MENTAL HEALTH, EMPLOYMENT STATUS AND PARENTHOOD: THE IMPACT OF THE ECONOMIC DOWNTURN ON PORTUGUESE YOUTH MENTAL HEALTH

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TABLE OF CONTENTS

Table of Contents I
List of Tables VII
List of Figures XI
List of Abbreviations XIII
Preface XV
Acknowledgements XVII
Structure of the dissertation XIX
List of the scientific papers that form the empirical basis of this dissertation XXI
Abstract XXIII
Resumo XXVII

Chapter I - INTRODUCTION 1
1. MENTAL HEALTH AND ADOLESCENCE 3
2. THE DETERMINANTS OF MENTAL HEALTH 5
3. ECONOMIC RECESSION: CONTEXTUAL BACKGROUND 8
3.1. Economic Recessions' Effects on Mental Health and Inequalities 10
3.2. Economic Recessions and Adolescents' Well-Being 12
4. UNEMPLOYMENT, FAMILY AND YOUTH MENTAL HEALTH 15
4.1. Macro-Level Unemployment 15
4.2. Individual Job Loss 15
4.3. Family Unemployment and Adolescents' Mental Well-Being 18
5. CYCLE OF INEQUALITY RELATED TO PARENTAL UNEMPLOYMENT AND PUBLIC POLICIES 21
5.1. Labour Market Measures 21
5.2. Family Support Programmes 23
5.3. Community Engagement 23
6. SUMMARY: "NO ONE MUST BE LEFT BEHIND" 25
References 26

Chapter II - EMPIRICAL STUDY 43
1. RESEARCH AIMS AND HYPOTHESES 45
2. METHODS 48
2.1. Research Phase II: Cross-Sectional Study Directed to Unemployment Benefit Claimants from Lisbon in the Context of Economic Recession 48
2.2. Research Phase III: Portuguese Health Behaviour in School-aged Children Study (HBSC/WHO) 59
2.3. Brief description of the statistical analyses applied in research phases II and III ... 67
References 68

Chapter III - RESULTS 73

1. SCIENTIFIC PAPER 75
Mental health outcomes in times of economic recession: A systematic literature review .. 75
ABSTRACT 77
INTRODUCTION 78
METHODS 79
RESULTS 81
DISCUSSION 89
References 95
Tables 108

2. SCIENTIFIC PAPER 127
Distress and unemployment: The related economic and non-economic factors in a sample of unemployed adults 127
ABSTRACT 129
INTRODUCTION 130
METHODS 131
RESULTS 132
DISCUSSION 137
References 141

3. SCIENTIFIC PAPER 145

Unemployment, life satisfaction and deprivation: Gender and partnership differences in the context of economic recession 145

ABSTRACT 147

INTRODUCTION 148

METHODS 150

RESULTS 151

DISCUSSION 156

References 160

4. SCIENTIFIC PAPER 163

Unemployment, parental distress and youth emotional well-being: The moderation roles of parent-youth relationship and financial deprivation 163

ABSTRACT 165

INTRODUCTION 166

METHODS 167

RESULTS 170

DISCUSSION 173

References 176

5. SCIENTIFIC PAPER 181

Unemployment as a source of mental distress to individuals and their families: Unemployed parents' perceptions during the economic recession 181

ABSTRACT 183

INTRODUCTION 184

METHODS 185

RESULTS 188

DISCUSSION 191

References 195

Tables 200

6. SCIENTIFIC PAPER 203

Does age matter? Parental employment status influence on psychological well-being: Findings from the national study of Portuguese schoolchildren 203

ABSTRACT 205

INTRODUCTION 207

METHODS 208

RESULTS 209

DISCUSSION 215

References 218

7. SCIENTIFIC PAPER 221

Do adolescents' future expectations differ by parental employment situation? Highlights from the Portuguese HBSC/WHO survey 221

ABSTRACT 223

INTRODUCTION 224

METHODS 225

RESULTS 227

DISCUSSION 229

References 232

8. SCIENTIFIC PAPER 237

Factors affecting the well-being of adolescents living with unemployed parents in times of economic recession: Findings from the Portuguese HBSC Study **..... 237**

ABSTRACT 239

INTRODUCTION 240

METHODS 241

RESULTS 243

DISCUSSION 248

References 252

9. SCIENTIFIC PAPER 257

Parental unemployment and youth life satisfaction: The moderating roles of satisfaction with family life 257

ABSTRACT 259

INTRODUCTION 260

METHODS 261

RESULTS 262

DISCUSSION 264

References 267

10. SCIENTIFIC PAPER 271

Young people's well-being and the economic crisis: How does parental unemployment and family wealth affect the downturn experience? 271

ABSTRACT 273

INTRODUCTION 274

METHODS 275

RESULTS 278

DISCUSSION 279

References 282

11. SCIENTIFIC PAPER 285

Young people living with unemployed parents during a labour market-crisis: How do Portugal and Scotland compare? 285

ABSTRACT 287

INTRODUCTION 288

METHODS 290

RESULTS 291

DISCUSSION 293

References 297

Chapter IV - DISCUSSION 301
1. DISCUSSION OF THE MAIN FINDINGS 303
1.1. Economic recession and mental health outcomes: Vulnerability of unemployed people and their families 305
1.2. Individual level unemployment effects on well-being and associated factors 306
1.3. Deprivation of access to the latent and manifest benefits of work 308
1.4. Effects of unemployment on the family 309
1.5. Parental unemployment and youth well-being 310
1.6. Possible effects of public policies and programmes 313
2. STUDY'S LIMITATIONS AND STRENGTHS 315
2.1. Self-report bias 315
2.2. Causality bias 316
2.3. Representativeness 316
3. IMPLICATIONS FOR FUTURE RESEARCH 318
4. IMPLICATIONS FOR PUBLIC POLICY 319
5. CONCLUSION 321
References 323

Chapter V - APPENDICES 331
APPENDIX I: Questionnaire - Psychosocial impact of unemployment on the family and the individual in times of economic crisis 333
APPENDIX II: Study ethical approval decision 347
APPENDIX III: Lisbon municipality and civil parishes collaboration request letter 349
APPENDIX IV: Permission to collect data from lisbon municipality and civil parishes. 351
APPENDIX V: Additional exploratory results 353
Assessing the need of psychological support in a sample of unemployed adults from Lisbon in a context of economic recession 353

LIST OF TABLES

Chapter II - EMPIRICAL STUDY

Table II.1. Aims and hypotheses of the scientific studies 47
Table II.2. Descriptive characteristics of the unemployed adults sample from Lisbon, Portugal..... 50
Table II.3. Principal axis factor estimates of the orthogonal (Varimax with Kaiser Normalization) factor loadings for the 34-item LAMB scale 56
Table II.4. Eigenvalues, percentage of variance explained, Cronbach alpha and the inter-factor correlations for the six factors of the 34-item LAMB-Scale..... 57
Table II.5. Means (m), Standard Deviation (SD) Inter-Item Correlation Matrix for the 12 items in GHQ-12 58
Table II.6. Key HBSC Survey variables 63
Table II.7. Principal axis factor estimates of the orthogonal (Varimax with Kaiser Normalization) factor loadings for the 15-item economic crisis impact scale 66

Chapter III - RESULTS

SCIENTIFIC PAPER 1

Table 1.1. Summary of the main features of retrieved studies 83
Table 1.2 Characteristics of studies included in the review comparing the data to pre-recession periods and mental health outcomes, 2004-2014 108
Table 1.3. Characteristics of studies included in review relating macroeconomic indicators and mental health outcomes, 2004-2014 114
Table 1.4. Characteristics of studies included in review relating unemployment status and mental health outcomes, 2004-2014..... 118
Table 1.5. Characteristics of studies included in review relating job quality and security, deprivation and socioeconomic status and mental health outcomes, 2004-2014..... 123
Table 1.6. Characteristics of studies included in review focusing on children and adolescents, older adults and people with mental health problems, 2004-2014..... 125

SCIENTIFIC PAPER 2

Table 2.1. Description of the study population (N=748 unemployed adults), in terms of total number and by gender, Lisbon, Portugal 2013. 133
Table 2.2. Descriptive statistics by distress level, socio-demographic variables, gender and age, and economic and non-economic variables of deprivation, in a sample of unemployed adults (N=748) from Lisbon, Portugal 2013. 134
Table 2.3. Logistic regression analyses with odds ratios (OR) and 95% confidence intervals (CI) by distress including unadjusted and adjusted ratios for gender, age, level of education, unemployment duration and deprivation variables, for total sample and with separate analyses for men and women, on a sample of unemployed adults (N=748) from Lisbon, Portugal 2013. 136

SCIENTIFIC PAPER 3

Table 3.1 Descriptive statistics of main sample 152
Table 3.2. Analysis of variance of life satisfaction between partnered and single individuals 152
Table 3.3. Multiple regression of variables linked to life satisfaction in single unemployed people. 153
Table 3.4. Hierarchical multiple regressions of variables linked to life satisfaction of unemployed partnered individuals and partnered parents. 155

SCIENTIFIC PAPER 4

Table 4.1. Means, standard deviations, and correlations of key variables. 170

SCIENTIFIC PAPER 5

Table 5.1. Characteristics of the study population 188
Table 5.2. Perceptions of unemployment as a source of economic hardship and pressure200
Table 5.3. Perceptions of unemployment as a source of change in family relations 201
Table 5.4. Perceptions of unemployment as a source of distress 202
Table 5.5. Perceptions of unemployment as a source of youth low well-being..... 202

SCIENTIFIC PAPER 6

Table 6.1. Descriptive data 209
Table 6.2. Bivariate analysis (χ^2) between psychological variables and parental employment status (ES) by school grade. 210
Table 6.3. Multiple linear regression results between Psychological variables and Parental Employment Status 212
Table 6.4. Bivariate analysis (χ^2) between father employment status and psychological variables by school grade. 213
Table 6.5. Bivariate analysis (χ^2) between mother employment status and psychological variables by school grade. 214

SCIENTIFIC PAPER 7

Table 7.1. Crosstabulation of parental employment status and adolescents' future expectations (N=2926) 228
Table 7.2. ANOVA results for Life Satisfaction by groups of future aspiration and educational expectations 229

SCIENTIFIC PAPER 8

Table 8.1. Sample descriptive characteristic, Portuguese adolescents with unemployed parents. HBSC study collected in Portugal in 2014. Total and by gender (N=1311) 244
Table 8.2. Bivariated analyses between the effect of father's unemployment on emotional well-being and type of parental unemployment, socio-demographic variables, and satisfaction with family life and peer relationships, in a sample of Portuguese adolescents with unemployed parents (total and by gender). 245
Table 8.3. Bivariated analyses between the effect of mother's unemployment on emotional well-being and type of parental unemployment, socio-demographic variables, and satisfaction with family life and peer relationships, in a sample of Portuguese adolescents with unemployed parents (total and by gender). 246
Table 8.4. Logistic regression analyses with odds ratios (OR) and 95% confidence intervals (CI) by perceiving well-being to be negatively affected by father's unemployment including unadjusted and adjusted ratios for type of parental unemployment, socio-demographic variables and satisfaction with family life and peer interactions variables, on a sample of Portuguese adolescents (boys and girls) with unemployed parents 247

Table 8.5. Logistic regression analyses with odds ratios (OR) and 95% confidence intervals (CI) by perceiving well-being to be negatively affected by mother's unemployment including unadjusted and adjusted ratios for type of parental unemployment, socio-demographic variables and satisfaction with family life and peer interactions variables, on a sample of Portuguese adolescents (boys and girls) with unemployed parents..... 248

SCIENTIFIC PAPER 9

Table 9.1. Means, standard deviations, and correlations of key variables, *p < .01..... 262

SCIENTIFIC PAPER 10

Table 10.1. Descriptive characteristics of the Portuguese HBSC sample..... 278
Table 10.2. Summary of linear regression analysis for the association between life satisfaction and perceived repercussions of the economic recession adjusted for age and gender. 278
Table 10.3. Summary of linear regression analysis of the relationship between minor and negative recessionary lifestyle changes and parental unemployment (ref) and perceived wealth by parental employment status (adjusted for age and gender). 279

SCIENTIFIC PAPER 11

Table11.1. Summary of linear regression analyses for parental unemployment predicting subjective health complaints and life satisfaction among adolescents from Portugal, adjusting for gender and age B (95% CI). 292
Table 11.2. Summary of linear regression analyses for parental unemployment predicting subjective health complaints and life satisfaction among adolescents from Scotland, adjusting for gender and age B (95% CI). 293

LIST OF FIGURES

Chapter I - INTRODUCTION

Figure I.1. Life-course approach of the inequalities in health. Adapted from WHO Review of Social Determinants and the Health divide in the European Region, 2014. 6
Figure I.2. Real GDP growth % for the world and the EU (27) by annual changes. Source: IMF. 8
Figure I.3. Group of the 7 recession high-impact countries (Greece, Ireland, Latvia, Lithuania, Portugal, Slovakia and Spain) average growth of public expenditure by component (real terms) before, during and after the economic crisis. Source: Storti et al., 2013 "The impact of 2008 economic recession on public expenditure financing drug policy in Europe". Reprinted with permission. 9
Figure I.4. Unemployment rate, annual average %, for EU (27) and Portugal. Source: Eurostat. 9
Figure I.5. Theoretical model linking economic recession and poor mental health. Adapted from WHO "The Impact of Economic Crises on Mental Health", 2011. 11
Figure I.6. Adapted model from the UNICEF framework for the impact of economic recession on children and youth. Source: Natali et al. 2014 'Trends in Child Well-being in EU Countries during the Great Recession'. 13
Figure I.7. Family Stress model adapted from Conger and Donnellan 2007 "An Interactionist Perspective on the Socioeconomic Context of Human Development". 14
Figure I.8. Simplified illustration of the Family Stress Model adapted from Conger and Conger, 2008 "Handbook of families and poverty". 19

SCIENTIFIC PAPER 1

Figure 1.1. Flow diagram of the multistep selection method 82

SCIENTIFIC PAPER 4

Figure 4.1.Conceptual diagram for the effect of parental distress during unemployment on change in youth emotional problems related to parental unemployment as a function of parent-youth relationship..... 163
Figure 4.2. Simple moderation analysis results with unstandardized regressions coefficients. 171
Figure 4.3. Additive moderation analysis results with unstandardized regressions coefficients. 171
Figure 4.4. Moderated moderation analysis results with unstandardized regressions coefficients. 172

SCIENTIFIC PAPER 5

Figure 5.1. Coding Tree 187

SCIENTIFIC PAPER 9

Figure 9.1. Conceptual diagram for the simple moderation analysis: the effect of parental unemployment and family life satisfaction in predicting youth life satisfaction. 257
Figure 9.2. Simple moderation analysis results with unstandardized regressions coefficients 263
Figure 9.3. Moderated moderation analysis results with unstandardized regressions coefficients 264

Chapter IV - DISCUSSION

Figure IV.1. Conceptual integration of the main findings from the present study within a life-course perspective..... 304

LIST OF ABBREVIATIONS

CSDH: Commission on Social Determinants of Health

DALY: Disability-Adjusted Life Years

EU: European Union

EUROSTAT: Directorate-General of the European Commission Statistics

GDP: Gross Domestic Product

GHQ: General Health Questionnaire

GINI Index: Coefficient of income distribution

GIP: Gabinetes de Inserção Professional (unemployment support offices)

HBSC: Health behaviour in School-aged Children Survey

IEFP: Instituto de Emprego e Formação Profissional (Portuguese Institute of Employment and Vocational Training)

ILO: International Labour Organisation

IMF: International Monetary Fund

INE: Instituto Nacional de Estatística (Statistics Portugal)

LAMB: Latent and Manifest Benefits of Work

NEET: Not in Employment, Education or Training

OECD: The Organisation for Economic Co-operation and Development

SES: Socioeconomic Status

UK: United Kingdom

UN: United Nations

UNICEF: United Nations Children's Fund

USA: United States of America

WHO: World Health Organisation

YLD: Years Lost to Disability

PREFACE

After I finished my master in Clinical and Health Psychology, my desire to learn more and acquire higher scientific skills inspired me to go abroad in search of stimuli and learning in the field of health. Thus, I did a year internship at the World Health Organization Collaborating Centre for Health Promotion Research at the National University of Ireland, Galway. This was a valuable work experience and an opportunity to improve my research skills in the field of health and mental health promotion in Europe.

Pursuing a PhD became a goal to further deepen my learning. Thus, a month after moving back to Portugal, I started the Doctoral Programme at Nova Medical School. At the time, the deep economic recession was starting to make itself felt more noticeably. During my studies, I heard many people talking about forced life changes, earning cuts and anxieties about the future. I also witnessed several of my friends losing their jobs and taking a long time to get back into the labour market. Therefore, I started to assume that this economic recession would pose a threat to public health and began to research the effects of past recessions.

When the unemployment rate reached 18%, it knocked at my door. My partner lost his job, and I saw firsthand how unemployment was a blow to mental well-being, even for a resilient person. I felt even more compelled to use my research skills to help improve knowledge and awareness about one of the most vulnerable groups of people during this recession – the unemployed, their family and their children. I truly hope the findings of this research work can contribute to the development of support measures to alleviate the negative effects of unemployment on mental health.

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I would like to start by thanking Professor José Miguel Caldas de Almeida, the supervisor of this doctoral thesis, for allowing me the autonomy to follow my own pathways of research interest, for his thoughtful advice and for the constant positive reinforcements to my work throughout the years.

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I acknowledge the financial support provided by the Portuguese Foundation for Science and Technology (SFRH/BD/80846/2011).

I wish to thank the Lisbon Municipality and the civil parishes of Benfica, São João, São João de Deus, São Francisco Xavier and Campolide where data was collected. I am especially thankful to all the people who voluntarily participated in this study. I truly hope that this set of findings will help to increase knowledge about the effects of unemployment and assist the design of more effective support.

I would also like to thank all my research colleagues from Aventura Social, and particularly Teresa Santos for her good advice, thought-provoking discussions and true companionship during my personal and academic development. Thank you! I correspondingly wish to thank Dr. Adilson Marques for his vital statistical and editing advice and helpful support.

To Professor Candace Currie, sincere thank you for welcoming me for a period of supplementary research work at the Child and Adolescent Health Research Unit (CAHRU), in the Medical School at the University of St Andrews, Scotland. This opportunity was fundamental to allow me to advance my research skills in an international environment. Thank you to Dr. Fergus Neville, my 'buddy' at CAHRU, for helping me become more informed about the Unit's practices and for the valuable guidance and scientific support. I also thank Dr. Ross Whitehead for the gratifying collaboration and Dr. Alina Cosma for her friendship during my stay in St. Andrews.

Moreover, I wish to thank my colleagues and friends from the Health Behaviour in School-aged Children Network, particularly to Dr. Ferdinand Salonna for his support and

to the Spanish and Greek HBSC teams for the collaboration work regarding the economic crisis items.

My gratitude extends to Dr. Cláudia Storti for inviting me to take part in the important research project entitled “The impact of economic recession and austerity on drug-related public expenditure” at the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). This was a crucial and useful learning experience. Thank you!

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STRUCTURE OF THE DISSERTATION

This PhD dissertation is the result of the research study conducted as part of the Doctoral Programme in Life Sciences speciality of Mental Health at the Medical School of Nova University of Lisbon, and was carried out within the Aventura Social research group of the former Centre for Malaria and Other Tropical Diseases (CMDT) Nova University of Lisbon (CMDT I&D unit of the Portuguese Foundation for Science and Technology), Portugal. The research was entirely supervised by Professor Dr. José Miguel Caldas de Almeida (Professor of Psychiatry and Mental Health at Medical School of Nova University of Lisbon) and co-supervised by Professor Dr. Margarida Gaspar de Matos (Professor of International Health at Faculty of Human Kinetics of University of Lisbon, Director of Aventura Social research group and Principal investigator of the Portuguese Health Behaviour in School-aged Children study).

Additionally, the preparation of this dissertation included a 3-month period of supplementary collaborative research activities at the Child and Adolescent Health Research Unit (CAHRU), School of Medicine of the University of St. Andrews in Scotland (United Kingdom), under the supervision of Professor Dr. Candace Currie (Professor of Child and Adolescent Health and Director of CAHRU).

The body of the present dissertation is structured into four main sections. The first section "Introduction" provides an overview of the concepts of mental health, the socioeconomic determinants and inequalities in mental health, the economic recession context, unemployment and its relationship with mental health through a life course perspective. All literature in this chapter is presented in order to inform the reader about the association between the economic recession and mental health outcomes, focusing specifically on vulnerable groups: the unemployed, their families and their children. Subsequently, after a short overview of the unemployment concept and figures, follows a review of the psychological unemployment research with an introduction to the three most important conceptual theories in psychological unemployment research (Jahoda's latent-deprivation model and Fryer and Payne's Agency Restriction Model) and a short introduction to several moderator variables of the unemployment experience. This is followed by an introduction to the effects of unemployment on the family and adolescent well-being in light of the main theoretical framework in parental unemployment research (Family Stress Model). At the end of this section, there is a brief reflection on the unemployment protection policies and other measures that can help buffer the negative

effects of the economic crisis among jobless households. The theoretical introduction of this thesis ends with a summary that guides the theoretical formulation of the research objectives.

The second section of the dissertation, "Empirical Study" describes the research general aims, specific objectives and hypotheses, and ends with the methodology of this research work.

The third section of the dissertation, "Results" includes a collection of eleven original studies presented in the format of scientific papers, with an introductory chapter related to each research study. These papers were all submitted or are published in national and international peer-reviewed journals.

The fourth section "General discussion" presents the final discussion of the main findings of this thesis, critically revises the strengths and limitations of the study and provides a set of future research avenues and public policy implications. Finally, the dissertation ends with a conclusion.

LIST OF THE SCIENTIFIC PAPERS THAT FORM THE EMPIRICAL BASIS OF THIS DISSERTATION

1. Frasquilho D, Matos MG, Salonna F, Guerreiro D, Storti CC, Gaspar T, Caldas de Almeida JM. Mental health outcomes in times of economic recession: A systematic literature review. BMC Public Health. 2016; 16: 115. doi: 10.1186/s12889-016-2720-y
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10. Frasquilho D, Matos MG, Gaspar T, Caldas de Almeida JM. Young people's well-being and the economic crisis: How parental unemployment and family wealth affect the downturn experience?. Children and Youth Services Review. 2016; 69: 219–222. doi: 10.1016/j.childyouth.2016.08.018
11. Frasquilho D, Matos, MG, Currie C, Neville FG, Whitehead R, Gaspar T, Caldas de Almeida JM. Young people living with unemployed parents during a labour market-crisis: How do Portugal and Scotland compare? Child Indicators Research. 2016; (Manuscript under review).

ABSTRACT

Background: Economic recessions pose significant risks to individuals' mental health and well-being. Common mental disorders are already highly prevalent in Europe, and more so in Portugal. Thus, changes in macroeconomic conditions are likely to aggravate this scenario. The exponential and rapid increase of unemployment is a particular consequence of the economic recession that has been proven to have a detrimental effect on mental health and well-being at both individual and population levels. These negative effects appear to be particularly related to the loss of financial protection and the loss of latent benefits that people had previous access through work (e.g. time structure, social contact, social status, collective purpose, and activity). Moreover, the effects of job loss on mental health seem to follow a chain-effect pattern, whereby unemployed parents and their children are both affected. Unemployed parents, who become distressed, may also have more difficulties in nurturing and taking care of their children. The changes in family relations may increase psychological maladjustment problems which may continue into adulthood impacting children's future prospects.

Objectives: In this context, the aims of this research work were: 1) to clarify the associations between factors related to economic recession and mental health outcomes and to characterize the most vulnerable groups of the population; 2) to investigate the prevalence of psychological well-being and related factors in adult job seekers; 3) to explore how family life is affected by unemployment during the economic recession; 4) to identify parental unemployment associations with young people's mental well-being and perceived repercussions of the economic recession.

Methods: This research work comprised of three phases. The first phase consisted of a systematic review of the current evidence relating to economic recessions, mental health outcomes and main vulnerability factors. In the second and third phases, research was conducted using two data sources: 1) cross-sectional survey data collected from unemployment benefit claimants from Lisbon (Portugal) in the context of economic recession, that was performed in five Lisbon civil parishes which contained specialized offices for professional integration of unemployed people; and 2) cross-sectional data from the Portuguese Health Behaviour in School-aged Children (HBSC/WHO) study, which is an epidemiological study focusing on health and well-being of students conducted quadrennially in collaboration with the World Health Organization (WHO) and coordinated by the principal investigator Professor Dr. Margarida Gaspar de Matos from

the University of Lisbon. For the study of unemployed adults (phase 2), the sample comprised of 748 unemployment benefit claimants from Lisbon (52% males) with a mean age of 43 years old (±11.4), and a subsample of 112 unemployed mothers and fathers of adolescents (44% fathers) with a mean age of 45 years old (±6.6). The outcomes evaluated were mental well-being (General Health Questionnaire-12), life satisfaction (Cantril's Self-Anchoring Ladder) and deprivation of latent (e.g. financial income) and manifest benefits (e.g. social contact, time structure, status, collective purpose, and activity) of work (LAMB-scale). This was followed by quantitative and qualitative questions related to family life and parental unemployment impacts on children in the context of an economic recession. For the study regarding young people living with unemployed parents (phase 3), there were two samples. The Portuguese HBSC 2010 study sample consisted of 4541 Portuguese adolescents (48% boys) attending 6^{th}, 8^{th} and 10^{th} school grades and with a mean age of 14 years old (±1.3). The sample from the HBSC 2014 study consisted of 3152 Portuguese adolescents (47% boys) attending 8^{th} and 10^{th} school grades and with a mean age of 15 years old (±1.2). The outcomes evaluated across parental employment status were: subjective health complaints (HBSC Symptom Checklist), life satisfaction (Cantril's Self-Anchoring Ladder), emotional well-being related to parents' unemployment status, satisfaction with the family life and peer interactions, adolescents' future and educational aspirations and experiences related to the economic crisis (Economic crisis repercussions scale). All data analyses for phase 2 and 3 were completed using Statistical Package for Social Sciences (SPSS v22.0), and the level of significance was set at $p < 0.05$.

Results: This research work resulted in a collection of eleven scientific papers that compose this thesis. The main findings suggested that: 1) economic recessions pose increased risks to mental health, and unemployed people and their family members are amongst the most affected group; 2) unemployed adults show a high prevalence of psychological distress and low life satisfaction, and the associations are stronger for unemployed women, older aged people, people with lower education, singles, partnered fathers and women living with unemployed partners; 3) worse mental health outcomes are more prevalent among unemployed adults that lack ability to purposefully structure their time and those who are financially deprived; 4) unemployment is associated with substantial cuts on household expenses that range from cutting on essential needs (house, food, health and children's education expenses) to families' leisure activities (holidays, going out, dining at restaurants), and is also associated with changes in family relations (more support *vs.* more friction and stricter parenting), parental distress (worry, anger, bad

temper, and sadness) and perceived children's low well-being (sadness, worry and bad temper); 5) young people living with unemployed parents report significantly worse mental well-being outcomes, lower future educational expectations, and perceive more the repercussions of the economic recession, than those living with employed parents; the main vulnerability aspects found were: paternal unemployment, low socioeconomic position, younger children, being a girl or older sons with unemployed fathers; 6) and finally, family relational factors may moderate the link between parental unemployment and young people's mental well-being.

Conclusions: The findings from this present research work enhance our understanding of how the economic recession, and the unemployment situation in particular, may be affecting Portuguese job seekers and their children's mental health and well-being, during the unique context of economic recession. Moreover, findings highlight the role of economic (income), noneconomic factors (e.g. time structure) and of family relations as factors that can act against the deleterious effects of unemployment on well-being. The identification of modifiable factors associated with better adult, family and children well-being during unemployment is essential given that Portugal faces an historical economic recession, has one of the highest unemployment rate in Europe, and tailored interventions to protect adults and young people's well-being during unemployment are urgently required. Such interventions may maximize life opportunities, diminish future health inequality and social expenditure for countries, and are fundamental to achieving a healthier and productive society.

Keywords: Adolescents; Economic Recession; Family Relationships; Mental Health; Parental Unemployment; Portugal; Social Determinants; Unemployment.

RESUMO

Contextualização: Os períodos de recessão económica apresentam riscos significativos para o bem-estar e para a saúde mental das populações. Reconhecendo-se que os problemas de saúde mental têm elevada prevalência na Europa e sobretudo em Portugal, poderá considerar-se que as mudanças nas condições macroeconómicas associadas à recessão possam agravar tal cenário. O aumento rápido e exponencial do desemprego é uma consequência particular da recessão económica, cujos efeitos negativos na saúde mental e bem-estar, tanto ao nível individual como populacional, são conhecidos. Estes efeitos negativos parecem estar especialmente relacionados com a perda da proteção financeira e com a perda de benefícios latentes, aos quais anteriormente se tinha acesso através do trabalho (i.e. estruturação do tempo, contacto social, estatuto social, propósito coletivo e estímulo à atividade). Ressalva-se que estes efeitos parecem seguir uma reação em cadeia, em que tanto os pais desempregados como os seus filhos podem ser simultaneamente afetados, uma vez que os pais podem apresentar maiores preocupações e dificuldades em estabelecer um relacionamento positivo. As alterações daí resultantes para o relacionamento familiar podem potenciar problemas de saúde mental nas crianças e jovens, possíveis de se perpetuarem na idade adulta, limitando, por sua vez, o seu bem-estar e sucessos futuros.

Objetivos: Tendo em conta o contexto acima descrito, apresentam-se seguidamente os objetivos deste estudo: 1) explorar as associações entre a recessão económica e os seus efeitos na saúde mental e caracterizar os grupos mais vulneráveis da população; 2) investigar a prevalência de bem-estar psicológico e fatores associados em adultos desempregados no contexto de recessão económica; 3) analisar a forma como a vida familiar é afetada pelo desemprego durante a recessão económica; 4) identificar associações entre o desemprego dos pais e o bem-estar mental dos jovens Portugueses e quais as repercussões da recessão económica que estes percecionam.

Métodos: Este trabalho de investigação foi realizado em três fases. A primeira fase constou de uma revisão sistemática de estudos que evidenciavam associações entre a recessão económica, a saúde mental e os principais fatores de vulnerabilidade. Na segunda e terceira fases, a investigação foi conduzida utilizando duas fontes de dados: 1) dados transversais recolhidos de uma população desempregada a receber subsídio de desemprego, em cinco freguesias de Lisboa onde funcionavam gabinetes de inserção profissional; e 2) dados obtidos através do estudo nacional Health Behaviour in School-

aged Children (HBSC), que é um estudo epidemiológico que foca o bem-estar e os comportamentos de saúde de estudantes Portugueses, e que é realizado quadrienalmente em colaboração com a Organização Mundial da Saúde (OMS) e é coordenado pela Professora Dr.ª Margarida Gaspar de Matos da Universidade de Lisboa. Para o estudo com adultos desempregados (fase 2), a amostra foi composta por 748 pessoas que recebiam na altura o subsídio de desemprego (52% homens), com idade média de 43 anos (± 11.4); e, uma subamostra de 112 pais e mães desempregados (44% pais), com uma idade média de 45 anos (± 6.6). Foram avaliados o bem-estar mental (General Health Questionnaire-12), a satisfação com a vida (Escada de Cantril) e a perceção de privação no acesso aos benefícios latentes (i.e. contacto social, estruturação do tempo, estatuto social, propósito coletivo, e estímulo à atividade) e manifesto (remuneração financeira) do trabalho (LAMB scale). Foram também avaliadas as respostas a questões quantitativas e qualitativas relacionadas com a vida familiar e com o impacto do desemprego parental nos jovens no contexto de recessão económica. O estudo que focou o bem-estar dos jovens portugueses que se encontravam a viver com pais desempregados (fase 3), foi constituído por duas amostras. A primeira consistiu numa amostra do estudo HBSC do ano de 2010, com 4541 adolescentes portugueses (48% rapazes) a frequentar o 6º, o 8º e 10º anos de escolaridade e com uma idade média de 14 anos (±1.3). A segunda incluiu uma amostra do estudo HBSC do ano de 2014, que consistiu de 3152 adolescentes portugueses (47% rapazes) a frequentar o 8º e 10º anos de escolaridade e com uma idade média de 15 anos (±1.2). O bem-estar dos jovens em relação à situação de emprego dos pais foi avaliado através das seguintes variáveis: queixas subjetivas de saúde (HBSC Symptom Checklist), satisfação com a vida (Escada de Cantril), bem-estar emocional relacionado com a situação de desemprego parental, satisfação com as interações familiares e de pares, aspirações futuras e educacionais, e experiências relacionadas com a crise económica (escala de repercussões da crise económica). Todos os dados foram analisados utilizando o Statistical Package for the Social Sciences (SPSS v22.0), e o nível de significância estatística foi estabelecido em $p < 0.05$.

Resultados: Deste estudo resultou um conjunto de onze artigos científicos que compõem esta tese de doutoramento. Os principais resultados sugerem que: 1) os fatores associados às recessões económicas apresentam riscos para a saúde mental, e as pessoas desempregadas e seus familiares constam de um grupo da população que pode ser particularmente mais afetado; 2) os adultos desempregados apresentam uma alta prevalência de sofrimento psicológico e de insatisfação com a vida, e as associações

significativamente mais fortes foram verificadas em mulheres desempregadas, nas pessoas com mais idade, naquelas com baixa escolaridade, solteiros, homens que são pais, e mulheres que vivem com parceiros desempregados; 3) a pior saúde mental foi também mais prevalente nos adultos desempregados com menor capacidade em estruturar o seu tempo e naqueles com maior privação financeira; 4) a situação de desemprego mostrou-se associada a uma diminuição substancial nas despesas do agregado familiar, que vão desde as necessidades essenciais (casa, comida, saúde, necessidades educacionais das crianças), até às atividades de lazer das famílias (férias, passeios, jantar em restaurantes). O desemprego foi também associado a alterações no relacionamento familiar (mais apoio vs. mais atrito e parentalidade mais rigorosa), a alterações negativas no bem-estar psicológico dos pais (maior preocupação, irritabilidade, raiva e tristeza) e dos filhos (maior tristeza, preocupação e irritabilidade); 5) os jovens que vivem com pais desempregados, quando comparados com os que vivem com pais empregados, relataram significativamente piores resultados ao nível do bem-estar psicológico e expectativas educacionais, percecionando as repercussões da crise económica de forma mais intensa; dos fatores de vulnerabilidade encontrados salientam-se: o desemprego paternal, baixa situação socioeconómica, ser rapariga, os jovens mais novos e os rapazes mais velhos cujo pai está desempregado; 6) e, finalmente, a qualidade das relações familiares parece moderar a associação entre o desemprego parental e o bem-estar psicológico dos jovens.

Conclusões: Os resultados do presente estudo visam melhorar a compreensão de como a recessão económica, e o desemprego em particular, afetam a saúde mental e bem-estar de adultos desempregados e dos jovens que vivem com pais desempregados. Os resultados destacam, ainda, o papel potencialmente moderador dos fatores económicos (capacidade financeira), não-económicos (ex. estruturação do tempo) e das relações familiares. A identificação destes fatores modificáveis associados ao bem-estar dos adultos, família e filhos no contexto de desemprego é essencial, sobretudo porque Portugal enfrenta uma recessão económica histórica apresentando uma das mais elevadas taxas de desemprego na Europa, e porque as intervenções para proteger adultos e jovens durante este período em particular, são urgentemente necessárias. Essas intervenções podem diminuir as desigualdades na saúde e as despesas sociais para o país, bem como maximizar as oportunidades de vida, assumindo, assim, um papel fundamental para alcançar uma população mais saudável e produtiva.

Palavras-chave: Adolescentes; Recessão Económica; Família Familiares; Saúde mental; Desemprego parental; Portugal; Determinantes Sociais; Desemprego.

CHAPTER I - INTRODUCTION

1. MENTAL HEALTH AND ADOLESCENCE

To understand the concept of health in general and mental health in particular, we need to go back to the constitution of the World Health Organization (WHO), on April 1948, when health was defined as*: "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"*[a].

This famous quote heralded a crucial shift in the way health was perceived. This integrated view of health and mental well-being was particularly relevant for the field of mental health, since it implied that to attain a complete state of health, mental health should also be addressed. As a result of this definition, a new argument emerged stating that there is *no health without mental health,* denoting that mental health is an essential component of health in general [1].

According to WHO, mental health is defined as "*a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community*" [2]. Thus, positive mental health is not just the absence of mental health disorders but is also the basis for overall well-being and effective functioning of individuals and their communities [3].

Mental health problems are highly prevalent in Europe. Latest estimations reveal that every year at least a third of the European adult population is affected by mental disorders, accounting for 19% of years of 'healthy' life lost due to disability or premature mortality (disability-adjusted life years - DALY's) [4]. Portugal, the focus of this thesis, has together with Northern Ireland the highest prevalence of mental health problems in Europe (23%) [5].

In adolescents[b], neuropsychiatric disorders account for the leading cause of disability in high-income countries (50 DALYs per 1000 males and 52 DALYs per 1000 females) [6,7]. In Portugal, for instance, 53% of the adolescents reported to feel nervous more than once a week, and 30% to feel low in the same frequency [8]. Worldwide, depression alone is the number one source of years lost to disability (YLD) among young people [7].

Thus, mental health problems bring a great amount of suffering and burden across generations (e.g. limitations of activities of daily living, marginalization and stigma),

[a] Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

[b] Defined by WHO as the population group aged 10 to19 years old. Adolescent Development. 2015. (Accessed 23-08-2015, at http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en/.)

decreases life expectancy (e.g. suicide, decreased self-management of physical health), increases family burdens (e.g. relationship problems, transmission of parental mental health problems to children's outcomes), and also carries economic costs for households (e.g. loss of income, work disability or job loss), and to society (e.g. loss of productivity, health and welfare service costs) [9,10].

Moreover, poor mental health limits individuals' development potential, increases health problems (e.g. cardiovascular disease), amplifies social and economic exclusion, limits quality of life, and restricts individuals' full participation and contribution to society [11]. The exclusion of people that can actively contribute leads to weakening economies and perpetuated cycles of poverty and exclusion [12,13]. Thus, there is '*no wealth without mental health*' [14].

Well-established evidence has shown that a higher prevalence of adult mental health problems is associated with poor mental health and the onset of mental health disorders during adolescence (e.g. depressive and anxiety disorders, substance use disorders and self-harm) [15,16]. In fact, the adolescent maturation process (biological maturation, neurological plasticity and synaptic pruning) and the intense psychosocial and cognitive modifications that occur provide opportunities and challenges to mental health and well-being [17,18,19]. Whilst most adolescents develop in an overall healthy way, there is evidence of a noticeable increased incidence of poor mental well-being and mental health problems during this process [20-22]. This brings clear public health implications because what happens during adolescence may shape development, influence life course trajectories, impact future achievement and adult mental well-being and overall governments' economic and social expenditure in the future [15,18].

These are strong arguments for a greater focus on adolescents' mental health. Actions that contribute to safeguard mental well-being or that can improve early detection and treatment of mental health problems might help reduce the global burden of mental health disorders, and may provide an opportunity for long-term positive health and socioeconomic benefits [23].

2. THE DETERMINANTS OF MENTAL HEALTH

It is increasingly acknowledged that mental health and well-being of individuals is greatly determined by the social and economic conditions into which they are born, grow, live and age [24]. As a consequence, mental health is inequitably distributed, and some individuals face a considerably higher vulnerability to poor well-being and mental health problems [12]. To recognize the social and economic factors related to health is extremely important in the formulation of health policies, and public health actions to reduce the global burden of disease, and for overall sustained development of countries.

Several studies have shown that there are persistent differences in the distribution of mental health disorders through socioeconomic groups globally [24-29]. This means that socially and economically disadvantaged individuals are more vulnerable to mental ill-health. The differences in health across socioeconomic groups are called the 'social inequalities in health', and the phenomenon whereby health lowers from highest to lowest socioeconomic groups is referred to as the 'social gradient of health' [30].

In 2005 WHO established a Commission on Social Determinants of Health (CSDH) with the aim of helping countries to address the social factors related to health and health inequalities [31]. Also, many models have been developed to better describe how social determinants amplify the health inequalities and the social gradient of health in the general population (e.g. the Rainbow Model by Dahlgren and Whitehead [32]). The latest model was presented by CSDH, the Conceptual Framework of Health Determinants [33]. This framework strongly suggests that the socioeconomic and political context of countries generate, configure and maintain the social stratification of populations and, therefore, the health inequalities [33].

Health inequalities are mostly established before adulthood. Thus, it is important to look at what happens early in life. Young people's development and life trajectories are highly affected by the socioeconomic context of their growth and development because maturation processes and the progress of personal identity require strong interaction with the surrounding environment [17,18,19,34].

Many studies have confirmed that the socioeconomic position of young people correlates positively with improved development and well-being assets, providing evidence for a social gradient phenomenon among young people [35-37]. Nonetheless, such social disparities among young people have been far less discussed than those of the adult population [38].

With increased acknowledgment of the importance of taking a life-course approach to understand the process of inequality in health, the CSDH [24] developed a framework illustrating how socioeconomic context influences the patterns of social stratification over the stages of the life-course (Figure I-1). This approach shows how the accumulation of negative effects on health (especially between childhood and adulthood) potentiates future inequities in health that may be perpetuated to future generations, and can, in turn, hold increased social and health expenditure for the State [15,18]. Within this framework, health and inequities in health (differences in health between social groups that can be avoidable) are heavily shaped by structural determinants such as wider society factors (e.g. social protection, societal cohesion and participation), countries' systems (e.g. social and health systems), and macro-level context (e.g. economic recession and unemployment) [39]. Moreover, family environment acts as an important determinant of health and development among young people. Families can either pose greater risk (e.g. inconsistent care-giving, conflict, stress) or be protective (e.g. family attachment, positive involvement) [15]. Thus, young people's life chances and health are highly shaped by family environment.

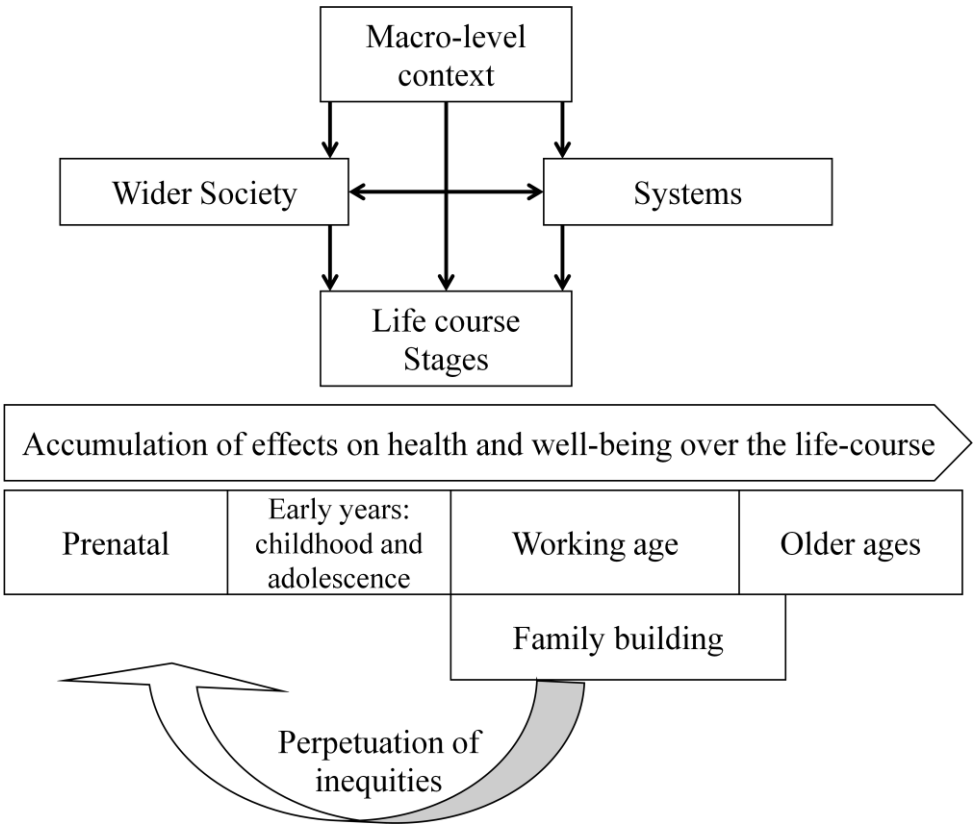

Figure I.1. Life-course approach of the inequalities in health. Adapted from WHO Review of Social Determinants and the Health divide in the European Region, 2014.

There are arguments that actions to reduce the social stratification and consequent inequalities in young people's health should also take into consideration changes at a structural level (e.g. macro-level context, systems and society). These changes may shape the individual differences in exposure and vulnerability to poorer mental health: material circumstances (e.g. housing and overall material living standards); psychosocial circumstances (e.g. psychosocial stressors, social support, family and peers relationship and coping styles); behavioural factors (e.g. nutrition, physical activity, tobacco consumption and alcohol consumption); and access to the health system [24].

The association between health and well-being assets and the socioeconomic context is an increasingly important topic for public policy in light of the recent economic recession and labour market crisis. The life-course framework drives public policy implications by acknowledging that mental health is influenced by structural and societal contexts across the generations, and may be useful to understand how economic recessions can threat people's life and well-being.

In sum, efforts to explain the surrounding factors that shape youth mental health and well-being should have a strong focus on health research and policy development, particularly as adolescence may be a significant and effective period to tackle the perpetuated cycle of inequalities in health [18,23,38].

3. ECONOMIC RECESSION: CONTEXTUAL BACKGROUND

Economic recessions provide a powerful illustration of how macroeconomic factors may determine the mental health status of populations and the extent of vulnerability to mental health problems that individuals face. But first, some definition and contextualization is needed.

In 2008-2009 an economic recession, with no precedent in post-war economic history, struck European economies [40]. Figure I-2 shows how EU (27) economy contracted by the rate of 4.2% [41].

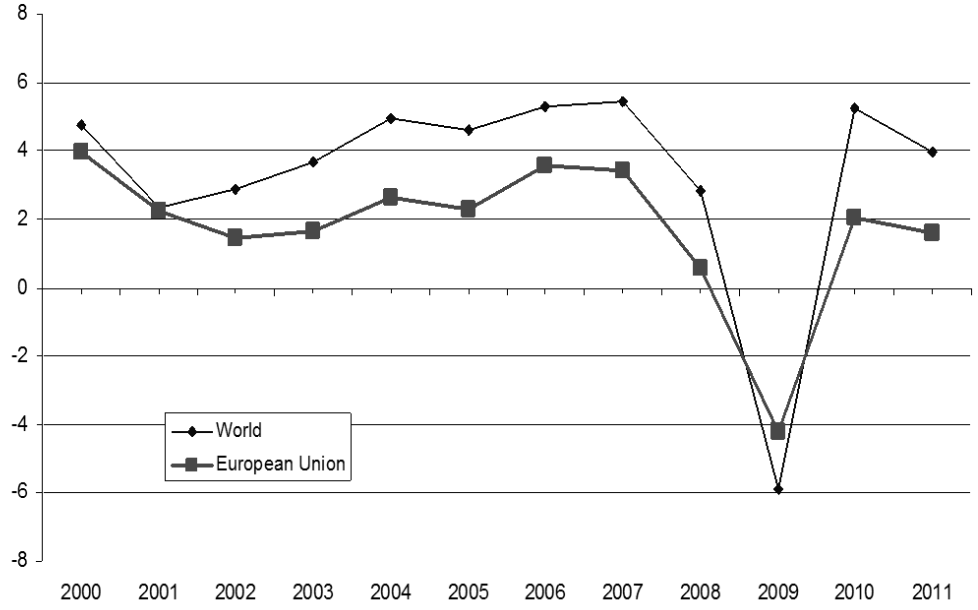

Figure I.2. Real GDP growth % for the world and the EU (27) by annual changes. Source: IMF.

This economic contraction was associated with public deficits and debt. The increase in interest rates that came afterwards made countries with already low economic growth, like Portugal, powerless in the face of foreign debt [42]. As a result, in May 2011, Portugal had to assume a financial assistance programme from the European Union, the European Central Bank and the International Monetary Fund (IMF) – the so called *Troika* [43]. The structural adjustments caused Portugal to reduce public spending (Fig. I-3) and severe socioeconomic consequences ensued, such as a marked increase in unemployment rates and an overall reduction of available income [44,45]. As a result, in countries that have been hardest hit by the recession, the working conditions, levels of poverty and social exclusion have significantly worsened [46,47].

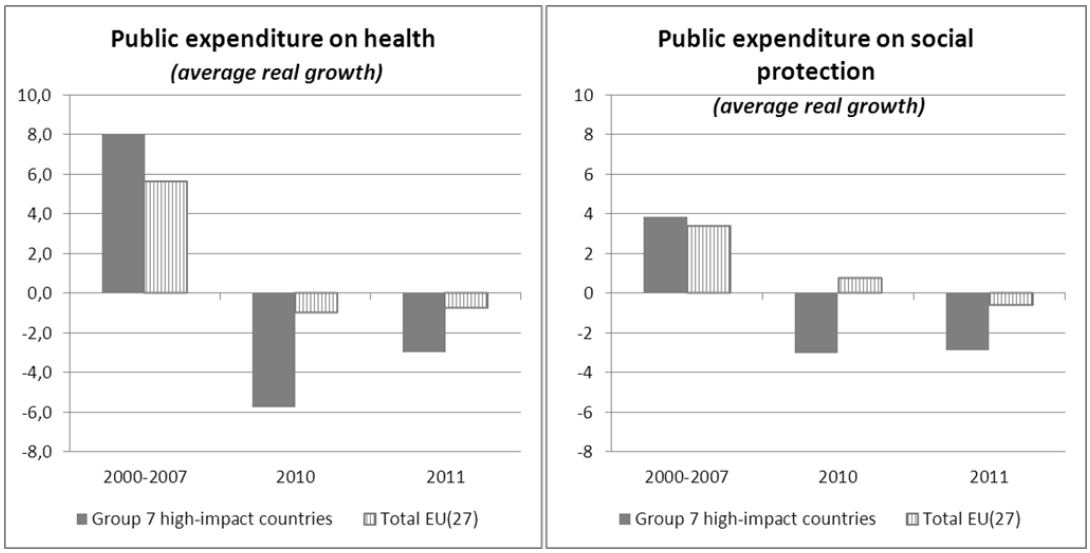

Figure I.3. Group of the 7 recession high-impact countries (Greece, Ireland, Latvia, Lithuania, Portugal, Slovakia and Spain) average growth of public expenditure by component (real terms) before, during and after the economic crisis. Source: Storti et al., 2013 "The impact of 2008 economic recession on public expenditure financing drug policy in Europe". Reprinted with permission.

Unemployment is the most widely available indicator of economic cycles of all the possible macroeconomic variables (e.g. gross domestic product, the unemployment rate, and the inflation rate), because it is a very sensitive countercyclical indicator - unemployment rates get higher when the economy contracts and fall gradually when the economy grows [47]. That is why almost half of Europeans reported knowing someone who had lost their job as a direct result of the economic crisis [49].

In Portugal, the context of this particular study, the rates of unemployment in the first quarter of 2013 rose from 9% (in 2008) up to a European record level of around 17% (Fig. I-4) that was only preceded by Greece (27%) and Spain (26%) [50].

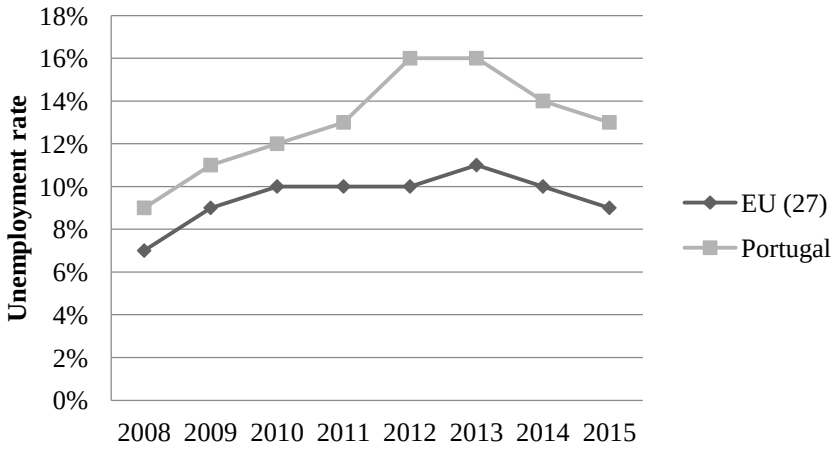

Figure I.4. Unemployment rate, annual average %, for EU (27) and Portugal. Source: Eurostat.

Since then, unemployment rates have been slowly declining [51]. However, the levels are still high (14%), especially if we account for the excessive share of long-term unemployed, i.e. people unemployed for more than a year (60.1%) [52].

Unemployment is a reality that affects a growing number of families with young people. The number of Portuguese youth living in unemployed households doubled from 5% before the crisis in 2008 to 10% in 2013 [53]. Although the official statistics were already rather worrying, there has been reports of an underestimation of the size of the problem, as there are dimensions of the unemployment phenomenon that the concept of 'unemployed'[c] does not cover [55]. For example, the Bank of Portugal (central bank of Portugal) highlighted that individuals out of work force that attend state vocational training courses (that are mandatory for many benefit claimants) are classified as employees for the purposes of contributory social security scheme, and therefore do not count as unemployed for the National Statistics [56]. Whilst this was already a common procedure, the number of unemployed in this situation has never been so high in the history of the Portuguese labour market [55]. Also not included in the official unemployment statistics are the discouraged workers, i.e. those who are not currently working and who do not actively seek work (possibly because they feel hopeless). In sum, we can conclude that, realistically, the recession may have created more unemployment than official statistics report. And, the labour market seems to be characterized by a great share of unprotected unemployment, given that only 44% of the Portuguese unemployed individuals are receiving financial benefits [57]. The findings stated above strongly indicate that Portugal, not only had to deal with a fallen economy, structural adjustments, and reduced public spending, but also experienced further and grave deterioration of its labour market.

3.1. Economic Recessions' Effects on Mental Health and Inequalities

All the negative factors entailed by this economic recession (reduced public spending, growth contraction, labour market deterioration) may impact mental health across the social gradient [46,58]. Even before the recession, mental disorders and mental health-related problems were already the main cause of disability, morbidity and premature death, and highly prevalent in Europe, particularly in Portugal [5,59,60]. Due to the growing

[c] The National Statistical Institute of Portugal provides the labour market related statistics for Portugal to the Eurostat and follows the international definition of unemployment "all persons above a specified age who during the reference period were: a) without paid work (i.e. were not in paid employment or self-employment); b) currently available for work; and (c) seeking work (i.e. had taken specific steps in a specified reference period to seek paid employment or self-employment". ILO. Decent work indicators: concepts and definitions ILO manual. 1st ed. Geneva: International Labour Office; 2012.

socioeconomic risk factors to mental health (unemployment, financial strain, debts and job-related problems) several researchers began to argue that the recession was likely to aggravate and boost mental health morbidity and related inequalities [61-66].

In 2011, the WHO launched a booklet entitled "The Impact of Economic Crises on Mental Health" in which a comprehensive framework linking economic crises and mental health outcomes was presented (Fig. I-5). This framework claims that the risks to mental health posed by recessions tend to be higher if social protection and other policy measures do not adequately respond [67].

Since then, several attempts have been made to explain the impact of the economic recession on mental health, through the collection of available evidence [68-73]. Studies have reported that economic deprivation, job loss, and the indebtedness of individuals and families may lead to a worsening of living conditions and ultimately exert a negative influence on health and behaviour of individuals [67,74,75]. Nevertheless, studies are still needed to improve the confirmation of the link between economic recessions and poor mental well-being outcomes.

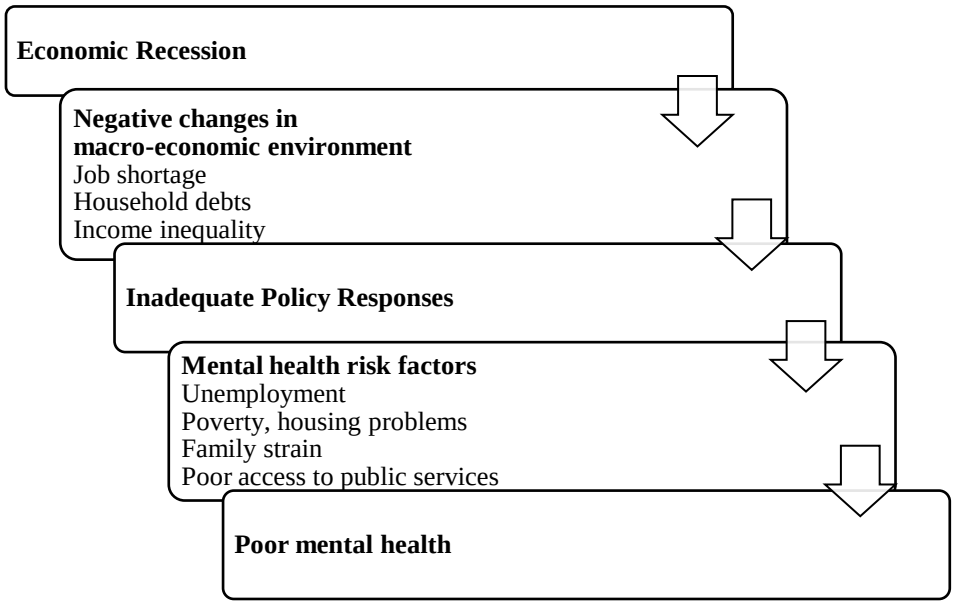

Figure I.5. Theoretical model linking economic recession and poor mental health. Adapted from WHO "The Impact of Economic Crises on Mental Health", 2011.

3.2. Economic Recessions and Adolescents' Well-Being

The potential impact of the economic recession on young people's health is an increasingly important topic in international public policy. As aforementioned, young people's health and well-being are shaped by societal and macroeconomic factors. Given that the longer youth face negative pressures on well-being the worse its impact in terms of development and health assets, assessing adolescents' repercussions of the economic recession is essential for current and future public health policies to respond effectively.

Recently several specific UNICEF reports have been confirming an association between youth well-being decline and recessionary contexts, remarking that the effects are expected to be longer and harder in countries highly impacted by the downturn and facing the highest unemployment rates, including Portugal, Greece and Spain [76-79]. Along with the UNICEF reports, several other research studies have been reporting an increase in socioeconomic disparities on youth well-being that might be anchored to decreases in family incomes and increasing family unemployment that typically accompany recessions [38,80-83].

As a result of the intense concern about the processes whereby the economic recession is expected to impact youth well-being UNICEF has developed a conceptual framework [84]. This framework (see Figure I-6) summarizes how the macroeconomic context and response policies impact households and in turn youth's well-being. The channels of transmission of the negative effects of the recession and austerity measures are essentially three: labour market (e.g. unemployment, deterioration of job conditions), financial market (e.g. low income, low access to credit), and public sector (e.g. health and social protection, budget cuts and higher taxes). As a consequence, many households are impacted in terms of unemployment, reduced income, lack of access to basic services, overall family stress and social exclusion, possibly increasing home violence and less nurture and caring relationships. Ultimately, the deterioration of a household's context in this way has an impact on children well-being and mental health.

Following there is a description of some theoretical models that in the past have tried to explain the process whereby economic recessions can pose greater risk and vulnerability on young people's mental health.

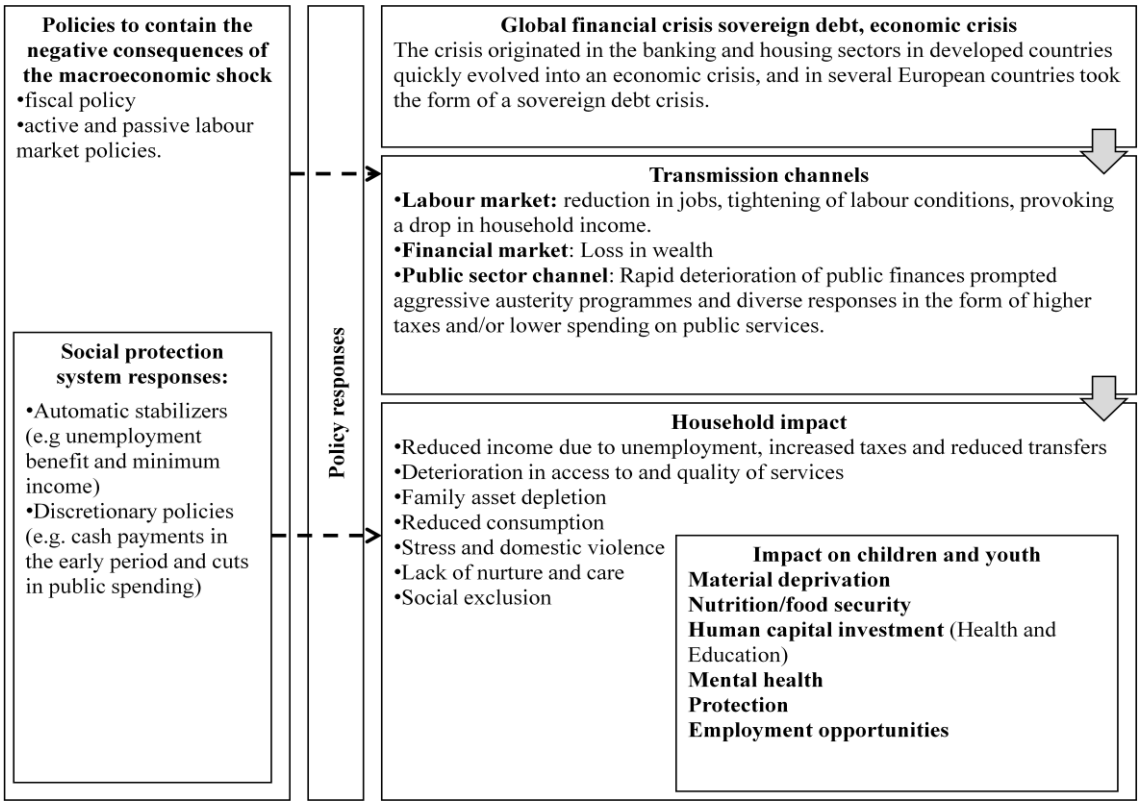

Figure I.6. Adapted model from the UNICEF framework for the impact of economic recession on children and youth. Source: Natali et al. 2014 'Trends in Child Well-being in EU Countries during the Great Recession'.

3.2.1. Family investment model

Within the family investment model, families from higher socioeconomic status can better afford to invest in children's resources (e.g. better schools, food and health care) in comparison to families from lower socioeconomic status. Investment in such resources enables youth to successfully develop physically, emotionally and cognitively [85,86]. However, a major limitation pointed out to this model is that youth optimal development is almost solely a result of the family's capability of economic investment.

3.2.2. Family stress model of economic hardship

This model was developed by Conger and his colleagues to help explain how hardship was influencing families in Iowa during a severe agricultural downturn during the 80's [87]. According to the model, parental distress is heightened by typical recessionary economic changes such as job loss, income decrease and growing debts (Fig. I-7). These changes are associated with increased family conflict and disruptive parent-youth interaction, and consequently associated with worsening health and well-being among

young people [88]. Substantially well-established research evidence on child and adolescent development supported the conception of the Family Stress Model [89-95].

Thus, although the mechanisms by which the economic recession affects young people's mental health are yet to be fully established, we anticipate an increase in mental health problems among youth facing challenging family environments, such as unemployment.

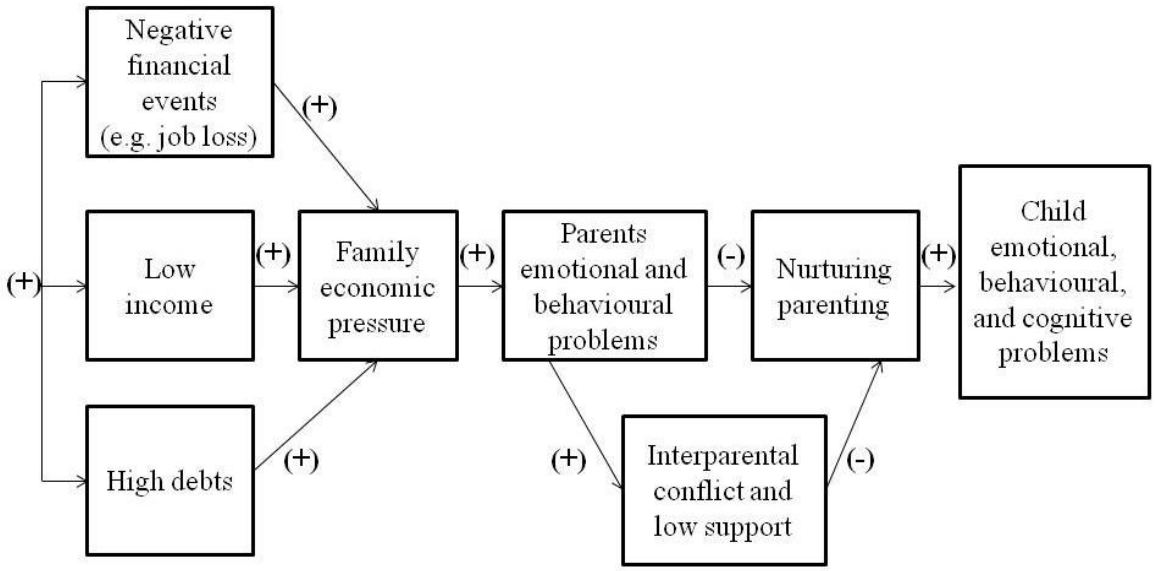

Figure I.7. Family Stress model adapted from Conger and Donnellan 2007 "An Interactionist Perspective on the Socioeconomic Context of Human Development".

4. UNEMPLOYMENT, FAMILY AND YOUTH MENTAL HEALTH

"The greatest burden of economic recession falls on the unemployed."

-Marie Jahoda, in "Economic recession and mental health some conceptual issues"; 1988, p.1.

Although the causes of unemployment may be economic, the effects of unemployment go beyond economics. Studies have found that fluctuations in labour market are more strongly associated with short-term changes in health than other economic indicators [95]. Unemployment threatens public health in general and is a significant factor of inequalities in mental health at three levels: 1) macro-level, 2) individual level and 3) proximal context level (family) [24, 97, 98].

4.1. Macro-Level Unemployment

At a macro-level, a reasonable amount of evidence shows that elevated unemployment rates affect general population well-being and mental health [99-103]. This is especially true in countries with the least developed social protection systems [104-108].

4.2. Individual Job Loss

At the individual level, losing a job is one of the most stressful life events [109], and the research question about its effects on mental health seems to date as far back as 1911 [110]. Nevertheless, it was not until the years of the Great Depression (1929) that the psychological aspects of unemployment became of greater relevance in research [111,112].

In recent studies, unemployment has been highly correlated to poor mental well-being, common mental disorders (e.g. depression and anxiety), higher alcohol intake, drug use, and suicidal behaviours [70,113-115]. Losing one's job during a recessionary context seems to worsen the outcomes [116-119]. Due to all the consequences that job loss brings to people, many theories have tried to explain the social and psychological correlates of unemployment. The most well-known theories of unemployment are described on the next pages.

4.2.1. Jahoda's latent-deprivation model

Jahoda's latent-deprivation model [120] proposes that apart from meeting economic needs, work provides access to five latent benefits that are essential to a person's mental health and well-being:

- Routines and time structure (e.g. deadlines and schedules);
- Activity (e.g. participation in leisure and social activities);
- Regular contact with others and expansion of social support (e.g. social interaction on occupational environments);
- Sense of collective purpose (e.g. working for the collective purposes of the company or society);
- Identity and social status (e.g. being part of a social norm).

According to this model, the levels of access and deprivation to work benefits are strongly linked to individuals' mental health. In an unemployment situation along with the financial difficulties, external routines and sense of direction in life are somewhat lost, people tend to withdrawn from social and leisure activities and, in turn, there is an accentuated reduction of social contact, feelings of being excluded from the collective purposes of the society which may undermine the individual's social status [120]. Well-established research has offered empirical support to this model, showing that deprivation of access to the mentioned benefits of work due to unemployment, accounts for higher levels of psychological distress among individuals [121-125].

4.2.2. Fryer and Payne's agency restriction model

Fryer and Payne's agency restriction model [126,127] adds to Jahoda's model, by supporting the positive relationship between perceptions of deprivation in access to latent benefits and self-experience of distress, but argues that such distress is mainly caused by the loss of (absolute and relative) financial resources, which restrict personal agency to act against the effects of job loss. This has been supported by other studies [123,128,129].

4.2.3. Warr's vitamin model

Warr's vitamin model [130] is a third model of unemployment, which postulates that there are nine specific environmental factors – 'vitamins' - which are associated with mental well-being (opportunity for control, skill use, external goals, variety, environmental clarity, availability of money, physical security, interpersonal contact, and valued social

position). According to the model, both employment and unemployment can be beneficial or harmful depending on the extent to which these 'vitamins' are provided.

We can conclude that these models are not mutually exclusive and research is consensual that both latent and manifest factors contribute to an individual's psychological well-being. Creed and Macintyre [129], together with Waters and Muller [131], have considered an integration of the models to provide a better explanation for the psychological distress experienced by people facing unemployment.

Besides the access to latent and manifest benefits, the unemployed population is very heterogeneous, and the experience of unemployment is complex and likely to differ by other social and demographic moderators. Some deserve to be highlighted:

Gender differences have been found in unemployment related distress. Whilst unemployed women seem to structure their time more efficiently than men, they tend to have poorer mental well-being during the unemployment situation [115,132].

Age related research highlights that younger unemployed people report lower stress, and higher access to social interaction and social status than older unemployed individuals [133-135].

Higher education has been found to reduce the risks of mental health problems on unemployed people because it tends to provide social status, identity and higher income savings [115,136].

Long-term unemployment has been associated with higher psychological distress, depression symptoms and alcohol intake [115,137,138].

Repeated experiences of unemployment seems to worsen the effects of job loss in a so called "scaring effect" [139].

Partnership status related research has found that unemployed individuals living with partners tend to report higher well-being than single individuals [115].

Parenthood status studies say that having children while unemployed entails rewards and costs to well-being. On one hand, being a parent may satisfy some psychological needs and increase social identity while unemployed [140]. On the other hand, however, there is much more evidence that nonparents have better well-being than parents during unemployment [141,142].

4.3. Family Unemployment and Adolescents' Mental Well-Being

The extensive research literature on the individual experience of unemployment listed above show how complex this phenomenon is and what a research challenge it is to capture its impact on the family and on young people. The first reports of the impact of unemployment upon children come from the 1930's Great Depression period. Family unemployment during that period resulted in severe material deprivation, overall poverty and social exclusion for children [112,143]. Studies from that era reported that unemployment impacted the child psychologically rather like their parents [112]. For instance, Williams [144] stated that '*children in these families feel the anxiety of their parents and it affects their behavior*' (p.70). Furthermore, deterioration in family roles and relationships were also documented [145].

Generally, contemporary studies have also reached somewhat to the same conclusions. Much of the research on parental unemployment has been focused on the negative impact on children's school achievement and educational aspirations [146-148]. But the evidence of the consequences of parental unemployment on young people's well-being and mental health is growing.

Thus, in comparison to those living with employed parents, **young people living with unemployed parents are more likely to report:**

- **poorer mental well-being and self-reported health** [149-154];
- **decreased cognitive and social–emotional outcomes** [142,155];
- **higher frequency of psychosomatic symptoms** [152,156,157];
- **higher risk of depression, feelings of loneliness and low self-esteem** [158-161];
- **lower life satisfaction** [162];
- **behavioural problems** (e.g. binge drinking, self-harm and aggressive behaviour) [155,161,163,164].

Other consequences that may indirectly add to the adverse effects of parental unemployment are poorer diets, reduction of extracurricular activities (e.g. sports, music or other activities), and lack of investment in education and health care [79].

Therefore, we might be looking at a chain effect whereby unemployment follows an intergenerational course, which affects parents' well-being but also that of their children [142]. The situation is considered so important in terms of the disadvantage it can produce to young people that both the International Monetary Fund (IMF) and the International

Labour Organization (ILO) have warned that parental unemployment may even reduce children's life expectancy [165].

The interaction between parental unemployment and youth health and well-being is complex and not linear, as many variables might interplay in this relationship. The Family Stress Model described above [166,167] proposes that parental distress caused by deprived environments (e.g. loss of income due to unemployment) impacts youth mental health and well-being through quality of parent-child interaction [168,169]. This model (Figure I-8) helps to explain the impact of parental unemployment on youth mental health and well-being.

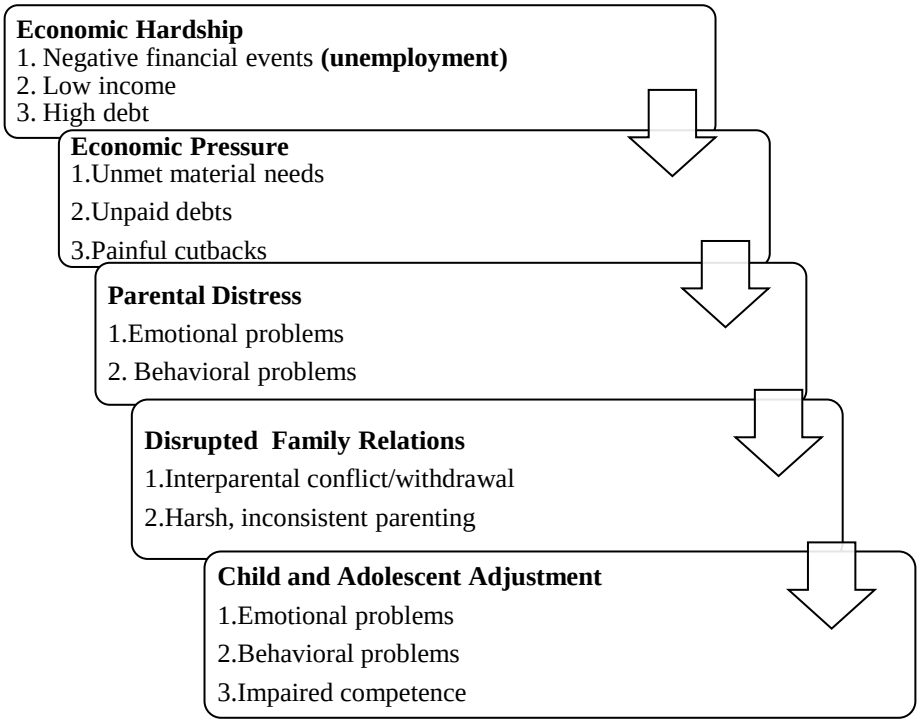

Figure I.8. Simplified illustration of the Family Stress Model adapted from Conger and Conger, 2008 "Handbook of families and poverty".

The model illustrates that unemployment and related increased economic pressure, are risk factors for mental health problems in adults [113,115], which, in turn, increase stress on family relations [98,170,171] and, as a consequence young people's well-being is threatened. Following is a description of evidence for the main factors that may interplay in this process.

Parents' mental health and distress related to the unemployment situation. Several studies have found that parental mental health problems are strongly associated with children's compromised socio-emotional and behavioural development [172-175].

Family financial pressure related to the unemployment situation. Families in which parents are unemployed may experience much lower levels of income and higher financial hardship than working families [77,79,170,176]. Higher family financial strain has a partial negative effect on adolescents' psychosomatic symptoms and health associated with parental job loss [153,157].

Family relations during the unemployment situation. There is supporting evidence that unemployment can both strengthen family relations and create tension and friction, depending on family cohesion prior to the unemployment situation [171]. Either way, family support is a major protection factor against family stress and youth adjustment problems [167, 177]. Nevertheless, parents increased distress, financial deprivation and feelings of personal failure due to unemployment, may cause them to be less nurturing and caring of their children [142,175,178]. Such parental emotional unavailability may create confusion in young people and act as a stressor to their well-being [179].

Gender. Sons and daughters might be affected differently by their parent's unemployment. Studies have shown that girls are more vulnerable to family stress and conflicts and tend to internalize the symptoms related to parent interaction disturbances more [180-182]. However, in relation to parental unemployment, evidence of gender differences is still very limited [158,162].

Age. Older adolescents with unemployed parents might start to worry more about future expenses and their own expectations, which might be perceived as more limited especially considering the poor macroeconomic environment [183]. Moreover, there is evidence that parental unemployment might be positive for increasing child happiness at younger ages, but becomes strongly negative or statistically not significant when children grow up [184]. In sum, although most unemployed parents' have the capacity to provide a caring and nurturing environment for their children, unemployment in the family, related income loss, and other factors, may push parents to decrease material and emotional investment in their children. Lack of well-being and of a nurturing environment in early years can modify youth developmental trajectories and sustain inequalities [38].

5. CYCLE OF INEQUALITY RELATED TO PARENTAL UNEMPLOYMENT AND PUBLIC POLICIES

The evidence above highlighted that living with unemployed parents may amplify young people's vulnerability to the repercussions of the recession. Furthermore, the consequences of parental unemployment on youth well-being are believed to be long-lasting and the probability of unemployment to be passed on to youth is also high [185,186].

There is also evidence that suggests that growing up with parental unemployment increases the likelihood of young people falling into 'not in employment, education or training' - NEET status [185,187]. The most recent data shows that Portuguese NEET rate below 25 years old is high and ranges from 10%-14% [188]. Some of the consequences of falling into NEET status have been described in literature, although we must always consider its heterogeneity: disengagement from life and society, mental health problems, drug and substance abuse, more likely to commit crimes and to have lower life expectancy [189].

Thus, young people living in unemployed households and facing many negative effects of that environment may find themselves locked in a perpetuated cycle of intergenerational disadvantage that compromises the possibilities of achieving the highest health and well-being status possible [38]. Countries' public policies and actions may protect unemployed adults and their children from the deleterious effect of job loss during the economic recession [62,67]. These include labour market measures, family support programmes and social capital activation measures.

5.1. Labour Market Measures

These measures, which can be both 'active' and 'passive', aim to diminish countries' unemployment and related risks. On one hand, 'passive labour market measures' rely on unemployment and associated welfare benefits paid to jobseekers and, on the other hand, 'active labour policies' aim to support jobseekers with enhanced access to training and skills development, certification, job-matching, and career guidance [190,191]. Active labour market policies, together with improved social welfare protection, have been associated with better health among populations [104,192].

Data from OECD and Eurostat shows that after the recession, public spending efforts on active labour market policies as a per cent of GDP have decreased in Portugal along with passive spending [191]. Moreover, as part of the fiscal consolidation measures,

Portugal reduced the maximum period for which unemployment benefits could be paid (even shorten it for older individuals), and strengthened sanctions for claimants who fail to meet the conditions placed on eligibility for benefits, mainly through part or total cessation of payments [190,193]. These measures were followed by substantial drops in benefit recipients despite the high rates of long-term unemployment [194]. Overall, 6 out of 10 unemployed individuals are not receiving unemployment benefits [194]. These groups of people are usually covered by social assistance programmes, which provide little cash benefits for a limited amount of time. In terms of active labour market measures, vocational training and entrepreneurship support programmes are on occasion available for unemployed people that fit the entitlement criteria and most of the adopted measures only address youth unemployment [193].

Thus, in response to growing levels of need, some third sector organizations (non-profit or religious associations) are providing important activation services to jobseekers (e.g. 'GIAS'- Social mutual-aid groups[d]; 'GEPE' - Self-help groups for Job Search[e]). Most of these services aim at peer-supported skill development to promote employability and social inclusion, active job searches and entrepreneurship project management. These programmes, however, have not been systematically available and as far as we know have not been evaluated for efficacy. Altogether, there is a substantial need for improving active labour market programmes in Portugal [193].

Other countries (Ireland, Finland, China and the Netherlands) have been successful in implementing group-based psycho-educational interventions to promote high-quality reemployment, and prevent the negative outcomes on mental health associated with the job-seeking situation – the so called JOBS model of support [195-199]. These interventions are intended to better assist individuals to get reemployed, however, there have been reports that if made mandatory they are less effective and may legitimize the imposition of unpaid work (e.g. mandatory placements) [200]. Moreover, it has been claimed that linking unemployment to poor mental health *per se*, can heighten stigma experienced by jobseekers [200]. Thus, intervention should be carefully planned and delivered, and always in a voluntary basis to prevent turning structural problems resultant of the economic recession (lack of jobs) into pathologization of the unemployed.

[d] http://www.caritas.pt/site/nacional/index.php?option=com_content&view=article&id=3571:grupos-de-apoio-promovem-auto-estima-dos-desempregados&catid=538:politicas-sociais&Itemid=61
[e] http://www.gepe.pt/

5.2. Family Support Programmes

Positive family relationships and parenting practices have been associated with positive effects on families and adolescents' well-being [17,201,202]. Thus, investing in cost-effective actions that promote the mental well-being of parents and their children at this critical time of economic recession may bring short-term health outcomes and long-lasting economic gains to societies [104,203,204].

Parenting and family support programmes should take a positive and assets-based approach to maximise families' financial inclusion and capability (improving parents' capacity to access and sustain good quality employment) and progress young people's well-being and life chances, by strengthening the context in which they develop [202].

As a response to the increasing pressure on families, the Portuguese government launched a Social Emergency Programme aiming to support vulnerable families (unemployed couples with dependent children and lone parents), by granting them a 10% increase in their social benefits, and by reinforcing social canteens to ensure daily meals [205]. However, data also shows that child poverty is growing [77] and that severe cuts have been made in child care benefits [206]. At the national level, parenting and family support initiatives and resources are scarce, and systematic delivery of programmes is rare and mainly provided by the third sector (e.g. 'O tesouro das famílias[f]'; 'Construir famílias'; 'Mais família') [207,208]. Most of these programmes are established in two international evidenced-based parenting programmes, 'The Incredible Years' and 'Triple P', which aim to improve parenting skills, parents' sense of competence, improved couples' and parent-child communication, and reduce parenting stress in families [209, 210].

Overall, parenting support programmes are evidence-based tools to moderate the intergenerational transmission of distress and health inequalities between parents and their children [24], and may be advantageously made available for families in need and that voluntarily agree to adhere.

5.3. Community Engagement

Engaging communities correlates positively with reduced social inequalities, health outcomes, self-efficacy and perceived social support [67,211], and may also protect youth development in the context of an economic crisis [212,213].

[f] http://www.gaf.pt/tesourofamilias/

Communities have better knowledge about local resources and assets, local socioeconomic stressors and the unmet needs for support. This information is useful to maximise resource allocation and target efficient solutions through citizens' insights on their own needs, and will help build the case for and support action at the local level [214]. Additionally, empowering communities may help improve local economy and consequently local labour market.

Taking into consideration the spending restrictions and limited resources of the recessionary context, a shift towards investment in developing meaningful and inclusive participation skills in the communities, however challenging, can make a positive difference to mental health outcomes and adequate public policy responses.

6. SUMMARY: "NO ONE MUST BE LEFT BEHIND"

This quote comes from the United Nations Post-2015 agenda for sustainable development [215], and means essentially that the inclusion of all who can contribute is necessary to strengthen economies and overall growth and development of societies. The third goal of this new agenda is to 'ensure healthy lives and promote well-being for all at all ages' (p.16), which includes the prevention and treatment of mental ill-health [215]. The agenda also states that young people, particularly those facing vulnerable situations, should be provided with a nurturing environment and given opportunities to learn and acquire the skills needed for the full realization of their rights and potential in order to fully participate and contribute to society.

During the economic recession and labour market crisis, there are numerous factors (e.g. individual and contextual: family, community and structural) that can risk or protect the mental health and well-being of populations. As mentioned earlier, unemployment is a particularly significant risk for the development of mental health problems in individuals and young people. Nonetheless, at the beginning of this research project and dissertation only a small number studies to our knowledge had completed a systematic review of evidence addressing the associations between mental health outcomes and economic recession related factors [216]. The research gap of the recessionary effects and unemployment on individuals, families and youth health was especially large in Portugal despite the heightened unemployment rates (reaching almost 18% in 2013) [220,219,36,94], the elevated child deprivation rates [77,176], the already high prevalence of mental health disorders (23%) [5], the elevated rate of income inequality [217], and the government spending cuts on health and relative expenditure [218].

Thus, by acknowledging the current context, the developmental goals proposed for the near future, and the above mentioned research gaps, this thesis tries to gather some knowledge about the possible effects of the economic recession on mental health, in particular among those facing unemployment situations, using a life-course perspective ranging from unemployed adults to young people living with unemployed parents [19]. In the following chapters the research aims and methods are described, findings are discussed, conclusions and implications are drawn with the intent of helping public policy arrangements and actions that can positively shape population's mental health and well-being which are essential to increase nations' development goals and achieve desirable social and economic growth.

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CHAPTER II - EMPIRICAL STUDY

1. RESEARCH AIMS AND HYPOTHESES

The general aim of the study was to contribute to widen knowledge about the impact of the current economic recession on mental health outcomes of individuals, by specifically focusing on the relations between individual unemployment and mental health, and the resulting effects on the family relations and mental well-being of young people. Associated with this general aim there were four specific aims that were addressed in 11 scientific papers that form the empirical basis of this dissertation. The specific aims were developed to address the purpose of this thesis which is achieving a life-course perspective of the unemployment effects in the unique context of economic recession ranging from the adult, the parent and the youth perceptions.

Accordingly, the specific aims are outlined below:

1. To clarify the associations between economic recession related factors and mental health outcomes and to characterize the most vulnerable groups of the population.

2. To investigate the prevalence of low psychological well-being, and factors related to the psychological well-being of adult job seekers.

3. To explore parents' perspectives on how they, their family life and their adolescent children were affected by their unemployment situation during the economic recession.

4. To identify parental unemployment associations with young people's perceptions of their mental well-being and perceived repercussions of the economic recession.

The first specific aim was addressed in a systematic literature review of 101 published research papers (2004-2014) reporting on the associations between economic recession related factors and mental health outcomes (empirical paper 1).

The second specific aim was addressed in two different empirical studies. In one study (empirical paper 2) a sample of jobseekers from Lisbon was characterized in terms of their perceived psychological distress in relation to socio-demographic variables and the access to latent and manifest benefits of employment. The second study (empirical paper 3) analysed the associations between life satisfaction, household compositions and the access to latent and manifest benefits of employment by partnership status to test if partnered individuals are more protected against the negative effects of unemployment than single

people, and if being a parent and being partnered with an unemployed person are linked to higher dissatisfaction.

To address the third aim, two studies were conducted using unemployed parents' perceptions about their interaction with their adolescent-child and related emotional well-being during the situation of unemployment (empirical studies 4 and 5).

The fourth and last aim was addressed by six empirical studies (studies 6-11) that focused the associations between parental unemployment and youth's perceptions of mental well-being, future and educational expectations and repercussions of the economic recession in national representative samples.

A summary of the hypotheses for each specific aim is displayed on Table II-1.

Table II.1. Aims and hypotheses of the scientific studies

Specific Aim	Hypotheses	Scientific Paper
1) To clarify the associations between economic recession related factors and mental health outcomes, and to characterize the most vulnerable groups of the population	• During economic recessions the most important factors associated with mental health outcomes are: unemployment, income decline and unmanageable debts. • The most vulnerable groups of the population during an economic recession are: people facing unemployment and economic deprivation, their families and young people affected by such factors.	1
2) To investigate the prevalence of low psychological well-being, and factors related to the low psychological well-being of adult job seekers	• Unemployed people report low levels of psychological well-being; • Financial deprivation and low access to latent benefits of work are associated with low levels of psychological well-being; • Being a woman, older age, lower educated, being single, experiencing long-term unemployment and repeated unemployment situation is associated with low levels of psychological well-being; • Single unemployed people report lower mental well-being compared to partnered individuals; • Being a parent while unemployed is associated with lower levels of mental well-being; • The association between mental well-being and access to benefits of employment differs by partnership status and gender.	2 3
3) To explore parents' perspectives on how they and their family life and their adolescent children were affected by their unemployment situation during the economic recession	• Based on the Family Stress Model, parental distress during unemployment will be positively associated with increased youth emotional problems; • Parent-child relationship and financial deprivation moderate the effect of unemployment on youth mental well-being; • Unemployed parents perceive the negative effects of unemployment on children's well-being, but also in terms of their family interactions, psychological well-being and financial situation.	4 5
4) To identify parental unemployment associations with young people's perceptions of their mental well-being and perceived repercussions of the economic recession	• Compared to those living with employed parents, Portuguese young people with jobless parents report: higher frequency of psychological complaints, lower future and educational expectations, lower life satisfaction, and report higher frequency of repercussions of the economic recession; • Associations vary by young people's age and gender; • Paternal and maternal unemployment affects youth' well-being differentially by sociodemographic factors; • Satisfaction with the family life is associated with higher levels of youth well-being (especially in girls) in the context of family unemployment; • The perceived effect of parental unemployment on youth low life satisfaction levels is moderated by strain in parent-child relationship and by financial deprivation; • Well-being outcomes of adolescents from unemployed families are expected to be worse in Portugal compared to another country with lower unemployment rates and higher unemployment and family protection measures.	6 7 8 9 10 11

2. METHODS

This research project addressed its aims in three study phases.

The first phase addressed the first aim of this thesis by systematically reviewing the current available evidence relating economic recession factors and mental health outcomes (the specific methods of this research phase are presented on page 79).

The second and third research phases, addressed the second, third and fourth aims of the thesis using a two informants approach (unemployed adults and young people with unemployed parents). Data for the second and third research phases came from two sources:

Research Phase II Cross-sectional study directed to unemployment benefit claimants from Lisbon (Portugal) in the context of economic recession.

Research Phase III Portuguese Health Behaviour in School-aged Children Study (HBSC/WHO)

Subsequently, the study designs, participants and general procedures for the second and third study phases are described.

2.1. Research Phase II: Cross-Sectional Study Directed to Unemployment Benefit Claimants from Lisbon in the Context of Economic Recession

This was a cross-sectional study focusing on unemployment benefit claimants from Lisbon, Portugal. Lisbon was chosen to run the study because at the time of data collection this city registered the highest unemployment rate (18.5%) in Portugal and therefore gave the possibility of getting a large sample of unemployed participants [1].

At the time of this study, Portuguese unemployment benefit claimants were required to certify they were actively seeking work in order to continue receiving state benefits. This certification needed to be done personally and at their local civil parish every two weeks. Participants for the study were approached at five civil parishes of Lisbon: Benfica, São João, São João de Deus, São Francisco Xavier and Campolide. These civil parishes were recommended to the researcher by the Lisbon's City Council because they contained local unemployment support offices ('gabinetes de inserção professional – GIPs') and therefore gave the possibility of maximizing the percentage of people who responded to the survey. From April to May 2013, the researcher went to these civil

parishes and handed self-administered questionnaires to all unemployed people who voluntarily agreed to respond.

All participants were asked to answer a mandatory section of the questionnaire (Section A) and, additionally, participants with adolescent children between the ages of 10 and 19 years-old were asked to answer a second section of the questionnaire (Section B).

The following pages provide relevant information about the characterization of the population involved, the instruments (Section A and B) and the variables used.

2.1.1. Study Participants

The sample consisted of unemployed adults from Lisbon who were registered at the Job Centre and were receiving state unemployment benefits. At the time of data collection, 9% of people in Lisbon were registered as unemployed in the Job Centre from a total population of 260,405 economically active people [2]. The estimated sample size required for the study was 549 in order to obtain a confidence interval level of .95 and at least 80% power for analysis. Accordingly, 1000 self-administered questionnaires were handed to all unemployed people who voluntarily agreed to respond during their bi-weekly presentation to their local civil parish as part of the requirements to continue receiving the state unemployment benefits. In total, 750 questionnaires were returned completed (75%) and 2 were dropped from the analysis for missing important socio-demographic data. A final response rate of 74.8% was obtained and 748 unemployed adults (386 males and 362 females) with a mean age of 43 years-old (±11.4) took part in the study.

Table II-2 presents the descriptive characteristics of the study population. More than half of the general participants had attained up to secondary education (55%), and the majority (58%) were living with a partner who was employed (64%). In terms of parental status, just over half (51%) reported to have dependent children, out of which 15% had adolescent children. Most of the participants were unemployed for the first time (64%) and for less than a year (57%). In terms of the unemployed parents subsample, there were 112 participants (44% fathers and 47% mothers) with a mean age of 45 years-old (±6.6). Most of the unemployed parents have attained up to secondary education (55%) and were not living alone (95%). More than half were living with a partner (67%) and there were 32% unemployed couples. Regarding exposure and duration of unemployment, 68% of the unemployed parents were experiencing unemployment for the first time and 57% were unemployed for less than a year.

Table II.2. Descriptive characteristics of the unemployed adults sample from Lisbon, Portugal.

Variables	Total N=748	Unemployed parents (subsample) N = 112
	% (N)	% (N)
Gender		
male	51.6 (386)	44.3 (54)
female	48.4 (362)	46.7 (57)
Age		
mean age (SD)	42.7 (±11.4)	45.0 (±6.6)
≤40 years	47.5 (354)	26.8 (30)
≥41 years	52.5 (391)	73.2 (82)
Level of education		
secondary level	54.7 (405)	54.5 (61)
higher education	45.3 (336)	45.5 (51)
Household type		
living alone	21.0 (157)	5.4 (6)
cohabiting with other people	79.0 (589)	94.6 (106)
Partnership status		
single	42.2 (315)	67.0 (75)
cohabiting with a partner	57.8 (432)	67.6 (48)
employed partner	64.1 (255)	32.4 (23)
unemployed partner	35.9 (143)	33.0 (37)
Parental status		
no children	48.7 (364)	-
dependent children	51.3 (383)	100 (112)
adolescent children	15.0 (112)	100 (112)
Unemployment spells		
1st time	64.0 (476)	67.6 (75)
repeated exposure	36.0 (268)	32.4 (36)
Unemployment duration		
short-term (< 1 year)	57.4 (425)	56.8 (63)
long-term (≥ 1 year)	42.6 (315)	43.2 (48)

2.1.2. Instruments

The most widely used questionnaires in unemployed research were reviewed together with adaptation and validation studies for the Portuguese population. Then a finalized version of the questionnaire was sent to a panel of experts from the Aventura Social research team[g] for further suggestions and recommendations. In the end, the 'Psychosocial Impact of Unemployment on Individuals and Families in the context of the Economic Recession Questionnaire' was developed.

Before applying the questionnaire to the study population, it was piloted with ten unemployed adults who gave suggestions relating to the way questions were formulated and changes were made accordingly. The final version of the questionnaire included two

[g] The "Aventura Social" is a well-recognized research team in Portugal, coordinated by Professor Dr. Margarida Gaspar de Matos, which is composed by several senior researchers that conduct regular population studies and universal and selective prevention interventions among the Portuguese adolescent population. (http://aventurasocial.com/)

sections (see appendix I for the questionnaire). The first and mandatory section (Section A) was answered by all participants and the second section (Section B) was only answered by participants with dependent adolescent children between the ages of 10 and 19 years-old[h].

Each section of the questionnaire (A and B) is explained below:

2.1.2.1. Questionnaire Section A

The Section A of the questionnaire was to be answered by all participants and was divided into four parts:

I - socio-demographic questions and a question on life satisfaction – Cantril Ladder of life satisfaction [3];

II - deprivation of access to the latent and manifest benefits of work scale – LAMB Scale [4,5];

III - psychological distress scale - General Health Questionnaire-12 [6];

IV - questions about service needs and use (because this was not a research domain under study, these questions were only used for an exploratory analysis presented in the appendix V).

2.1.2.2. Questionnaire Section B

Section B of the questionnaire was only to be answered by unemployed parents with adolescent chidren. The questionnaire included questions focusing predominantly on the possible effects of the unemployment situation on the parent-youth relationship and perceived youth emotional well-being.

2.1.3. Variables

2.1.3.1. Socio-demographic variables

These variables were used to help characterize the participants or used to divide participants into categories for subsample analyses. These included: gender, age, nationality, education level, partnership status, household composition, parental status, number of unemployment spells, and unemployment duration.

[h] WHO definition of the adolescence period.

2.1.3.2. Outcome variables in Section A

The Cantril's self-anchoring ladder of life satisfaction [3], was chosen because life satisfaction, the global evaluation of one's life, is a common key indicator of a persons' subjective well-being [7]. Also, various studies have found that unemployment leads to a significantly greater dissatisfaction with life and an accentuated drop in well-being [8-11]

The **Latent and Manifest Benefits of Work-LAMB-Scale** [4] was adapted and validated for the Portuguese population by Sousa-Ribeiro and Coimbra [5]. This was used to assess the deprivation of latent and manifest benefits of work. The LAMB-Scale is organized in a factorial structure of six components, which can be identified with the latent benefits of work (collective purpose, social contact, status, time structure, enforced activity) stated in the Latent Deprivation Model [12], and with the manifest benefit of work (financial income) stated in Fryer's Agency Restriction Model [13].

The domain benefits were presented as 34 bipolar phrased statements that correspond, on the one hand to access and, on the other hand, to the deprivation of access to a particular benefit (e.g. time structure: "I often have too much free time during the daytime" and "I usually do not have too much free time during daytime"). For each phrased statement respondents identified their degree of agreement on a seven-point scale. Higher scores represented greater perception of deprivation to access the particular benefit. The psychometric properties of the LAMB scale have been extensively examined by a number of studies with unemployed samples and have shown good psychometric qualities [4,14,15].

The **General Health Questionnaire-12** was used to measure mental well-being among the unemployed sample. This is a 12 item instrument with good psychometric properties to assess psychological distress or minor psychiatric disorders [16] and has been adapted and validated for the Portuguese population [17]. This measure has been widely used and recommended for use as a screening device in occupational settings and unemployment research [18]. Some examples of the items in the GHQ-12 are: 1) being able to concentrate on whatever you are doing; 2) lost much sleep over worry; 3) felt constantly under strain; and 4) been losing self-confidence in yourself. Responses were scored on a four-point scale from zero to three, with higher scores indicating greater psychological distress.

2.1.3.3. Outcome variables in Section B

Change in youth emotional problems related to parental unemployment was based on the self-rated health variable of the HBSC/WHO study [19]. This variable assessed parents' perception of the presence of emotional problems among the adolescents due to their unemployment situation. Respondents answered the question 'In your opinion, how much has your unemployment negatively affected your adolescent's emotional well-being?' using a 4 point rating scale (not at all-very much).

Perception of parent-youth relationship was used to assess parents' perception of how much the unemployment negatively affected the relationship with their adolescent in a scale from 1 to 4 (not at all-very much).

Subjective experiences about family life changes due to unemployment were assessed using an open question regarding participants' perception of the changes that occurred in terms of family life as a result of their unemployment: "Please use the space provided to elaborate on any changes to your family life due to the unemployment situation or to write down other comments". Theoretically based on the Family Stress Model [20] the responses to this open-ended question were coded as follow: (1) unemployment as a source of economic hardship and pressure; (2) unemployment as a source of change in family relations; (3) unemployment as a source of distress; (4) unemployment as a source of low youth well-being.

2.1.4. Data Input, Screening Prior to Statistical Analysis, Missing Values and Psychometric Properties

Survey data were transferred to an electronic data file in SPSS 22.0 (Statistical Package for the Social Sciences). This file was examined and data was cleaned prior to statistical analyses. All variables were checked for data inaccuracy by running SPSS frequencies. This was followed by missing values' analysis of the data. To manage missing data we used the expectation maximization approach [21]. This was executed by SPSS which estimated the means, variances, and covariance from the individuals whose data was missing, while age and gender where controlled.

2.1.4.1. Factorial structure and psychometric statistics of the instruments used

The two instruments included in Section A (parts II and III) of the questionnaire were tested for reliability and factorability.

Latent and Manifest Benefits of Work-LAMB-Scale - The coefficient of internal consistency (Cronbach's alpha) for the current sample of unemployed adults was $\alpha = 0.90$. An exploratory factor analysis (EFA) was performed to reveal the underlying structure of the set of the LAMB-Scale components. An examination of the Kaiser-Meyer Olkin measure of sampling adequacy suggested that the sample was factorable (KMO=.908) and Bartlett's test of sphericity was significant [χ^2 (561) = 12024.522, $p \leq .001$]. Finally, the communalities were all above .3 loadings.

A principle components analysis using an orthogonal rotation (varimax method) was used because the primary purpose was to identify and compute composite coping scores for the factors. The 34 items loaded on 6 factors. The initial eigenvalues showed that the first factor (financial income) explained 24.3% of the variance, the second factor (time structure) 13.6% of the variance, the third factor (social contact) 10.1% of the variance, the fourth factor (status) 5.2% of the variance, the fifth factor (activity) 4.5% of the variance and the sixth factor (collective purpose) 3.5% of the variance. The six factor solution explained 61.2% of the variance. The 34 items and their factor loading matrix are reported on Table II-3. The eigenvalues, percentage of variance explained and Cronbach's internal reliabilities are presented on Table II-4.

General Health Questionnaire 12- The coefficient of internal consistency of the 12-item GHQ tested by the Cronbach's alpha for the current sample was $\alpha = 0.92$, showing a good reliability. The GHQ-12 was tested using the Kaiser-Meyer-Olkin (KMO) Test and Bartlett's Test of Sphericity to determine its factorability. For this study the KMO measure was .94 and Bartlett's test of sphericity was significant [χ^2 (66) = 4463.791, $p \leq .001$] indicating suitability for factor analysis. Afterward, a Principal Component Analysis (PCA) with varimax rotation was performed and a factor structure of the GHQ-12 was obtained. There was only one eigenvalue greater than 1.00 which explained 53% of the total variance of the scale. In Table II-5 the correlation co-efficients show the relationship between each of the 12 items of the scale.

2.1.5. Ethics

Ethical approval was granted by the NOVA Medical School Ethics Committee and National Committee for Data Protection. Moreover, the survey was approved by the Lisbon City Council and all five civil parishes (Benfica, São João, São João de Deus, São Francisco de Xavier and Campolide) gave approval for data collection (See appendices II, III, IV). Informed consent was obtained from all participants included in the study, and confidentiality was assured with anonymous responses to the questionnaire.

Table II.3. Principal axis factor estimates of the orthogonal (Varimax with Kaiser Normalization) factor loadings for the 34-item LAMB scale

Item	Factor					
	1	2	3	4	5	6
Financial Strain						
3. From the income I receive I often have money left for savings / From the income I receive I rarely have money left for savings	.616					
10. My income usually allows me to do the things I want / My income rarely allows me to do the things I want	.820					
18. My level of income usually allows me to make plans for the future / My level of income rarely allows me to make plans for the future	.847					
21. My income doesn't restrict me from living as well as my friends / My income restricts me from living as well as my friends	.810					
26. My income usually allows me to have leisure activities as often as I like / My income rarely allows me to have leisure activities as often as I like	.776					
33. I often have enough money to buy treats for myself / I rarely have enough money to buy treats for myself	.805					
Time Structure						
1. There is usually too much spare time in my day / There is rarely too much spare time in my day		.765				
8. Most of the day I have things to do at certain times/ I rarely have things to do at certain times most of the day		.607				
14. Time usually drags for me / Time rarely drags for me		.672				
16. I often wish I had more things to do to fill up the time in my days / I rarely wish I had more things to do to fill up the time in my days		.652				
20. I usually keep busy most of the day / I rarely keep busy most of the day		.428				
23. I often have nothing to do / I rarely have nothing to do		.743				
31. I often have a lot of time on my hands / I rarely have a lot of time on my hands		.726				
Social Contact						
7. I often meet new people / I seldom meet new people			.554			
11. I regularly engage in social activities with people I don't know / I rarely engage in social activities with people I know			.696			
19. I usually have a lot of opportunities to mix with people / I rarely have a lot of opportunities to mix with people			.711			
24. I often go out and meet with others / I rarely go out and meet with others			.732			
27. I regularly engage in social activities with others / I rarely engage in social activities with others			.723			
30. I rarely have a lot of opportunities to meet friends/ I usually have a lot of opportunities to meet friends			.432			
34. I usually spend a lot of time with other people / I rarely spend a lot of time with other people			.753			

Table II - 3. (cont.) Principal axis factor estimates of the orthogonal (Varimax with Kaiser Normalization) factor loadings for the 34-item LAMB scale

Status			
4. I am usually important to my friends / I am rarely important to my friends	.755		
12. My friends usually value my company / My friends rarely value my company	.752		
22. I am often valued by the people around me / I am rarely valued by the people around me	.728		
25. In general, people respect me/ In general, people do not respect me.	.654		
Activity			
5. I always catch up with the things I have to do / I rarely catch up with the things I have to do		.674	
6. I have a good balance in my day between responsibilities and free time / I do not have a good balance in my day between responsibilities and free time		.692	
15. I usually do all the things I have to / I rarely do all the things I have to		.724	
17. My days are usually well organised / My days are usually not well organised		.746	
Collective Purpose			
2. I hold a valuable position in society / I do not hold a valuable position in society			.532
9. I often feel a valuable part of society / I seldom feel a valuable part of society			.613
13. I contribute greatly to my community / I contribute minimally to my community			.675
29. I often feel that I make a meaningful contribution to society / I rarely feel that I make a meaningful contribution to society			.751
32. I usually feel very much a part of my community / I rarely feel very much a part of my community			.724

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table II.4. Eigenvalues, percentage of variance explained, Cronbach alpha and the inter-factor correlations for the six factors of the 34-item LAMB-Scale.

Factor	Eigenvalues	% Variance Explained	Alpha						Item-Total Correlation*
1. Financial Strain	8.260	24.294	.882	1.000	.176	.353	-.056	-.003	.308	.279
2. Time Structure	4.610	13.560	.848		1.000	.194	.094	-.046	.233	.214
3. Social Contact	3.447	10.138	.847			1.000	.483	.344	.522	.602
4. Status	1.782	5.241	.875				1.000	.564	.450	.430
5. Activity	1.530	4.499	.805					1.000	.377	.322
6. Collective Purpose	1.186	3.488	.813						1.000	.606

**Average inter-factor correlation: .41*

Table II.5. Means (m), Standard Deviation (SD) Inter-Item Correlation Matrix for the 12 items in GHQ-12

	Item 1	**Item 2**	**Item 3**	**Item 4**	**Item 5**	**Item 6**	**Item 7**	**Item 8**	**Item 9**	**Item 10**	**Item 11**	**Item 12**	**Item-Total Correlation***
Item 1	1.000												.661
Item 2	.496	1.000											.631
Item 3	.559	.402	1.000										.643
Item 4	.497	.398	.538	1.000									.626
Item 5	.444	.551	.384	.377	1.000								.618
Item 6	.434	.514	.403	.435	.537	1.000							.644
Item 7	.507	.419	.539	.510	.456	.420	1.000						.671
Item 8	.513	.472	.490	.548	.460	.471	.589	1.000					.713
Item 9	.514	.551	.444	.457	.546	.584	.552	.566	1.000				.744
Item 10	.479	.426	.490	.457	.457	.492	.478	.554	.607	1.000			.712
Item 11	.384	.373	.444	.393	.313	.383	.411	.463	.472	.649	1.000		.596
Item 12	.526	.471	.546	.495	.435	.478	.567	.597	.593	.558	.513	1.000	.723
Mean Score	1.54	1.75	1.39	1.35	1.77	1.63	1.53	1.50	1.72	1.21	.86	1.46	
SD	(.767)	(.957)	(.740)	(.705)	(.922)	(.931)	(.808)	(.757)	(.989)	(1.045)	(1.021)	(.736)	

2.2. Research Phase III: Portuguese Health Behaviour in School-aged Children Study (HBSC/WHO)

The Portuguese Health Behaviour in School-Aged Children study (HBSC/WHO) is a cross-national study performed in Portugal every four years since 1996 and is coordinated by its principal investigator Professor Dr. Margarida Gaspar de Matos from the University of Lisbon [22-24]. It is a World Health Organization (WHO) collaborative study that assesses school-aged children's health, well-being and their determinants in 44 countries in North America and Europe [25]. The overall purpose of HBSC/WHO study is to help inform policy makers on how to improve young people's lives and well-being. All countries participating in the HBSC/WHO study follow a standardized research protocol [26,27]. The six last papers of this thesis used data from the Portuguese HBSC/WHO study from 2010 and 2014.

2.2.1. Study Participants

For this study and for each HBSC survey wave (2010 and 2014), there was a nationally representative sample of students with an average age of approximately 14-15 years old. As specified by the HBSC international research protocol, participants were recruited via a clustered sampling design to meet the required number of students for each school grade from selected national public schools [26]. For the purpose of this particular study, only respondents living with both parents were included to avoid a confounding effect of family composition.

The sample from the HBSC 2010 study consisted of 4541 Portuguese adolescents (48% boys and 52% girls) attending 6th, 8th and 10th school grades and with a mean age of 14 years old (SD=1.3). The proportion of adolescents living with both jobless parents was about 3%, from which 6% were living with a jobless father and 19% were living with a jobless mother.

The sample from the HBSC 2014 study consisted of 3152 Portuguese adolescents (47% boys and 53% girls) attending 8th and 10th school grades and with a mean age of 15 years old (SD=1.2). The proportion of adolescents living with both non-employed parents was 4%, and there were more adolescents living with a jobless father (8%) and fewer adolescents living with a jobless mother (18%). Additionally, 19% of the adolescents reported to be living with at least one parent currently seeking for a job.

2.2.2. Instruments

Each HBSC survey consists of 75 items measuring background factors (e.g., socioeconomic status, family structure), individual and social resources (e.g., body image, school environment), health behaviours (e.g., smoking, dieting, sexual behaviour, violence), and health outcomes (e.g., life satisfaction, psychological well-being, and self-reported health). For the current dissertation, only the variables summarized in Table II-6 were included in the analysis.

2.2.3. Variables

2.2.3.1. Exposure variable

For the 6 and 7 studies, four groups of parental employment status were considered: 1) both parents employed, 2) both parents non-employed; 3) father non-employed (father is jobless and mother is employed); 4) and mother non-employed (mother is jobless and father is employed). For the subsequent paper, the analysis addressed two groups of parental employment status: 1) paternal unemployment (father is jobless and seeking job) and 2) maternal unemployment (mother is jobless and seeking job). For the remaining papers two groups were considered: 1) both parents employed; 2) at least one parent unemployed (both parents were unemployed and looking for job; only the father was unemployed and looking for job; only the mother was unemployed and looking for job).

2.2.3.2. Outcome variables

We used six outcome variables for testing youth well-being (see Table II-6) across parental employment status.

HBSC Symptom Checklist (HBSC-SCL). This scale, which has two different dimensions (somatic and psychological symptoms), has been validated in a number of studies with young people [28, 29]. It is composed of 8 items that ask young people how often in the last six months they have experienced: 1) headache, 2) stomach-ache, 3) backache, 4) feeling low, 5) difficulty getting into sleeping, 6) irritability, 7) dizziness and, 8) nervousness.

Life satisfaction. This outcome was measured using the Cantril Ladder [3] on which adolescents rated their current life satisfaction as a measure of subjective well-being. They were asked to indicate on a ladder, where 10 corresponded to the best possible life and 0 to

the worst possible life, where they stood at the time. Life satisfaction is an important component of mental well-being [30] and this scale has been validated and used in several studies with adolescent populations [31,32].

Emotional well-being related to father and/or mother unemployment status. This measure was incorporated on the HBSC/WHO survey of 2014 after being pilot-tested and revised by a panel of experts from the Aventura Social research team. This measure was based on the self-reported health status scale[33] and was used to increase the trustworthiness of the results obtained with the adult sample, to provide a more complete picture of impact of parental unemployment on adolescent's psychological well-being. Respondents were asked to rate how much their father's or mother's unemployment negatively affected their emotional well-being on a rating scale of one to four points (not at all to very much).

Satisfaction with the family life and peer interactions. These outcomes were evaluated with two separate Cantril's self-anchoring ladders[3]. Individuals were asked to picture a ladder with 10 steps and to tick next to the number that best described where they stood at the moment. The top of the ladder, 10 was the best possible family environment or peer interactions and at the bottom, 0 was the worst possible.

Adolescents' future and educational aspirations. This measure was a self-rating scale where adolescents' were asked to report how frequently (never, rarely, sometimes *vs.* often, always) they set up goals and plans for the future; think about completing high school or professional education and; aspire to go on to university or further education upon leaving high school.

Economic crisis repercussions scale. This scale is composed of 15 items that evaluate experiences related to the economic crisis. These items were inspired in the findings of the research report of UNICEF Ireland "Change the Future: Experiencing Youth in Contemporary Ireland. Happiness, Bullying and the Recession" [34], pilot-tested and revised by a panel of experts from the Aventura Social research team. The items were then added to the Portuguese HBSC/WHO 2014 survey and suggested for use to the HBSC network. Greece and Spain agreed on also adding the items to their national surveys in 2014 [35]. The 15 items loaded on 3 subscales: minor lifestyle changes, negative lifestyle changes and extreme deprivation. Due to multicollinearity issues with the parental employment status variable this last factor was not considered in the analyses. A brief explanation for that is presented in the following pages.

2.2.3.3. Covariate Variables

To avoid a confounding impact of socioeconomic status in the data analysis we controlled for family affluence or subjective family wealth (see Table II-6).

The family affluence scale. This variable was used as a proxy of young people's socioeconomic status (SES). The scale included four items assessing self-reported material affluence (e.g. car or computer ownership, family holidays last year and own bedroom) [36] and the responses were coded as "low SES", "medium SES" and "high SES" according to the summed score of the items. This scale has been validated and widely used in research with adolescent populations [37].

Subjective family wealth. This indicator combines the perception of family absolute and relative economic position and provides a wider estimate of family's socioeconomic position. It is measured by asking 'How well-off do you think your family is?'. The responses may range from: 1) 'not at all well-off '; 2) 'not so well-off'; 3) 'average'; 4) 'quite well-off; and 5) 'very well-off [27].

Table II.6. Key HBSC Survey variables

Exposure Variables	HBSC Question	Response Coding	Categories used	Empirical studies
Parental Employment Status	a) 'Does your mother/father have a job?' b) 'If your mother/father does not work, why not?'	a) 1 = yes; 2 = no; 3 = don't know; 4= don't know her/him or never see her/him b) 1= she/he is retired, sick or a student; 2= she/he is looking for work; 3= she/he is a housewife/houseman or takes care of others; 4= don't know	**Coding v1**: 1 = employed (a) =1) 2 = non-employed (a)=2) **Coding v2:** 1 = paternal unemployment (father a) =2 and b) = 2) 2 = maternal unemployment (mother a) =2 and b) = 2) **Coding v3:** 1) both parents are employed 2) at least one parent is unemployed	6 7 8 9 10 11
Outcome Variables	HBSC Question	Coding	Categories used	Empirical studies
HBSC Psychological Symptoms Checklist (HBSC-SCL)	'During the past six months, how often have you had the following problems: feeling low; difficulty getting into sleeping; irritability; feeling nervous?'	1=every day; 2= several times a week; 3= once a week; 4= some time during the month; 5= less often or never	Item response ranging from (1) "feel this about every day" to (5) "rarely or never feel this". 8-item composite scale (0-32)	6 11
Life satisfaction Satisfaction with the family environment and peer interactions	'Here is a picture of a ladder. The top of the ladder, 10, is the best possible life/family environment/peer interactions for you and the bottom, 0, is the worst possible. In general, where on the ladder do you feel you stand at the moment? Tick the box next to the number that best describes where you stand'	Rating scales 0-10	Continuous scales (0-10)	7 9 11
Emotional well-being related to father and/or mother unemployment status	'How much the father's or mother's unemployment negatively affected your emotional well-being?'	1= not at all; 2= somewhat; 3= a great deal; 4= a lot	Dichotomized 0 = not affected (1) 1= affected (2-4)	8

Table II-6 (cont.) Key HBSC Survey variables

Outcome Variables	HBSC Question	Response Coding	Categories used	Empirical studies
Post-School Expectations	a) 2010 Survey 'How frequently you: set up goals and plans for the future; think about completing high school or professional education and; aspire to go on to university or further education upon leaving high school?'	1= never; 2= rarely; 3= sometimes; 4= often; 5= always	1= low expectactions (1+2+3) 2= high expectactions (4+5)	7
Economic crisis repercussions scale	What changed at home due to the economic recession? **Minor lifestyle changes** I value more what I have; I feel more responsible for having good grades; I try to save money that people give to me or on house expenses (electricity, water…); When with my friends we now choose to do things that do not make us spend money; We are more united/closer together at home; I reuse and recycle things to save pocket money; In my spare time I now volunteer to help others **Negative lifestyle changes** There is less money around; My parents are more irritable and nervous than before; There are less family outings and vacations. we spend more time at home; I feel my parents need my support	0) doesn't apply to me 1) applies to me	0) doesn't apply to me 1) applies to me	10
Covariate Variables	HBSC Question	Coding	Categories used	Empirical studies
Family Affluence Scale (FAS)	a) 'Do you have your own bedroom for yourself?' b) 'Does your family own a car, van or truck?' c) 'During the past 12 months, how many times did you travel away on holiday (vacation) with your family?' d) 'How many computers do your family own?'	a) 0=No; 1=Yes b) 0=No; 1=Yes; 2=Yes, two or more c) 0=Not at all; 1=Once; 2=Twice; 3=More than twice d) 0=None; 1=One; 2=Two; 3=More than two	Composite FAS II Score ranging from 0 to 9. 0-2 = low affluence 3-5=middle affluence 6-9=high affluence	8
Subjective family wealth	'How well off do you think your family is?	1=Not at all well off; 2=Not very well off; 3=Average; 4=Quite well off; 5 = Very well off;	Continuous scale (1-5 or reverse)	9 10

2.2.4. Data Input, Screening Prior to Statistical Analysis, Missing Values and Psychometric Properties

The data was then entered into a SPSS database in order to carry out the statistical analysis. All data were cleaned and managed by the data bank manager of the international HBSC/WHO network Prof. Oddrun Samdal at the University of Bergen, Norway.

2.2.4.1. Factorial structure and psychometric statistics of the economic crisis repercussions scale

The economic crisis repercussions' scale was tested for reliability and factorability. After data collection, PCA was conducted to combine the responses. The 15 items of the scale loaded on 3 factors using an orthogonal rotation method (varimax) that explained 41.4% of the variance (see Table II-7). The first factor – *Minor lifestyle changes* - explained 21.4% of the variance. The *minor lifestyle changes* factor reflects less negative experiences related to the recession and some sort of adaptation (e.g. "I value more what I have"; "when with my friends we now choose to do things that do not make us spend money."). The second factor – *Negative lifestyle changes* - explained 11.2% of the variance and reflects experiences stating some extent of deprivation (e.g. "there is less money around"; "my parents are more irritable and nervous than before"; "there are less family outings, vacations and we spend more time at home"). The third factor –*Deprivation* – explained 8.9% of the variance and was related to more extreme deprivation experiences during the recession (e.g. "we had to move back to our grandparents' house"; "I had to change school due to financial reasons"; "parents are around the house more because they are jobless"). However, because the last factor contains items related to parental unemployment we decided not to consider it in the analyses to avoid multicollinearity issues with the parental employment status variables.

Table II.7. Principal axis factor estimates of the orthogonal (Varimax with Kaiser Normalization) factor loadings for the 15-item economic crisis impact scale

	Factor		
Items	1	2	3
Minor lifestyle changes			
I value more what I have	.683		
I feel more responsible for having good grades	.661		
I try to save money that people give to me or on house expenses (electricity, water…)	.562		
When with my friends we now choose to do things that do not make us spend money	.538		
We are more united/closer together at home	.510		
I reuse and recycle things to save pocket money	.435		
In my spare time I now volunteer to help others	.361		
Negative lifestyle changes			
There is less money around		.713	
My parents are more irritable and nervous than before		.669	
There are less family outings and vacations. we spend more time at home		.616	
I feel my parents need my support		.507	
Extreme Deprivation			
We had to move back to our grandparents house			.670
I had to change school due to financial reasons			.646
Parents are around the house more because they are jobless			.574
Family members have lost their job due to the crisis			.492

2.2.5. Ethics

The HBSC/WHO Portuguese study follows the principles outlined in the Declaration of Helsinki, and was approved by the Portuguese Ministry of Education and Health, by the ethics committee of São João Hospital and, by the national ethics committee. Moreover, consent was given by all participating schools and all legal guardians also gave written informed consent. The questionnaires were sent to schools, administered in the classroom by teachers and with voluntary student participation, according to international standard guidelines from the HBSC/WHO survey protocol[26,27]. Further, anonymous responses to the questionnaire ensured confidentiality. The international coordination of the HBSC/WHO study network is run by Dr. Jo Inchley from the University of St Andrews in Scotland.

2.3. Brief description of the statistical analyses applied in research phases II and III

The quantitative statistical analysis comprised various methods. All data analyses were completed using SPSS version 22.0, and the level of significance was set at $p < 0.05$.

- Descriptive analysis: the nominal variables were characterized by their frequency and percentage of each category. Continuous variables were characterized by mean, standard deviation, minimum and maximum values;
- Principal Components Factor Analysis: was used to explore the factor structure of composite scales;
- Chi-square tests: were used to assess the statistical significance of the association between nominal variables;
- Independent samples t-test and analysis of variance (ANOVA): were used to compare means of continuous variables between independent groups;
- Linear regression and multiple linear regression models: were used to estimate the prediction strength between explanatory variables, and a continuous dependent variable;
- Logistic regression models: were used to assess the extent to which independent variables were associated with the categories of a dichotomous dependent variable. Adjusted and unadjusted odds ratio (OR) with 95% confidence intervals (CIs) were calculated;
- Simple moderation, additive moderation, and moderated moderation models of regression were performed using Hayes' PROCESS macro for SPSS [38]. Each analysis utilized a bootstrapping approach, and significance was determined at 95% bias-corrected confidence intervals. All variables were continuous and centered prior to analysis, and the estimated effects reported were unstandardized regression coefficients [38];

To contribute to a deeper understanding of what was explored by the quantitative analyses, qualitative analyses were further completed:

- Thematic content analysis: this technique was used to analyse qualitative data regarding parents' experiences about the relationship between their unemployment situation and perceived changes in their family's day-to-day life [39].

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CHAPTER III - RESULTS

1. SCIENTIFIC PAPER

MENTAL HEALTH OUTCOMES IN TIMES OF ECONOMIC RECESSION: A SYSTEMATIC LITERATURE REVIEW

Diana Frasquilho • Margarida Gaspar de Matos • Ferdinand Salonna • Diogo Guerreiro • Cláudia C Storti • Tânia Gaspar • José Miguel Caldas de Almeida

The first aim of the research project was to develop an updated body of knowledge concerning the impact of the economic recession on mental health outcomes and the most vulnerable groups. For that purpose, a 10-year systematic literature review of peer-reviewed original studies that reported on associations between recession related factors and mental health outcomes was performed. The most important findings emerging from this manuscript are summarized below:

- the economic recession may increase population's psychological distress;
- literature shows that periods of recession correlate with higher prevalence of common mental disorders, substance disorders, and ultimately suicidal behaviour;
- it may be possible that in order to cope with psychosocial stress people might turn to substance misuse;
- key factors that seem to make people more vulnerable to the effects of the recession are: being unemployed, having a precarious work situation, facing debts and economic strain, and having a pre-existing mental illness;
- economic recession may have a severe and long-term negative impact on mental health in children and young people, especially if they face stress within the family as a result of economic hardship or parental unemployment;
- specific differences in changes in the mental health outcomes of the populations between countries and regions may be explained by response policy variation to the economic recession (the presence of unemployment benefits or social programmes);
- more research is needed concerning mediator and moderator factors between the determinants of a recession and mental health outcomes;
- more research from countries badly hit by the economic recession and from low and middle income countries is needed;

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RESEARCH ARTICLE Open Access

Mental health outcomes in times of economic recession: a systematic literature review

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ABSTRACT

Background: Countries in recession experience high unemployment rates and a decline in living conditions, which, it has been suggested, negatively influences their populations' health. The present review examines the recent evidence of the possible association between economic recessions and mental health outcomes.

Methods: Literature review of records identified through Medline, PsycINFO, SciELO, and EBSCO Host. Only original research papers, published between 2004 and 2014, peer-reviewed, non-qualitative research, and reporting on associations between economic factors and proxies of mental health were considered.

Results: One-hundred-one papers met the inclusion criteria. The evidence was consistent that economic recessions and mediators such as unemployment, income decline, and unmanageable debts are significantly associated with poor mental well-being, increased rates of common mental disorders, substance-related disorders, and suicidal behaviours.

Conclusion: On the basis of a thorough analysis of the selected investigations, we conclude that periods of economic recession are possibly associated with a higher prevalence of mental health problems, including common mental disorders, substance disorders, and ultimately suicidal behaviour. Most of the research is based on cross-sectional studies, which seriously limits causality inferences. Conclusions are summarised, taking into account international policy recommendations concerning the cost-effective measures that can possibly reduce the occurrence of negative mental health outcomes in populations during periods of economic recession.

Keywords Economic recession, Mental disorders, Mental health, Substance-related disorders, Suicide, Unemployment.

INTRODUCTION

Economic recessions have been estimated to significantly affect the population's health and well-being, which applies, in particular, to vulnerable groups of people [1-5]. In countries that have been hardest hit by the latest recession, which started in 2007, the living and working conditions have substantially worsened [6]. Work became more precarious and unemployment rates increased as a result of the slowdown in global growth and consequent deterioration of the labour markets [7]. For instance, almost half of the citizens of Europe reported knowing someone who had lost his/her job as a direct result of the crisis [8]. Rates of involuntary part-time employment have also been rising since the beginning of the recession [9]. Overall, people are more fearful about losing their employment [8] since competition for jobs is rising and finding work quickly is perceived as unlikely. It is estimated that labour markets will take time to improve even though there are prospects for economic recovery [6]. Levels of poverty and social exclusion have worsened, mainly in groups that were already at risk [10]. During this recession, more people have been reporting being at risk of being unable to cope with unexpected expenses and even facing difficulties with paying ordinary bills or buying food over the coming year [8].

It is known that the health of populations is shaped by the socioeconomic context, welfare systems, labour markets, public policies, and demographic characteristics of countries [4]. There are strong reasons to believe that changes in these key determinants may be reflected in the mental well-being of populations [11]. Therefore, mental health should be a health area regarded as possibly vulnerable during a recession [12], especially if mental disorders were already highly prevalent even before the crisis began [13]. Nonetheless, some authors have argued that associations between contracting economies and levels of well-being may show mixed patterns of both positive and negative impacts [14]. However, this current recession is likely to aggravate and boost mental health problems through growing socioeconomic risk factors such as unemployment, financial strain, debts, and job-related problems [3]. People facing these major life changes are more prone to mental ill-health [15 – 18]. It has also been theorised that economic pressure and unemployment have a devastating impact on families, in particular children, since the family is the most important context for their healthy development [19, 20].

This paper intends to cover the main sources and types of recent evidence on populations' mental health outcomes in times of economic recession. Specifically to summarize the mental health outcomes and the socioeconomic determinants most

frequently addressed by the literature on economic recessions, which groups of people seem to be the most vulnerable, and to determine possible research needs.

METHODS

Search strategy and definition of terms

A systematic search was performed in Medline, PsycINFO, SciELO, and EBSCO Host. The keywords used for reference tracing were derived from Medical Subject Headings (MeSH) in combination with key terms used in other reviews [2, 3, 5, 21, 22]. Two sets of keywords were then used and combined: 1) Recession and socioeconomic terms – "economic recession" or "financial crisis" or "recession" or "unemployment" or "socioeconomic deprivation"; combined with 2) mental health outcomes – "mental health" or "mental disorders" or "suicide" or "substance-related disorders". Regarding the recession and socioeconomic terms, besides the logical use of the words "economic recession" and its synonyms, the word "unemployment" was used as it is a widely recognised countercyclical variable, i.e. a phenomenon that increases in recessions [23]. The term "socioeconomic deprivation" was used, on one hand because it is a broad term that includes the characteristics of both social and economic vulnerability that are expected to increase in periods of recession[24], and on the other hand, because of its indisputable negative effect on health [5, 11]. Concerning the mental health outcomes, in addition to "mental health", the term "mental disorders" was used because it is a MeSH term that encompasses "all psychiatric illness or diseases manifested by breakdowns in the adaptation process expressed primarily as abnormalities of thought, feeling, and behaviour producing either distress or impairment of function". Although "mental disorders" is a broad term, it does not include suicide, which is known to be associated with major mental health problems [25]. Therefore a specific keyword for that was entered. The term "substance-related disorders" was also included, because using the broad term "mental disorders" did not retrieve papers with clear specific results and this was a MeSH term used in other reference works [26].

Eligibility criteria and data extraction

Two reviewers independently screened all the titles and abstracts. The final articles in this review are a consensual reflection of both reviewers. They only considered studies

for inclusion that were original research papers, peer-reviewed, published between 2004 and 2014, written in English or Portuguese, and showing associated results between recession or socioeconomic terms and mental health outcomes. Moreover, the authors excluded all duplicates, small sample investigations (<1000 except for case –control studies) for precision reasons and strength of effect sizes [27], research that did not employ validated instruments or used an inappropriate methodology regarding the associations under consideration (e.g. ambiguous variables under study, poor construct validity, and drawing of conclusions without statistical support), and qualitative research. The data extraction from each study was based on the following variables: the setting and country, the sample (N and age), the years examined, the mental health outcome(s) and the socioeconomic determinant(s), and the key associations or effects found. In general, we found significant disparities in the methods, data collection procedures, analyses, and contexts of existing studies that complicated direct comparison of results among studies. Because of this diversity of metrics and outcome variables, it was impossible to apply statistical criteria to the studies and for that reason it was not appropriate to perform meta-analysis of the results.

Mental health outcomes associated with economic recessions

We organised the main results by mental health outcomes and the socioeconomic determinants most frequently addressed by the literature, based on the quality of study design (cohort, case – control, cross-sectional and ecological). The mental health outcomes were clustered into four main groups: 1) psychological well-being (measured by continuous variables of mental health distress, self-rated health, and well-being or quality of life variables); 2) common mental disorders (assessed by caseness for depression, anxiety, and somatoform disorders); 3) problems related to substance-related disorders (reports on smoking, patterns of alcohol consumption, drug use, and substance-related harms), and 4) reports on suicidal behaviours (suicide mortality, parasuicidal behaviour, suicidal ideation, and attempts). The socioeconomic determinants retrieved were clustered into three groups by: 1) inter-time variables (pre-and post-economic recession changes); 2) macroeconomic indicators (rates of unemployment, GDP, home foreclosure rates), and 3) individual-level indicators (employment status, psychosocial job quality and security, household income, perceived financial strain or security, perceived economy/recession stress, deprivation, indebtedness, housing payment problems, socioeconomic status).

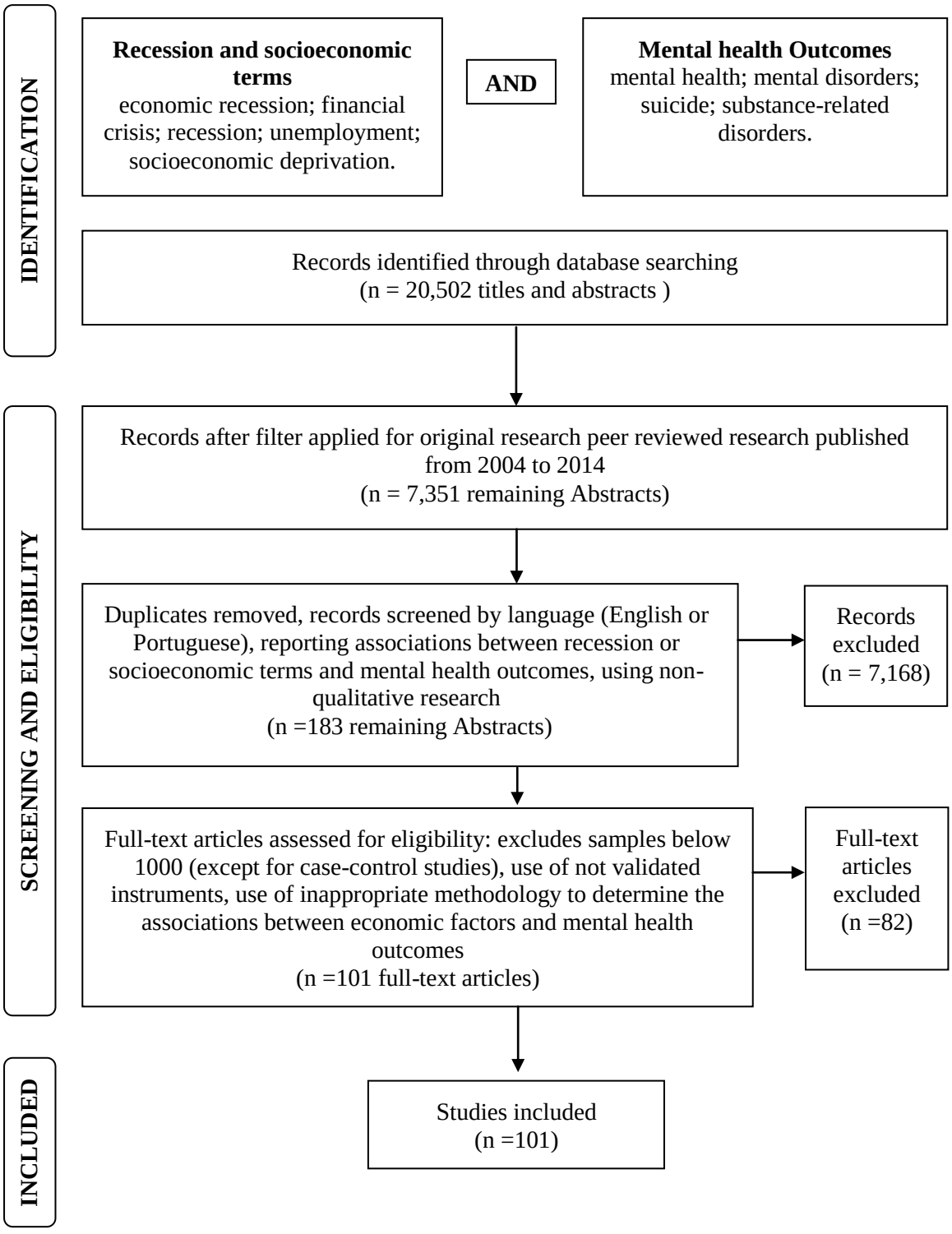
RESULTS

Study selection results

At the beginning, 20,502 studies were identified and were first filtered on the basis of being original peer-reviewed research papers and published between 2004 and 2014. The remaining 7351 papers were then screened by two independent reviewers through their titles and abstracts, and the subsequent filtering was performed on the basis of the following inclusion criteria: not being duplicates, written in English or Portuguese, were non-qualitative research, and reported associations between recession or socioeconomic terms and mental health outcomes. The full texts of 183 studies were then analysed.

The number of papers excluded was a consequence of combinations of search keywords such as “crisis” and “mental health” or “suicide” that resulted in papers not relevant to the study objective. From the analysis of the 183 full texts, the investigators further excluded studies that used an inappropriate methodology regarding the associations between economic recession and mental health outcomes, including non-validated instruments, or used small samples (<1000, with the exception of case – control studies). After the previously described multistep selection method, 101 papers were used for the present review. Figure 1.1 shows the progress of selection for the study and the number of articles at each selection stage.

Figure 1.1. Flow diagram of the multistep selection method



Research designs

Table 1.1 summarizes the main features of the retrieved studies. Two studies used case – control design, 30 were cohort studies, 40 were cross-sectional studies or repeated cross-sectional studies, one used a mixed cross-sectional and case – control design, and 28 were ecological studies.

Table 1.1. Summary of the main features of retrieved studies

Studies research design	
case-control	2
cohort	30
cross-sectional	41
ecological	28
Samples	
cross-national population samples	16
national population samples	66
regional/community samples	19
Geographical allocation of studies' samples	
EU	61
North America (USA and Canada)	18
Australasia (Australia and New Zealand)	7
Asia (China, Japan, South Korea)	6
South America (Argentina and Brazil)	2
Multicentre	7

Samples and geographical allocation

More than half (66) of the total of 101 studies used national population samples. Out of these 66, 58 were general population samples and the rest were focusing on specific populations. Two used working populations, two used unemployed populations, two used samples of adolescents, one used a sample of patients attending primary care centres, and one used a sample of older adults. Furthermore, 16 studies used cross-national population samples, of which 11 were general population samples and 5 focused only specific populations. Two studies were samples of children and adolescents; one was a sample of working population; one used a sample of patients attending primary care centres, and one used samples of older adults. An additional 19 studies used community or regional samples. Out of these 19, 10 studies used general population, 3 used samples of workers, 1 used a sample of unemployed adults, 2 used samples of adolescents, 1 used a sample of children and parents, 1 used a sample of older adults, and 1 used a sample of hospital patients.

In terms of geographical allocation, 61 studies were conducted in Europe (7 studies were cross-European, 2 studies used samples from both Greece and Poland, and both Denmark and Sweden, 15 used samples from the UK, 8 from Greece, 7 from Sweden, 7 from Spain, 4 from Italy, 3 from Finland, 2 from Iceland, and 1 population sample each

from France, Germany, Hungary, Portugal, Slovakia, and Slovenia). Eighteen studies have North American population samples (15 from USA and 3 from Canada); 7 studies were from Australasia countries (five Australian and two from New Zealand). Two studies were South American, one from Argentina and Brazil, and six studies were from Asian countries (three from South Korea, two from Japan, and one study from Hong Kong).

In addition, there were seven multicentre studies that used cross continent population samples from various countries.

Pre and post-economic recession changes in psychological well-being

Studies comparing the data to pre-recession periods show a consistent aggravation of the mental health status of the populations involved (Table 1.2, at the end of the paper).

A longitudinal study from Greece showed that mental health and self-rated health were negatively affected by unemployment during the economic recession (2008 – 2013), especially among unemployed individuals [28]. A similar result was found in Italy, where the inequalities regarding self-reported health between workers and unemployed individuals were amplified after the onset of the recession [29].

Repeated cross-sectional studies from Greece also showed that the recession period was associated with a significant deterioration of the population's self-reported health and increased odds of poor health when compared to control populations [30, 31]. English and Spanish repeated cross-sectional studies indicated that the prevalence of psychological distress significantly increased during the recession period, with a greater impact on men compared to women [32, 33]. However, women also reported increased mental distress during the recession, according to a repeated cross-sectional survey from Sweden [34]. In Japan, comparable surveys before and after the economic recession period showed reports of an increase in poor health across people of all socioeconomic ranks[35].

Pre and post-economic recession changes in rates of common mental disorders

Regarding morbidity rates for common mental disorders, longitudinal data from Iceland presented aggravated stress levels among the population, though only significant for women and especially if unemployed [36]. Greek comparable data from before and after the recession exhibited a statistically significant rise in the prevalence of depression [37, 38]. In Spain, evidence displayed a risk of suffering from depression during a recession that was almost three times higher than before [39]. Similar evidence was also found in Canada and Hong Kong [40, 41].

The same Spanish study also showed an increase in the prevalence of anxiety disorders [39]. Nevertheless, no changes in the prevalence of anxiety were found in the Canadian working population sample [40].

Pre and post-economic recession changes in substance-related disorders

A cohort study from the USA stated that the overall prevalence of any alcohol use significantly declined during the recession but, conversely, binge-drinking became more frequent [42]. Spanish repeated cross-sectional evidence shows that this recession may have triggered alcohol-related disorders, since a noteworthy rise of 4.6 % in the abuse of alcohol and dependence on it was observed [39]. Furthermore, available data from Argentina also revealed that people may tend to increase their intake of lower-quality alcohol, which is known to pose additional threats to health [43].

Pre and post-economic recession changes in suicidal behaviours

Longitudinal evidence during the Swedish recession reported a post-recessionary increase in suicide rates among unemployed men [44] suggesting possible delayed effects of the recession on suicidal behaviours. Similarly, Greek cross-sectional data, from before and after the onset of the recession, indicated that the rate of suicidal ideation increased significantly in men [45]. Moreover, in South Korea data from comparable surveys also showed that income gradient-related suicide behaviour was found to have increased in the years after the recession period [46].

Several ecological studies from Spain have reported a substantial growth of suicidal ideation and suicide attempts [47 – 49]. In Italy, an ecological study showed an evident increase in suicide rates among Italian men involved in the labour force after 2007 [50] Similar evidence comes from the UK, where time-trends analysis displayed an increase in the suicide rate, especially among working-age men [51, 52]. In an ecological analysis, Reeves et al. found that most of the European countries experienced a significant rise (6.5 %) in suicide rates after the onset of the recession in 2009 [53]. The same was found in Canada (a rise of 4.5 %) and in the USA (a rise of 4.8 %) [54].

Macroeconomic indicators associated with mental health outcomes

Data from cohort studies focusing on unemployment rates (Table 1.3, at the end of the paper) have shown that high unemployment rates are linked to individuals' worsened

mental well-being and higher mental distress levels [55 – 57]. Similar evidence was found in a cross-sectional study from the USA [58, 59].

A large cross-national ecological study has shown that rises in unemployment among the population are also associated with lower life satisfaction levels, especially among unemployed individuals [58]. Despite this evidence, however, there is a recent ecological study from Spain that suggests that rises in unemployment rates were associated with a decrease in the demand for mental healthcare [60].

Recent ecological studies provide evidence of a strong positive association between unemployment rates and suicidal behaviour. A study that covered 30 countries (European, North American, and Australia) demonstrates that increases in the unemployment rate related to the recession period have a negative impact on suicide, especially in those Eastern and Southern European countries with the least developed social protection systems [61]. Similar evidence has been found in studies focusing solely on European countries [62 – 66] and studies performed in the USA [67 – 69], as well as in South Korea [70]. In Greece two studies also found strong correlations between unemployment rates and suicide [71, 72], though there is one study reporting no correlation and no increase in suicide behaviours [73]. In England, these correlations were only statistically significant at the regional level [74], and in Hungary the correlations were only strong 3 to 5 years after the onset of the recession [75]. Using other macroeconomic indicators, Houle and collaborators found that the state-level foreclosure rate also correlated to suicide rates in the USA [76] and an Italian study found that the decrease in GDP per person was associated with male suicide [77].

Individual-level indicators associated with mental health outcomes

Unemployment

Studies demonstrate that people who lose their job during a recession are more vulnerable to the economic recession. For instance, during the Japanese economic crisis unemployed people were twice as likely to report poor health compared to controls [35]. In Hong Kong the prevalence of a major depression episode increased among the unemployed [41]. In addition, research dealing with the European recession shows a significantly higher risk of depression and mental distress among this group of people compared to the general population [28, 29, 33, 39], although Icelandic and Swedish data showed increased stress levels only for unemployed women [34, 36]. When variations in macroeconomic indicators are

considered, the unemployed were also more vulnerable to mental health problems and suicidal behaviour [56, 57, 70].

Several individual-level cohort studies (Table 1.4, at the end of the paper) found an association between job loss and poor mental health outcomes and low life satisfaction, and suggest that this can be both a risk factor for being unemployed and its consequence [78 – 86]. In addition, in cross-sectional studies unemployment has also been associated with psychosomatic symptoms and psychological distress [87 – 90].

Two large cohort studies showed that unemployment was associated with depressive symptoms [91, 92]. The risk of common mental disorders such as depression and anxiety was also found to be significantly greater in unemployed individuals in several cross-sectional studies [93 – 96].

Furthermore, a case – control study from Finland found that being unemployed was a heavy predictor of risky behaviours such as driving under the influence of drugs[97]. Cross-sectional data from the USA and Germany also discovered that unemployment was significantly related to alcohol and drug use [98 – 100]. Additionally, alcohol-attributable deaths rate were determined to be higher among the unemployed population during recession, says an ecological study from South Korea [101].

Suicidal behaviours were also linked to unemployment in several studies. A Canadian case control study found that unemployed individuals have a significantly increased risk of parasuicidal behaviour compared to their matched controls [102]. Likewise, in a large cross-national study, being unemployed was discovered to be a strong risk factor for suicidal ideation and attempts [103]. An Australian study also revealed that, in times of recession, unemployed males commit suicide at 4.62 times the rate of employed men and women 8.44 times more compared with employed females[104]. Also in times of recession a Spanish study states that being unemployed was found to be associated with suicidal ideation [105].

Precarious and insecure work

Change in working conditions may affect mental health (Table 1.5, at the end of the paper). Finnish longitudinal data pinpointed mental distress as being stronger among precarious workers with high job insecurity [106]. Nevertheless, there is a Swedish cohort study that found no significant differences in the effects of job insecurity on health between temporary and permanent workers [107]. Cross-sectional data from during the recession in Italy, determined that job stress was significantly related to workers' mental

health and fear of the crisis [108]. This was supported by British evidence of an increased risk of depression and anxiety among such employees [109, 110].

Debt, deprivation, and financial hardship

Several studies found socioeconomic status and indebtedness to be related to mental health. In the USA, a cohort study, indicated increased incidence of anxiety and mood disorders, and substance use disorders were strongly associated with drops in household incomes [111]. Strong causal conclusions about this matter can also be drawn on the basis of a cohort study from New Zealand that shows a high level of association between inequalities in wealth and psychological distress, stating that people reporting low levels of wealth have three times greater distress than those reporting higher levels of wealth [112]. Longitudinal data also illustrates that housing payment problems and indebtedness have a detrimental effect on mental health [113] and on the onset of depression and anxiety [114].

Income inequality at a regional level was also significantly associated with poorer mental health in a cross-sectional study completed in a community sample from Wales, UK [115]. Additionally, low socioeconomic status was related to higher rates of tobacco smoking and the use of cannabis and other illegal drugs compared to people of higher socioeconomic status in a French community-based cohort [116]. Furthermore, a cohort and a cross-sectional study from England found that people facing debt are also at higher risk of depression [110], and are twice as likely to think about suicide [117].

The previously cited studies show that during recession Greek people with serious economic difficulties had 1.33 times higher odds of developing a major depressive episode during the recession [38], and in South Korea well-off people do better in recessions in terms of the prevalence of depression, suicidal ideation, and suicide attempts [46].

Families, children, and older people

The literature also stated that families and children affected by socioeconomic factors might face a decline in their mental health (Table 1.6, at the end of the paper). Finnish longitudinal research shows that economic stress can lead to deterioration in children's mental health, mainly through changes in family relationships and parenting quality [118]. A large cross-national study with representative data on adolescents from 31 countries found that the countries most hit by the recession (Ireland and Portugal) faced a

rise in psychological health complaints (9 – 17 %), and this was related to the increase in unemployment rates [119].

In fact, adolescents who perceived themselves as being socioeconomically worse off have a four times higher likelihood of rating low life satisfaction and quality of life, claims a study from Slovenia [120]. In addition, children with unemployed parents have a higher prevalence of depression, higher rates of psychosomatic symptoms, and lower perceptions of psychological well-being [121 – 123].

Trends in a cohort of Canadian adolescents' total suicide- related behaviour during periods of recession illustrate that the downward trends in suicidal behaviour stopped after the onset of the recession, though no increase has been reported [124]. Moreover, in the USA, repeated cross-sectional analysis before and after the onset of the crisis revealed that state-level unemployment during the year preceding the survey increased girls ' rates of suicidal ideation and suicide plans, but did not affect the suicidal behaviour of boys [125].

Studies focusing on older adults report that those facing distress related to economic slowdown and rates of home foreclosure also had greater depression and anxiety symptoms in Australian cohort studies [126, 127].

People with mental health problems

A cross-sectional study comparing data from 27 EU countries before and after the crisis found that individuals with mental health problems were more vulnerable to losing their employment than those without these problems. This evidence is particularly important for people already facing mental health problems because it may indicate that during a recession discriminatory attitudes towards people with chronic mental health conditions may harden, both in the job market and in society, further increasing their suffering and isolation [128].

DISCUSSION

In general, evidence on the impact of economic crises and recessions on mental health is accruing, but comprehensive studies are lacking. Epidemiological data comparing changes in health status before and after a recession are consistent and report negative associations with mental health and increased mental health problems. However, to measure the extension and duration of these impacts and to isolate the exact causal factors appeared to be challenging. There is a preponderance of cross-sectional and ecological studies compared to cohort or case – control studies. This causes great limitations in terms

of determining causality between the recession and mental health problems. Nevertheless, the repeated cross-sectional studies helped to better estimate the changes in the population's outcomes before and after the recession period.

In terms of geographical allocation, most of the research is being done in Europe and North America during the period of this review (2004 – 2014). Some of the countries hardest hit by the economic recession (Greece, Spain, and Italy) are monitoring changes in the mental health outcomes of their populations, although they are doing so mainly by using repeated cross-sectional surveys or ecological analysis. We found no specific studies from Ireland or Portugal focusing on the effects of the recession on mental health. We strongly believe that research results from these countries could contribute to a better understanding of the consequences of the recession since its impact on mental health varies greatly, depending on how austerity measures and policy responses were implemented. Additionally, there were a very limited number of studies from low and middle-income countries despite the fact that there are strong reasons to believe that these countries are likely to be heavily affected by the recession, especially because any further reductions in these countries' already weak health budgets (mental health services in particular) is likely to be very damaging. We argue that research from these countries finds substantial barriers to publication in widely accessible journals due to possibly material and financial constraints, problems of research design and statistics and thinkable difficulty in writing in English. Thus, we argue that this under-representation of research might result in limited conclusions. Nonetheless, the studies included in this review confirm that recession periods are feasibly associated with the increased prevalence of psychological distress and common mental disorders, substance disorders, and ultimately suicidal behaviour. Despite being limited to the validity of self-reporting, the data on alcohol misuse behaviour indicates that any increase in its prevalence may be countercyclical and related to unemployment rates. We further add that recessions might result in an increased prevalence of smoking and illicit substance use since the literature indicated this may be a coping mechanism used to help deal with unemployment and economic distress [100]. However, the impact may vary according to the profile of substance users. Recreational users may be more susceptible to cuts in income, therefore reducing abuse, while others who are more dependent may actually adopt riskier patterns of substance misuse, such as injecting or binge drinking, in order to maximise the effects of the substances they have managed to purchase [129]. Further analysis of these fields is still required.

Although reports of growing suicidal ideation and attempts in countries in recession are limited to the complexity of the phenomenon, to the cultural background, and to the quality of the data sets and self-reports, which are susceptible to recall bias, it is consistent with the previous idea that suicide is more common in areas of high socioeconomic deprivation, social fragmentation, and unemployment [4]. Furthermore, a great proportion of the evidence from this review shows that unemployment, precarious work, debt, and financial deprivation are significantly associated with mental health problems. Determinants as such are well-known driving forces for widening health inequities, and put some groups of people at higher risk of suffering the impact of the economic recession. The influence of these factors on mental health has been widely recognised in the past[15,130,131]. Therefore, special attention should be given to people facing economic pressure and unemployment.

Indirect data supports the view that families and children may be disproportionally affected by recession, which is consistent with the Family Stress Model [19, 20]. Many mental disorders often start in adolescence or young adulthood. Growing up in a challenging environment can put young people in a very vulnerable position [132 – 134]. Up-to-date evidence shows that 27% of young Europeans aged below 18 are at risk of poverty or social exclusion and, considering the growing number of people who are unemployed and in deprivation, these are worrying indicators [135]. Failing to protect the mental health of young people and to capitalise on their energy may indicate that we will possibly face a long-lasting loss of future adult productivity [134, 136]. Unexpectedly, there is a substantial research gap on the effects of recession on families and children. A better understanding of these effects could be gained from research focusing on how job losses and economic strain affect family members.

Research and policy implications

Summarising the data from this review gives us a global perspective and allows some hypotheses to emerge that serve as a framework for future research on economic recessions and mental health outcomes:

– it is plausible that the actual recession increased the population's psychological distress;

– according to the evidence reviewed, periods of recession correlate with higher prevalence of common mental disorders, substance disorders, and ultimately suicidal behaviour;

– it may be possible that in order to cope with psychosocial stress people might turn to substance misuse;

– some key factors seem to make people more vulnerable to the effects of the recession: being unemployed, having a precarious work situation, facing debts and economic strain, and having a pre-existing mental illness;

– economic recession may also have a severe and long-term impact on mental health in children and young people, especially if they face stress within the family as a result of economic hardship or parental unemployment;

– some specific differences between countries and regions were found in this review. The authors hypothesise that this may be explained by the socioeconomic response policy to recession (the presence of unemployment benefits or social programmes) which could influence changes in the mental health outcomes of the populations;

– more research is needed concerning mediating factors between the determinants of a recession and mental health outcomes;

– more research from countries badly hit by the economic recession and from low and middle income countries is needed;

– the links between recession and direct effects on health seem to be very complex, and the lagged effects have not been systematically studied because of a lack of longitudinal studies and therefore a scarcity of long data series persists.

Even though the economy can shape populations' mental well-being, better mental health can in turn be a major contributor to economic growth [136]. Policies and cost-effective measures may affect the extent of the risk factors faced by populations and the occurrence of mental health disorders during and after an economic recession. The World Health Organisation [4] has argued that the mental health effects of economic crises depend on action in five key areas:

- active labour market programmes
- family support programmes
- regulation of the marketing of alcoholic beverages, restrictions on their availability, and taxation
- provision of quality and equitable access to primary care for those people at high risk of mental health problems
- debt relief programmes.

Strengths and weaknesses of this study

A language bias might be present since the review was exclusively based on English and Portuguese language research reports. Nonetheless, the potential impact of studies published in other languages in this literature review may be minimal since most of the publications in widely accessible journals are in English. Another limitation may be the literature search time framed to last 10 years. Although it is a usual procedure [137], it could have limited the inclusion of other important works. Also, given the heterogeneity of the metrics used by the studies we were unable to use quantitative meta-analytic methods and therefore were not capable of identifying statistical patterns.

As included studies have mainly cross-sectional or ecological design, there is a limited space for establishing causal inferences. This is especially important because this gives only evidence of the rough short-term mental health outcomes related to economic recession and specific socioeconomic indicators, but there is still a lack of evidence on the longer-term consequences, particularly if the number of long-term unemployed people continues to grow and social safety nets experience further cuts. Moreover, despite the fact that most studies are showing negative associations between the recession and levels of mental health, there may be mixed patterns (positive and negative effects of the recession) that are dependent on countries' policies and responses adopted to deal with the recession[14]. Thus, the generalisability of the findings is considerably limited by the uniqueness of the welfare and health systems of each country and its response measures to the economic recession itself. The only way to ascertain whether the economic recession has increased the incidence of poor mental health is to intensify the gathering of empirical evidence from long-term cohort studies [138].

Notwithstanding limitations, the literature review gives a rough approximation of the consequences of the recession, showing an increasing number of people experiencing poor mental health and reporting common mental disorders such as depression and anxiety, substance-related disorders, and suicidal behaviour, which corroborates with what was found in other reference works [1-3].

Conclusions

Quality evidence showing that economic recessions are possibly associated with negative mental health outcomes of populations is growing. This seems especially true for psychological well-being, common mental disorders, substance disorders, and suicidal behaviour, despite the fact that the mediation pathways are still undisclosed. There are groups of people that may be especially vulnerable to the effects of recessions: the unemployed, those in debt or facing financial difficulties, people with pre-existing mental health problems, and families with children. It is well known that mental disorders and substance use disorders make major contributions to the global burden of disease in high-income countries and constitute important public health problems. Since economic downturns may possibly exacerbate mental ill-health and suicide risk factors, it is a collective responsibility to take action and reduce these unbearable costs as far as possible. In times of economic constraints countries may want to consider balancing appropriate resources. Structural reforms and the implementation of available cost-effective measures to achieve health and high levels of well-being may contribute to a more productive economy and desirable societal assets.

Ethical approval

None sought.

Abbreviations

MeSH: medical subject headings; GDP: gross domestic product.

Competing interests

None of the authors reported any further financial interests or potential conflicts of interest.

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Tables

Table 1.2 Characteristics of studies included in the review comparing the data to pre-recession periods and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
28	National population sample, Greece	Cohort	17,713 (2008-2013) Mean age 39.41y (SD=8.83)	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post- recession period Employment Status	**Psychological Well-being** Mental health (CES-D scale) Self-rated health	In the period 2008-2013 unemployed people faced more impaired health (3.21 vs. 2.48, t = 8.34, p=0.00) and mental health than did employed people (12.67 vs. 9.39, t = 12.28, p =0.00). These health differences between unemployed and employed individuals were smaller in 2008-2009 than in 2010-2013.	Temporal order of exposures, confounders, and the outcome under consideration affected al participants at the same time, producing stronger causal conclusions. The results indicate a relationship between unemployment and health/mental health.	The impact of economic recessions varies across cultures and time periods; thus, the generalisability of the findings may be considerably limited by the uniqueness of the Greek situation.
29	National population sample, Italy	Cohort	37,782 (2006-2010) 15-64 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post- recession period **Employment Status**	**Psychological Well-being** Self-rated health	Temporary workers, first job seekers and unemployed individuals all perceive their health as being worse than permanent workers do. The health inequalities between permanent workers and the unemployed rose, especially for males and young people, after the economic recession.	The temporal order of the exposures, confounders, and the outcome under consideration affected all the participants at the same time, producing stronger causal conclusions.	The impact of economic recessions varies across cultures and time periods; thus, generalising findings may be reasonably limited by the uniqueness of the Italian social system.
31	National population samples from Greece and Poland	Repeated cross-sectional Case-control	54,120 cases 136,952 controls (2006-2009)	**Inter-time Variables** Pre- and post-recession period	**Psychological Well-being** Self-reported health	Relative to the control population (Poland), Greece experienced a significantly bigger increase in the odds of poor health after the crisis (OR= 1.16; 95% CI 1.04-1.29)	This study benefits from having a control group and cross-national design. The study is composed of comparable surveys across two time points, before and after the onset of the recession.	Its cross-sectional design removes the possibility of causal inference. Data is derived from 2006-2009 and the crisis started in 2008 so the long-term effects of the recession could not be investigated.
30	National population sample, Greece	Repeated cross-sectional	10,572 (2006) (2011) >18 years	**Inter-time Variables** Pre- and post- recession period	**Psychological Well-being** Self-reported health	Self-reported good health deteriorated from 71% in 2006 to 68.8% in 2011 (P < 0.05).	The study is composed of comparable surveys across two time periods (pre- and post-recession).	Its cross-sectional design removes the possibility of causal inference. It is limited to 2011.
32	National population sample, England, UK	Repeated cross-sectional	106,985 (1991) (2010) 25-64 y	**Inter-time Variables** Pre- and post- recession period	**Psychological Well-being** Mental health distress (GHQ-12)	Age-sex adj GHQ-12 caseness increased from 13.7% (95% CI:12.9%-14.5%) in 2008 to 16.4% (95% CI:14.9%-17.9%) in 2009 and 15.5% (95% CI:14.4%-16.7%) in 2010. Women only had a greater prevalence from 1991 until the recession, but men showed an increase over the period.	Uses a continuous measure of mental health symptoms. Large nationally representative dataset surveyed two times.	Its cross-sectional design removes the possibility of causal inference. Limited period of time; the long-term effects of the recession could not be investigated.
33	National population sample, Spain	Repeated cross-sectional	23,760 (2006) 16,616 (2012)	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post- recession period Employment Status	**Psychological Well-being** Mental health distress (GHQ-12)	Results found an increase in the prevalence of poor mental health among men (prevalence ratio = 1.15, 95% CI 1.04-1.26, especially among those aged 35-54 years, and a slight decrease for women between 2006/07 and 2011/12. There was a larger impact among the unemployed.	The study is composed of comparable surveys across two time points before and after the economic recession period. Representative sample	Its cross-sectional design removes the possibility of causal inference. Limited period of time (2012); the long-term effects of the recession could not be investigated.

Table 1.2 Characteristics of studies included in the review comparing the data to pre-recession periods and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
34	Regional population sample, Working-age women, Stockholm, Sweden	Repeated cross-sectional	27,994 (2006) 22,639 (2010) 18-64 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post- recession period Employment Status	**Psychological Well-being** Mental health distress (GHQ-12)	Mental distress increased among women of all types of employment status between 2006 and 2010, but more so among unemployed women, OR 2.65 (CI 95% 2.17-3.23) in 2006 and OR 2.81 (CI 95% 2.20-3.58) in 2010.	The study is composed of comparable surveys across multiple time points before and after the economic recession period.	Its cross-sectional design removes the possibility of causal inference. Data is derived from 2006-2010 and the crisis started in 2008, so the long term effects of the recession could not be investigated. The sample is composed only of women.
35	National population sample, Japan	Repeated cross-sectional	168,801 (1986-1989) 150,016 (1998-2001) 20-60 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post- recession period Employment status/Income	**Psychological Well-being** Self-reported health	The OR for poor self-rated health (95% CI) among middle-class people compared with the highest class was 1.02 (0.92-1.14) before the crisis and increased to 1.14 (1.02-1.29) after the crisis (p = 0.02). The association was stronger among males. Unemployed people were twice as likely to report poor health.	The study is composed of comparable surveys across multiple time points before and after the economic recession period, showing reports of increased poor health across all socioeconomic statuses.	Its cross-sectional design removes the possibility of causal inference. The study lacks individual-level information on job insecurity, work overload, or pay cuts that can work as confounders. The outcome was self-reported.
36	National population sample, Iceland	Cohort	9,807 (2007) 5,439 (2009)	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-recession period Employment Status	**Common Mental Disorders** Psychological stress (PSS-4)	Age-adj stress levels increased between 2007 and 2009 (P = 0.004), only for women (P = 0.003). The OR for high stress levels increased only among women (OR = 1.37), especially those who were unemployed (OR= 3.38), students (OR = 2.01), with middle levels of education (OR = 1.65), or in the middle income bracket (OR = 1.59).	This study examines the longitudinal interrelations between employment status and socio-demographic in psychological stress levels during a period of extensive macroeconomic changes.	The impact of economic recessions varies across cultures and time periods; thus, the generalisability of the findings may be reasonably limited by the uniqueness of Icelandic culture, as well as the nature of the 2008 economic collapse in Iceland.
37	National population sample, Greece	Repeated cross-sectional	2,197 (2008) 2,256 (2011) 18-69 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post- recession period Perceived financial strain	**Common Mental Disorders** Depression (SCID-I)	The odds of major depression were greater in 2011 than in 2008 (OR=2.6, 95%CI=1.97-3.43). Financial strain independently and significantly predicts the presence of major depression (OR=1.2, 95%CI=1.13-1.24).	The study is composed of comparable surveys across two time points before and after the period of the economic recession.	Its cross-sectional design removes the possibility of causal inference. Limited period of time; the long-term effects of the recession could not be investigated. Telephone survey.
38	National population sample, Greece	Repeated cross-sectional	2,197 (2008) 2,192 (2009) 18-69 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post- recession period Financial strain	**Common Mental Disorders** Major depressive episode – MDE (SCID-I)	The one-month prevalence of MDE in 2009 was found to be 6.8%, compared to rates of 3.3% in 2008 ($p < 0.0001$). Respondents facing serious economic hardship were at higher risk of developing an MDE.	Representative samples and comparable surveys across two time points before and during the period of the economic recession in Greece.	No causal inference can be made because of the cross-sectional nature of the study. The generalisability of the findings is limited by the uniqueness of the 2008 economic collapse in Greece. Limited period of time; the long-term effects of the recession could not be investigated.

Table 1.2 Characteristics of studies included in the review comparing the data to pre-recession periods and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
39	National population sample, patients attending primary care centres, Spain	Repeated cross-sectional	7,640 (2006-07) 5,876 (2010-11)	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-recession period Employment status, Mortgage payments	**Common Mental Disorders** **Substance Disorders** Depression Anxiety Somatoform Alcohol-related disorders	Since the pre-crisis period (2006), major depression increased by 19.4%, anxiety by 8.4%, somatoform disorders by 7.3%, and alcohol-related disorders by 4.6%. The risk of depression when unemployed was OR=2.12, p<0.001. The risk of depression resulting from mortgage payment difficulties was OR=2.95, p<0.001.	The study is composed of comparable surveys across multiple time points before and after the economic recession period.	Its cross-sectional design removes the possibility of causal inference. Limited period of time; the long-term effects of the recession could not be investigated. Only patients attending and able to access primary care were investigated.
40	Regional working population sample, Alberta, Canada	Repeated cross-sectional	3,579 (2008-2009)	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-recession period	**Common Mental Disorders** Major depressive disorder (MDD) Dysthymia Anxiety (CIDI)	The 12-month prevalence of major depressive disorder (MDD) before September 1, 2008; between September 1, 2008, and March 1, 2009; and between March 1, 2009, and October 30, 2009, was 5.1%, 6.8%, and 7.6% (P = 0.03), respectively. The lifetime prevalence of dysthymia reported during the 3 periods was 0.4%, 0.7%, and 1.5% (P = 0.006), respectively. No changes in the 12-month prevalence of social phobia, panic disorder, and generalized anxiety disorder were found over time.	This study examines changes in the population prevalence of common mental disorders before and during the period of the economic recession.	No causal inference can be made because of the cross-sectional nature of the study. The effects of socioeconomic variables were not adjusted. The long-term effects of the recession could not be investigated.
41	National population sample, Hong Kong, China	Repeated cross-sectional	3,016 (2007) 2,011 (2009) 15-65 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-economic crisis period Socioeconomic/ Employment Status	**Common Mental Disorders** Major depressive episode (MDE)	The 12-month prevalence of MDE was significantly higher in 2009 (/12.5%) than 2007 (8.5%). The prevalence of MDE in the unemployed group increased from 2007(14.6%) to 2009 (17.8%).	The study is composed of comparable surveys across two time points before and after the period of the economic recession.	Because of population characteristics and cultural norms concerning response to economic adversity, the findings may not generalise to other societies. Its cross-sectional design removes the possibility of causal inference. The long-term effects of the recession could not be investigated.
42	National population sample, USA	Cohort	2,050,431 (2006-2007; 2008-2009) > 18 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-recession period Employment status	**Substance-Disorders** Alcohol use	The prevalence of any alcohol use significantly declined from 52.0% in 2006-2007 to 51.6% in 2008-2009. There was an increase in the prevalence of frequent bingeing, from 4.8% in 2006-2007 to 5.1% in 2008-2009 (P < 0.01). Unmarried non-Black men under 30 years who recently became unemployed were at the greatest risk of frequent bingeing.	Large representative sample. Longitudinal measures on changes of alcohol use prevalence during a period of economic recession.	The generalisability of the findings may be reasonably limited to the country's own policy regarding alcohol use and the social welfare system. Limited period of time; the long-term effects of the recession could not be investigated.
43	Community sample, province and city of Buenos Aires, Argentina	Cross-sectional	1,000 (2002) 18-65 y	**Inter-time Variables** During recession period	**Substance-Disorders** Patterns of drinking behaviour Drinking-related problems	During the economic crisis people drank more at home or at friends' homes. A large number of respondents also reported that people had changed to cheaper or lower-quality alcoholic drinks.	Brings evidence on how the economic crisis is possibly resulting in increased drinking of cheaper or lower-quality alcoholic drinks.	No causal inference can be made because of the cross-sectional design. Self-reports of sensitive behaviours. Generalisability is limited to the uniqueness of the Argentinean economic collapse and society

Table 1.2. Characteristics of studies included in the review comparing the data to pre-recession periods and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
44	National population sample, Sweden	Cohort	4,224210 (1992-1996)	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-recession period Employment status	**Suicidal Behaviours** Excess mortality effects (suicide)	During the recession there was no additional risk of mortality as a result of suicide. During the post-recession period, there was an additional risk of mortality through suicide for unemployed men (HR = 1.43; 95% CI = 1.31, 1.56) but not unemployed women.	This study examines longitudinal changes in suicide mortality during a period of mass unemployment in Sweden. Reports post-recessionary increases on suicide among unemployed men, considering possible time-lagged effects.	This research study fails to determine if mental health declined as a result of unemployment, or loss of benefits or income over time. The generalisability of the findings may be limited by the uniqueness of the Swedish welfare system and its economic recession.
45	National population sample, Greece	Repeated cross-sectional	2,192 (2009) 2,256 (2011)	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-recession period Financial strain (Index of Personal Economic Distress)	**Suicidal Behaviours** Suicidal ideation Suicide attempts	The rate of suicidal ideation increased from 5.2% in 2009 to 6.7% in 2011 (χ^2=3.92, df=1, p=0.04). The increase was significant in men (7.1% vs. 4.4%, χ^2=6.41, df=1, p=0.011) and those aged 55-64 years (7.2% vs. 1.9%, χ^2=14.41, df=1, p<0.001), while it decreased in those younger than 24 years (4.9% vs. 13.9%, χ^2= 15.83, df=1, p<0.001). Suicidal ideation increased among psychotropic medication users (22.7% vs. 4.5%, χ^2=11.10, df=1, p<0.001) and those asking for mental healthcare (17.3% vs. 8.3%, χ^2=13.36, df=1, p<0.001). No unemployed respondent reported a suicide attempt in 2009, while the proportion was 4.4% in 2011 (χ^2=4.12, df=1, p=0.042).	Representative sample. This study provides evidence on the increase in the prevalence of suicidal ideation and reported suicide attempts in a country facing a deep economic recession.	Reported suicidal ideation and suicide attempts can be susceptible to recall bias or to reluctance on the part of respondents to disclose such sensitive information. No causal inference can be made because of the cross-sectional nature of the study. Limited period of time; the long-term effects of the recession could not be investigated. The generalisability of the findings may be reasonably limited by the uniqueness of the 2008 economic collapse in Greece.
46	National population sample, South Korea	Repeated cross-sectional	27,745 (1998) 27,413 (2001) 25,487 (2005) 3,335 (2007) >19 y	**Inter-time Variables** **Psychosocial/economic indicators** Pre- and post-recession period Socioeconomic inequalities	**Common Mental Disorders** **Suicidal Behaviours** Depression (doctor-diagnosed) Suicidal ideation Suicide attempts	The pro-rich inequalities in the prevalence of depression, suicidal ideation and suicide attempts doubled between 1998 and 2007. The CI for depression decreased from -0.126 (SE: 0.068) in 1998 to -0.278 (SE: 0.068) in 2001 and stayed constant. The CI for suicidal ideation fell gradually: -0.138 (SE: 0.012) in 1998 and -0.250 (SE: 0.028) in 2007. The CI for suicide attempts increased from -0.221 (SE: 0.062) in 1998 to -0.175 (SE: 0.075) in 2001 and -0.179 (SE: 0.089) in 2005, and in 2007 to -0.400 (SE: 0.116).	Nationally representative survey data sets The study is composed of comparable surveys across several time points before and after the period of the economic recession.	Reported suicidal ideation and suicide attempts can be susceptible to recall bias or to reluctance on the part of respondents to disclose such sensitive information. Depressed individuals in lower income groups might have been under-represented because of financial difficulties in seeking professional help. No causal inference can be made as it is a cross-sectional study.
47	National Population sample, Spain	Ecological study	(2005-2010)	**Inter-time Variables** Pre- and post-recession period	**Suicidal Behaviours** National suicide rates	An 8.0% increase was found in the suicide rate above the trend since the financial crisis (95% CI: 1.009-1.156; P = 0.03). Stratified analyses suggested that the association between the crisis and suicide rates is greatest in males and those of working age.	Uses stratified analyses and adjusted for seasonal fluctuations.	Because of its ecological nature, the quality of the data is not assessable and no implications can be drawn regarding causality. Other variables, independent of economic conditions, may be involved.

Table 1.2.Characteristics of studies included in the review comparing the data to pre-recession periods and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
48	Regional population sample, Andalusia, Spain	Ecological study	24,380 (2003-2012)	**Inter-time Variables** Pre- and post-recession period	**Suicidal Behaviours** Hospital records on suicide attempts	Compared to the historical trends prior to the onset of the crisis, between 2008 and 2012 there were 4,989 more suicide attempts (95% CI: 1,985-8,013): 2,017 (95% CI: 87-3,987) in men and 2,972 (95% CI: 1,878-4,075) in women. In men, an association between unemployment and suicidal behaviour was found.	First ad hoc study of the impact of the recession on suicide attempts in Spain based on hospital records in a large population sample.	Because of its ecological nature, the quality of the daa is not assessable and no implications can be drawn regarding causality. The results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
49	Regional population sample, Andalusia, Spain	Ecological study	1975-2012	**Inter-time Variables** Pre- and post-recession period	**Suicidal Behaviours** Regional suicide rates	Suicide rates have increased since 1975.in recent decades, an upward trend has been observed in young people (15 to 44 y), an annual percentage rate change of 1.21 (95%CI: 0.7-1.7) for men and 0.93 (95%CI: 0.4-1.4) for women.	Regional trend analysis of the variation in suicide rates.	Because of its ecological nature, the quality of the data is not assessable and no implications can be drawn regarding causality. The results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
50	National population sample, Italy	Ecological study	(1980-2010) >15 y	**Inter-time Variables** Pre- and post-recession period	**Suicidal Behaviours** National suicide rates	The suicide rate for men involved in the labour force increased by 12% in 2010 compared with that in 2006. The suicide rate declined for women of all ages and for men younger than 25 and older than 65 years of age.	Examined trends in the total official suicide rate before and after the onset of the recession.	Because of its ecological nature, the quality of the data is not assessable and no implications can be drawn regarding causality. The results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide. There were no economic variables involved in the analyses.
51	National population sample, England, UK	Ecological study	2008-2010	**Inter-time Variables** **Macroeconomic indicators** Pre- and post-recession period Regional unemployment rate	**Suicidal Behaviours** National suicide rates	During 2008 and 2010, there were 846 more (95% CI: 818-877) suicides among men and 155 (121-189) more suicides among women than would have been expected on the basis of historical trends. The 10% increase in men's unemployment was significantly associated with an increase of 1.4% (0.5%- 2.3%) in suicides.	Examined trends in the total suicide rate before and after the onset of the recession and in relation to unemployment rates.	Because of its ecological nature, the quality of the data is not assessable and no implications can be drawn regarding causality. The results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
52	National population sample, England and Wales, UK	Ecological study	(2001-2011) 16-64 y	**Inter-time Variables** Pre- and post-recession period	**Suicidal Behaviours** National Suicide Rates	The downward trend in the suicide rate for men stopped for men aged 16-34 years in 2006 (95% CI Quarter 3 (Q3) 2004, Q3 2007 for 16-24-year-olds & Q1 2005, Q4 2006 for 25-34-year-olds). The suicide rate in 35-44-year-old men reversed from a downward to an upward trend in early 2010 (95% CI Q4 2008, Q2 2011). No clear evidence of an association between trends in female suicide rates and indicators of economic recession was found.	Used age- and sex-specific trends in suicide in the years before and after the economic recession of 2008 in relation to a variety of indicators of recession effects. Excluded accidental deaths	Causality issues due to its ecological nature. Quality of the data is not assessable. The results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.

Table 1.2.Characteristics of studies included in the review comparing the data to pre-recession periods and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
53	Cross-national population samples, EU, Canada and USA	Ecological study	2001-2011	**Inter-time Variables** Pre- and post-recession period	**Suicidal Behaviours** National suicide rates	In the EU, there was a rise in the suicide rate of 6.5% above past trends in 2009. In Canada, suicides rose by 4.5% between 2007 and 2009. In the USA, suicides rose by 4.8% between 2007 and 2010.	Cross-national analysis. Examined trends in the total official suicide rate before and after the onset of the recession.	Because of its ecological nature, the quality of the data is not assessable and no implications can be drawn regarding causality. The results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide. Suicide rates may vary across nations for cultural reasons.
54	National population sample, USA	Ecological study	1999-2010	**Inter-time Variables** **Macroeconomic indicators** Pre- and post-recession period State-level unemployment rate	**Suicidal Behaviours** National suicide rate	The suicide rate accelerated after the onset of the recession. There were an additional 0.51 deaths per 100,000 per year (95% CI 0•28-0•75) in 2008-10 – an additional 1,580 suicides per year (95% CI 860-2300). A 1% rise in unemployment is associated with a 0.99% increase in the suicide rate (95% CI 0·60-1·38, p<0·0001)	Examined trends in the total suicide rate before and after the onset of the recession and in relation to unemployment rates.	Because of its ecological nature, the quality of the data is not assessable and no implications can be drawn regarding causality. The results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.

Table 1.3. Characteristics of studies included in review relating macroeconomic indicators and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
55	National population sample, USA	Cohort	26,313 18-59 y	**Macroeconomic indicators** State level unemployment rate	**Psychological Well-being** Health Related Quality of Life, Mental Health Component Summary Scale - (SF-12 Health Survey)	Increases in average state unemployment rate worsen individual's HRQL. During hard economic times mental health decreases more than physical health	Temporal order of exposures under consideration affected all participants at the same time producing stronger causal conclusions.	The effect sizes are relatively small in magnitude. The results and recommendations should not be generalized to other cohorts.
56	National population sample, Britain, UK	Cohort	10,264 (1991-2008) 16–65 y	**Macroeconomic indicators** Local area unemployment rate	**Psychological Well-being** Mental health distress (GHQ-12)	Mental distress levels among unemployed people are significantly higher than among their securely employed counterparts (2.20; 95% CI:1.98- 2.42). Residence in a high-unemployment area protects against distress if unemployed.	Annual data collected over a 17 year period. Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Possible bias due to selection effects threat causal inference since those with poor mental health are more likely to subsequently become unemployed.
57	National unemployed population sample, Sweden	Cohort	1,806 (1996) 1,415 (1997) 19–64 y	**Macroeconomic indicators** Regional unemployment and vacancy rate	**Psychological Well-being** Mental health distress (GHQ-12)	Significant negative effects of both unemployment rate (−0.22) and vacancy rate (−5.29) on the level of mental health among the unemployed.	Dataset surveyed in two times and shows that higher municipal vacancy rates improved mental health among the unemployed	The cross-sectional result of vacancy rates by longitudinal analysis of change gives some information on this being an effect of ecological modification and not differential health-based selection.
59	National population sample of working-age men, USA	Repeated cross-sectional	30,000 (1997) 35,000 (2001)	**Macroeconomic indicators** Local area unemployment rate	**Psychological Well-being** Mental health distress caseness (K6)	1 percentage point increase in the local unemployment rate leads to 3.4, 3.3, 2.5, 3.5, 3.5 and 3.8 percentage point increases in responding affirmatively to sadness, hopelessness, worthlessness, restlessness, nervousness, and feelings of effort, respectively.	Gives systematic evidence of the procyclical nature of mental health, in several clusters.	Does not take into account the lagged effect of macroeconomic conditions on mental health. Its cross-sectional design removes the possibility of causal inference.
58	Cross-national, 40 European and Anglo-Saxon societies	Ecological study	42,275 (2000–2004) (2005–2007	**Macroeconomic indicators** Employment status, GDP, income inequality	**Psychological Well-being** Life satisfaction	Unemployment lowers substantially the level of life-satisfaction (-0.761 to -0.785 points lower than those employed). GDP per capita and income inequality negatively influence this association.	Large cross-national sample with attention to the macroeconomic variables of countries.	Not all contexts that affect the relationship between unemployment and life-satisfaction may be placed at the national level
60	Regional population sample, Asturias, Spain	Ecological study	2000-2010	**Macroeconomic indicators** National unemployment rate, GDP	**Psychological Well-being** hospital records on incidence and prevalence of mental illness	Found a negative correlation of unemployment rate with mental health care demand. Unemployment rate was associated with a decrease in both new and prevalent mental health demand.	Regionally analysis of the association between mental health care demand and the variation of the unemployment rate and GDP.	The series studied ended in 2010, just before the intense years of the crisis. Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution
61	Cross-national samples of 30 countries EU, North American and Australia	Ecological study	(1960-2012)	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours** National suicide rates	Unemployment rate increase has a detrimental impact on suicide, especially in country groups with the least developed unemployment protection (eastern and southern Europe).	Large cross-national sample covering a period of 52 years.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.

Table 1.3 Characteristics of studies included in review relating macroeconomic indicators and mental health outcomes, 2004-2014.

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
62	Cross-national samples, 29 EU countries	Ecological study	1999-2010	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours** National suicide rates	A 1% increase in unemployment rates, suicide rates increase by 0.09. Male suicides increase by 0.21 (per 100 000 male inhabitants). The relationship is positive for women but not statistically significant.	Cross-national level trends analysis covering the period of recession.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
63	Cross-national samples of 26 EU countries	Ecological study	1970-2007	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours Substance-Disorders** National suicide rates National deaths by alcohol abuse	1% increase in unemployment increases suicide at 0.79% in ages younger than 65 years (95% CI 0·16–1·42; 60–550 potential excess deaths [mean 310]). A more than 3% increase in unemployment increases suicide in 4.45% at ages younger than 65 years (95% CI 0·65–8·24; 250–3220 potential excess deaths [mean 1740]) and 28% deaths from alcohol (12·30–43·70; 1550–5490 potential excess deaths [mean 3500]	Large cross-national sample covering a period of 37 years.	It is limited to 2007. Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
64	Cross-national samples of 23 EU countries	Ecological study	2000-2010	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours** National suicide rates	A 1% increase in unemployment rates, suicide rates increase by 34.1%.	Cross-national level trends analysis covering the period of recession.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide. The time series is limited to a decade.
65	Cross-national samples of 20 EU countries	Ecological study	(1981-2011)	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours** National male suicide rates	Male suicide increases significantly 0.94% with each rise in male unemployment (95% CI: 0.51-1.36%)	Large cross-national sample covering a period of 30 years.	Focus only in male suicide. Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
66	Cross-national samples of 8 EU countries	Ecological study	2000-2010	**Macroeconomic indicators** Unemployment rate and GDP	**Suicidal Behaviours** National suicide rates	Rise on unemployment rates and decline GDP increased suicide mortality (Germany +5.3%, Portugal +5.2%, Czech Republic +7.6%, Slovakia +22.7% and Poland +19.3%). In low social spending countries, unemployment rate has a stronger effect on suicide.	Cross-national level trends analysis covering the period of recession.	The time series is limited to a decade. The ecological design does not allow for control of potential confounders or effect modifiers. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
67	National Population sample, USA	Ecological study	1979-2004	**Macroeconomic indicators** Unemployment rate and GDP	**Suicidal Behaviours** National suicide rates	Higher unemployment rates for prime working-age (35-64) men and women are positively correlated with their higher suicide rates	Cross-state level trends analysis	The time series is limited to 2004, higher effects are expected afterwards. The ecological design does not allow for control of potential confounders or effect modifiers. Other variables, independent of economic conditions, may be involved .

Table 1.3 Characteristics of studies included in review relating macroeconomic indicators and mental health outcomes, 2004-2014.

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
68	National Population sample, USA	Ecological study	(1997-2010)	**Macroeconomic indicators** Employment Rate	**Suicidal Behaviours** National Suicide Rates	Strong positive association between unemployment rates and total suicide rates over time. Strong explanation among the middle-aged suicides but cannot explain temporal variation in suicide rates among the young and elderly.	Examined trends in the total suicide rate and in the rate disaggregated by sex, age group and time period and include a number of important confounding factors in a multivariate analysis.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
69	National population sample, USA	Ecological study	1968-2008	**Macroeconomic indicators** State level unemployment rate	**Suicidal Behaviours** State level suicide rates	A 1-percentage-point increase in the state unemployment rate was associated with 0.16 (95% CI: 0.08, 0.24) more suicide deaths per 100,000 population. The presence of generous state unemployment benefit programs buffer the impact of unemployment rates on suicide.	State fixed-effect analysis covering 1968-2008 on suicide rates	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
70	National population sample, South Korea	Ecological study	2003-2011	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours** National suicide rates	National unemployment rate was positively and significantly associated with the unemployed and employed suicide rate.	National level trends analysis covering the period of recession.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide. The time series is limited to 8 years.
71	National population sample, Greece	Ecological study	1968-2011	**Macroeconomic indicators** National unemployment rate, government expenditure	**Suicidal Behaviours** National suicide rates	Unemployment rates and suicide rates were highly correlated (0.45). 1% increase in unemployment of males (25-44y), increases suicide rates in 4.5%. Austerity measures and negative economic growth also significantly increase male suicide rates.	Evaluates specific effects of fiscal austerity, among other socio-economic variables, on suicide rates over recession period.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
72	National population sample, Greece	Ecological study	1991-2011	**Macroeconomic indicators** Unemployment rate and GDP	**Suicidal Behaviours** National suicide rates	Suicide rates are positively and significantly correlated with percentage of public debt in GDP and unemployment.	National level trends analysis covering the period of recession and macroeconomic fluctuations	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide. The time series is limited to 10 years
73	National population sample, Greece	Ecological study	2000-2010	**Macroeconomic indicators** National unemployment rate, growth rate	**Suicidal Behaviours** National suicide rates	The correlations between suicidal rates and unemployment and growth rate were about zero. Found no increase in suicidality in Greece during the recession and no relationship of suicidal rates with unemployment rates or growth rate.	Evaluates specific effects of unemployment and growth rates, on suicide rates over recession period.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide. The time series is limited to a decade.
74	National population sample, England, UK	Ecological study	1993-2010	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours** National suicide rates	The associations between unemployment rate and suicide rates were only statistically significant associations at regional level between 2008 and 2010.	National and regional level trends analysis covering the period of recession.	Due to the ecological design, quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved.

Table 1.3 Characteristics of studies included in review relating macroeconomic indicators and mental health outcomes, 2004-2014.

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
75	National population sample, Hungary	Ecological study	2000-2011	**Macroeconomic indicators** National unemployment rate	**Suicidal Behaviours** National suicide rates	Unemployment rates might be associated with suicidality in the general population after 3-5 years after the onset of recession (strong positive correlation at 5 years for the general population (0.78))	National level trends analysis covering the period of recession and suggesting that there is a time lag in the increase of suicide rates.	The time series is limited to a decade Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.
76	National population sample, USA	Ecological study	2005-2010	**Macroeconomic indicators** State level foreclosure rate	**Suicidal Behaviours** State level suicide rates	The foreclosure crisis has likely contributed to increased suicides ($b = 0.04$; $P < .1$). the effects were strongest among the middle-aged people (46-64 years: total foreclosure rate, $b = 0.21$; $P < .001$)	State-level analysis covering 2005-2010 on suicide state rates.	Because of its ecological nature, the quality of data is not assessable and no implications on causality can be drawn. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide. The time series is limited to 5 years
77	National population sample, Italy	Ecological study	2000-2010	**Macroeconomic indicators** GDP per person	**Suicidal Behaviours** National suicide rates	The real GDP was associated with the percentage of male completed suicides due to financial problems $b= 0.16$, $p= 0.05$).	National level trends analysis covering the period of recession	Only male suicides were considered. The time series is limited to a decade. The ecological design does not allow for control of potential confounders or effect modifiers. Results should be interpreted with caution as other variables, independent of economic conditions, may be involved in the precipitation of suicide.

Table 1.4. Characteristics of studies included in review relating unemployment status and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
78	National population sample, USA	Cohort	1,510 1986-2002 >25 y	**Individual-level indicators** Employment status Socioeconomic status	**Psychological Well-being** Depressive symptoms (CES-D)	Job loss is linked with follow-up depressive symptoms and, occupational prestige significantly heightened this vulnerability. Unemployment status is significantly associated with depressive symptoms (r: 0.333, S.E.: 0.108)	Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Difficult to distinguish truly involuntary job losses from health-related separations. Did not account for life course effects, the role of neighbourhood, or other such effects by which inequality may shape health.
79	National population sample, Australia	Cohort	7,176 2001 20-55 y	**Individual-level indicators** Employment status	**Psychological Well-being** Mental health distress (MHI-5)	Negative correlation (r=−0.16) between unemployment and mental health across waves. Mental health is both a consequence of and risk factor for unemployment.	Uses a continuous measure of mental health symptoms. It simultaneously investigates the bi-directional effects of unemployment and mental health.	The analyses were restricted to working age population (20 to 55 years at baseline). The results and recommendations should not be generalized to other cohorts.
80	National population sample, Britain, UK	Cohort	14,686 1991-2000 ≥16 y	**Individual-level indicators** Employment status Financial situation	**Psychological Well-being** Mental health distress caseness (GHQ-12)	Job loss increased risk of distress for men (OR= 3.15; 95% CI:2.50-3.98) and women (OR= 2.60; 95% CI:1.97-3.43). Moving to paid work reduced risk of distress for men (OR=0.52;95% CI: 0.41-0.68) and for women (OR=0.68;95% CI: 0.69-1.40). Worse off unemployed men are more distressed (OR=4.19; 95% CI:3.20-5.50).	Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Although, subjective financial difficulty was associated with psychological distress, whether it is causal or the consequence of negative affectivity is not clear.
81	National population sample, New Zealand	Cohort	15,095 (2004-2009) 15–60y	**Individual-level indicators** Employment Status Deprivation	**Psychological Well-being** Mental health distress (Kessler-10 and SF-36)	Job loss decreased MH (SF-36) in 1.34 points (95% CI -1.85 to -0.82) and increased mental distress in 0.50 points (95% CI 0.34 to 0.67). Deprivation was associated with a 1.47 (95% CI -1.67 to -1.28) decline in MH and a 0.57 unit (95% CI 0.51 to 0.63) increase in mental distress.	Large sample over 5 years. Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Those with poor mental health are more likely to subsequently become unemployed or experience more deprivation, so reverse causation might be possible.
82	National population sample, Britain, UK	Cohort	10,300 16–64y (1991-2009)	**Individual-level indicators** Employment Status	**Psychological Well-being** Mental health distress (GHQ-12)	Moving from unemployment to employment was strongly associated with an improvement in mental health −2.1 [95% CI −2.4 to −1.7], whereas becoming unemployed was detrimental 2.5 (95% CI 2.2- 2.7).	Annual data collected over a 19-year period. Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Possible bias due to selection effects threat causal inference since those with poor mental health are more likely to subsequently become unemployed
83	National population sample, Britain, UK	Cohort	10,264 16–65y (1991-2007)	**Individual-level indicators** Employment Status	**Psychological Well-being** Mental health distress (GHQ-12)	Job loss significantly predicted poorer psychological well-being in comparison to those still employed (2.21; 95%; CI: 1.99 - 2.43).	Annual data collected over a 16-year period. Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Possible bias due to selection effects threat causal inference since those with poor mental health are more likely to subsequently become unemployed

Table 1.4. Characteristics of studies included in review relating unemployment status and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
84	National population sample, Japan	Cohort	4,800 (2007-2011) 20-40y	**Individual-level indicators** Employment Status	**Psychological Well-being** Mental health distress (MHI-5)	Job loss decreases mental health by 12.0 points (MHI-5) after controlling for other variables.	Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Direction of causality even after controlling for individual heterogeneity, is difficult to distinguish.
85	National population sample, Australia	Cohort	5,846 2007 > 15 y	**Individual-level indicators** Employment status Unemployment duration	**Psychological Well-being** Mental health distress (MHI-5)	Baseline mental health status predicts overall time spent unemployed. 19.1% of those with poor mental health experience subsequent unemployment compared with 14.6% of those with better mental health.	Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal link.	The analysis was restricted to respondents aging 20–50 years at baseline. The results and recommendations should not be generalized to other cohorts
86	National population sample, Australia	Cohort	21,280 (2001-2010) ≥16 y	**Individual-level indicators** Employment status Number of unemployment spells	**Psychological Well-being** Mental well-being (SF-36)	Compared to employed people, unemployed people show a 1.64 decrease (95% CI -2.05 to -1.23, p<0.001) in mental health, and those who had two or more spells of unemployment show a 2.56 decrease (95% CI -3.93 to -1.19, p<0.001).	Large sample. Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Lack of data on voluntarily or involuntary job loss (due to illness) self-reported nature of the data on mental health
87	National population, Sweden	Cross-sectional	20,538 (2008) 18-85 y	**Individual-level indicators** Employment status	**Psychological Well-being** Mental health distress (GHQ-12) psychosomatic symptoms	Unemployed people had reduced psychological well-being (OR=2.11; 95% CI: 1.79 – 2.50) and more psychosomatic symptoms (OR=1.62; 95% CI: 1.37 – 1.92) compared with individuals who were employed.	Large sample. The postal survey reduces the potential bias introduced by interviewer and respondents may answer sensitive questions more honestly.	Its cross-sectional design removes the possibility of causal inference. Postal questionnaire surveys increase non-response sample bias.
88	Community sample, Scania, Sweden	Cross-sectional	5,180 18-64 y	**Individual-level indicators** Employment status Psychosocial job quality	**Psychological Well-being** Mental health distress (GHQ-12)	People facing job strain (OR=3.01; 95% CI:2.26–4.02) and unemployment (OR=5.81; 95% CI:4.33–7.79) have significantly higher odds ratios of psychological distress.	The postal survey reduces the potential bias introduced by interviewer and respondents may answer sensitive questions more honestly.	Its cross-sectional design removes the possibility of causal inference. Postal questionnaire surveys increase non-response sample bias.
89	Regional sample, North West of England, UK	Cross-sectional	15,228 (2009)	**Individual-level indicators** Employment status Deprivation	**Psychological Well-being** Life satisfaction Mental well-being	Deprivation strongly linked to low LS and MWB. 17.1% of the most deprived tertile have low LS compared to 8.9% in the most affluent.	It identifies the characteristics of individuals most likely to suffer from poor Well-being	Its cross-sectional design removes the possibility of causal inference.
90	National population sample, Brazil	Cross-sectional	5,000 (2003) >18 y	**Individual-level indicators** Employment status	**Common Mental Disorders** State of animus (World Health Survey)	Among women, level of education and unemployment were associated with feelings of depression and anxiety. Among males, feelings of depression were strongly associated with unemployment.	This study provides data on the negative effects of unemployment on depression and anxiety, which are important predictors of subsequent morbidity.	Its cross-sectional design removes the possibility of causal inference. Generalizing findings may be reasonably limited to the uniqueness of the Brazilian welfare system.

Table 1.4. Characteristics of studies included in review relating unemployment status and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
91	Cross-national samples of older adults from 13 EU countries and USA	Cohort	15,055 (2006-2010) 50-64 y	**Individual-level indicators** Employment status	**Common Mental Disorders** Depressive symptoms (EURO-D and CESD)	Unemployment was associated with 4.78% [95% (CI): 0.823% to 8.74%] increase in depressive symptoms in the USA and 3.35% (95% CI: 0.486% to 6.22%) increase in Europe.	Bias due to selection and reverse causality was lessen because the study distinguished job loss due to plant closures, and used individual fixed effect models.	Used two measures for depressive symptoms Euro-D for Europe and CESD for USA. However, these were normalized. The analysis was restricted to older adults (50-64y).
92	Cross-national sample of primary care patients from EU and Chile	Cohort	10,059 (2003-2004) 18-75 y	**Individual-level indicators** Employment status	**Common Mental Disorders** Depression caseness Composite International Diagnostic Interview (CIDI)	Job loss between baseline and 6 months compared to those employed at both times had an adj relative risk ratio for 12-month depression of 1.58 (95% CI:0.76, 3.27). Participants with depression at baseline and 6 months compared to neither time had an OR for 6-month unemployment of 1.58 (95% CI:0.97, 2.58).	It examines the interrelations between unemployment and clinical depression in both directions across different countries producing stronger causal conclusions.	No available data on whether employment is full time or part-time or underemployment. If unemployed adults with depression are less likely to seek medical treatment they may be under-represented in the GP-based sampling frame.
95	Cross-national samples of European Countries	Cross-sectional	34,395 >18 y (2001-2009)	**Individual-level indicators** Employment status Education level Income and Occupation	**Common Mental Disorders** Anxiety Mood disorder	Unemployed showed the highest prevalence and increased risk of 12-month mental disorders. Mood disorders and anxiety were more prevalent among those receiving a low and a low-average income Northern Ireland, Portugal and Belgium were the countries with the highest risk for mental disorders.	This study examines the associations between employment status and mental health in a European representative sample. Specifies which countries are at higher risk for mental disorders.	Since data derives from different countries during a wide time interval (2001–2009) to determine the impact of the adverse economic conditions of the past few years was not possible. Participants from different countries have been exposed to different economic scenarios and the study was unable to evaluate the impact of this. No causal inference can be made due to the cross-sectional nature of the study
93	National population sample, England, UK	Cross-sectional	5,090 ≥16 y	**Individual-level indicators** Employment status	**Common Mental Disorders** CIS-R interview: Common Mental Disorders (CMD)	Risk of CMD was significantly greater in unemployed individuals; economically inactive; not working due to physical health reasons; unable to find a suitable job among others. Individuals unemployed for less than 1 year or more than 3 years had a higher risk of CMD.	Uses a well validated scale for detection of common mental disorders.	Its cross-sectional design removes the possibility of causal inference.
94	National population sample, Sweden	Cross-sectional	42,448 (2004) 18-84 y	**Individual-level indicators** Employment status Financial strain	**Common Mental Disorders** Anxiety Depression (EQ-5D)	Unemployment (OR=2.9; 95%; CI:2.2-4.0), economic hardship (OR=3.1; 95%; CI:2.4-3.9 were strongly and independently related with anxiety/depression.	Large and population-based study that uses an internationally validated scale of quality of life that measures anxiety and depression.	No causal inference can be made due to the cross-sectional nature of the study.
96	National population of employees of collapsed major banks, Iceland	Cross-sectional	1,880 (2009) >20 y	**Individual-level indicators** Employment status (Downsizing)	**Common Mental Disorders** Depression and anxiety symptoms (AOSH)	Downsizing, salary cut, and transfer to another department is associated with increased psychological distress	Nationwide sample and the inclusion of all employees of collapsed major banks in one country highly hit by the economic recession	No causal inference can be made due to the cross-sectional design and self-reported data. This sample was drawn from the collapse of banks in Iceland, so generalizing findings to other countries may be limited

Table 1.4. Characteristics of studies included in review relating unemployment status and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
97	National population sample, Finland	Case-control	5,859 cases 74,809 controls	**Individual-level indicators** Employment status Socioeconomic status	**Substance-Disorders** Driving under the influence of drugs (DUID)	Low education, unemployment, disability pension, being divorced and living alone were the strongest individual predictors of DUID in all substance groups.	Large sample size, based on two registers ensuring good coverage and validity, increases reliability of the study. It shows that disadvantaged social background is related to driving under the influence of drugs.	Impaired drivers were over-represented: the cases were suspected and apprehended of DUID by the police. Not all people driving under the influence are caught (fewer than 10%). The direction of causality remains unclear.
98	National population sample, USA	Repeated Cross-sectional	405,000 (2002-2010) >18y	**Individual-level indicators** Employment status	**Substance-Disorders** alcohol use/abuse/dependence; illicit drug use/abuse/dependence and tobacco use	Unemployed people show higher prevalence of alcohol use, illicit drug use, tobacco use, alcohol abuse or dependence, and illicit drug abuse or dependence than employed. This was before, at the start of, and during the 2009–2010 period of high unemployment.	Nationally representative sample of US adults. Strong association between substance disorders and unemployment.	Cross-sectional data does not allow tests of causality among the reported associations. Possible bias due to validity of self-reports of sensitive behaviours
99	National population sample, USA	Cross-sectional	5,307 (2009-2010) >18y	**Individual-level indicators** Employment status housing payment problems	**Substance-Disorders** Alcohol Dependence Negative drinking consequences	Housing payment instability was associated with experiencing more negative drinking consequences and alcohol dependence symptoms. Job loss was strongly associated with alcohol problems in univariate models, but no significant associations were observed in multivariate models.	Nationally representative sample of US adults. Strong association between alcohol drinking patterns and housing instability and unemployment.	Does not preclude the possibility of reverse causation (individuals with existing alcohol problems prior to the study)
100	Community sample of job-seekers, Germany	Cross-sectional	7,906 (2008-09) 18-64 y	**Individual-level indicators** Employment status Duration of unemployment	**Substance-Disorders** Smoking, risky drinking, illicit drug use. Self-rated health	52.4% of the sample (53.4% male, 33.5 years mean age) had 3 or more health risk factors. 84.8% of the 18-24 year old long-term unemployed men were smokers. Substance use risk factors were highest among the 18-24 year olds All health risk factors were associated with lower self-rated health.	Very high proportions of individuals with health risk behaviours were found, and associations with self-rated health were confirmed in a sample of job-seeker individuals.	No causal inference can be made due to the cross-sectional design. The validity of self-reports of sensitive behaviours, such as alcohol consumption. Since the research focused job-seekers the sample included both unemployed and employed individuals. This sample was drawn from one area in Germany so generalizing findings may be limited
101	National population sample, South Korea	Ecological Study	1995-2005	**Individual-level indicators** Employment status	**Substance-Disorders** alcohol-attributable mortality	Found an incidence of 20 times higher alcohol-attributable deaths rate of unemployed compared to those of non-manual workers during recession	Brings national evidence on the inequalities in the health effects of economic changes.	Did not consider accidental deaths caused directly by alcohol (e.g. falls). The real magnitude of social disparity in alcohol-attributable death rates may be even greater than that estimated. Social disparity in alcohol-attributable mortality cannot be said to be a result of the crisis because this was tested.

Table 1.4. Characteristics of studies included in review relating unemployment status and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
102	Community sample, emergency departments in Edmonton, Canada	Case-control	507 cases 200 controls (1993-94) >16 y	**Individual-level indicators** Employment status	**Suicidal Behaviours** Parasuicide	There is an association between unemployment and parasuicide (OR=12.0; 95% CI:6.0-23.9)	Brings strong evidence on the influence of exposure to unemployment on parasuicidal behaviour in comparison to a control group.	There is low response rate for both cases and controls.
103	Cross-national samples from 21 countries worldwide	Cross-sectional	108,705 (2001-07) >18y	**Individual-level indicators** Employment status Educational level	**Suicidal Behaviours** Suicidal ideation and attempts (CIDI)	12-month prevalence of suicide ideation, plans and attempts are 2.0%, 0.6% and 0.3% respectively for developed countries and 2.1%, 0.7% and 0.4% for developing countries. Risk factors for suicidal behaviours in both developed and developing countries included being a woman, low educated, low income, and being unemployed (among others).	Large cross-national epidemiological survey database	No causal inference can be made due to the cross-sectional nature of the study. Reported suicidal ideation and suicide attempts can be susceptible to recall bias or to reluctance on the part of respondents to disclose such a sensitive information.
104	National population sample, Australia	Cross-sectional	4,697 (2007-2009) 15-64 y	**Individual-level indicators** Employment status	**Suicidal Behaviours** Death by Suicide	During 2001-10 economically inactive/unemployed males suicide at 4.62 times (RR = 4.62; 95% CI: 4.10, 5.19; P<0.001) the rate of employed men (RR=1.00). Economically inactive/unemployed females had a suicide RR of 8.44 compared with employed females (95% CI 7.38, 9.67; P<0.001).	Best available national data and provides information on the employment status of individual suicide cases.	Possible under-reporting of suicide data and under-report of the long-term unemployed that have given up looking for work (i.e. discouraged job seekers). Lack of available data on confounding factors.
105	National population sample, Spain	Cross-sectional	4,583 (2001-2002) >18y	**Individual-level indicators** Employment status	**Suicidal Behaviours** Suicidal ideation and attempts (CIDI)	Being unemployed or having work disability were also associated with suicidal ideation in people aged 18-49. The prevalence of suicidal ideation and attempts found in this study is similar to the one found ten years ago, before the economic crisis	Representative sample of the national population in Spain during the economic recession. The data was collected in the same way as in the ESEMED study, making it possible to compare current figures with the prevalence found before the crisis.	No causal inference can be made due to the cross-sectional nature of the study. Reported suicidal ideation and suicide attempts can be susceptible to recall bias or to reluctance on the part of respondents to disclose such a sensitive information.

Table 1.5. Characteristics of studies included in review relating job quality and security, deprivation and socioeconomic status and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
106	National population sample, Finland	Cohort	3,449 31 y	**Individual-level indicators** Psychosocial job quality and Security	**Psychological Well-being** Mental health distress caseness (HSCL-25) Self-reports of GP	The precarious workers have more distress symptoms in comparison with permanent workers. No differences in doctor-diagnosed/treated illnesses between precarious and permanent workers.	It measures mental health and correlates with self-reports of doctor diagnosed/treated illnesses. Temporal order of exposures and confounders affected all participants at the same time producing stronger causal conclusions.	Cannot make differential analysis of health-based selection. The results and recommendations should not be generalized to other cohorts
107	Regional population sample, Northern Sweden	Cohort	1,071 30-42y	**Individual-level indicators** Psychosocial job security	**Psychological Well-being** Self-rated health, sleep quality and mental health	The adverse effects of job insecurity on health are present on both permanent and temporary employees.	The study has a follow-up design. Temporal order of exposures affected all participants at the same time producing stronger causal conclusions.	The results and recommendations should not be generalized to other cohorts.
108	Community sample of workers from private organization, Italy	Cross-sectional	1,236 (2010-2011)	**Individual-level indicators** Psychosocial job quality and Security	**Psychological Well-being** Mental health distress (GHQ12)	Job stress fully mediated the relationship between fear of the crisis and mental health of the workers.	Large sample and uses a well validated scale for detection of mental distress.	Its cross-sectional design removes the possibility of causal inference. Possible response bias since those with mental distress may perceive and rate the same work environment more stressful than those without mental distress
109	National Population sample, England, UK	Cross-sectional	2,603 20-55 y	**Individual-level indicators** Employment Status Psychosocial job quality	**Common Mental Disorders** CIS-R interview: Common Mental Disorders (CMD)	The prevalence of mental disorders among unemployed (33.1%) was greater than in employed (12.9%; OR 3.34, 95% CI 2.06–5.42, p<0.001). Results were similar for those respondents in the poorest quality jobs.	Uses a well validated scale for detection of common mental disorders.	Its cross-sectional design removes the possibility of causal inference. Possible response bias since those with mental illnesses may perceive and rate the same work environment more negatively than those without a disorder.
110	National working population sample, UK	Cross-sectional	3,581 (2007) 16-64y	**Individual-level indicators** Psychosocial job security Indebtedness	**Common Mental Disorders** Depression	Risk of depression is greater for poor job security (OR=1.58, 95%; CI:1.22-2.06). Adj for age and sex, job insecurity (OR=1.86, 95% CI:1.47-2.35) and debt (OR=2.17, 95% CI:1.58-2.98) were independently associated.	Large representative sample.	Its cross-sectional design removes the possibility of causal inference: job insecurity may be more frequently reported by people rendered pessimistic by a mood disorder.
111	National population sample, USA	Cohort	34 653 (2001- 02; 04-05) ≥20 y	**Individual-level indicators** Household income Socioeconomic inequalities	**Common Mental Disorders** Substance use disorders (AUDADIS-IV)	A decrease in household income during the 2 time points was associated with an increased risk of incident mood, anxiety, or substance use disorders (adj OR=1.30; 99% CI:1.06-1.60)	Nationally representative sample and strong associations. Temporal order of exposures produces stronger causal conclusions.	Unable to adjust for physical health conditions that may be potential confounders.
112	National population sample, New Zealand	Cohort	15,340 (2002-2004/05) >25 y	**Individual-level indicators** Total wealth Socioeconomic inequalities	**Psychological Well-being** Mental health distress (Kessler-10)	High psychological distress linked to lowest wealth quintile compared with the highest (OR 3.06, 95% CI 2.68 to 3.50). Adj for age and sex did not alter the relationship; adj for income and area deprivation attenuated the OR to 1.73 (95% CI 1.48 to 2.04); adj baseline health status reduced the OR to 1.45 (95% CI 1.23 to 1.71).	Strong associations between inequalities in wealth and distress. Temporal order of exposures and confounders affected all participants at the same time.	The socioeconomic position at baseline was not controlled. The results and recommendations should not be generalized to other cohorts.

Table 1.5. Characteristics of studies included in review relating job quality and security, deprivation and socioeconomic status and mental health outcomes, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
113	National population sample, Britain, UK	Cohort	8,185 (1991) (2003)	**Individual-level indicators** Indebtedness housing payment problems	**Psychological Well-being** Mental health distress caseness (GHQ-12)	Housing payment problems and debts have significant detrimental effects on mental Well-being. The sizes of these effects are in addition to and larger in magnitude than those associated with financial hardship.	Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	Generalizing findings may be reasonably limited to the UK's welfare system in regard to housing payment problems. The results and recommendations should not be generalized to other cohorts.
114	Community sample, Detroit, USA	Cohort	1,547 (2008) (2010)	**Individual-level indicators** Home foreclosure Financial hardship	**Common Mental Disorders** Major depression (PHQ-9) Generalized anxiety disorder (GAD-7)	Foreclosure was associated with an increased rate of major depression [incidence density ratio (IDR) 2.4, 95%; CI:1.6-3.6] and GAD (IDR 1.9, 95%; CI:1.4-2.6)	Establishes longitudinal associations between home foreclosure and common mental disorders producing stronger causal conclusions.	The sample is limited to a longitudinal cohort of pre-dominantly African-American adults. Because mental health problems are common among individuals at risk of foreclosure, the observed associations may result, in part, from pre-existing psychopathology.
115	Community sample, Wales, UK	Cross-sectional	88,623 (2003/04–2010) 18-74 y	**Individual-level indicators** Area income deprivation Socioeconomic inequalities	**Psychological Well-being** Mental health distress (MHI-5)	High neighbourhood income inequality was associated with better mental health in low-deprivation neighbourhoods (P = 0.036). Income inequality at regional level was significantly associated with poorer mental health (P = 0.012).	Uses a continuous measure of mental health symptoms. Large sampling fraction.	No data were available on individual income. Its cross-sectional design removes the possibility of causal inference.
116	Community sample, France	Cohort	1,103 (1991–2009) 22–35 y	**Individual-level indicators** Socioeconomic status Level of education	**Substance-Disorders** tobacco, cannabis use, other illegal drug use	Low socioeconomic status was linked with higher rates of tobacco smoking [OR=2.11, 95% CI 1.51–2.96], cannabis use [OR= 1.75, 95% 1.20–2.55], problematic cannabis use [OR= 2.44, 95% CI 1.38–4.30] and other illegal drugs [OR= 2.27, 95% CI 1.11–4.65].	Relatively large community sample of young adults. Longitudinal measures of family and juvenile characteristics obtained independently of participants' reports of substance-use	The research focused only young adults whose parents worked in a large national company and were part of an ongoing epidemiological study. Other variables that can act as confounders were not controlled: family and peer characteristics
117	National population sample, England, UK	Cross-sectional	7,461 (2007) 35-54 y	**Individual-level indicators** Indebtedness	**Suicidal Behaviours** Suicidal ideation	Those in debt were twice as likely to think about suicide after controlling for socio-demographic, economic and lifestyle factors.	Representative sample. Strong association between suicidal thoughts and being in debt.	No causal inference can be made due to the cross-sectional nature of the study.

Table 1.6. Characteristics of studies included in review focusing on children and adolescents, older adults and people with mental health problems, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
118	Regional sample of parents and children, Southern Finland	Cohort	1,149 12 y 843 mothers 30 -59y 573 fathers 28- 66 y	**Individual-level indicators** Family perceived financial strain	**Psychological Well-being** Parental Mental health distress caseness (GHQ-12) Child mental health	Family economic hardship creates a risk for child mental health through economic pressures and problems in parental mental health, marital interaction, and parenting even in a welfare state.	Gives information on transgenerational effect of family economic pressure on child mental health. Child mental health was reported by both parents and children, which adds to the reliability. Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions	Reporter bias is expected since mothers and fathers reported on their own mental health and parenting. Other contexts determinants such as reductions in funding in day care and schools can act as confounders. Generalizing findings is limited to the uniqueness of the Finish welfare system with extensive governmental support to families.
119	Cross-national samples of adolescents, 31 countries worldwide	Repeated cross-sectional	164,623 (2005–2006) 168,284 (2009-2010) 11-15y	**Inter-time Variables** **Macroeconomic indicators** Unemployment Rates	**Psychological Well-being** Psychological health complaints (HBSC symptom checklist)	Ireland and Portugal were the only countries facing a rise In psychological health complaints (9–17%) with increasing unemployment (21–148%). Youth unemployment rates in 2010 increased the likelihood of psychological health complaints.	Uses nationally representative data on adolescents from 31 countries, surveyed over two time points, before and after recession	Data derives from 2006-2010 and the crisis started in 2008 so the long term effects of the recession could not be investigated. The sample is composed only by adolescents aging 11 to 15 years old.
120	National population sample of adolescent, Slovenia	Cross-sectional	1,815 (2010) 15y	**Individual-level indicators** Family Affluence Scale, perceived material welfare, family type, occupational status of parents	**Psychological Well-being** Mental health (KIDSCREEN-10, SDQ), Life satisfaction Feelings of depression	The adolescents who perceived to be socioeconomically worse off had 4-times higher odds ($p < 0.001$) of a low life satisfaction, a greater chance of a low quality of life, and a higher SDQ score than those who perceived to be better off ($p < 0.001$).	Uses a national representative sample and several variables to measure socioeconomic status.	Includes only 15-year-olds who are enrolled in school and does not include dropouts, who might be among the most socioeconomically underprivileged. Its cross-sectional design removes the possibility of causal inference.
121	National population sample of adolescents, Portugal	Cross-sectional	4,877 (2010) 10 -18 y	**Individual-level indicators** Parental employment status	**Psychological Well-being** Health Related Quality of Life	Having at least one parent unemployed has a statistical significant negative impact on perceptions of adolescent health.	Gives important information about the transgenerational effect of employment status.	Its cross-sectional design removes the possibility of causal inference. The study was not designed specifically to address causal links between the variables and parental employment.
122	Cross-national samples of children and adolescents, Denmark and Sweden	Cross-sectional	4,299 2-17 y (1996)	**Individual-level indicators** Parental employment status	**Psychological Well-being** Psychosomatic symptoms	Children in families with one or both parents without paid work had an increased prevalence of recurrent psychosomatic symptoms (OR= 1.52 to 3.20)	Gives important information about the transgenerational effect of employment status.	Underreporting bias is expected as children differ in their tendency to report symptoms to their parents. Also the parents' reports on their children can depend on their own health. Its cross-sectional design removes the possibility of causal inference.

Table 1.6. Characteristics of studies included in review focusing on children and adolescents, older adults and people with mental health problems, 2004-2014

Study	Setting	Study design	N Year Age	Socioeconomic Determinants	Mental Health Outcomes	Associations/Effects	Strengths	Limitations
123	Regional sample of adolescents, Kosice, Slovakia	Cross-sectional	2,836 14-22	**Individual-level indicators** Parental employment status	**Psychological Well-being** Self-rated health Long-term well-being Health complaints	Parental long-term unemployment (especially of fathers) is negatively associated with adolescents' subjective health. Father's long-term unemployment was a significant predictor of moderate self-rated health and low long-term well-being among girls and boys. Mother's long-term unemployment was negatively associated with self-rated health of girls and long-standing illness among boys.	Gives important information about the transgenerational effect of employment status.	Lack of specific detailed information about parental unemployment (maternity leave of mothers, retirement, or invalidity of parents were considered unemployment)
124	Regional sample of adolescents, emergency room, Ontario, Canada	Cohort	15,739 (2002-2011) 12-17 y	**Inter-time Variables** Pre and Post-recession period	**Suicidal behaviours** hospital records of suicide-related behaviours	The suicide-related behaviours incidence rates decreased by 30% in boys and girls from FYs 2002/03 to 2006/07, but stopped afterwards and subsequent admissions increased.	Large sample of adolescents and examines trends in the total suicide related behaviour during recession periods.	The hospital records do not identify suicidal intent. Data is not representative of the general population. Suicide-related behaviours are complex and other variables may act as confounders.
125	National population sample of adolescent, USA	Repeated cross-sectional	403,457 (1997-2009) mean age 16 y	**Macroeconomic indicators** State level job loss	**Suicidal Behaviours** Suicide ideation, attempts and plans	State level unemployment during the year preceding the survey increased girls' probability of suicidal ideation and suicide plans, but did not affect the suicide-related behaviors of boys	Uses a national representative sample and Gives important information about economic circumstances effects on adolescents risk behaviours.	It is unable to identify the pathways through which unemployment rates affect adolescents' suicide-related behaviors.
126	Regional sample of older adults, Canberra/Queanbeyan, Australia	Cohort	1,973 (2005-2010) mean age 66.58 y (SD = 1.5)	**Inter-time Variables** **Individual-level indicators** Pre and Post-recession period Financial security Financial hardship	**Common Mental Disorders** Depression Anxiety (Goldberg Scales) Self-reported health	Economic slowdown related distress is linked to greater depression symptoms at both waves 2 ($t(655) = -3.44, p = .001$) and 3 ($t(662) = -4.96, p < .001$), and greater anxiety symptoms at both waves (wave 2 - $t(655) = -3.62, p < .001$; wave 3 - $t(662) = -5.15, p < .001$).	Temporal order of exposures, confounders, and the outcome under consideration affected all participants at the same time producing stronger causal conclusions.	The analysis was restricted to older adults at baseline. Consequently, the results and recommendations should not be applied to younger cohorts. Limited period of time, the long term effects of the recession could not be investigated.
127	National population sample of older adults, USA	Cohort	2,261 (2005-2006) (2010-2011) >57 y	**Individual-level indicators** Home foreclosure	**Common Mental Disorders** **D**epressive symptoms **(CES-D)**	Increases in neighbourhood-level foreclosure were associated with an increased rate in depression in older adults. Notices of default (OR = 1.75; 95% CI = 1.14, 2.67) and properties returning to ownership by the bank (OR = 1.62; 95% CI = 1.06, 2.47) were associated with depressive symptoms.	Establishes longitudinal associations between home foreclosure and depressive symptoms producing stronger causal conclusions.	The mechanisms linking increases in foreclosure to depressive symptoms are not explored. The sample is limited to a longitudinal cohort of older American adults.
128	Cross-national working population sample, European Union countries	Cross-sectional	20,368 (2006) 20,124 (2010) 18–64 y	**Inter-time Variables** **Macroeconomic indicators** **Individual-level indicators** Pre and Post-recession period Employment Status Sate level unemployment	**Psychological Well-being** Mental health distress (MHI-5) Mental health disorders	Following the onset of the recession, individuals with mental health problems were more vulnerable to losing their jobs [OR= 1.12, 95% CI: 1.03-1.34] (OR: 1.12, 95% CI: 1.03, 1.34).	Uses nationally representative data on people with and without mental health problems from 27 countries in Europe surveyed over two time points, before and after recession.	The data was collected through brief, self-reported questionnaires. Limited period of time, the long term effects of the recession could not be investigated. Its cross-sectional design removes the possibility of causal inference.

2. SCIENTIFIC PAPER

DISTRESS AND UNEMPLOYMENT: THE RELATED ECONOMIC AND NON-ECONOMIC FACTORS IN A SAMPLE OF UNEMPLOYED ADULTS

Diana Frasquilho • Margarida Gaspar de Matos • Adilson Marques • Tânia Gaspar • José Miguel Caldas de Almeida

This study addressed the prevalence of psychological distress in a sample of unemployed adults and the factors associated with it. The findings give support to the two main theoretical frameworks in unemployment research: the Latent Deprivation Model and the Agency Restriction Model, and are supported by the results of the literature review. The manuscript is presented on the next pages and a summary of its main findings is shown below:

- in this sample, unemployed individuals score high on distress, considering the mean score for distress presented in the adaptation study to the Portuguese population;
- almost half of the unemployed participants reported to be extremely distress;
- unemployed individuals who reported more deprivation of latent and manifest benefits of work also reported higher distress scores;
- unemployed individuals who show an ability to schedule purposeful activities during unemployment and have a better financial situation, reported the lower distress levels;
- unemployed women reported higher distress levels than men;
- unemployed individuals with lower educational levels reported higher distress levels than those with higher educational levels;
- older unemployed individuals tended to report higher distress levels than younger unemployed individuals.

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ORIGINAL ARTICLE

Distress and unemployment: the related economic and noneconomic factors in a sample of unemployed adults

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ABSTRACT

Objectives To examine associations between economic and non-economic factors and psychological distress in a group of 748 unemployed adults during economic recession.

Methods Data was collected through a questionnaire. Bivariate and logistic regression analyses were used to test the associations between distress (GHQ-12) and the deprivation of income and latent benefits of employment (time structure, activity, status, collective purpose and social contact).

Results The participants' mean of distress was higher than the national population mean, and 46.5% of the participants scored above that. All economic and non-economic factors emerged as strong predictors of distress; particularly financial deprivation (OR 1.06; CI 95% 1.04-1.09) and lack of structured time (OR 1.07; CI 95% 1.05-1.09). Women (OR 1.40; CI 95% 1.04-1.86) and people with higher education levels (OR 0.45; CI 95% 0.34-0.61) were less affected.

Conclusion The unemployed individuals score high on distress, especially those facing financial strain and lack of structured time, and women and individuals with lower education in particular. Given the recessionary context and high unemployment rates, these insights raise awareness for policies and actions targeting the needs unemployed people.

Keywords: economic recession; financial deprivation; mental health; psychological stress; time structure; unemployment.

INTRODUCTION

The 2009 economic recession has had a profound impact on labour markets, increasing unemployment rates [1]. Unemployment is a major concern in terms of public health given that evidence suggests it is related to higher mortality risk [2, 3] and mental health problems [4-7].

In Portugal, despite being one of the European countries where the unemployment rates grown the most (9% in 2008 to 14% in 2014), little research to our knowledge has focused on mental well-being of the unemployed population [8, 9]. The main objective of the present study is to research differences between groups of unemployed people defined by individual factors in regards to distress levels, and to investigate how the deprivation of access to latent and manifest benefits of employment relates to distress. This study addresses this aim in light of two main theoretical frameworks in unemployment research: the Latent Deprivation Model [10] and the Agency Restriction Model [11].

According to the Latent Deprivation Model (Jahoda 1982), unemployment related stress is due to loss of income and deprivation on five latent benefits of work: time structure, social contacts, social purpose, status, and activity. The factors suggested by the model have been empirically validated by other studies [12-18.]

In the Agency Restriction Model (Fryer 1986) distress found in unemployed people is mainly associated with the loss of (absolute and relative) financial resources that restricts personal agency. This model has been validated empirically [12,19,20]. Thus, in this unemployed sample, those experiencing high financial deprivation and high deprivation scores on latent benefits of work are expected to report more distress.

Individual factors are also important to consider. Reflecting on gender and age differences, there is evidence that unemployed women tend to report poorer mental health [4] and that older unemployed may face discrimination given the scarcity of jobs during recession and may stay longer in unemployment [21]. Being unemployed for longer periods (cumulative stress) and having repeated experiences of unemployment (scaring effect) may also increase the likelihood of distress [4,21-23]. Low levels of education may expand these situations thus increasing job search discouragement and distress [24]. In line with this, specific individual factors might exacerbate or improve distress levels.

METHODS

Study population and data collection

This study involved 750 unemployed adults from Portugal that were registered at the Lisbon's Job Centre and were receiving state benefits (a convenience sample). At the time of data collection, 9% of people in Lisbon were registered as unemployed from a total population of 260.405 economically active people [25] . The estimated sample size required for the study was 549 in order to obtain a confidence interval level of .95 and at least 80% power for analysis. Accordingly, 1000 self-administered questionnaires were handed to all unemployed people who voluntarily agreed to respond during their bi-weekly presentation to their local civil parish as part of the requirements to continue receiving the unemployment benefit. Informed consent was obtained, and confidentiality was assured. In total, 750 questionnaires were returned completed (75%) and 2 were dropped from the analysis for missing important socio-demographic data. A final response rate of 74.8% was obtained and 748 unemployed adults (386 males and 362 females) took part of the study.

Measures

The General Health Questionnaire-12 (GHQ-12) was used to measure distress [26]. It has been adapted and validated for the Portuguese population [27]. This measure has been recommended for use as a screening instrument for common mental disorders and widely used in unemployment research [4] . Responses were scored on a four-point scale ranging from 1 to 4 (*better than usual - much less than usual*), with higher scores indicating greater distress. For this study the Goldberg's GHQ scoring method (0-0-1-1) was used [26].

Latent and manifest deprivations of unemployment were assessed using the Latent and Manifest Benefits of Work-LAMB-Scale [28], adapted and validated for the Portuguese population [29]. The LAMB-Scale is organized in a factorial structure of six components, which can be identified with the latent benefits people derived from Jahoda's Latent Deprivation Model (1982) (collective purpose, social contact, status, time structure, enforced activity) and with the manifest benefit of work stated in Fryer's Agency Restriction Model (1986) (financial income). The domain benefits are presented as bipolar phrased statements that correspond, on one hand to access and, on the other hand, to the deprivation of access to a particular benefit. The respondents identified for each phrased statement the degree of agreement regarding a seven-point scale. The higher scores stand for greater deprivation to access certain benefits. The LAMB-subscales were: *financial*

strain (e.g., my level of income usually/rarely allows me to make future plans); *time structure* (e.g., there is usually/rarely too much spare time in my day); *social contact* (e.g., regularly/rarely engage in social activities with others); *status* (e.g., I am usually/rarely important to my friends); *enforced activity* (e.g., I usually/rarely do the things I have to do) and; *collective purpose* (e.g., I often/seldom feel as a valuable part of society).

It also assessed education level (secondary level and higher education), marital status (cohabiting or not with a partner), partner employment status (partner is employed or unemployed), household type (cohabiting with someone or living alone), parental status (having or not having dependent children), number of unemployment spells (first unemployment experience or a repeated experience) and unemployment duration (short-term unemployment was defined as being unemployed for less than a year and long-term unemployment for longer than one year).

Data analysis

Descriptive statistics (means, standard deviations, and percents) were calculated for all variables. Bivariate relationships between distress and independent variables (gender, age, educational level, household type, marital status, parental status, unemployment spells, unemployment duration and the manifest and latent benefits of employment) were tested by chi-square tests. Afterwards, logistic regression was used to assess the extent to which variables were associated with low and high distress levels. Adjusted and unadjusted odds ratio (OR) with 95% confidence intervals (CIs) were calculated and the significance level was set at $p < 0.05$. All data analysis was completed using Statistical Package for Social Sciences (SPSS), version 22.0.

RESULTS

Reliability of the instruments used in this study was performed. The coefficient of internal consistency of the GHQ-12 for the current study tested by the Cronbach's alpha was 0.92. We used the mean GHQ-12 score (5.94±4.04) for the population of respondents as the cut-off point as suggested by the authors [30]. For this sample the cut-off point 6/7 was used to establish levels of low distress and high distress. The internal reliability coefficients of the LAMB subscales were also tested by the Cronbach's alpha and were respectively: 0.88 for financial strain; 0.85 for time structure; 0.84 for social contact; 0.87 for status; 0.81 for enforced activity and; 0.81 for collective purpose.

Table 2.1 presents the descriptive characteristics of the study population. The sample was balanced across gender (51.6% men) and the mean age was 42.7 (SD=11.4) years old. More than half have attained up to secondary education (54.7%), a higher proportion of women had higher education (51%) in comparison to men. The majority were cohabiting with someone (79%), more than half (57.8%) were living with a partner out of which 64.1% were living with an employed partner. In terms of parental status, a higher percentage of women reported having dependent children (54.1%) in comparison to men. For the most part this was the first time unemployed (64%) and mainly short-term unemployed (57.4%). Almost half of the individuals (46.5%) and more than half of women (51.3%) reported high distress levels. Additionally, high scores of deprivation were found for financial deprivation (even more for women), time structure (even more for men), social contact (even more for women), status, activity and collective purpose (even more for women).

Table 2.1. Description of the study population (N=748 unemployed adults), in terms of total number and by gender, Lisbon, Portugal 2013.

Variables	Total		Males		Females		P^a
	N	%	N	%	N	%	
Gender							
male	386	51.6	386	51.6			
female	362	48.4			362	48.4	
Level of education							
secondary level	405	54.7	228	60.0	177	49.0	0.003
higher education	336	45.3	152	40.0	184	51.0	
Household type							
living alone	157	21.0	93	24.2	64	17.7	0.029
cohabiting	589	79.0	291	75.8	298	82.3	
Marital status							
living with partner	432	57.8	225	58.4	57.2	57.2	n.s.
single	315	42.2	160	41.6	42.8	42.8	
Partner employment status							
employed	255	64.1	119	57.5	136	71.2	0.004
unemployed	143	35.9	88	42.5	55	28.8	
Parental status							
dependent children	383	51.3	187	48.6	196	54.1	n.s.
no children	364	48.7	198	51.4	166	45.9	
Unemployment spells							
1st time	476	64.0	249	65.2	227	62.7	n.s.
repeated	268	36.0	133	34.8	135	37.3	
Unemployment duration							
< 1 year	425	57.4	218	57.5	207	57.3	n.s.
≥ 1 year	315	42.6	161	42.5	154	42.7	
Psychological distress							
low distress	393	53.0	219	57.0	174	48.7	0.024
high distress	348	46.5	165	43.0	183	51.3	
	Mean ± SD		Mean ± SD		Mean ± SD		P^b
Age	42.7±11.4 (19-66)		43.4±11.6 (19-66)		42.0±11.2 (21-66)		n.s.
Financial deprivation	31.5 ± 8.9 (6-42)		30.3 ± 9.0 (6-42)		32.8 ± 8.5 (6-42)		<0.001
Time structure	30.6 ± 10.4 (8-56)		31.6 ± 9.9 (8-56)		29.5 ± 10.8 (8-56)		0.007
Social contact	26.0 ± 9.3 (7-49)		25.2 ± 8.7 (7-49)		26.7 ± 9.9 (7-49)		0.026
Status	10.1 ± 5.4 (4-28)		10.3 ± 5.3 (4-28)		9.9 ± 5.5 (4-28)		n.s.
Activity	11.5 ± 5.2 (4-28)		11.3 ± 5.1 (4-28)		11.7 ± 5.4 (4-28)		n.s.
Collective purpose	18.9 ± 7.0 (5-35)		18.0 ± 6.5 (5-35)		20.0 ± 7.3 (5-35)		<0.001

[a] Tested by chi-square; [b] Tested by *t*-test; n.s. = non significant

Table 2.2 shows the results of the comparison analysis of demographic variables and distress tested by the Chi-Square. Higher deprivation was associated with higher distress levels across all variables (financial deprivation t=-9.068, $p<0.001$; time structure t=-9.380, $p<0.001$; social contact t=-8.553, $p<0.001$; status t=-5.162, $p<0.001$; activity t=-4.412, $p<0.001$ and; collective purpose t=- 8.104, $p<0.001$). Additionally, women reported significantly higher distress levels than men [χ^2 (1) =5.107, $p<0.05$] and older people tended to report higher distress levels than younger people [χ^2 (1) =10.078, $p<0.01$]. There was a statistically significant association between educational level and distress [χ^2 (1) =27.564, $p<0.001$]; that is, people with lower educational levels reported higher distress levels than people with higher educational levels. Long-term unemployment was also associated with higher levels of distress [χ^2 (1) =3.489, $p<0.05$].

Table 2.2. Descriptive statistics by distress level, socio-demographic variables, gender and age, and economic and non-economic variables of deprivation, in a sample of unemployed adults (N=748) from Lisbon, Portugal 2013.

Variables	Low distress		High distress		p [a]
	N	%	N	%	
Gender					
male	219	55.7	165	47.4	0.024
female	174	44.3	183	52.6	
Level of education					
secondary level	175	45.2	224	64.6	<0.001
higher education	212	54.8	123	35.4	
Household type					
living alone	88	22.5	68	19.5	0.324
cohabiting	303	77.5	280	80.5	
Marital status					
living with partner	225	57.4	202	57.4	0.859
single	167	42.6	146	42.0	
Partner employment status					
employed	138	67.6	114	60.3	0.130
unemployed	66	32.4	75	39.7	
Parental status					
dependent children	192	49.0	187	53.7	0.196
no children	200	51.0	161	46.3	
Unemployment spells					
1st time	243	62.3	226	65.1	0.427
repeated	147	37.7	121	34.9	
Unemployment duration					
< 1 year	237	60.8	185	53.9	0.042
≥ 1 year	153	39.2	158	46.1	
	Mean ± SD		Mean ± SD		p [b]
Age	41.4±11.5		44.1±11.1		<0.001
Financial deprivation	28.8± 8.5		34.5± 8.3		<0.001
Time structure	27.3 ± 9.1		34.2± 10.6		<0.001
Social contact	23.3 ± 8.5		28.9 ± 9.3		<0.001
Status	9.1 ± 5.1		11.1 ± 5.5		<0.001
Activity	10.6 ± 4.8		12.3 ± 5.5		<0.001
Collective purpose	17.0 ± 6.5		21.0 ± 6.8		<0.001

[a] Tested by chi-square; [b] Tested by *t*-test.

Table 2.3 shows the results of the unadjusted and adjusted results of the logistic regression analysis across the different variables and distress levels, first including all the participants and then by gender. The unadjusted results show that people experiencing deprived access to the latent benefits of work also tend to exhibit significantly higher stress levels ($p<0.001$). This is true for time structure deprivation, social contact deprivation, status deprivation, activity and financial deprivation of collective purpose. Furthermore these results are independent of gender, even though, for men and women separately the deprivation of activity was slightly less significant ($p<0.01$). Women were also more likely to report higher levels of stress compared to men (OR 1.40; CI 95% 1.04-1.86; $p<0.05$). In addition, both older unemployed men and women (OR 1.02; CI 95% 1.00-1.04; $p<0.05$) were more likely to report higher distress levels than younger men and women, respectively. In general, higher educated people were more likely to report less stress than those with lower education levels (OR 0.45; CI 95% 0.34-0.61; $p<0.001$). This was observed for men (OR 0.36; CI 95% 0.23-0.56; $p<0.001$) and women (OR 0.50; CI 95% 0.33-0.77; $p<0.001$) separately. Additionally, long-term unemployment was associated with higher stress (OR 1.32; CI 95% 1.00-1.77; $p<0.05$). Yet, when the results were analysed separately by gender, the association was found only in women (OR 1.61; CI 95% 1.05-2.46; $p<0.05$).

The results of the adjusted regression analysis, when all variables were entered into the model, are shown in table 2.3. Financial deprivation (OR 1.06; CI 95% 1.04-1.09; $p<0.001$) and time structure deprivation (OR 1.06; CI 95% 1.04-1.09; $p<0.001$) maintain a positive relationship with higher distress reports among the entire sample and, in men and women separately. In turn, deprivation of social contact, status, activity and collective purpose are no longer significant among the total population and across genders after the adjustment. Moreover, the link between distress and educational level remained negatively associated for the entire sample (OR 0.61; CI 95% 0.43-0.87; $p<0.01$) and for the men (OR 0.50; CI 95% 033-0.77; $p<0.05$).

Table 2.3. Logistic regression analyses with odds ratios (OR) and 95% confidence intervals (CI) by distress including unadjusted and adjusted ratios for gender, age, level of education, unemployment duration and deprivation variables, for total sample and with separate analyses for men and women, on a sample of unemployed adults (N=748) from Lisbon, Portugal 2013.

Explanatory variables	Total		Men		Women	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Gender						
male	1.00 (ref.)	1.00 (ref.)				
female	1.40 (1.04-1.86)*	1.52(1.06-2.17)*				
Age	1.02 (1.01-1.03)***	1.02 (1.00-1.03)*	1.02 (1.00-1.04)*	1.01 (0.99-1.03)	1.02 (1.01-1.04)*	1.03 (1.00-1.05)*
Level of education						
secondary level	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
higher education	0.45 (0.34-0.61)***	0.62 (0.43-0.89)**	0.36 (0.23-0.56)***	0.55 (0.33-0.94)*	0.50 (0.33-0.77)***	0.73 (0.44-1.21)
Unemployment duration						
< 1 year	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
≥ 1 year	1.32 (1.00-1.77)*	1.05(0.73-1.51)	1.10 (0.73-1.66)	0.87 (0.51-1.48)	1.61 (1.05-2.46)*	1.30 (0.73-2.09)
Financial deprivation	1.08 (1.06-1.11)***	1.06 (1.04-1.09)***	1.08 (1.05-1.11)***	1.07 (1.03-1.10)***	1.09 (1.06-1.12)***	1.06 (1.02-1.09)**
Time structure	1.07 (1.05-1.09)***	1.07 (1.05-1.09)***	1.08 (1.06-1.11)***	1.08 (1.04-1.11)***	1.07 (1.05-1.10)***	1.06 (1.04-1.09)***
Social contact	1.07 (1.05-1.09)***	1.02 (0.99-1.04)	1.07 (1.04-1.10)***	1.02 (0.98-1.06)	1.07 (1.05-1.10)***	1.02 (0.98-1.05)
Status	1.08 (1.05-1.11)***	1.03(0.99-1.08)	1.08 (1.04-1.13)***	1.06 (0.99-1.13)	1.07 (1.03-1.12)***	1.01 (0.95-1.08)
Activity	1.07 (1.04-1.10)***	1.04 (1.00-1.08)	1.07 (1.02-1.11)**	1.04 (0.98-1.11)	1.06 (1.02-1.11)**	1.04 (0.98-1.10)
Collective purpose	1.09 (1.07-1.12)***	1.03 (1.00-1.06)	1.10 (1.06-1.14)***	1.02 (0.97-1.08)	1.09 (1.05-1.12)***	1.03 (0.99-1.07)

*** p≤.001; ** p≤.01; *p≤.05.

DISCUSSION

This study covered a comprehensive range of variables associated with mental distress of a group of unemployed individuals. The mean score for GHQ-12 for the current study (5.94±4.04) indicated that this group of unemployed people reported considerable high levels of distress when considering the mean score for GHQ-12 (2.4±2.7) presented in the adaptation study to the Portuguese population [27]. This is consistent with previous research suggesting that unemployed samples have increased levels of distress [5]. Moreover, when considering people who scored above the mean, a great proportion of the study participants (46.5%) reported to be very distressed.

Overall, more deprivation of latent and manifest benefits of work was linked to more distress. These findings offer support that both theoretical models of unemployment [10,11] are not mutually exclusive and that deprivation of access to latent and manifest benefits of work is associated with higher distress among the unemployed individuals. Adjusting for all variables in the model, deprivation of time structure and financial deprivation showed the strongest associations. Research on the distressing effects of financial deprivation confirms our findings [19,31]. Indeed, unemployed people experiencing a better financial situation probably feel they have better access to other benefits, like social contact and leisure activities. In line with prior research, our findings suggested that individuals who show an ability to schedule purposeful activities during unemployment experience higher well-being [4]. After the adjustment, we did not find support that levels of distress are lower for people with high social contact, cohabiting with someone or partner or living alone. This contradicts some of the evidence showing that social support moderates the effects of stress [16]. We can estimate that because the stress levels are so high in this sample, social support eventually loses its power of moderation.

Considering the sociodemographic factors, the results showed that women and people with lower educational levels had an increased likelihood of experiencing higher distress levels. These results have received empirical support in the literature [4]. It may reflect the general findings established in Europe that women, in general, display poorer mental health than men [32]. Additionally, the results might be due to the fact that in Portugal a significant contribution to household income is made by women's participation in the labour force[33]. Thus, hypothetically, for these specific women work may contribute to a higher share of personal identity and income source. Furthermore, as expected, higher education presents itself in this sample of unemployed as a protective factor against high

distress. Research consistently found that education is an important social determinant of mental health [7]. These findings may be also partly due to low expectations on re-employment chances because of low qualifications. Long-term unemployment alone was associated with higher distress. Prior research also found an association between increasing length of unemployment and deterioration of mental health [4,23]. However, when controlled for other variables, the association between duration of unemployment and distress were not statistically significant. Then again, it is possible that this non-significant association might be explained by limitations of the study design.

Limitations

This study has a cross-sectional design so causal inference and generalization are limited and reverse causation effects should not be ruled out. Nonetheless, the findings received ample empirical support from longitudinal studies that state that higher distress among the unemployed is largely a consequence of job loss and not the contrary [5]. Also, latent deprivation has been found to be reduced when people are reemployed [13]. In addition to this limitation, unemployed people are a very heterogeneous group and other key moderators of mental well-being should be accounted for in future research (i.e. personality traits). The use of a convenience sample undermines the ability to make generalisations and implies that the findings should be treated with caution. Moreover, the findings are obtained with a group of unemployed receiving state unemployment benefits; only 44% of the Portuguese unemployed individuals are receiving financial benefits [34]. Another limitation is the fact that this specific group has a high number of first-time unemployed which we believe is related to the increase in unemployment rates registered during the recessionary period. Generalization of the findings is therefore also limited to different welfare systems and socioeconomic contexts. These limitations reinforce the fact that findings need to be carefully interpreted.

Besides the aforementioned limitations, the findings are relevant given the scarce available studies focusing on distress among the unemployed people in Portugal and especially pertinent to raise awareness of its importance as the unemployment rate is high like in many European countries in recession.

These findings have identified some variables that are associated with a lesser distressed experience of unemployment, and may therefore help policy-makers and practitioners decisions and actions. Literature has shown that mental health inequalities among unemployed individuals are related to weak national economic performance,

unequal distribution of income and lack of unemployment social policy [5]. Interventions that are aimed at the protection of populations' mental health promote greater health equity. Unemployment-benefits are important determinants for individuals' well-being, and are especially important during recession periods when scarcity of jobs makes people stay out of the labour force for longer. However, individuals differ in terms of financial obligations. Therefore, it is important that financial and debt management services could be made available. Moreover, in line with empirical literature the results from this study have showed that higher time structure is associated with lower distress. Therefore, encouraging unemployed people to schedule meaningful routines and set daily goals to better cope with the situation may prove useful to decrease levels of distress during unemployment. Although any initiative should respect gender equality, it is important to recognise that women and people with low education levels may be at higher risk of poor mental health.

Conclusion

In summary, the findings indicate that socioeconomic deprivation accounts for distress, particularly because of a lack of structured use of time and financial deprivation. Additionally, women and people with lower education levels showed higher likelihood of experiencing distress during unemployment. Overall, the associations found in this study may be seen as a further step for the better comprehension of the unemployment experience. This is useful to raise awareness in times of high unemployment rates and economic recession that are affecting many European countries, for the need of tailored policies and health interventions to limit periods of inactivity, to tackle distress, gender and educational inequities and increase the probability of reintegration of social capital into labour market.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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3. SCIENTIFIC PAPER

UNEMPLOYMENT, LIFE SATISFACTION AND DEPRIVATION: GENDER AND PARTNERSHIP DIFFERENCES IN THE CONTEXT OF ECONOMIC RECESSION

Diana Frasquilho • Margarida Gaspar de Matos • Adilson Marques • Tânia Gaspar • José Miguel Caldas de Almeida

This study was theoretically based on the assumption that, in general, partnered unemployed individuals report higher life satisfaction than single people, and that parenthood and partnership with an unemployed partner may be negatively associated with life satisfaction. The manuscript is presented on the following pages, and the summary of findings is presented next:

- the sample of jobseeker adults from Lisbon reported in average to be highly dissatisfied with life;
- levels of life satisfaction during the unemployment situation differ significantly by partnership and are associated with household composition and deprivation factors;
- single people reported lower levels of life satisfaction compared to partnered people;
- experiencing financial deprivation and low time structure was negatively associated with life satisfaction among single men and women;
- in partnered men, higher life satisfaction was associated with being childless together with low financial deprivation and higher time structure;
- in partnered women, higher life satisfaction was associated with having an employed partner together with lower financial strain and higher time structure;
- in partnered fathers, life satisfaction was associated with higher time structure, status and less enforced activity.
- the results, together with the findings reported in the literature, indicated that actions that provide better access to the specific predictors of life satisfaction in single or partnered men and women may provide some protection in regard to the negative effects of unemployment on well-being.

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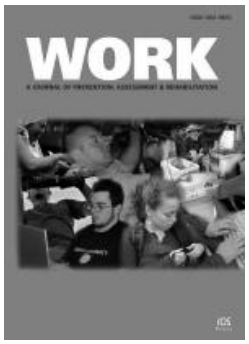

Unemployment, Life Satisfaction and Deprivation: Gender and Partnership Differences in the Context of Economic Recession

ABSTRACT

Background The economic recession produced a rapid rise of unemployment rates which was more visible in Southern European countries. There is evidence that unemployment correlates highly with individuals' poor life satisfaction.

Objective To analyse the relationship between life satisfaction, household composition and socioeconomic deprivation in people facing unemployment during the economic recession.

Methods A sample of 748 unemployed people from Lisbon (Portugal) completed a socio-demographic questionnaire, the Cantril's ladder of life satisfaction scale, and the latent and manifest benefits of work scale (LAMB). Multiple regression analyses were used to test the associations between life satisfaction and all other variables.

Results Partnered people report higher life satisfaction compared to single. Financial deprivation and lack of structured time were the strongest factors related negatively with life satisfaction in both partnered and single people. Having children had a particular negative effect on the life satisfaction of partnered men; and living with an unemployed partner together with lack of social contact and high enforced activity had a negative effect on life satisfaction in partnered women.

Conclusion The heterogeneity of socioeconomic needs found by household composition bring practical policy implications for support actions targeting unemployed individuals in the unique context of economic recession.

Keywords: marital status, parenthood status, socioeconomic factors, unemployment, well-being.

INTRODUCTION

Life satisfaction, a global evaluation of one's life, is a common key indicator of individuals' subjective well-being [1]. There are reports that life satisfaction, well-being and quality of life have declined in many European countries since the start of the economic recession [2,3].

Several researchers were already expecting such declines. There is evidence that this economic recession and the changes to welfare systems, labour markets, and public policies it produces are likely to generate detrimental effects to population's mental health and well-being that are not equally distributed [4,5]. Many studies have demonstrated that during recession times the lowest levels of life satisfaction and well-being are reported by the unemployed people [2,3].

For policy makers it is important to know which subpopulations are most negatively affected by unemployment, and for researchers it is important to extend knowledge about the life satisfaction of the unemployed in countries were the economic recession was particularly severe, such as the Southern European countries – Greece, Spain and Portugal. In the first quarter of 2013, the rates of unemployment in these countries risen to record levels (Greece 27%; Spain 26%; and Portugal 17.4%) [6]. This study, focus the life satisfaction of the unemployed in the Portuguese context.

Unemployment is a known major stressful life event that can lead to an accentuated drop in life satisfaction and well-being [7]. Because in the context of economic recession individuals face higher odds of experiencing unemployment at some stage during their lives and for longer periods due to lack of available jobs, it is crucial for policy makers to get information about the factors that are associated with better well-being during the unemployment situation.

Literature has established several key factors that can affect how life satisfaction declines during unemployment. In general, people living with a partner report experiencing higher life satisfaction than single people [3,7-9]. Despite being limited, research on partner's employment status and satisfaction say that unemployed people experience higher satisfaction when the partner is also unemployed. This process is called adherence to a "social norm" [10].

Empirical research on the effect of parenthood on well-being have stressed that being a parent entails rewards and costs. On one hand, having children may help adults satisfy some psychological needs and increase their social identity [11]. On the other hand,

however, there is much more evidence that nonparents are better off than parents on well-being measures [12,13]. Unemployment is expected to exert a negative pressure in parenthood and consequently life satisfaction. This association should differ with partnership status, as single parents were found in literature to be less satisfied with their lives than parents living in partnership [8,14].

In regards to socioeconomic factors, there are theories formulated that describe the determinants through which well-being is affected during unemployment. The Agency Restriction Model [15] and the Latent Deprivation Model [16], theorise together with financial strain, that there are five other major factors influencing well-being during job loss: time structure, social contact, status, enforced activity and collective purpose.

Financial deprivation has high negative effects on the unemployed individuals' well-being as it brings constraints to make ends meet and to access coping resources to deal with the job loss situation [15,17]. Partnered individuals may have higher access to financial resources than single people, while being a parent may entail higher financial strain which may lower life satisfaction [12,18]. Nevertheless, it is known that in countries with strong welfare systems the association between being a parent and financial deprivation is much lower or even absent [12].

The use of structured time (e.g. purposeful daily routines), social contact, collective purpose, and activity are highly associated with well-being among the unemployed population[19]. Parents' involvement in their children's activities and coupled individuals may have increased access to social contact (e.g. social support from other parents) and to other needs such as time structure, collective purpose and social status [18].

Despite that the detrimental effects of unemployment on individuals' well-being have been somewhat established in international literature, to date, there is limited information on association between unemployed individual factors and life satisfaction among Portuguese adults in its unique recessionary context. Thus, the present study contributes to improve knowledge about the factors associated with life satisfaction in Portuguese unemployed individuals and to examine which variables predict life satisfaction better in groups defined by partnership and gender.

METHODS

Procedure and Participants

This cross sectional study was conducted in Lisbon (Portugal) from April to May 2013. At the time of data collection 9% of people in Lisbon were registered as unemployed from a total population of 26.0405 economically active people [20]. The study was conducted in 5 civil parishes of Lisbon that were recommended to the researchers by the City Council because they contained specialized offices for Professional Integration of unemployed people and also because these parishes can certify that the unemployed individual is actively seeking work or not as part of the requirements to continue receiving state benefit. This gave the possibility of getting a larger sample of unemployed participants. Thus, self-administered questionnaires were handed to all unemployed people visiting the civil parishes and who voluntarily agreed to respond. A final convenience sample of 748 unemployed adults (386 males and 362 females), with a mean age of 42.7 years old (SD=11.4) was obtained.

Ethical Approval to carry out the study was obtained from the Ethics Committee of the Nova Medical School of Lisbon, from the Lisbon City Council and civil parishes. Consents were obtained from all participants, and confidentiality was assured throughout the study as questionnaire responses were anonymous.

Measures

Study participants were asked to indicate whether they were living with a partner at present and to indicate their partner's employment status. Moreover, respondents were asked to indicate whether they had dependent children.

Life satisfaction was measured by the Cantril's Ladder of Life Satisfaction [21], which is an extensively used measure of well-being [22]. Individuals were asked to indicate on a picture of a ladder where they felt they life stood at the moment (the top of the ladder 10 was the best possible life and the bottom 0 was the worst possible life).

Socioeconomic deprivation was assessed using a validated Portuguese version of the Latent and Manifest Benefits of Work-LAMB-Scale [23]. This scale has been widely used in unemployment research [19]. The LAMB-Scale addresses six main dimensions of the deprivation benefits of work using 7-point bipolar scales: 1) financial strain (e.g., my level of income usually/rarely allows me to make future plans); 2) time structure (e.g., there is usually/rarely too much spare time in my day); 3) social contact (e.g., regularly/rarely

engage in social activities with others); 4) status (e.g., I am usually/rarely important to my friends); 5) enforced activity (e.g., I usually/rarely do the things I have to do) and; 6) collective purpose (e.g., I often/seldom feel as a valuable part of society). The higher scores stand for greater perception of deprivation. For this study the internal reliability coefficient of the subscales tested by the Cronbach's alpha were: financial strain 0.88; time structure 0.85; social contact 0.84; status 0.87; enforced activity 0.81 and collective purpose 0.81.

Socio-demographic data were also obtained: age, gender, education level (secondary level and superior education), number of unemployment spells (first unemployment experience or a repeated experience) and unemployment duration (short-term unemployment was defined as being unemployed for less than a year and long-term unemployment for longer than one year).

Data analysis

After descriptive analysis for all variables (means, standard deviations, and percents), ANOVA was carried out to determine the associations between life satisfaction and the independent factors. Analyses were then stratified by partnership status, after the ANOVA results showed that life satisfaction differs significantly between single and partnered individuals. Linear regressions were conducted to examine the associations between life satisfaction and the independent variables. All models were adjusted for age and gender because well-being variables in unemployed populations have been found to vary between such variables [7]. All data analysis was completed using Statistical Package for Social Sciences (SPSS), version 22.0 and the level of significance for all tests was .05.

RESULTS

Sample description

Socio-demographic characteristics of the study participants are shown in Table 3.1. The current study included 748 adults (52% males), with a mean age of 42.7 years old (SD=11.4). At the time, most of the respondents were living in partnership (58%) with an employed partner (64%) and were parents (51%). More than half have attained up to secondary education (55%), were unemployed for the first time (64%), and for less than a year (57.4%). Respondents rated their overall life satisfaction as low (mean of 3) and financial deprivation and latent deprivation as high.

Table 3.1 Descriptive statistics of main sample

Variables	N (%)
Gender	
male	386 (51.6)
female	362 (48.4)
Partnership status	
partnered	432 (57.8)
single	315 (42.2)
Partner employment status	
employed	255 (64.1)
unemployed	143 (35.9)
Parental status	
parents	383 (51.3)
non-parents	364 (48.7)
Household type	
single	213 (28.5)
single parents	102 (13.7)
partnered	151 (20.2)
partnered parents	281 (37.6)
Level of education	
secondary level	405 (54.7)
superior education	336 (45.3)
Unemployment spells	
1st time	476 (64.0)
repeated	268 (36.0)
Unemployment duration	
< 1 year	425 (57.4)
≥ 1 year	315 (42.6)
	Mean ± SD
Age	42.7±11.4
Life satisfaction	3.1± 2.2
Financial deprivation	31.5 ± 8.9
Time structure	30.6 ± 10.4
Social contact	26.0 ± 9.3
Status	10.1 ± 5.4
Activity	11.5 ± 5.2
Collective purpose	18.9 ± 7.0

Association between life satisfaction and partnership status

There was a statistically significant difference in life satisfaction between partnered (3.3±2.2) and single (2.7±2.1) people (Table 3.2) as determined by one-way ANOVA, [F (1,726) = 12.134, p = .001].

Table 3.2. Analysis of variance of life satisfaction between partnered and single individuals

	Total			
	Partnered	Single		
	Mean (SD)	Mean (SD)	F	Sig
Life satisfaction	3.3 (2.2)	2.7 (2.1)	12.134	.001

Association between life satisfaction, parental status and deprivation variables in single people

A hierarchical multiple regression analysis was conducted to test firstly the effect of parental status independently of the influence of financial and latent deprivation and secondly to test whether parental status together with financial and latent deprivation was still associated with life satisfaction in the sample of single unemployed people. All models were adjusted for gender and age. The analyses were further stratified by gender to test for possible heterogeneity of explanatory factors. Results for the regressions are presented in Table 3.3.

All of the 10 variables together accounted for a significant 18% (adj. R^2) of the variance in life satisfaction of the total sample of single people. Parental status was not associated with life satisfaction in single people, neither in first model (parental status alone) nor in the second model (parental status plus latent and manifest deprivation variables). The latent and manifest deprivation variables at step 2 did add significantly to the prediction of life satisfaction, ΔF (6, 291) = 8.727, $p < 0.001$, which suggests that these variables, specifically financial deprivation and lack of time structure, were the most important factors to be considered in single unemployed people's life satisfaction. This was found to be true in both men and women.

Table 3.3. Multiple regression of variables linked to life satisfaction in single unemployed people.

Step		Total	Male	Female
		B (95% CI)	B (95% CI)	B (95% CI)
1	childless	0.19 (-0.33;0.70)	0.47 (-0.29;1.24)	-0.04 (-0.76;0.68)
2	childless	0.07 (-0.42;0.56)	0.54 (-0.23;10.31)	-0.33 (-0.99;0.33)
	financial strain	-0.07(-0.10;-.04)***	-0.05 (-0.09;-0.01)**	-0.10 (-0.14;-0.05)***
	low time structure	-0.04 (-0.06; 0.02)***	-0.03 (-0.06;0.00)*	-0.04 (-0.07;-0.02)**
	lack of social contact	-0.02 (-0.05;0.01)	-0.04 (-0.09;0.01)	0.00 (-0.04;0.04)
	status deprivation	-0.05 (-0.10;0.01)	-0.02 (-0.11;0.06)	-0.06 (-0.14;0.01)
	lack of activity	0.04 (-0.01;0.10)	0.03 (-0.05;0.12)	0.05 (-0.02;0.12)
	low collective purpose	0.02 (-0.02;0.06)	0.04 (-0.02;0.10)	0.00 (-0.05;0.05)

Data are given as regression coefficients (B) and 95% confidence intervals.
R^2 is 0.182, 0.103 for males, and 0.247 for females.
*$p < 0.05$; **$p < 0.01$; *** $p < 0.001$

Association between life satisfaction, parental status, partner's employment and deprivation variables in partnered people

A hierarchical multiple regression analysis was performed to test the effect of parental status and partner's job status first independently of and secondly together with

the influence of the manifest and latent deprivation variables in life satisfaction among the partnered unemployed people. All models were adjusted for gender and age. The analyses were further stratified by gender to test for possible heterogeneity of factors. Results for the regressions are presented in Table 3.4.

All variables together accounted for a significant 17% (adj. R^2) of the variance in life satisfaction in the total sample of partnered unemployed people. At Step 1, parental status and partners employment status were significantly associated with life satisfaction, F (4, 374) = 4.471, $p < 0.01$, accounting for 4% of the variance. The addition of the latent and manifest deprivation variable at Step 2 increased significantly the prediction of life satisfaction, ΔF (6, 368) = 11.048, $p < 0.001$, which suggests that they are also important factors to be considered. Nonetheless, being childless and living with an employed partner remained as significant key factors of life satisfaction in partnered unemployed people even after deprivation variables are considered.

For men, not having dependent children was associated with higher levels of life satisfaction, whilst financial strain and lacking time structure were negatively associated with life satisfaction and accounted for a significant 15% (adj. R^2) of the variance, F (9,185)= 4.869, $p < .001$. For women, having an unemployed partner, experiencing financial strain, low social contact and high enforced activity accounted for a significant 19% (adj. R^2) of the variance in life satisfaction, F (9,174)= 5.842, $p < .001$.

Because being a parent was significantly associated with lower levels of life satisfaction among partnered individuals, particularly in men, a multiple regression analysis was conducted to test what specific variables can explain this heterogeneity.

In unemployed partnered fathers, all variables together accounted for 13% (adj. R^2) of the variance in life satisfaction, F (8, 120) = 3.351, $p < 0.01$. For these fathers, the main additional factors linked to life satisfaction were status and activity. In fathers higher status and less enforced activity were associated with higher levels of life satisfaction in addition to higher time structure.

In unemployed partnered mothers, the variables accounted for 21% (adj. R2) of the variance in life satisfaction, F (8, 113) = 4.919, p < 0.001. For these mothers partners' unemployment loses statistical significance in the presence of the other variables (financial strain, social contact and enforced activity). Thus, in partnered mothers, less financial strain, higher social contact and less enforced activity were linked to higher life satisfaction.

Table 3.4. Hierarchical multiple regressions of variables linked to life satisfaction of unemployed partnered individuals and partnered parents.

		Total	Male	Female	Fathers	Mothers
		B (95% CI)	B (95% CI)	B (95% CI)	B (95% CI)	B (95% CI)
1	childless	0.57 (0.11;1.03)*	0.75 (0.10;1.40)*	0.41 (-0.25;1.07)		
	unemployed partner	-0.73(-1.19; 0.28)***	-0.45 (-1.08;0.17)	-1.06 (1.75;-0.37)**		
2	childless	0.54 (0.11;0.98)**	0.69 (0.05;1.32)*	0.40 (-0.21;1.01)		
	unemployed partner	-0.48 (-0.92;-0.05)*	-0.35 (-0.95;0.25)	-0.65 (-1.31;0.00)*	-0.24 (-0.98; 0.50)	-0.43(-1.28;0.43)
	financial strain	-0.05 (-0.08;-0.02)***	-0.06(-0.09; 0.02)**	-0.04 (-0.08;-0.01)*	-0.04 (-0.08;0.01)	-0.06 (-0.10;-0.01)*
	low time structure	-0.03 (-0.06;-0.01)***	-0.05(-0.08;-0.02)**	-0.01 (-0.05;0.02)	-0.04 (-0.08;0.00)*	-0.01 (-0.05;0.03)
	lack of social contact	-0.02 (-0.05;0.02)	0.02 (-0.02;0.07)	-0.06 (-0.10;-0.01)**	0.03 (-0.02;0.08)	-0.06 (-0.11;-0.01)*
	status deprivation	-0.05 (-0.10;0.01)	-0.08 (-0.16;0.01)	-0.03 (-0.11;0.04)	-0.13 (-0.24;-0.03)*	-0.01 ((-0.10;0.08)
	lack of activity	0.07 (0.02;0.12)**	0.05 (-0.03;0.12)	0.09 (0.02;0.15)**	0.10 (0.01;0.19)*	0.10 (0.01;0.18)*
	low collective purpose	-0.02 (-0.06;0.01)	-0.01 (-0.07;0.05)	-0.03 (0.80;0.02)	-0.03 (-0.11;0.04)	-0.04 (-0.10;0.03)

Data are given as regression coefficients (B) and 95% confidence intervals.
R^2 is 0.169, 0.152 for males, and 0.192 for females.
In partnered parents R^2 is 0.128 for males, and 0.206 for females.
*p < 0.05; **p < 0.01; *** p < 0.001

DISCUSSION

This study examined the different factors driving the relationship between life satisfaction, household composition and socioeconomic deprivation factors in a sample of unemployed men and women from a country (Portugal) with a high unemployment rate and under the context of economic recession. The descriptive statistics highlighted that this sample of unemployed adults from Lisbon is highly dissatisfied with life, reporting on average a score of 3 out of 10. Many factors may explain such low score, but it can be the case that the provision of support to unemployed individuals in Portugal is potentially not mitigating the impact of unemployment [24].

Corroborating prior research [3,7,25], the findings from this study showed that unemployed people living in partnership were more satisfied with their lives than single individuals. And this was both true for women and for men. This may suggest that men and women living in partnership seem to have more resources to cope with job loss than single people.

Single and life satisfaction

The findings suggested that the lower levels of life satisfaction found in single people may be explained in part by financial strain and lack of time structure, but not by having dependent children as one would expect by findings of other studies [8,14]. This could be explained by the fact that the subgroup of single parents is very small, but also because financial strain and time structure are in fact the key variables that best account for the significant variance in life satisfaction among single people. There were no gender differences to report.

Living in partnership and life satisfaction

Although partnered individuals are less likely to perceive lower life satisfaction, they also report to be highly dissatisfied. Both financial strain and lack of time structure significantly predicted their satisfaction with life. Furthermore, partnered individuals experience higher life satisfaction if they are childless, living with an employed partner and experience lower enforced activity.

Nevertheless, there were substantial gender differences found. For partnered men, being a father together with financial strain and lack of time structure predicted lower levels of life satisfaction. These findings are corroborated by other studies [13], showing that nonparent men are better off than parents on well-being measures. These findings are

rather important since fathers low life satisfaction is likely to affect their children as well [26,27]. Thus, helping fathers to better cope with unemployment may also help protect their children's well-being during the unemployment situation.

The differences found may be suggestive of the importance of traditional gender roles. For instance, the possible reason why being a parent is negatively associated with life satisfaction in partnered unemployed men may be due to higher pressure to provide for their children. This social burden of being the "breadwinner" might explain, for instance, why status deprivation was negatively associated with life satisfaction in male partnered parents but not in partnered mothers.

For partnered women, life satisfaction was better predicted by partner's employment, financial deprivation, social contact and enforced activity. It might be the case that these women expect men to carry out their traditional role of the "breadwinner". Thus, when the partner is employed they may feel it is more socially acceptable to be jobless probably because the traditional role of the "housewife" is then strengthened. The results in partnered mothers show the same direction, however, partner's employment status is less significant in the presence of other variables.

The differences with respect to how a partner's employment status affects life satisfaction does not offer evidence of an overall adherence to a "social norm" [10]. Independently of financial or latent deprivation, unemployed men's life satisfaction was not found to be dependent of the employment status of their partners as it was in unemployed women.

Other remarkable differences between partnered women and men were found in time structure and social contact. Unemployed women living in partnership tend to structure their time better compared to men or even single people. Therefore, men and single people may benefit in terms of well-being from support to help them resort to activities that give purpose and time structure to their lives. Nevertheless, partnered women seem to be more protected in terms of time structure. It may be the case that this is also related to the traditional role of the "housewife", in a way that by undertaking house chores and taking care of others may ease these women to structure their time in a more purposeful way.

Additionally, social contact was highly associated with life satisfaction in partnered women's life satisfaction, especially in mothers, rather than to single women or unemployed men. Although the evidence in relation to gender differences in latent deprivation is sparse, and more so if related to partnership and parental status,

Hammarström and Janlert [28] partly support these findings by indicating that social support is highly associated with unemployed women's well-being but not with unemployed men's. The fact that in this study only partnered women showed a strong association between social contact and life satisfaction may indicate that the commitments made by these women at the family level may withdraw them from social activities. Thus, these women would possibly benefit in terms of life satisfaction if supported to increase contact with others.

Financial deprivation

The findings suggest that financial deprivation is the most common significant predictor of life satisfaction in all groups for the exception of partnered women with no children (unemployed partner was the best predictor) and partnered fathers (lack of time structure, low status and enforced activity were better predictors). This could mean that a more generous cash benefit system might lessen the experience of financial strain and improve their overall life satisfaction. It could also mean that the levels of unemployment protection in Portugal are insufficient to fulfil the needs of this unemployed sample; however, further research is needed to provide evidence for that statement.

These findings are somewhat limited to the fact that this study used correlational data, a cross-sectional design and a convenience sample which obviously implies methodological fragilities. Moreover, unemployment is a very complex life event that depends on a large number of individual variables (e.g. personality and motivations) and context variables (e.g. labour market conditions and welfare system) and only a few effects were analysed, and on one single key component of well-being (life satisfaction). These finding allow thus a small, but important step forward in the comprehensive understanding of the possible effects of household composition on well-being during an unemployment experience in a unique context of economic recession. Participants were unemployed people from an urban area that were receiving state unemployment benefits, and possible bias can be at least theoretically foreseen when considering the overall population of Portuguese unemployed people (56%) who do not receive any benefits at all[29].

Despite these limitations, the present study contributes to the understanding of how life satisfaction and socioeconomic deprivation during unemployment is experienced within specific family groups, and is the first study of its kind performed in Portugal and

involving the unemployed population. Although facts, associations and pathways need to be further explored, these findings surfaced a few concerns to suggest that actions that provide better access to the specific predictors of life satisfaction in single or partnered men and women may provide some protection to the negative effects of unemployment on well-being.

Conclusion

In a social, economic and political context of economic recession that poses new challenges to the support process of unemployed individuals this study contributes to the knowledge about effect of household composition and socioeconomic deprivation on the life satisfaction of single and partnered unemployed men and women; and tries to delineate possible specific intervention paths that might stimulate the design of actions to support unemployed people to cope better with the unemployment situation considering the heterogeneity of the needs that were expressed.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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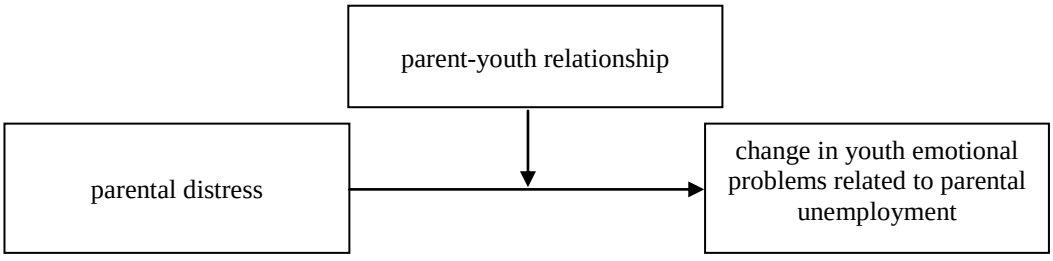
4. SCIENTIFIC PAPER

UNEMPLOYMENT, PARENTAL DISTRESS AND YOUTH EMOTIONAL WELL-BEING: THE MODERATION ROLES OF PARENT-YOUTH RELATIONSHIP AND FINANCIAL DEPRIVATION

Diana Frasquilho • Margarida Gaspar de Matos • Adilson Marques • Fergus G. Neville • Tânia Gaspar • José Miguel Caldas de Almeida

This study investigated the unemployed people's perceptions about the relationship between their distress and their children's mental well-being. This research was theoretically driven by the Family Stress Model [24] and the argument that family is an important context for children and adolescents' well-being. Thus, moderation roles of parent-youth relationship and financial deprivation on the link between parental distress and youth emotional problems related to parental unemployment were explored. The main findings suggested that, during unemployment, parents' distress levels are associated with change in youth emotional problems, and parent–youth relationship moderates such link (Fig. 4.1). Financial deprivation, however, did not prove to moderate such association.

Figure 4.1.Conceptual diagram for the effect of parental distress during unemployment on change in youth emotional problems related to parental unemployment as a function of parent-youth relationship



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ORIGINAL ARTICLE

Unemployment, Parental Distress and Youth Emotional Well-Being: The Moderation Roles of Parent–Youth Relationship and Financial Deprivation

Diana Frasquilho[1] · Margarida Gaspar de Matos[2,3] · Adilson Marques[2] · Fergus G. Neville[4] · Tânia Gaspar[2,5] · J. M. Caldas-de-Almeida[6]

ABSTRACT

Objectives We investigated, in a sample of 112 unemployed parents of adolescents aged 10-19 years, the links between parental distress and change in youth emotional problems related to parental unemployment and the moderation roles of parent-youth relationship and financial deprivation.

Methods Data were analyzed using descriptive statistics and correlations. Further, simple moderation, additive moderation, and moderated moderation models of regression were performed to analyze the effects of parental distress, parent-youth relationship and financial deprivation in predicting change in youth emotional problems related to parental unemployment.

Results Parental distress moderated by parent-youth relationship predicted levels of change in youth emotional problems related to parental unemployment.

Conclusion This study provides evidence that during job loss, parental distress is linked to youth emotional well-being and that parent-youth relationships play an important moderation role. This raises the importance of further researching parental distress impacts on youth well-being, especially during periods of high unemployment rates.

Keywords: adolescence, mental health, parental unemployment, parent-child relations.

INTRODUCTION

The recent economic recession has led to an increase in unemployment levels and socioeconomic complications in several countries. Negative consequences for families and adolescents' well-being in the medium and long term are expected in countries badly affected by the economic recession [1-3]. In most of these countries, levels of poverty are high and increasing among children and adolescents, and have been attributable to the growing rates of parental unemployment and lowering of family incomes [4-6]. A recent cross-national study using representative data on adolescents from 31 countries support this argument. Surveyed before and after the recession, young people in Ireland and Portugal reported a significant rise in youth psychological health complaints associated with the increasing of unemployment rates [7]. The family context is an important determinant of well-being of adolescents [8]. In that sense, adolescents are likely to become especially vulnerable to poorer well-being and more likely to develop mental health problems when their families are facing stress and socioeconomic deprivation [9-11]. A recent study in Slovenia showed that adolescents who report living in socioeconomic deprivation exhibit lower life satisfaction and a poorer quality of life than those living in better socioeconomic conditions [12]. Therefore, such adverse living situations constitute a serious threat that can undermine adolescents' development, well-being and future health outcomes in adult life [8].

There is strong evidence for the association between unemployment and mental health problems in adults [13-16]. However, the costs of unemployment might go beyond the individual and have repercussions for the family. Well-established research says that a family's negative socioeconomic living circumstances have implications on youth well-being [8-10,12,17,18]. Focusing specifically on parental unemployment, research has demonstrated that children of unemployed parents have a higher prevalence of depression symptoms, higher rates of psychosomatic symptoms and lower perceptions of psychological well-being [19-23].

We addressed how parental distress during an unemployment situation is associated with change in youth emotional problems, with reference to the main theoretical framework in parental unemployment research: The Family Stress Model [24]. The Family Stress Model states that adverse financial events, such as unemployment and financial deprivation, together with parental distress and tensions in the family relationship can negatively affect youth emotional well-being [25,26]. Available evidence substantiates the

model suggesting that parental distress is associated with increased probability of youth developing mental health problems [18,27-29]. Moreover, according to the Family Stress Model, the negative intergenerational impact on well-being is affected by strain in the parent-child relationship [30, 31]. Indeed, evidence states that both parental distress and financial deprivation are associated with a strained parent-adolescent relationship [18,24,26,31-34], and in turn a good parent-adolescent relationship is linked to higher youth well-being when facing events such unemployment in the family [35-37]. A lack of parental support is therefore likely to affect adolescents' well-being during parental unemployment [2,38].

This present study aimed to examine in a sample of unemployed parents, first if higher parental distress during a period of unemployment is associated with negative change in youth emotional problems, and second if strain in the parent-youth relationship and financial deprivation moderate such a link. Higher parental distress is expected to negatively affect change in youth emotional problems related to parental unemployment, and parent-youth relationship is expected to moderate this association together with financial deprivation. If such a negative intergenerational impact exists, the true costs of unemployment might go beyond the individual affected by the job loss, with implications for social and public health policies.

METHODS

Procedure and Participants

We used a convenience sample of unemployed adults (N=748) from Lisbon who were receiving unemployment benefits and registered at the Job Centre. The survey was conducted from April to May 2013. In Portugal, benefit claimants must go to their local civil parishes every two weeks to certify that they are actively seeking work as part of the requirements to continue receiving state unemployment benefit. Thus, self-administered questionnaires were handed to all unemployed people who voluntarily agreed to respond in 5 civil parishes of Lisbon. These civil parishes were recommended to the research team by the City Council because they contained specialized offices for Professional Integration of unemployed people and therefore gave the possibility of getting a larger sample of unemployed participants. Informed consent was obtained from all participants included in the study, and confidentiality was assured. Approval to carry out the study was obtained from the Ethics Committee of the Nova Medical School of Lisbon, from the Lisbon City Council and from the Lisbon civil parishes.

For the purpose of this specific study only parents living with adolescent children aged between 10-19 years old were included in the analysis. In addition to the general questionnaire, these respondents also answered questions regarding perception of the quality of the parent-adolescent relationship and change in youth emotional problems related to parental unemployment. Thus, a final subsample under analysis was composed of 112 parents (54 male and 57 female with a mean age of 45 years±6.6) living with adolescents (53 male and 58 female adolescents with a mean age of 15 years±2.9). More than half of the parents had attained up to higher education (54.5%). About 44% of the parents lived with an employed partner, 34% were single and 21% reported that their partner is also unemployed. For the most part this was the first time participants had been unemployed (67.6%) and the period of unemployment was generally short-term (less than a year) at the time of data collection (56.8%).

Measures

Parental distress

The adapted and validated Portuguese version of the General Health Questionnaire-12 (GHQ-12) was used to measure distress among unemployed parents [39, 40]. This measure assesses the severity of common mental health problems and is widely used as a distress screening instrument in unemployment research [13]. Responses were scored on a four-point scale ranging from 0 to 3 (better than usual - much less than usual) with higher scores indicating higher distress. The maximum possible score is 36, and the best distress threshold suggested by the scale authors is 12. The coefficient of internal consistency of the GHQ-12 for the current study tested by the Cronbach's alpha was 0.92.

Change in youth emotional problems related to parental unemployment

The change in youth emotional problems related to parental unemployment was measured using a single item based on the self-reported health scale which is a widely recognized measure of morbidity and mortality in health psychology [41]. Respondents answered the question 'In your opinion, how much has your unemployment negatively affected your adolescent's emotional well-being?' using a 4 point rating scale (not at all-very much).

Perception of parent-youth relationship

The unemployed parents were asked to indicate, in a single-item self-reported measure, 'In your opinion, how much the unemployment negatively affected the relationship with your adolescent' in a scale from 1 to 4 (not at all-very much).

Financial deprivation

This measure was an 8-item subscale of the Latent and Manifest Benefits of Work-LAMB-Scale [42], adapted and validated for the Portuguese population [43]. The respondents identified the degree of deprivation in scales from 1 to 7 for six phrased statements such as e.g., 'my level of income usually/rarely allows me to make future plans'. Higher scores indicated a higher level of deprivation, and the maximum possible score was 42. For this study the internal reliability coefficient of the subscale tested by the Cronbach's alpha was 0.88.

Data Analyses

Data were analyzed firstly using descriptive statistics (means and standard deviation) and correlations. Secondly, to analyze the effects of parental distress, parent-youth relationship and financial deprivation in predicting change in youth emotional problems related to parental unemployment, simple moderation, additive moderation, and moderated moderation models of regression were performed using Hayes' PROCESS macro for SPSS [44]. Each analysis utilized a bootstrapping approach, and significance was determined at 95% bias-corrected confidence intervals. All variables were continuous and centered prior to analysis, and the estimated effects reported were unstandardized regression coefficients [44]. To address potentially confounding effects of family structure (single versus dual-parent households, unemployed couples), parent and youth gender, parent and youth age, and parent level of education, all models were tested including these factors as covariates. Family structure was coded into one variable with 1 representing single-parent families, 2 dual-parent families with one employed parent, and 3 dual-parent families both parents unemployed. Youth and parent gender were both coded into two separate variables, with 0 representing males and 1 representing females. Parent level of education was coded into one variable with 1 indicative of up to secondary level education and 2 of higher education.

RESULTS

Table 4.1 presents the descriptive statistics and correlations for the survey measures. Change in youth emotional problems related to parental unemployment was positively correlated with parental distress and parent-youth relationship. Parental distress correlated positively with both change in youth emotional problems related to parental unemployment and financial deprivation. The mean of parental distress should be considered high in relation to the threshold of 12 suggested by the scale authors [45].

Table 4.1. Means, standard deviations, and correlations of key variables.

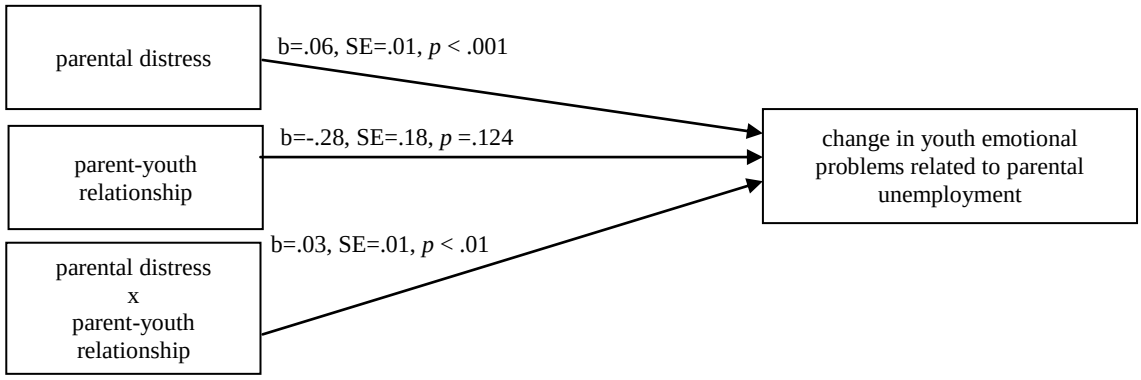
	Mean (SD)	1	2	3	4
1. Parental distress	18.71 (8.33)	-			
2. Youth emotional problems	2.05 (0.79)	.52**	-		
3. Parent-youth relationship	2.35 (0.98)	.11	.27**	-	
4. Financial deprivation	32.56 (8.70)	.30**	.13	-.21*	-

The raw (unstandardized) values are reported for each variable.
**p < .01 *p <.05

Moderation analysis

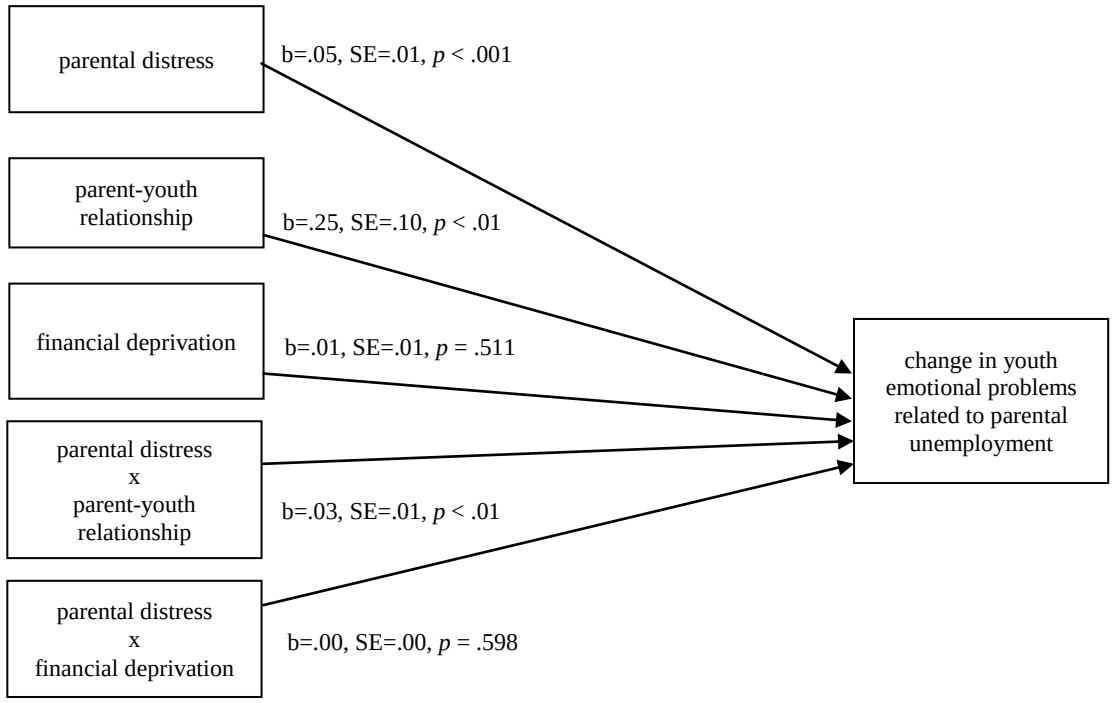
A simple moderation analysis using the PROCESS macro was performed to test the hypothesis that the relationship between parental distress and change in youth emotional problems related to parental unemployment would be moderated by parent-youth relationship. To avoid multicollinearity issues, parental distress and parent-youth relationship were mean centered prior to analysis and an interaction term between parent-youth relationship and parental distress was produced. Figure 4.2 shows the simple moderation model tested. Results revealed that the interaction between parental distress and parent-youth relationship accounted for a significant proportion of the variance on change in youth emotional problems related to parental unemployment [$\Delta R^2 = .06$, b =.03, t (96) = 3.15, $p < .001$]. Therefore, support for a moderation effect was found. Examination of the conditional effect values showed an enhancing effect; worse parent-youth relationship together with higher parental distress enhances negative change in youth emotional problems related to parental unemployment.

Figure 4.2. Simple moderation analysis results with unstandardized regressions coefficients.



An additive moderation analysis was conducted to test whether the effect of parental distress on change in youth emotional problems related to parental unemployment was moderated by both parent-youth relationship and financial deprivation (fig. 4.3). After adding the financial deprivation x parental distress interaction to the moderation model, the interaction between parent-youth relationship and parental distress remained significant [b =.03, t (94) = 3.38, p < .01], but the interaction between financial deprivation and parental distress was not [b =.00, t (94) = .52, p = .60]. Thus, the effect of parental distress on change in youth emotional problems related to parental unemployment was not found to be additively dependent on both parent-youth relationship and financial deprivation.

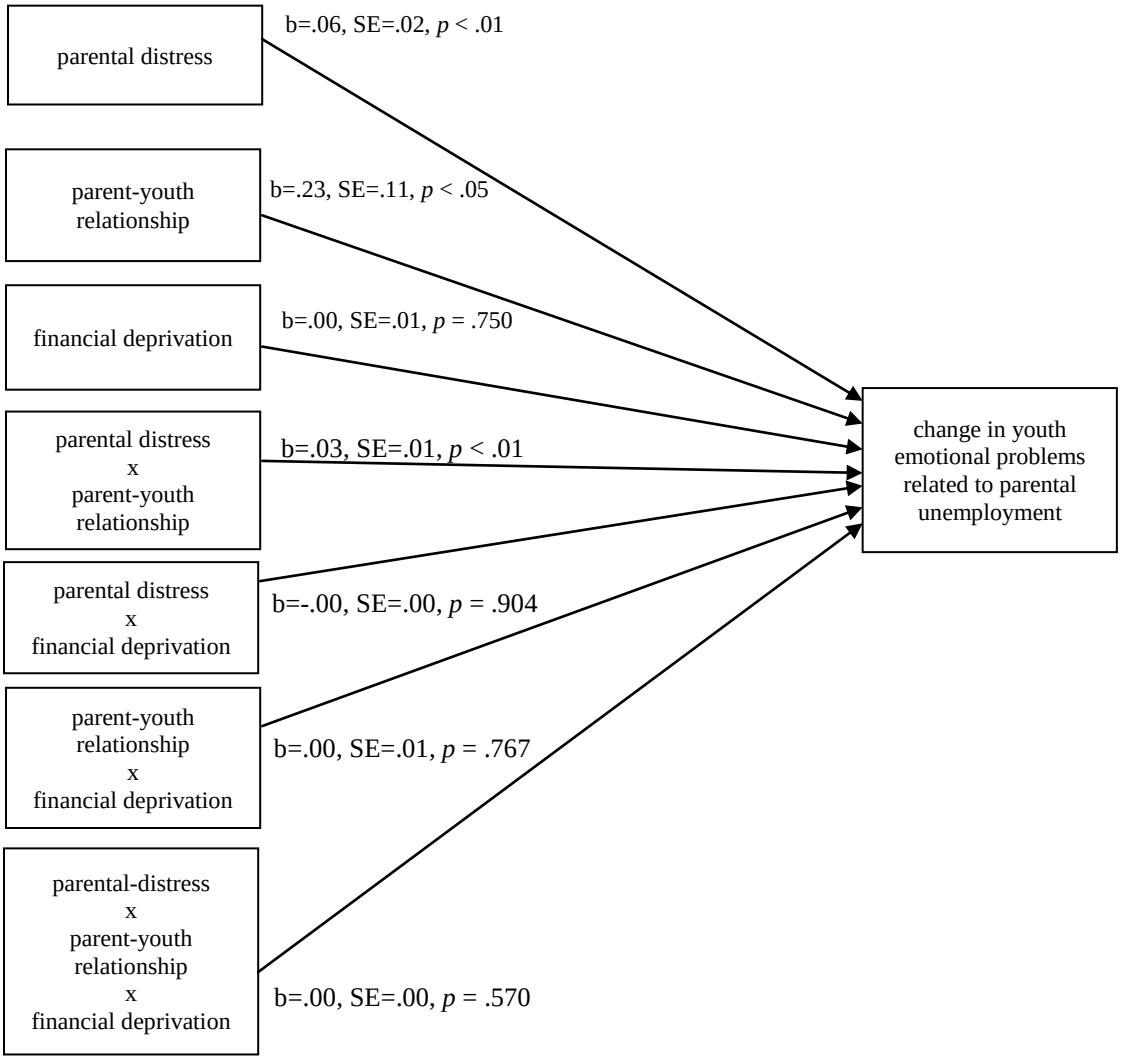
Figure 4.3. Additive moderation analysis results with unstandardized regressions coefficients.



Moderated moderation

To test whether the interaction found between parental distress and parent-youth relationship was moderated by financial deprivation, a moderated moderation analysis (also known as three-way interaction) was performed (Fig. 4.4). Altogether the model accounted for a significant amount of variance on change in youth emotional problems related to parental unemployment [F (12, 92) = 8.45, p < .001, R^2 = .43]. However, the interaction between parental distress, parent-youth relationship and financial deprivation was not statically significant [b=.00, t (92) = .57, p =.570]. Only the interaction between parental distress and parent-youth relationship accounted for a significant moderation effect on change in youth emotional problems related to parental unemployment [b =.03, t (92) = 3.03, p < .01]. Thus, support for the moderated moderation hypothesis was not found.

Figure 4.4. Moderated moderation analysis results with unstandardized regressions coefficients.



DISCUSSION

In this study we examined the effect of parental distress on change in youth emotional problems related to parental unemployment and the moderating roles of parent-youth relationship and financial deprivation. The results confirmed the hypothesis that during unemployment the parents' distress levels are associated with change in youth emotional problems, and that parent–youth relationship moderates such link. This means that the link between parental distress and negative change in youth emotional problems due to parental unemployment is stronger when the parent-youth relationship is worse. This corroborates the idea that good parent-youth interaction may act as a protector of the effects of parental stress on youth well-being during parental unemployment [8, 35-37]. Further, additive and multiplicative moderation analysis revealed that the effect of parental distress on change in youth emotional problems related to parental unemployment was not moderated by combining parent-youth relationship and financial deprivation together.

Altogether, the findings are somewhat consistent with the arguments of the Family Stress Model. This model acknowledges that together with parental well-being, parent-youth relationship and financial deprivation affects adolescents' well-being [2,24,30,31,34,46]. Our results, however, showed that financial deprivation did not moderate the effect of parental distress on youth emotional problems. This is in line with prior research showing that highly distressed parents report lower levels of their youths' well-being independently of socioeconomic deprivation [20,29,47,48]. These results point to the complexity of understanding the association between parental distress and youth emotional well-being in an unemployment situation, which should go beyond financial deprivation to consider additional social variables (e.g. coping skills for handling the emotional consequences of job loss, such as capacity to schedule meaningful routines and take care of their mental health).

The parental distress results of this study reveal that this sample is highly distressed, which is in line with most of the literature that links unemployment to higher distress levels [14]. Moreover, our results indicated that this sample of unemployed parents was facing extensive financial deprivation when compared to the results found in other Portuguese studies, which supports the argument that unemployed families are likely to face higher financial hardship [49].

This study has some limitations. First, it has a cross-sectional design so causal inference and generalization are limited. Second, the sample size was relatively small (less

than 200), limiting statistical power, and precluding the use of structural equation modeling or other statistical approaches to test the current model [50]. Third, the results might have been influenced by reporter bias, because parents reported on their own psychological distress level, relationship quality with their adolescents and their adolescent's change in emotional problems. In this study it can be expected that parents and adolescents differ in the view of their relationship and that mainly adolescents, but not parental, reports are associated with diverse outcomes [51]. Nonetheless, there is evidence showing that children and their parents tend to perceive health-related quality of life consistently [52]. In the future, it would be useful to design a multi-informant study that may also include self-reports of adolescents with unemployed parents. Fourth, it is important to consider that the pathways of the impact of parental unemployment distress are many and operate at different levels, and that elements of adolescent life other than family are also important to emotional well-being. Fifth, the findings are obtained with a sample of unemployed parents that are receiving state unemployment benefits. Because only 44% of the Portuguese unemployed individuals are receiving financial benefits (people are only entitled to unemployment benefit if they have completed a period of at least 365 days' paid work with recorded earnings in the 12 months preceding the date unemployment began) [53], the results should not be generalized for the whole Portuguese unemployed parent population.

Despite these limitations, our study is the first - to our knowledge - to contribute to the understanding of the effect of parental distress on changes in youth emotional problems in a population facing unemployment. The moderating role of parent-adolescent relationship on the effect of parental distress on changes in youth emotional problems highlights the importance of the quality of family relations during unemployment. The findings might help plan longitudinal studies that can provide evidence for causality, directionality, and temporal order of the effects. Additionally, the findings might help improve policy-making by bringing awareness to the associations between parental distress and changes in youth emotional problems related to parental unemployment, which is especially relevant during periods of economic recession. In particular, the results point to the social importance of parental unemployment – rather than solely the financial consequences – on adolescent well-being, suggesting a need for add social resources to help families during periods of unemployment.

Conclusion

This study examined whether parental distress is associated with changes in youth emotional problems related to parental unemployment and whether this association is moderated parent-youth relationship and by financial deprivation. Results showed that during parental unemployment, elevated parental distress was associated with to greater adolescent emotional problems, and that parent-youth relationship moderated this association. These findings suggest a possible transmission of unemployed parents' distress to adolescents and that the quality of parent-youth relationship exerts important effects on this association. Such information adds to existing literature about the impact of parental distress upon adolescents, and expands the research to explore the effects of parental unemployment. This is useful to raise awareness for research on the effects of unemployment in the family context, which is especially relevant given the rise of unemployment rates caused by the economic recession.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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5. SCIENTIFIC PAPER

UNEMPLOYMENT AS A SOURCE OF MENTAL DISTRESS TO INDIVIDUALS AND THEIR FAMILIES: UNEMPLOYED PARENTS' PERCEPTIONS DURING THE ECONOMIC RECESSION

Diana Frasquilho • Margarida Gaspar de Matos • Teresa Santos • Tânia Gaspar • José Miguel Caldas de Almeida

This manuscript presents a qualitative analysis of the perceptions of unemployed parents about the perceived repercussions of the unemployment situation in their family life. The main results are listed below, and the manuscript is presented on the following pages.

Jobless parents perceive unemployment as:

- a source of economic hardship and pressure, ranging from cutting down on essential needs (house, food, health and children education costs) to cutting back on family leisure activities (holidays, going out, dining at restaurants);
- a source of change in family relations, either positive (more proximity and support) or negative (more friction, conflicts and harsher parenting);
- a source of distress (worry, anger, bad temper, and sadness) and;
- a source of low well-being in youth (sadness, worry and bad temper).
- it is believed that individualized evaluation of the unemployment situation would help prevent people from falling into extreme economic deprivation situations, as well as from suffering psychological distress and having their family members also affected.
- failing to protect families and children during unemployment may potentially leave emotional scars that can be particularly critical to young people's development.

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Unemployment as a source of mental distress to individuals and their family: Unemployed parents' perceptions during the economic recession

Diana Frasquilho[1,2], Margarida Gaspar de Matos[2,3,4], Teresa Santos[2], Tânia Gaspar[4,5] and JM Caldas de Almeida[6]

ABSTRACT

Background Due to the economic recession several people in Europe became unemployed. This situation may risk their mental health.

Aims This study explored parents' perceptions about their unemployment's effects in daily life during the recession.

Method The participants answer an open question on how the unemployment affected their family lives. Thematic analysis was used to analyze data.

Results The findings suggest that unemployment is a source of adult and youth mental distress, and of economic hardship and changes in family relations.

Conclusion Support to unemployed individuals and their families could benefit from these insights when granting the needed financial and socio-emotional assistance.

Keywords: economic recession; family relations; mental health; socioeconomic factors; thematic analysis; unemployment.

INTRODUCTION

The European economic recession created a labour market crisis raising the rates of unemployment in the Euro area to record levels [1] affecting mostly the Southern European countries where unemployment rates largely increased. For instance, in Portugal, the unemployment rate increased from 9% (before the crisis) up to 17% during the crisis [2]. Such rates were, at that time, only preceded by Greece (27%) and Spain (26%).

Literature suggests that, during the economic recession and ensuing labour market crisis, unemployed people have a particularly significant risk of the development of mental health problems [3]. In fact, unemployment research supports that losing a job is a highly stressful life event, associated with negative mental health outcomes [4,5]. Going as far back as the 30's, to the renowned Marienthal-study that documented the everyday life and health changes of factory employees who had lost their job [6], unemployment was found not only to lead to poverty, but also to hopelessness, apathy, diminished activity, disruptive sense of time and overall breakdown of social life [7]. These findings helped to redefine research and gave substance to the argument that without work, people face higher risks of economic and social deprivation, which is associated with poorer health and well-being [8-16].

Nonetheless, an unemployed population is heterogeneous and perceptions towards an unemployment situation may differ with subgroups of individuals [5,17]. Unemployed parents, for instance, may face increased risk. There is evidence pinpointing parental unemployment's associations with higher levels of psychological distress and financial deprivation [13,18].

Since unemployment is such a complex situation, there is a possibility of a chain reaction whereby either the individual who loses the job and/or his or her family suffer the effects. In light of the evidence from other studies, parental unemployment has been found to be associated with adverse youth well-being, with decreased cognitive and social–emotional outcomes [18-27].

The *family stress model* offers the theoretical base to explain how parental unemployment effects on distress and youth mental well-being are associated with changes in economic hardship and pressure, and stress on family relations [28]. One of the pathways involved in the association between parental unemployment and adverse youth well-being outcomes may exist in the effect of unemployment related stress on parents. Several studies have demonstrated that parental distress correlates with children decreased well-being and compromised social, emotional, and behavioural development [29-34]. Using a life-

course perspective, living in an unemployed household and in economic deprivation may cumulatively affect adolescents and their future health [35].

Family interaction and support may also influence the association between parental unemployment and adverse youth well-being outcomes, by either strengthening or weakening the negative effects of unemployment [36]. Southern European countries (including Portugal) have been characterized by having strong family ties [40], thus it is expected that family relations exert influence upon the effects of the unemployment situation. In fact, evidence from Portugal has shown that strong family relationships seem to moderate the link between parental distress and youth well-being during unemployment [41].

Notwithstanding the abovementioned literature, important arguments on the effects of unemployment to individuals' well-being and that of their families, they do not allow deeper insights on subjective experiences within the populations. Qualitative analysis allows us to better understand how unemployment actually changes family life. Thus, this study aimed to provide essential information about the mental well-being of a sample of unemployed parents and their experience of unemployment in terms of perceived changes in families' day-to-day life and young people's well-being. Such information is important, not only to improve research on the area of unemployment effects but also, because it is necessary to acknowledge what are the resources (economic, social etc.) needed to improve the lives of unemployed people and their family members.

METHODS

Procedure and Participants

This study was conducted in conjunction with a cross-sectional study directed to unemployment benefit claimants from Lisbon, Portugal [41]. Participants were unemployed adults from Lisbon, registered at the Job Centre and receiving state unemployment benefits that had adolescent children between the ages of 10 and 19 years. All participants answered a self-administered questionnaire that was handed to people who voluntarily agreed to respond during their bi-weekly presentation at their local civil parish as part of the requirements to continue receiving state unemployment benefit. Recruitment and data collection occurred in 5 civil parishes of Lisbon that were recommended to the researchers by the Lisbon City Council as they contained offices that support unemployed people and

thus gave the possibility of increasing the recruitment of unemployed participants. A hundred and twelve unemployed parents answered the survey. However, 53 participants out of these 112 did not answer the open question regarding the unemployment experience, resulting in a total of 59 of participants (40.7% fathers and 59.3% mothers), aging 44.4 years old (±6.2) that were included in this study (response rate of 53%).

Measures

Participants answered an open question regarding their perception of the changes that occurred in terms of family life as a result of their unemployment; "Please use the space provided to elaborate on any changes to your family life due to the unemployment situation or to write down other comments".

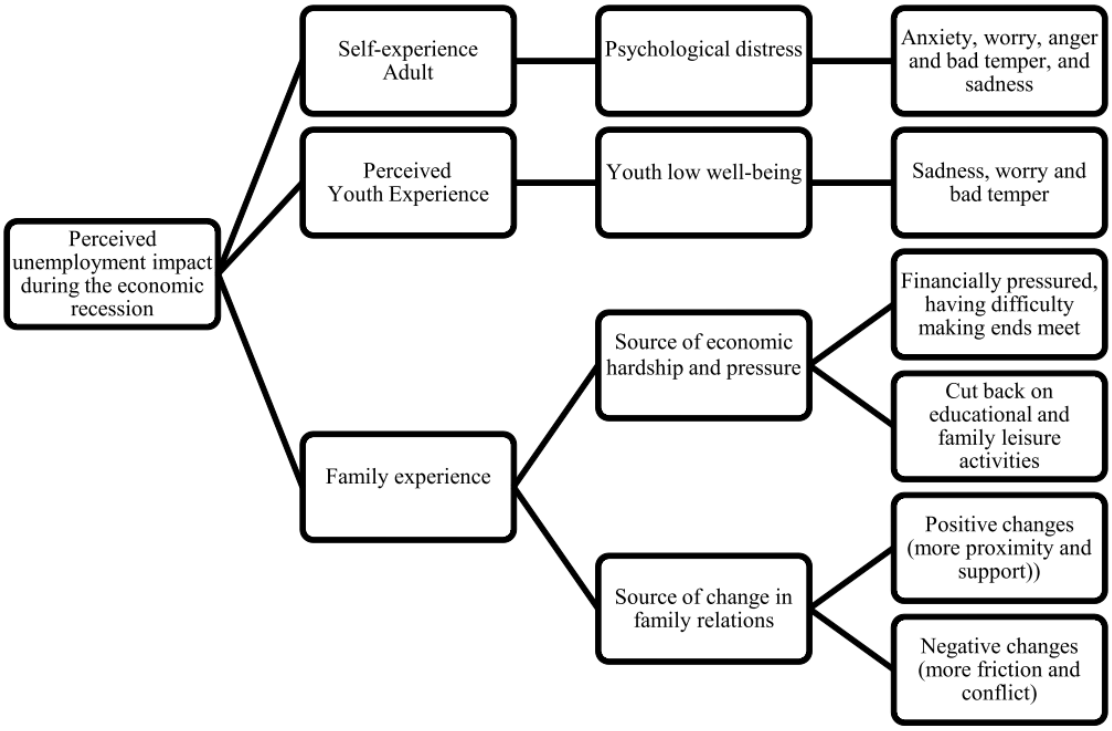
Socio-demographic data were also obtained to contextualize this segment of the open-ended question answers: age, gender, education level (secondary level and superior education), number of unemployment spells (first unemployment experience or a repeated experience) and unemployment duration (short-term unemployment was defined as being unemployed for less than a year and long-term unemployment for longer than one year). For this study, participants were also divided into three groups by partnership: single; partnered with employed partner; partnered with unemployed partner.

In addition, the participants completed the General Health Questionnaire-12 (GHQ-12) as part of their baseline questionnaire [42]. The GHQ-12 is a widely used and recommended screening instrument for psychological distress in occupational settings and unemployment research [16,43] and has been adapted and validated for the Portuguese population [44]. Participants rate from 0 to 3 (better than usual/same as usual/less than usual/much less than usual) their answer to 12 items: 1) Being able to concentrate on whatever you are doing; 2) Lost much sleep over worry; 3) Felt constantly under strain; and 4) Been losing self-confidence in yourself. Higher scores indicate higher levels of psychological distress. Using this scale, and the mean GHQ-12 score (5.94±4.04) for the population of respondents as the cut-off point as suggested by the authors [45], participants were identified as having low distress (GHQ-12 score, 0–6) and high stress (GHQ-12 score, 7-12).

Data analysis

Descriptive statistics (means, standard deviations, and percentages) were calculated for demographic variables and the psychological distress variable. The answers to the open question were analyzed using thematic content analysis. The researchers read and re-read the written answers, and prominent patterns and concepts were initially identified as themes. These themes were microanalysed and categories were created. These categories were then analysed by three experts based on the constructs present on the *family stress model* and concurrent background literature. The three experts checked if the categories worked and independently coded the written answers according to them using Statistical Package for Social Sciences (SPSS), version 22.0. Throughout the analysis the three experts discussed on the interpretation of the data, and the analysis continued until a 100% agreement between the experts was obtained in terms of the categorization (saturation point). Figure 5.1 illustrates the coding tree.

Figure 5.1. Coding Tree



Ethics

The study was approved by the Ethics Committee of the Nova Medical School of Lisbon. Moreover, the Lisbon City Council and the 5 civil parishes gave approval for the questionnaire and participants gave written informed consent.

RESULTS

Participants' characteristics are presented in Table 5.1. Most of the participants have attained up to secondary level of education (64.4%), were partnered and the partner was employed (54.2%), it was the first experience of unemployment (65.5%), and mostly for less than a year (60.3%). More than half of the participants (52.5%) reported to be experiencing elevated psychological distress.

Table 5.1. Characteristics of the study population

Variables	% (N)
Gender	
male	40.7 (24)
female	59.3 (35)
Age	
≤40 years	30.5 (18)
≥41 years	69.5 (41)
Level of education	
secondary level	64.4 (38)
superior education	35.6 (21)
Family type	
single	30.5 (18)
partner employed	54.2 (32)
unemployed partner	15.3 (9)
Unemployment spell	
1st time	65.5(38)
repeated	34.5 (20)
Unemployment duration	
< 1 year	60.3 (35)
≥ 1 year	39.7 (23)
Psychological distress	
low distress	47.5 (28)
high distress	52.5 (31)
	Mean ± SD
Adults' age	44.4 ±6.2
Adolescents' age	14.8±2.9

Subjective experiences about the family life changes resultant of the unemployment situation

The following categories derived from the thematic content analysis and were theoretically based on the *family stress model* [28]: (1) unemployment as a source of economic hardship and pressure; (2) unemployment as a source of change in family relations; (3) unemployment as a source of distress; (4) unemployment as a source of low youth well-being.

Unemployment as a source of economic hardship and pressure. The participants mentioned feeling financially pressured, having difficulty making ends meet (see Table 5.2 at the end of the paper):

"*We had to reorganize our life and adjust to a lower level of income*" [mother, 47, low stress, partner employed, 12y boy]

"*The unemployment has brought us a hard time paying our day-to-day expenses.*" [mother, 40y, low stress, partner employed, 14y boy]

The economic pressure and hardship varied a lot from having to cut down on essential needs (house, food and health), children's education costs and family leisure activities:

"*Difficulties in paying the house rent and expenses*" [father, 42y, 13y boy, high stress, single].

"*I limit myself to survive. There is lack food (a few days), clothes, and access to medical doctors. Everything is lacking.*" [mother, 34y, low stress, employed partner, 17y boy]

"*Stricter control of purchases (groceries and clothing). We do not go out as much and we tend to stay at home. We had to reduce school spending.*" [father, 49y, 19y girl, high stress, partner employed].

"The inability to financially support the education of my daughter" [father, 47y, high stress, partner employed, 15y girl]

Cut back on family leisure activities (holidays, going out, dinning at restaurants) "*After being unemployed, we stopped being able to afford leisure activities such as going to the cinema, shopping, weekends off , etc ..*" [mother, 40y, low stress, single, 14y girl]; "*Our quality of life has decreased greatly. We hardly go out at weekends and no longer eat out…all we do is talk about the crisis*" [40 y mother, high stress, 16y girl, partner employed]

There was also an example of a woman that reported she had to go back to live with her parents:

"*The unemployment situation forced me to leave the house. I had to move with my daughters to their grandparents' house. The life I had is ruined and I have no resources to get it back.*" [mother, 40y, 14y girl, high stress, single].

Unemployment as a source of change in family relations. Participants described, with varying influence, unemployment as a factor that changed family relations (see Table 5.3 at the end of the paper).

Family relations were mentioned as negatively affected (more friction, conflicts and harsher parenting). For instance, a woman reported that: "*In a house where there is no 'bread' all argue and no one is right.*" [mother, 52yr, low stress, single, 18yr girl]. This is a Portuguese saying that illustrates that when essential needs are not met (like food) people get angry with each other and argue about many petty things. Other examples of negative changes were:

"*The mood changes are a constant with respect to the couple. I am more often with a bad temper.*" [father, 44y, low stress, unemployed partner, 14y girl]

"*There is less dialogue and more apprehension.*" [mother, 42y, high stress, partner employed, 16y girl]

"*The situation implied friction between us (father and daughter)"* [father, 47y, high stress, girl]

However, positive changes (more proximity and support) were also reported:

"*The situation changed for the better, because we are more united as a family.*" [mother, 43y, low stress, partner employed, 12y girl]

"*It brought us further closer together. There are things far worse and people in far worse situations than ours. We always have to think positively, despite knowing that my situation is not pleasing*" [mother, 45y, low stress, partner employed, 17y boy]

Unemployment as a source of distress. Participants unanimously reported unemployment as a source of psychological distress and of low well-being (see Table 5.4 at the end of the paper). The emotions most frequently mentioned were: worry, anger, bad temper, and sadness. For example:

"*We are all sad, nervous and worried*." [father, 37y, high stress, single, 10y girl]

"*I'm more sensitive to little things and sometimes I feel angry.*" [father, 48y, low stress, single, 18y girl]

"*I feel changes in terms of sadness.*" [mother, 49y, high stress, unemployed partner, 18y boy]

"*I feel insecure*" [mother, 52y, high stress, unemployed partner, 18y boy]

"*I am constantly striving and sometimes I transfer my anxiety and bad temper to him (son). I have no doubt that being unemployed took my quality of life, I have no doubt about it.*" [mother, 48y, high stress, single, 10y boy]

Unemployment as a source of youth low well-being. The transmission of stress to their children was less stated. However, for these participants, their unemployment represented a negative event in their children's well-being (see Table 5.5, at the end of the paper), reporting perceiving sadness, worry and bad temper in them:

"*My son is sad to see his mother worried and sad*." [mother, 42y, high stress, partner employed, 12y boy]

"Having no way to give our children what they need, they are bad tempered, sad and this leads to temporary arguments." [mother, 47y, low stress, single, 10y girl]

"*The inability to financially support the education of my daughter implies a set of conflicts…sometimes making us take extreme positions as parents which has negative effects on her emotional well-being*." [father, 47y, high stress, partner employed, 15y girl]

This father also reported asking his children to improve their focus on schoolwork:

"*We try to make them understand the importance of school work in their (children) lives, so that in the future they can be successful people*." [father, 39y, low stress, partner employed, 17y boy]

DISCUSSION

This study focused, in a sample where the majority of participants score high on distress levels, qualitative data that suggests that unemployment is experienced as a source of economic hardship and pressure, emotional distress, change in family relations (marital and parenting) and, ultimately, a source of change in their children's well-being.

Economic hardship and pressure was linked to negative income change, difficulty with meeting day-to-day expenses (food, clothing, house rent) and having to make

significant cutbacks in other expenditures (school and education, leisure activities, savings). This is in line with the argument that unemployed families experience more financial hardship than working families [46-48]. The level of deprivation, however, varied a lot. On one hand, some people reported that they had to adjust to a lower level of income and had cut out leisure activities, holidays and meals in restaurants; and on the other hand, some people reported to be in 'survival mode' having cut essential needs such as food, clothing and health needs. The findings of the present study also correspond with those of Paugam and collaborators (2015)[49], depending on the countries, unemployed individuals report to be 'living with less' (e.g. in France and Germany) while others report to be 'surviving' (southern European countries) and such differences were found to be associated with the inadequacy of certain countries' social protection systems. In our case we argue that the unemployment situations vary due to several factors related to the individuals. Thus, we believe that an individualized evaluation of financial resources and needs (house rents, debts etc.) would prevent people from falling into extreme deprivation situations when facing unemployment.

For most participants, the financial deprivation resultant from their unemployment situation affected their well-being and quality of family life. For instance, the lack of access to leisure activities was seen to be associated with a significant loss of quality of life. This is in line with the experience of deprived need for social experiences proposed by the unemployment research model of Jahoda (1982). Further, many participants stated that their inability to provide for their children's basic needs and education added to the experience of psychological stress (e.g. worry, bad temper, anger, sadness). Other studies corroborate that unemployment and consequent financial deprivation negatively influence mental well-being [5,9,50,51].

Changes in family relations due to unemployment were reported to be either positive or negative. Findings suggest that on one hand, family members can be brought closer together as a coping mechanism of social support, and on the other hand there may be an increased strain on both marital and parental relationships. The literature also shows that unemployment can both strengthen relations and create tension and conflicts. It is possible, for instance, that such variation depends partly on the family cohesion status prior to the unemployment situation [36]. Either way, maintaining good relations with family while unemployed was reported by the participants to be a significant source of support.

The findings also revealed that parents perceive that their adolescent children are somewhat aware of the situation and are showing signs of low mental well-being (bad

temper, sadness and worry). This is supported by available evidence showing that parental unemployment is associated with young people's decreased levels of mental well-being [18-27].

In sum, these findings highlight that unemployment is connected with economic strain and reduced family budget, which in turn seems to be potentially harmful to individuals' and families' quality of life, educational pursuits and overall mental well-being. Furthermore, unemployment seems also to bring negative consequences to children's emotional well-being, which is particularly worrying as this can potentially leave emotional scars throughout their critical development period [52].

The reported changes in family relations varied significantly in terms of being positive and negative, it seems fair to suggest that this factor may act as a possible moderator of the effect of unemployment. For adults, especially those from southern European countries where family has a central role, having the support of their spouses and children can be very significant. For youth, there is corroborating evidence that good family interactions seem to be protective against negative consequences of parental unemployment [19,53,54]. In fact, our previous quantitative analysis of data has shown that parent-youth relationships play an important moderation role in the link between parental distress and youth emotional well-being during unemployment [41].

Overall, the findings mirror the findings of previous research carried out to date and are consistent with the conceptual model of *family stress* in the sense that unemployment is linked to increases in family economic pressure, parental distress and changes in family relations, which in turn are associated with possible negative emotional consequences for young people [55,56]. These findings contend that growing up in an unemployed household could negatively and cumulatively affect youth health across their lifetime, which supports the arguments of a life-course perspective [35].

This study has some limitations. The participants were all receiving state unemployment benefits and therefore the findings may not be generalized to unemployed people who are not financially supported and may be experiencing a different situation. Moreover, the study was carried out in a capital city of a country facing an economic downturn and expenditure cuts on state services; so the results may differ in other rural zones and by countries' socioeconomic context.

In spite of its limitations, this study brings important insight in terms of the unemployment experience of parents and their families; thus contributing to what has been explored in previous quantitative studies. The high prevalence of psychological distress

found in this sample pinpoint that mental health interventions should be available to improve people and family members' ability to cope with the unemployment experience and reduce the negative outcomes of job loss on mental health and promote high-quality reemployment. Current research appears to corroborate the need for such actions showing potential society gains in overall health [57]. Moreover, considering the differences found in terms of economic deprivation and pressure experiences, public spending efforts may want to consider individualized evaluation of the economic situation of people facing unemployment to ensure that extreme cases of financial deprivation are prevented.

Thus, future research and interventions to support unemployed people and their families may want to consider the factors described by the participants in this study and link these to increase efficacy to intervention programmes and policies that are especially important for countries facing high unemployment.

Conclusion

This study described the subjective experiences of unemployed parents. The majority of participants score high on distress levels and unemployment was described to affect people economically, psychologically, socially (family interactions) and their children's well-being. These findings are consistent with unemployment research literature and the theoretical model of *family stress*, and support that unemployment risks people's well-being and as well their families. The findings improve our knowledge about the perspectives and processes involved during unemployment in the family context, which allow better informed practices related to unemployment research and mental health interventions that may enhance re-employment. These measures are especially important given the actual labour market crisis that many European countries are facing.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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Tables

Table 5.2. Perceptions of unemployment as a source of economic hardship and pressure

Financially pressured, having difficulty making ends meet	"Difficulties in paying the house rent and expenses" [father, 42y, 13y boy, high stress, single] "I limit myself to survive. There is lack food (a few days), clothes, and access to medical doctors. Everything is lacking." [mother, 34y, 17y boy, low stress, employed partner]. "The unemployment has brought us a hard time paying our day-to-day expenses." [mother, 40y, 14y boy, low stress, partner employed] "We had to reorganize our life and adjust to a lower level of income" [mother, 47, low stress, partner employed, 12y boy] "it (unemployment) changed our life negatively…in a material sense" [50 y father, high stress, 18y girl, partner employed] "It affected us mainly financially." [mother, 43y, 19y girl, low stress, partner unemployed] "The financial spending cut in our way of living has changed our everyday life." [mother, 41y, 16y girl, low stress, partner employed]. "The unemployment affected us financially…it is scary" [mother, 38y, 16y girl, low stress, employed partner] "I cannot give my son everything I gave him before" [mother, 35y, 12y boy, high stress, employed partner] "I have no way of giving to my children what they need" [mother, 47y, 10y girl, low stress, single] "The unemployment situation forced me to leave the house. I had to move my daughters to their grandparents' house. The life I had is ruined and I have no resources to get it back." [mother, 40y, 14y girl, high stress, single]. "The main problem is in economic terms." [mother, 52y, 18y girl, high stress, partner employed] "We had to make adjustments to our monthly expenses and eliminate some fixed costs such as insurances, savings, etc." [mother, 45y, 18y girl, low stress, partner employed].
Cut back on educational and family leisure activities	"After being unemployed , we stopped being able to afford leisure activities such as going to the cinema, shopping, weekends off, etc .." [mother, 40y, 14y girl, low stress, single] "Stricter control of purchases (groceries and clothing). We do not go out as much and we tend to stay at home. We had to reduce school spending." [father, 49y, 19y girl, high stress, partner employed]. "Lack of access to some things that previously existed. Change son from a private school to a public school." [father, 45y, 15y boy, low stress, single]. "The inability to financially support the education of my daughter" [father, 47y, high stress, partner employed, 15y girl] "Our quality of life has decreased greatly. We hardly go out at weekends and no longer eat out…all we do is talk about the crisis" [40 y mother, high stress, 16y girl, partner employed] "We had to save a little more. We don't go out much nor shop." [42 y father, high stress, girl 11y, partner employed] "We changed the food habits, the leisure activities and clothing purchases" [45 y, father, low stress, 18y boy, single] "I cannot longer provide her as many activities or things as before." [mother, 36y, girl, high stress, single] "I feel great financial pressure going out or going on holidays." [father, 60y, 18y boy, low stress, partner employed] "Changes in family life were felt mainly at the level of cutting treats and leisure" [father, 60y, 19y girl, low stress, single]. "In general we had to cut in various family outings". [mother, 30y, 13y boy, low stress, unemployed partner] "Economically incapable of taking family vacations." [father, 38y, 10y girl, low stress, employed partner] "Instability...The money is not enough for the most pressing needs." [father, 47y, 12y boy, high stress, unemployed partner] "We go out a lot less. The future looks heavy." [mother, 49y, 16y girl, high stress, partner employed]

Table 5.3. Perceptions of unemployment as a source of change in family relations

Positive changes	"The situation changed for the better, because we are more united as a family." [mother, 43y, low stress, partner employed, 12y girl] "It brought us further closer together. There are things far worse and people in far worse situations than ours. We always have to think positively, despite knowing that my situation is not pleasing" [mother, 45y, low stress, partner employed, 17y boy] "the situation brought us (son) closer together because I have more time for him (son)" [mother, 48y, high stress, single, 10y boy] "Despite all the changes we had in our lives, I have always so far had great family support." [father, 40y, low stress, partner employed, 16y children] "We no longer have a housemaid so that eventually brought them closer to me. They know the mother is now always available. The same goes for my husband." [mother, 41y, low stress, partner employed] "Our life partly improved. I am more available for my daughter now." [mother, 49y, low stress, single, 11y girl] "In terms of family, there is more unification and support." [father, 41y, low stress, partner employed, 15y boy] "family support helps to disguise the growing tension… There is greater solidarity among all." [father, 50y, high stress, partner employed, 17y girl] "I have more motivation to be with my children, to help them with homework and to go out more." [mother, 45y, low stress, single, 12y girl] "In general we had to cut in various family outings but also it had the positive side. We have more time to be with family" [mother, 30y, low stress, unemployed partner, 13y boy]
Negative changes	"House where there is no 'bread' all argue and no one is right." [mother, 52y, low stress, single, 18y girl]. "The mood changes are a constant with respect to the couple. I am more often with a bad temper." [father, 44y, low stress, unemployed partner, 14y girl] "There is less dialogue and more apprehension." [mother, 42y, high stress, partner employed, 16y girl] "The situation implied a set of friction between us (father and daughter)" [father, 47y, high stress] "At the family level (which is the people for whom we cannot always be pretending) makes us not so good parents…and the panic of thinking that at any time my husband can also get unemployed is terrifying us all." [mother, 40y, high stress, partner employed, 11y boy] "The biggest change is that I spend much more time at home now. They (children) were surprised at first and did not like it because they had to say where they were going all the time. Now they are used to it." [mother, 46y, high stress, partner employed, 14y girl] "We cannot have a normal family life." [mother, 58y, high stress, single, 19 y boy] "Family support is essential to face unemployment as a life that is not yet over." [mother, 47y, low stress, partner employed, 12y boy] "My unemployment, together with the fact that my wife has a lot free time also, has led to an increase in marital conflicts." [father, 44 y, low stress, partner employed, 10y boy]. "My kids think I'm not capable." [father, 48y, high stress, single, 17y boy]. "I started to have more time for my son but the fact of being at home all the time and not getting a job makes me more nervous and I am easily harsher to him." [mother, 36y, high stress, single, 12y boy]. "Bad family environment." [father, 44y, high stress, unemployed partner, 12y boy]. "The inability to financially support the education of my daughter implies a set of conflicts…sometimes making us take extreme positions as parents which have negative effects on her emotional well-being." [father, 47y, high stress, partner employed, 15y girl]. "Having no way to give our children what they need, they are bad tempered, sad and this leads to temporary arguments." [mother, 47y, low stress, single, 10y girl].

Table 5.4. Perceptions of unemployment as a source of distress

"We are all sad, nervous and worried." (father, 37y, high stress, single, 10y girl)
"I feel more sensitive to little things and sometimes feel angry." [father, 48y, low stress, single, 18y girl]
"I feel changes in terms of sadness." [mother, 49y, high stress, unemployed partner, 18y boy]
"I feel insecure" [mother, 52y, high stress, unemployed partner, 18y boy]
"I am constantly striving and sometimes I transfer him (son) my anxiety and bad temper. I have no doubt that being unemployed took my quality of life, I have no doubt it." [mother, 48y, high stress, single, 10y boy]
"The biggest negative change of being unemployed, it is not knowing when I'll get a job again." [father, 38 y, high stress, single, 12y boy]
"It completely changed our situation because it is very sad, in the age of technology that we are in this situation. Politicians do not care about the people. It's sad." [father, 46y, high stress, unemployed partner, 19y girl].
"The changes are not in terms of the lack of material goods, but psychologically and on future planning." [mother, 52y, high stress, partner employed, 17y boy].
"The fact that a person has worked for 22 years (I 'm 40!) and was thrown out of the company makes me feel very angry." [mother, 40y, high stress, partner employed, 11y boy].
"There are huge changes. My husband is unemployed too, which strongly affects our well-being. He is also sicker because he has bipolar disorder and being unemployed as further negatively affect his health." [mother, 53y, unemployed partner, 16y girl]
"Unemployment changed my family life…due to my limited income I am more worried and that has caused conflicts with my partner. Money does not bring happiness but it helps a lot." [mother, 42y, high stress, partner employed, 12y boy]

Table 5.5. Perceptions of unemployment as a source of youth low well-being

"My son is sad to see his mother worried and sad." [mother, 42y, high stress, partner employed, 12y boy]
"Having no way to give our children what they need, they are bad tempered, sad and this leads to temporary arguments." [mother, 47y, low stress, single, 10y girl]
"The inability to financially support the education of my daughter implies a set of conflicts…sometimes makes us take extreme positions as parents which have negative effects on her emotional well-being." [father, 47y, high stress, partner employed, 15y girl]
"We try to make them understand the importance of school work in their (children) lives, so that in the future they can be successful people." [father, 39y, low stress, partner employed, 17y boy]
"Despite having more time for my children my youngest seems to be a little concerned." [mother, 37y, low stress, partner employed]
"My son and family are still not very affected. But to see his father at home and the mother working makes him a little worried." [father, 46y, high stress, partner employed, 12 y boy]

6. SCIENTIFIC PAPER

DOES AGE MATTER? PARENTAL EMPLOYMENT STATUS INFLUENCE ON PSYCHOLOGICAL WELL-BEING: FINDINGS FROM THE NATIONAL STUDY OF PORTUGUESE SCHOOLCHILDREN

Diana Frasquilho • Margarida Gaspar de Matos • Tânia Gaspar • José Miguel Caldas de Almeida

This manuscript consists of preliminary examination of the relations between parental employment status and psychological well-being outcomes within a nationwide representative sample of Portuguese adolescents. The main findings are listed below and the manuscript is presented on the following pages.

Having both parents jobless was statistically associated:

- with low mood and irritability or bad temper among middle aged adolescents (14 year-olds).

Having a jobless father was statistically associated:

- with low mood among younger (12 year-olds) and middle aged adolescents (14 year-olds);
- with irritability or bad temper in all age cohorts (12-16 year-olds).

Having a jobless mother was associated with low mood and irritability or bad temper only among mid-adolescents (14 year-olds).

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DOES AGE MATTER? PARENTAL EMPLOYMENT STATUS INFLUENCE ON PSYCHOLOGICAL WELL-BEING: FINDINGS FROM THE NATIONAL STUDY OF PORTUGUESE SCHOOLCHILDREN

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ABSTRACT

Background Portugal is facing an unprecedented economic recession and the highest unemployment rate ever recorded in the country (18%). Employment is a fundamental component of well-being and the main source of income for most people. When job loss hits home, families struggle with psychosocial stress which may influence the healthy development of adolescents.

Objectives This paper aims to explore age-related differences of aspects of psychological well-being linked with parental employment status on a sample of 5050 Portuguese adolescents with a mean age of 14 years old (SD=1.85). We analysed data from the Portuguese Health Behaviour in School-aged Children study (HBSC/WHO) and performed qui-square tests and linear regression models regarding different parental employment status, controlling for gender and age.

Results indicate that parental employment status is associated with psychological well-being of the adolescents and the effects differ with age and parent gender. Having both parents non-employed negatively influences low mood and irritability or bad temper of middle age adolescents (mean age 14). Secondly, having a non-employed father is statistically associated with low mood of younger and middle aged adolescents (mean age 12 and 14), and self-rated irritability or bad temper in all age cohorts (mean ages 12, 14 and 16 years old). Thirdly, having a non-employed mother was associated with low mood and irritability or bad temper in mid-adolescents.

Conclusion In conclusion the link between parental employment status and psychological well-being of adolescents varies with age and parental gender. Mid-age adolescents have higher rates of negative psychological well-being linked with parental non-employment.

Keywords: adolescence, mental health, parental employment status, recession.

INTRODUCTION

Good mental health of a population is an essential factor for countries economic prosperity and social sustainability and can be threatened by economic recessions [1].

World Health Organization warned that developed countries that have required emergency assistance from the International Monetary Fund, are especially vulnerable [2]. This is the case of Portugal where spending restrictions are being imposed during the loan repayment while coping with the imminent impact of one of the highest unemployment rates (18%) in Europe and the highest ever recorded by the national statistics body [3].

Health-related quality of life and mental health are expected to worsen as a consequence of the economic recession and unemployment rates [4, 5]. In a recent study from the Portuguese Socioeconomic Development Association [6] almost half of the Portuguese (47%) reported high levels of stress as a result of the current crisis. The situation worsens when unemployment hits home. The same study [6], reports that 55% of the unemployed respondents have high levels of stress and their families also reported to be highly stressed.

These results are in accordance with contemporary evidence comparing to pre-recession periods. European countries are facing significant increases on the prevalence of psychological distress and poor health of their population [7,8]. The prevalence of depression is rising [9-12] and so are anxiety disorders [10].

Unemployed people are at higher risk. During the Asian recession, unemployed people were twice as likely to report poor health compared to controls [13] and had higher rates of occurrence of depression [12]. As well, data from Spain and Iceland shows a significant higher risk of depression and stress among unemployed during the crisis [10,14].

The negative impacts of unemployment on physical and mental health are well acknowledged [15-17]. When a parent loses its job, the negative consequences are likely to affect family as a whole [18]. Parents play an important role of emotionally guard their offspring from distress. Stressors in parents' lives may disrupt healthy parenting. It has been shown in previous research that unemployment related distress and associated feelings of personal failure can result in loss of parental sensitivity and unsupportive parent-child relationships [19]. Moreover, in economical challenging environments such as the situation of parental unemployment, children are likely to share parents' distress leading to an increase of emotional and behavioural problems among children and adolescents [20-25].

Younger adolescents can be especially vulnerable to parental unemployment since parent-child interdependence and emotional support is stronger than in older ages [26]. It is also known that early experiences to acute stress can affect the psychosocial developmental processes of children which in turn can rouse long-term limitations to their human and social capital. This poses several questions on the long-term and, possibly, adulthood health consequences of economic recession and parental unemployment on the youth which is known to be in a critical developmental stage. Growing up under such a challenging environment can pose higher risks to mental ill-health putting young people in a very exposed position. Nevertheless, healthy young people can make an important contribution to future economic growth of a country. Failing to capitalise their energy, by not caring about their development and health, Portugal can miss a critical opportunity to deal with the financial crisis.

This study aims to research the impact of parental employment status on Portuguese adolescents' psychological well-being indicators. Data from the Portuguese Health Behaviour in School-aged children (HBSC-WHO) are used to estimate the consequences of parental non-employment on the likelihood of adolescents ranging from 10 to 21 years old (mean age of 14 years old, SD=1.85) experiencing negative emotions.

METHODS

This is a cross-sectional research study (HBSC/WHO). Collected data from the Portuguese Health Behaviour in School-aged Children Survey/WHO was analysed to explore the links between parental employment status and adolescents' low mood, irritability or bad temper.

HBSC/WHO is a school-based, self-report questionnaire to assess school-children and adolescents mental and physical health. The questionnaires were sent to schools and administered in the classroom, according to the international protocol [27].

All participating schools obtained informed parental consent, which were required by the committee of parents from each school. Confidentiality was ensure by anonymous response to the questionnaire and restricted access to questionnaires by HBSC/WHO research team members when computing and analysing data.

Participants

The total sample consisted of 4541 Portuguese adolescents (52.3% girls and 47.7% boys), with a mean age of 14 years old (SD=1.85) randomly selected from 139 Portuguese national public schools.

In order to avoid a confounding effect of family composition with the parental employment status, only respondents living with both parents were included.

Measures

Four groups of parental employment status were considered: both parents employed, both parents non-employed; father non-employed (regarding father not having a job and mother being employed); and mother non-employed (regarding mother not having a job and father being employed).

Psychological well-being data was collected from the HBSC/WHO symptom checklist scale [28]. Two indicators of adolescents' psychological well-being (feeling low and feeling irritability or bad temper) were examined in relation to parental employment status. Adolescents were asked how often they had experienced those feelings in the last six months.

Data analysis

The data was entered into the database of the Statistical Package for Social Sciences, version 19.0 for Windows. It was proceed with descriptive analysis of the sample, Chi-square tests and Multiple Linear Regressions to determine the relationship and strength of association between adolescents' feeling low and irritability or bad temper and parental employment status controlling for age.

RESULTS

A percentage of 3.4 of the cases reported to have both parents in a non-employed status (Table 6.1). A higher percentage reported to have the mother or the father in a non-employed status.

Table 6.1. Descriptive data

Parental Employment Status	N	%
Both non-employed	154	3.4
Mother non-employed	877	19.3
Father non-employed	251	5.5
Both employed	3259	71.8
Total	4541	100.0

Using Chi-square tests, we examined the relationship between parental employment status and the psychological aspects adjusting for school grade (as a proxy for age). We compared both parent employment status (employed and non-employed) and feeling low between three age cohorts. The first was composed of 6th grade school students (N=1556, mean age 11.8), the second of 8th grade students (N= 1594, mean age 13.8) and the third of 10th grade school students (N= 1900, mean age 15.9). The results for both parental employment status and feeling low (Table 6.2) showed strong statistically significant correlation for the 8th graders [χ^2 (4) = 22.702, $p \leq 0.001$].

Feeling rarely or never low was present in 64.6% of the sample with both parents employed, while feeling low every week and more than once a week was present in 20.9% of the sample with both non-employed parents.

As for feeling irritability or bad temper and both parental employment status (Table 6.2), results showed again strong statistically significant correlation for the 8th graders [χ^2 (4) = 15.330, $p \leq 0.05$].

Rarely or never feeling irritability or bad temper was present in 56.9% of the sample with both parents employed and more than once a week was present in 13.1% of the sample with both non-employed parents.

Table 6.2. Bivariate analysis (χ^2) between psychological variables and parental employment status (ES) by school grade.

				Feeling Low						
Grade				Rarely or Never	About every month	About every week	More than once a week	About every day	Total	χ^2
6th grade	Both Parents	Non-employed	N	275	43	19	27	22	386	
			%	71.2	11.1	4.9	7.0	5.7	100.0	
		Employed	N	738	104	30	60	44	976	4.519
			%	75.6	10.7	3.1	6.1	4.5	100.0	
	Total		N	1013	147	49	87	66	1362	
			%	74.4	10.8	3.6	6.4	4.8	100.0	
8th grade	Both Parents	Non-employed	N	236	71	40	49	31	427	
			%	55.3	16.6	9.4	11.5	7.3	100.0	
		Employed	N	661	182	47	83	50	1023	22.702***
			%	64.6	17.8	4.6	8.1	4.9	100.0	
	Total		N	897	253	87	132	81	1450	
			%	61.9	17.4	6.0	9.1	5.6	100.0	
10th grade	Both Parents	Non-employed	N	230	112	49	46	18	455	
			%	50.5	24.6	10.8	10.1	4.0	100.0	
		Employed	N	653	277	145	114	48	1237	1.584
			%	52.8	22.4	11.7	9.2	3.9	100.0	
	Total		N	883	389	194	160	66	1692	
			%	52.2	23.0	11.5	9.5	3.9	100.0	

*** p≤.001; ** p≤.01; *p≤.05.

Table 6.2 (cont.) Bivariate analysis (χ^2) between psychological variables and parental employment status (ES) by school grade

				Irritability or bad temper						
Grade				Rarely or Never	About every month	About every week	More than once a week	About every day	Total	χ^2
6th grade	Both Parents	Non-employed	N	252	49	29	36	19	385	5.203
			%	65.5	12.7	7.5	9.4	4.9	100.0	
		Employed	N	659	152	54	80	35	980	
			%	67.2	15.5	5.5	8.2	3.6	100.0	
	Total		N	911	201	83	116	54	1365	
			%	66.7	14.7	6.1	8.5	4.0	100.0	
8th grade	Both Parents	Non-employed	N	204	104	41	56	22	427	15.330**
			%	47.8	24.4	9.6	13.1	5.2	100.0	
		Employed	N	583	242	78	86	35	1024	
			%	56.9	23.6	7.6	8.4	3.4	100.0	
	Total		N	787	346	119	142	57	1451	
			%	54.2	23.8	8.2	9.8	3.9	100.0	
10th grade	Both Parents	Non-employed	N	176	149	59	56	16	456	3.162
			%	38.6	32.7	12.9	12.3	3.5	100.0	
		Employed	N	520	375	175	131	36	1237	
			%	42.0	30.3	14.1	10.6	2.9	100.0	
	Total		N	696	524	234	187	52	1693	
			%	41.1	31.0	13.8	11.0	3.1	100.0	

*** p≤.001; ** p≤.01; *p≤.05.

We performed a multiple linear regression analysis (Table 6.3) and examined the strength of age, gender and parental employment status as predictors of feeling low and irritability or bad temper. Both psychological variables were standardized and transformed into z-scores.

Overall these variables explained 3.5% of feeling low [R^2adj =. 035; F (3) = 56.24, p≤.001] and 2.8% of feeling irritability or bad temper [R^2adj =. 028; F (3) = 44.50, p≤.001].

When performing the same statistical treatment for 6th grade, 8th grade and 10th grade separately (Table 6.3), an adjusted model for 8th graders and parental employment was achieved and the variables reliably predicted feeling low [R^2adj =. 049; F(2) = 37.29, p <0.001] and irritability or bad temper [R^2adj =. 022; F(2) = 17.31, p<0.001].

These adolescents tend to report lower frequencies of feeling low (β = -.099, p<0.001) and irritability and bad temper (β = -.099, p<0.001) when parents are both employed.

On the contrary, the employment status of both parents shows no significant influence for these psychological aspects for 6th graders and 10th graders.

Table 6.3. Multiple linear regression results between Psychological variables and Parental Employment Status

Psychological Variables		B	SE	β	t	R^2
Feeling low						
	Gender (male)	.279	.029	.140	9.593***	
	Age	.064	.008	.118	8.032***	.035
	Both Parents Employed	-.098	.032	-.045	-3.049**	
Irritability or Bad temper						
	Gender (male)	.148	.029	.074	5.056***	
	Age	.078	.008	.143	9.721***	.028
	Both Parents Employed	-.104	.033	-.047	-3.207***	
		B	SE	β	t	R^2
Feeling low						
6th Grade	Gender (male)	.101	.051	.053	1.966*	0.033
	Both Parents Employed	-.090	.057	-.043	-1.575	
8th Grade						
	Gender (male)	.401	.053	.196	7.624***	0.049
	Both Parents Employed	-.224	.058	-.099	-3.880***	
10th Grade	Gender (male)	.292	.047	.149	6.171***	0.021
	Both Parents Employed	-.034	.053	-.015	-.642	
Irritability or bad temper						
6th Grade	Gender (male)	-.055	.054	-.028	-1.024	0.001
	Both Parents Employed	-.092	.060	-.042	-1.538	
8th Grade	Gender (male)	.229	.052	.115	4.409***	0.022
	Both Parents Employed	-.217	.057	-.099	-3.801***	
10th Grade	Gender (male)	.212	.047	.108	4.484***	0.011
	Both Parents Employed	-.069	.053	-.031	-1.300	

Note. *** p≤.001; ** p≤.01; *p≤.05. B and SE (standard error): unstandardized coefficients; β: standardized coefficients**.**

Father's Employment Status

We performed Chi-Square tests to compare data concerning mother and father employment status separately and the three age cohort group.

Father employment status and adolescents' feeling low data (Table 6.4) shows that this association is significant for 6th graders [χ^2 (4) = 15.56, p =.004] and 8th graders [χ^2 (4) = 21.15, p =.000]. Results show no statistical significant differences for 10th graders.

Students in 6th grade report rarely or never feeling low when father is employed (75.4%) and feeling low about every week when father is not-employed (8.4%). As for 8th graders the strongest association was found between rarely or never feeling low when father is employed (63.2%) and feeling low about every day (11.0%) and more than once a week when father is not employed (15.4%).

Irritability or bad temper was statistically significant associated with father employment status in all age groups.

The 6th graders show statically significant associations [χ^2 (4)= 10.80, p =.029] mainly in rarely or never feeling irritated or bad tempered (67.4%) when father is employed and feeling irritability or bad temper about every week when father is not-employed (10.9%). The 8th graders show the strongest associations [χ^2 (4) = 24.38, *p* =.000]. Rarely or never feeling irritability or bad temper was present in 55.9% of the sample with employed father, while 26.5% of the respondents reported feeling irritability or bad temper more than once a week and about every day when father is not-employed. The 10th grade respondents [χ^2 (4) = 11.56, *p* =.021] show associations only between having father not-employed and feeling irritability or bad temper about every week (17.6%).

Table 6.4. Bivariate analysis (χ^2) between father employment status and psychological variables by school grade.

			Feeling Low						
Grade	**Father Employment Status**		Rarely or Never	About every month	About every week	More than once a week	About every day	Total	χ^2
6th grade	Non-employed	N	73	15	10	12	9	119	
		%	61.3	12.6	8.4	10.1	7.6	100.0	
			(-3.4)	(.6)	(2.8)	(1.8)	(1.4)		15.559**
	Employed	N	966	137	43	75	60	1281	
		%	75.4	10.7	3.4	5.9	4.7	100.0	
			(3.4)	(-.6)	(-2.8)	(-1.8)	(-1.4)		
8th grade	Non-employed	N	69	19	12	21	15	136	
		%	50.7	14.0	8.8	15.4	11.0***	100.0	
			(-2.8)	(-1.1)	(1.5)	(2.8)	(2.9)		21.146***
	Employed	N	849	240	75	112	68	1344	
		%	63.2	17.9	5.6	8.3	5.1	100.0	
			(2.8)	(1.1)	(-1.5)	(-2.8)	(-2.9)		
10th grade	Non-employed	N	71	37	19	16	8	151	
		%	47.0	24.5	12.6	10.6	5.3	100.0	
			(-1.3)	(.5)	(.5)	(.5)	(.9)		2.245
	Employed	N	836	362	179	149	60	1586	
		%	52.7	22.8	11.3	9.4	3.8	100.0	
			(1.3)	(-.5)	(-.5)	(-.5)	(-.9)		
			Irritability or Bad Temper						
Grade	**Father Employment Status**		Rarely or Never	About every month	About every week	More than once a week	About every day	Total	χ^2
6th grade	Non-employed	N	67	17	13	14	8	119	
		%	56.3	14.3	10.9	11.8	6.7	100.0	
			(-2.4)	(-.2)	(2.2)	(1.3)	(1.6)		10.803*
	Employed	N	865	191	74	107	47	1284	
		%	67.4	14.9	5.8	8.3	3.7	100.0	
			(2.4)	(.2)	(-2.2)	(-1.3)	(-1.6)		
8th grade	Non-employed	N	55	36	9	25	11	136	
		%	40.4	26.5	6.6	18.4	8.1	100.0	
			(-3.5)	(.8)	(-.7)	(3.5)	(2.6)		24.384***
	Employed	N	752	313	113	120	47	1345	
		%	55.9	23.3	8.4	8.9	3.5	100.0	
			(3.5)	(-.8)	(.7)	(-3.5)	(-2.6)		
10th grade	Non-employed	N	55	40	23	27	8	153	
		%	35.9	26.1	15.0	17.6	5.2	100.0	
			(-1.4)	(-1.3)	(.5)	(2.7)	(1.6)		11.575*
	Employed	N	663	495	217	165	46	1586	
		%	41.8	31.2	13.7	10.4	2.9	100.0	
			(1.4)	(1.3)	(-.5)	(-2.7)	(-1.6)		

Note. *** p≤.001; ** p≤.01; *p≤.05. Adjusted standardized residuals appear in parentheses below group frequencies

Mother's Employment Status

Mother's employment status and adolescents' feeling low (Table 6.5) was only significant for 8th graders [χ^2 (4) = 13.82, p =.008]. The association was found between feeling low about every week (9.0%) when mother is not-employed and feeling rarely or never low when mother is employed (64.0%). Moreover, irritability or bad temper was only statistically significant associated with mother's employment status among the 8th graders [χ^2 (4) = 10.01, p =.040). The associations were found between having the mother employed and rarely or never feeling irritability or bad temper (55.9%) and feeling irritability or bad temper about every week (11%) and having the mother not-employed.

Table 6.5. Bivariate analysis (χ^2) between mother employment status and psychological variables by school grade.

			Feeling Low						
Grade	**Mother Employment Status**		Rarely or Never	About every month	About every week	More than once a week	About every day	Total	χ^2
6th grade	Not-employed	N	246	45	15	21	21	348	
		%	70.7	12.9	4.3	6.0	6.0	100.0	
			(-1.5)	(1.5)	(.6)	(-.4)	(.8)		3.665
	Employed	N	834	113	40	74	55	1116	
		%	74.7	10.1	3.6	6.6	4.9	100.0	
			(1.5)	(-1.5)	(-.6)	(.4)	(-.8)		
8th grade	Not-employed	N	202	65	33	41	24	365	
		%	55.3	17.8	9.0	11.2	6.6	100.0	
			(-3.0)	(.3)	(2.7)	(1.6)	(1.0)		13.817**
	Employed	N	750	201	60	99	61	1171	
		%	64.0	17.2	5.1	8.5	5.2	100.0	
			(3.0)	(-.3)	(-2.7)	(-1.6)	(-1.0)		
10th grade	Not-employed	N	186	99	40	38	12	375	
		%	49.6	26.4	10.7	10.1	3.2	100.0	
			(-.8)	(1.6)	(-.6)	(.4)	(-1.0)		3.774
	Employed	N	753	325	171	137	63	1449	
		%	52.0	22.4	11.8	9.5	4.3	100.0	
			(.8)	(-1.6)	(.6)	(-.4)	(1.0)		

			Irritability or Bad temper						
Grade	**Mother Employment Status**		Rarely or Never	About every month	About every week	More than once a week	About every day	Total	χ^2
6th grade	Not-employed	N	229	40	27	32	20	348	
		%	65.8	11.5	7.8	9.2	5.7	100.0	
			(-.4)	(-1.8)	(1.4)	(.5)	(1.6)		7.524
	Employed	N	750	172	63	93	42	1120	
		%	67.0	15.4	5.6	8.3	3.8	100.0	
			(.4)	(1.8)	(-1.4)	(-.5)	(-1.6)		
8th grade	Not-employed	N	177	87	40	43	18	365	
		%	48.5	23.8	11.0	11.8	4.9	100.0	
			(-2.5)	(.0)	(2.1)	(1.4)	(1.2)		10.011*
	Employed	N	655	279	88	109	41	1172	
		%	55.9	23.8	7.5	9.3	3.5	100.0	
			(2.5)	(.0)	(-2.1)	(-1.4)	(-1.2)		
10th grade	Not-employed	N	142	134	50	40	9	375	
		%	37.9	35.7	13.3	10.7	2.4	100.0	
			(-1.2)	(2.1)	(-.4)	(-.2)	(-.8)	(-1.2)	4.763
	Employed	N	600	437	205	161	47	1450	
		%	41.4	30.1	14.1	11.1	3.2	100.0	
			(1.2)	(-2.1)	(.4)	(.2)	(.8)	(1.2)	

Note. *** p≤.001; ** p≤.01; *p≤.05. Adjusted standardized residuals appear in parentheses below group frequencies.

DISCUSSION

Data showed that the associations between parental employment status and adolescents' mood vary across age groups and with parent gender.

Firstly, strong significant differences between feeling low and irritability or bad temper and parental employment status of both parents were only present among the 8th graders. Secondly, all independent variables (age, gender and parental employment status) were predictors of feeling low and irritability or bad temper. Although the strength of association is relatively weak it was especially relevant for the 8th graders. Thirdly, on one hand having non-employed father was associated with higher frequencies of feeling low among the younger cohort groups (6th and 8th graders) and had no influence in older respondents of the 10th grade. On the other hand, higher rates of irritability or bad temper were associated with having a non-employed father in all age groups. At last, having non-employed mother had no significant effects on younger and older (6th and 10th graders) adolescents' psychological well-being indicators. However, 8th graders reported frequently feeling low and irritability or bad temper when mother is non-employed and rarely or never when mother is employed.

Overall, age seems to act as a potential moderator between parental employment status and frequencies of psychological symptoms. Available evidence shows that younger adolescents use more family oriented coping strategies than the older adolescents [29], meaning that they may feel more distressed when parents are under the effects of job loss than their older counterparts.

In this study the middle aged group (8th graders) is the only group that has reported high frequencies of feeling low and irritability with all parental non-employment status. This evidence places 8th graders at a possible higher risk for negative influences of parental unemployment. This may be because mid-adolescents are starting to engage in peer support connections while still in need for family support. Parental disturbance can then create an increment of stress. However, further research is needed to give a better explanation for this difference.

The results of this study suggest that parental employment status may play an important role of protection against low mood and irritability. Our results are similar to those reported by Myklestad and colleagues [30] who found that parental unemployment and mental health were significantly associated with psychological distress among adolescents. Other authors also suggested that unemployed parents have to energetically cope with

stressors and may be less supportive for their children and for that reason may be causing them distress [19]. Further research upon the quality of the relationship between parent-child and parental employment status is highly recommended.

A clear limitation of the present study is its cross-sectional nature that makes it impossible to establish causality. Moreover, we did not control possible confounding factors such as education, income or duration of non-employment which should be also considered in future research.

In spite of its limitations the fact that it is a national representative study in which parental employment status was not yet analysed in regard to age-related differences in a period of economic recession makes this a unique study to highlight the associations of macro-economic factors to psychological well-being of adolescents.

Conclusion

This study provides evidence for the influence of parental employment status in adolescents' psychological well-being and suggests that age is an important mediator variable along with parent gender. Studies linking parental unemployment and its effects on their children are rare and this study gives additional information on the psychological consequences of parental employment status ranging from early teens to later adolescents. This evidence is relevant given the high rate of unemployment (18%) in Portugal and can be useful to acknowledge the need to support non-employed parents to better cope with the situation and prevent distress among their younger children. Adolescence is a decidedly period with regard to development and health influences. Having unemployed parents during this developmental stage can prone young people to negative effects on well-being that may influence further adult health. Because of the present socio-historical period of Portugal, research on the health consequences of adolescents with unemployed parents is urgently needed.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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7. SCIENTIFIC PAPER

DO ADOLESCENTS' FUTURE EXPECTATIONS DIFFER BY PARENTAL EMPLOYMENT SITUATION? HIGHLIGHTS FROM THE PORTUGUESE HBSC/WHO SURVEY

Diana Frasquilho • Margarida Gaspar de Matos • Tânia Gaspar • José Miguel Caldas de Almeida

This study is a continuation of the preliminary analysis of the associations between parental employment status and adolescents' well-being outcomes. In this specific manuscript, the focus was set on youth future expectations. The main findings are listed below and the manuscript is presented on the following pages.

- parental employment was positively associated with adolescents' higher future planning and higher educational expectations compared to parental non-employment;
- adolescents with both parents employed more frequently set goals and plans for the future than those whose parents are jobless;
- adolescents with both parents employed more frequently think about completing high school or professional education, and have higher expectations to go to university or further education than those whose parents are jobless;
- adolescents reporting higher future and educational expectations showed greater life-satisfaction scores.

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Do Adolescents' Future Expectations Differ by Parental Employment Situation? Highlights from the Portuguese HBSC/WHO Survey

ABSTRACT

Objectives: This study explores the associations between parental employment status and the future and educational expectations and life satisfaction of a national representative sample of adolescents.

Methods and analysis: Data were obtained from 5050 adolescents, attending school and with a mean age of 13.98 years old (SD=1.85). After a descriptive analysis of the sample, Chi-square tests were used by parental employment status (both parents employed or non-employed) for adolescents future expectations variables: setting up goals and plans for the future; think about completing high school /professional education; aspire to go on to university/ further education upon leaving high school. Moreover, ANOVA was used with life-satisfaction.

Results: Employment of both parents is positively associated with higher future planning and higher educational expectations compared to parental non-employment. In addition, adolescents reporting higher future and educational expectations show greater life-satisfaction scores.

Conclusions: This study provides evidence on how adolescents' future and educational expectations differs by parental employment status and, in turn, life-satisfaction. The evidence is relevant given the actual socioeconomic context and can be useful to acknowledge the need to support research on adolescents' with non-employed parents.

Keywords: Adolescents, Economic Recession, Employment Status, Future expectations, Personal Satisfaction.

INTRODUCTION

Education is a strong determinant for adolescents' well-being and socioeconomic inclusion [1]. Portugal has been one of the countries hardest hit by the European economic crisis, amid the harsh austerity measures that have affected people's economic and socio-emotional resources. Macroeconomic environmental stress poses significant costs to individuals through reduced employment opportunities, decline in incomes and levels of life-satisfaction [2,3]. Available evidence shows that people report more health and well-being problems during recession periods [4,5].

The specific economic crisis that began in 2008 deteriorated labour markets and raised job loss rates. People face a considerable stressful burden from job loss, as they must to adapt to economic, social and psychological changes [6]. It is also a well-known risk factor for mental health morbidity [7]. In Europe, recent data from the recession describes a significant higher risk of depression among unemployed people [8], which is consistent with previous evidence of a positive correlation between unemployment and common mental disorders [9-11]. The adverse effects of recession and unemployment can disproportionally affect families [12]. In Portugal, cuts in child care benefits and restrictions to social welfare benefits during the recession were particularly severe despite the high unemployment rates, which significantly reduced incomes and increased the risk of poverty for some families [13]. Perceiving a low sense of efficacy in dealing with the growing hardship and job loss is likely to increase pressure on parents. Distressed parents become less nurturing and short-tempered [14] and although young people's resilience and strengths push them towards healthy development, they may be especially vulnerable to changes in family relationships as they are still biologically and psychosocially maturing. In fact, prior evidence has stated that children from parents facing economic stress are more likely to face emotional and behavioural problems [15-17]. This is consistent with the Family Stress Model [18], which describes a process whereby economic hardship undermines parents' mental health, the quality of the family relationships and therefore adolescent's emotional and behavioural adjustment. These outcomes raise serious concerns about the potential impacts of family unemployment to adolescents' well-being. It is known that education is one of the strongest determinants for young peoples' well-being and health [1]. Higher educated people are at a greater advantage of obtaining employment [19] and better earnings [20], achieving higher rates of health status and lower scores of social assistance needs [21].

Parents are usually their children's primary role models in terms of learning experiences, and consequently can protect or increase school engagement through their behaviour and attitudes towards education [22]. Having unemployed parents has been associated with a risk of educational disengagement and low achievement [23] and this may be due to modifications in terms of supportive relationships within the family that are known to promote motivation and well-being [24]. Furthermore, it is known that lower functioning across school related domains is associated with adolescents' lower life-satisfaction that in turn may put them in higher risk for health and behaviour problems[25]. The *Health Behaviour in School-aged Children* (HBSC/WHO) is a collaborative study undertaken by the World Health Organization, which surveys school-aged children's health status, health behaviours and risk behaviours and gives information about parental employment status. Overall, the crossing of different variables can provide useful data to improve the insight of researchers, stakeholders and citizens with respect to health inequalities among children and adolescents[26]. The availability of national data covering the relevant period (2010), albeit for a limited set of variables, allows a rough analysis of the short-run associations of parental non-employment during economic recession and Portuguese adolescents' future and educational expectations that is estimated to be related to life-satisfaction.

METHODS

Participants

The sample used in this study was obtained from the 2010 HBSC Study – Portuguese Survey [27] (www.hbsc.org/). A clustered sampling design was used to meet the required number of students for each school grade from 139 national public schools selected according to an international research protocol [28]. The sampling unit was either the school or the class so that the sample was representative by age and gender. The total sample consisted of 5050 Portuguese adolescents (47.7% boys and 52.3% girls) attending 6^{th}, 8^{th} and 10^{th} school grades and with a mean age of 13.98 years old (*SD*=1.85). For the purpose of this particular study, only respondents living with both parents and having both employed or both parents non-employed were included in the analysis to avoid a confounding effect of family composition.

Research Design and Instrument

The data analysed and presented here were obtained from the cross-sectional survey conducted in 2010 in Portugal, according to the methodology of World Health Organization collaborative HBSC study. HBSC/WHO is a cross-sectional descriptive correlational study that uses a school-based, self-report questionnaire to assess school-children and adolescents mental and physical health [28]. Questionnaires and data collection were developed cooperatively between international researchers according to a standardized research protocol, and used in collaboration with the World Health Organization.

Measures

The total sample was stratified by parental employment status. Two groups of parental employment status were considered: "Yes" having both parents employed and "No" both parents not-employed and either (mother or father) not-employed. In the present study, the outcome measure was adolescents' future and educational aspirations. The adolescents' were asked to report how frequently (never/rarely/sometimes and often/always) they: Set up goals and plans for the future; think about completing high school or professional education and; aspire to go on to university or further education upon leaving high school. Additionally, the adolescents were asked to rate their life-satisfaction using a visual analogue scale "Cantril ladder", indicating the step of the ladder at which they would place their lives at present (from "0" to "10") [26].

Statistical Analyses

Questionnaire' data were scanned, translated and interpreted by the programme-Eyes & Hands-Forms, version 5. The data was then entered into the database of the Statistical Package for Social Sciences, version 19.0 for Windows, in order to carry out the data analysis. After descriptive analysis of the sample, Chi-square tests were used to estimate the associations between parental employment status and respondents' future and educational aspirations. Moreover, one-way ANOVA was used to test possible differences in the means of life-satisfaction among groups of frequency by aspirations.

Ethical Considerations

The HBSC/WHO Portuguese study follows the principles outlined in the Declaration of Helsinki, and was approved by the Portuguese Ministry of Education and Regional Offices of Education, by the scientific committee, by the national ethics committee and by national data protection. Moreover, all participating schools made available informed parental consent, required by the committee of parents from each school. The questionnaires were sent to schools, administered in the classroom by teachers and with voluntary student participation, according to the international protocol. Further, confidentiality was ensured with anonymous response to the questionnaire and restricted access to HBSC research team members, regarding the work on computing and data analysis.

RESULTS

Table 7.1 shows the results of chi-square tests and descriptive statistics for adolescents' future expectations by parental employment status. There is a statistically significant association between parental employment status and setting up goals and plans for the future [χ^2 (1) = 7.519, p <.01]. Adolescents with both parents employed often/always set goals and plans for the future (75.8%) and those whose parents are not employed "never to sometimes" do this. Furthermore, parental employment status shows a statistically significant association with frequency of thinking about completing high school or professional education [χ^2 (1) = 4.787, p <.05]. Having both parents employed is linked to often/always thinking about completing high school or professional education (71.9%), whereas not having parents employed is linked to never to sometimes think about this (32.2%). The aspirations to go on to university or further education upon leaving school are also statistically associated with parental employment status [χ^2 (1) = 29.198, p <.001]. There is a strong association on the one hand, between having both parents employed and often/always expecting to go to university or further education (76.3%) and, on the other hand, not having parents employed is more frequent when never to only sometimes expecting it (33.5%).

Table 7.1. Crosstabulation of parental employment status and adolescents' future expectations (N=2926)

Future Expectations		Both Parents Employed		χ^2
		yes	no	
Setting up goals and plans for the future	Never/rarely/ sometimes	239 29.2% (2.7)	239 29.2% (2.7)	7.519**
	Often/always	1572 75.8% (2.7)	580 70.8% (-2.7)	
Think about completing high school/professional education	Never/rarely/ sometimes	586 28.1% (-2.2)	267 32.2% (2.2)	4.787*
	Often/always	1498 71.9% (2.2)	562 67.8% (-2.2)	
Aspire to go on to university/further education upon leaving high school	Never/rarely/ sometimes	498 23.7% (-5.4)	278 33.5% (5.4)	29.198***
	Often/always	1599 76.3% (5.4)	551 66.5% (-5.4)	

Note. *** p≤.001; ** p≤.01; *p≤.05. Adjusted standardized residuals appear in parentheses below group frequencies.

The one-way analysis of variance (ANOVA) was used to determine whether there are any significant differences in terms of life-satisfaction scores for frequency of future aspiration and educational expectation. The group comparisons (Table 7.2) show statistically significant differences in life-satisfaction between "never to sometimes" and "often and always" setting up goals and plans for the future [F (1, 160.845) = 53.270, p=.000].

This significance indicated that life-satisfaction is significantly greater when adolescents "often and always" set goals and plans for the future. Statistically significant differences in life-satisfaction were found between "never to sometimes" and "often and always" thinking about completing high school or professional education [F (1, 57.331) =18.707, p=.000]. Often and always aspiring to complete high school or professional education is associated with higher levels of life-satisfaction. Likewise, life-satisfaction varies with frequency of aspiring to go on to university or further education [F (1, 72.226) =23.507, p=.000]. That is, often or always aspiring to continue to university or further education when leaving high school is associated with higher levels of life-satisfaction.

Table 7.2. ANOVA results for Life Satisfaction by groups of future aspiration and educational expectations

		Life Satisfaction			
		M	*SD*	F	*p*
Setting up goals and plans for the future	Never/rarely/ sometimes	6.85	1.83	53.270	.000
	Often/always	7.36	1.71		
Think about completing high school /professional education	Never/rarely/ sometimes	7.01	1.82	18.707	.000
	Often/always	7.31	1.72		
Aspire to go on to university/ further education upon leaving high school	Never/rarely/ sometimes	6.97	1.82	23.507	.000
	Often/always	7.31	1.73		

DISCUSSION

Data showed that higher future planning and aspirations to continuing studies are associated with having parents employed compared to having parents in a non-employment situation. Prior studies gather evidence that confirms these results [29-31].

Possible pathways for these outcomes might be that families without work are most likely to have more difficulties in making ends meet and paying for school related expenses [29,30] and parents perceiving a low sense of efficacy dealing with these financial constraints may become stressed and less nurturing [14] causing changes in family connectedness and adolescents' developmental outcomes [32]. Moreover, it is known that adolescents' family satisfaction and subsequent feelings of self-worth are fundamental determinant of adolescents' intentions to continue education [26]. In addition, it is likely to be true that family economic constraints in the case of job loss may push the adolescent to feel compelled to work and leave school in order to contribute to family revenue [33]. During this particular economic recession period, young people failing to pursue education are exceptionally vulnerable to unemployment because overall jobs are less due to weakening labour market conditions and also because young people have low skills and poor work experience. Youth unemployment has been demonstrated to be far more sensitive to economic shocks than adult unemployment [34]. In Europe, youth unemployment reached record highs (28.2%), increasing twice the pre-recession level in countries facing substantial economic instability [35]. In 2012, the unemployment rate for youth below 25 years old in Portugal reached 18.8% [36].

Youth unemployment rise is accompanied by significant increases in the NEETs rate - 'not in employment, education or training'. The most recent data shows that Portuguese NEET rate below 25 years old ranges from 10%-14% [37]. Longitudinal data has

revealed that falling into NEET status is significantly associated with growing up with parental unemployment [29]. This brings rough but alarming evidence of possible intergenerational transmission of inactivity. Missed work opportunities and inactivity in early life has long lasting consequences [38,39] and can limit potential human capital [40]. Some outcomes for the NEET group have been described in literature, although we must consider its heterogeneity: disengagement from life and society; mental health problems; drug and substance abuse; are more likely to commit crimes; less life expectancy [41]. Moreover risking having a "lost generation" can pose great societal and economic demands for countries. This study results indicated statistically significant differences in life-satisfaction between groups of frequency by future and educational aspirations.

Setting up goals and future plans and strongly aspiring to continue studying were linked to higher life-satisfaction compared to others. Already available evidence indicated that adolescents' low life-satisfaction is related to their low engagement at school (e.g. cognitive engagement) and further lifelong learning experiences [42]. In addition to this possible risk, it should not be forgotten that the majority of Portuguese adolescents already do not perceive their school performance to be very good, placing Portugal at the bottom for positive self-perception of school performance compared to 52 countries [26]. A major limitation is that the design of this study is cross-sectional using one point of time only. Therefore, despite the possible hypothesis the pathway through which parental non-employment may reduce the adolescents' future and educational aspirations and how this is related to low life-satisfaction is yet to be completely elucidated. Moreover, this study did not have the opportunity to test the causal relationship between parental unemployment and adolescents' expectations. Future research which includes national data and covers the socioeconomic status of the sample and the level of education of the parents is recommended. Other important determinants to further study are the effects of duration of parental non-employment and the quality of relationship between family members impacting on adolescents' well-being. Regardless of these limitations the fact that it is a national representative study in which social-economic situations were not yet analysed in relation to future and educational expectations, in association with the present socio-historical period of recession, makes this an important study to highlight the need to research possible intergenerational effects of family unemployment.

Conclusion

The current study gives a rough estimation that parental employment status is associated with future expectations and educational aspirations of adolescents. The evidence is relevant given the actual socioeconomic context of Portugal (with an unemployment rate of 16%) and can be useful to acknowledge the need to support adolescents' with non-employed parents to better cope with the situation, and to prevent early school drop-outs that are known to negatively impact health, social and economical outcomes of individuals and society. In Portugal educational attainment remains a challenge and children with low socioeconomic status are unlikely to attain high levels of education. The recession may increase the extent of inequality in access to education which in addition to students' low future and educational expectations may represent a lost opportunity for them to prosper and escape from exclusion and deprivation.

In a conference report, UNICEF [43] appealed that countries must "make sure that children, the most vulnerable members of society, are not asked to bear the burden of a crisis they did not create." (p.2). School-age is when adult life potential is set. Taking action at this age may improve the attainment of sustained results, potentially lasting to adult life, in health and economic growth. This is likely to reduce health and social demands by future excluded and ill-adults. Thus, enhanced efforts to encourage dropout prevention programmes and the implementation of strategies to promote students' ambition, attainment and achievement especially for those at greater risk – from families affected by unemployment and economic deprivation – are strongly recommended.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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8. SCIENTIFIC PAPER

FACTORS AFFECTING THE WELL-BEING OF ADOLESCENTS LIVING WITH UNEMPLOYED PARENTS IN TIMES OF ECONOMIC RECESSION: FINDINGS FROM THE PORTUGUESE HBSC STUDY

Diana Frasquilho • Margarida Gaspar de Matos • Adilson Marques • Tânia Gaspar • José Miguel Caldas de Almeida

This study examined the associations between youth perceptions of emotional well-being linked to paternal and maternal unemployment and the sociodemographic characteristics of young people together with measures of satisfaction with family life and peers. This is the first study using a newly developed variable that was created to specifically measure well-being linked to parental unemployment in a nationally representative sample of Portuguese students. The key findings of this research are summarized below and the manuscript is presented on the following pages.

- most of the adolescents reported to be significantly affected by father's unemployment but not by mother's unemployment;
- girls from low socioeconomic backgrounds and with poor family life satisfaction were more likely to report negative emotional well-being related to parental unemployment;
- older boys predominantly reported negative emotional well-being related to father's unemployment;
- older girls predominantly reported negative emotional well-being related to mother's unemployment;
- socioeconomic position and family context influence youth emotional well-being in the context of parental unemployment differently by gender.

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Factors affecting the well-being of adolescents living with unemployed parents in times of economic recession: Findings from the Portuguese HBSC Study

ABSTRACT

Objectives Using a national representative sample of adolescents with unemployed parents, this study examined which factors (socio-demographic and of satisfaction with family life and peers) are related to the negative effect of parents' unemployment on emotional well-being.

Methods Data on adolescents (14.1±1.7 years old), with at least one parent unemployed (n=1311, 53.2% girls), was provided by the Portuguese Health Behaviour in School-aged Children (HBSC) study. Descriptive statistics and logistic regression analyses were performed.

Results A high proportion of adolescents reported being emotionally affected by father's unemployment but not by their mother's. Older boys and older girls were more likely to report that their same-gender parent's unemployment situation (sons-fathers and daughters-mothers) has had a negative effect on their well-being. Girls from low socioeconomic status and with poor family satisfaction were more likely to report negative emotional well-being related to parental unemployment.

Conclusions This study presents evidence on factors that can shape adolescents' emotional well-being related to parents' unemployment situation. Given the recessionary context and high unemployment rates, these insights are valuable to assist the design of an action to improve the levels of well-being of Portuguese adolescents from unemployed families.

Keywords: adolescents; individual factors; parental unemployment; socio-economic status; well-being.

INTRODUCTION

There are reports that the negative impact of the economic crisis on youth well-being was stronger in countries facing the harshest unemployment rates (e.g. Portugal, Spain and Greece) [1]; and young people's health and well-being decline was found to be anchored to parents' unemployment [2-4]. Furthermore, evidence from countries in recession has also provided support for the association between increasing unemployment rates and rise in the prevalence of adolescents' psychological symptoms [5]. At the individual level, losing a job has been highly correlated to poor mental well-being in adults [6,7]. Moreover, previous research on parental employment and youth's well-being also suggests that parents' unemployment is associated with young people's lower well-being [8-12]. This is consistent with the *family stress* model that states that economic changes in the family generates parental distress, as well as adolescents' emotional and behavioural maladjustment through disruptive parent-child interactions [13].

Growing up under adverse socioeconomic conditions and events can compromise the possibilities of young people achieving higher health and well-being status, and such disadvantages can endure into adult health and perpetuate into the next generations [14]. Given the importance of the association of parental employment status to youth well-being, especially during the economic recession, it is increasingly pertinent to monitor youth well-being in relation to parents' unemployment.

Differences in socioeconomic and demographic characteristics of adolescents living in unemployed families are important issues for research consideration since they may contribute to further affect their well-being [15]. Family socioeconomic status (SES), for instance, is a reliable predictor of mental health problems in adolescents [16-18]. Age might also be an important factor. A study from Giuliano and Spilimbergo [19] found that older adolescents' with unemployed parents may start to worry more about future expenses, and their own expectations might be perceived as more limited especially considering the poor macroeconomic environment. In contrast, good family relations and strong peer connections have been positively associated with youth well-being and may, therefore, counteract the negative effects of family stress and disrupted relationships possibly shaped during the unemployment situation [11,20-22].

Although associations between adolescents' well-being and parental employment status were explored in the abovementioned studies, these are limited by either using general well-being scales, by not considering gender-specific differences (e.g. father's

and/or mother's unemployment). Moreover, data from countries that strongly felt the effects of the economic crisis is still lacking.

Therefore, this paper uses data from the Portuguese Health Behaviour in School-aged Children survey (HBSC/WHO) for the year 2014 to further explore youth emotional well-being in the context of parental unemployment. Specifically, this study aims to: 1) describe the socio-demographic characteristics of boys and girls living with unemployed parents (unemployed father, mother or both); 2) to study the relationship between reporting feeling affected by paternal and/or maternal unemployment and socio-demographic and relational factors in boys and girls; and 3) to estimate the associations between risk variables (age, type of parental unemployment, socioeconomic position, satisfaction with family life and peers) and feeling affected by paternal and/or maternal unemployment.

To our knowledge this is the first study that empirically examined which socio-demographic and relational factors are associated with adolescents' worse well-being during parental unemployment. Such information is essential given that Portugal faces an historical economic recession, has the fifth highest unemployment rate in Europe (14% in 2014) [23], and tailored interventions to protect families during unemployment are urgently required. Thus, evidence can be useful to inform decision-making and to take into account when tailoring specific interventions for adolescents' facing parents' unemployment.

METHODS

Participants and procedures

The present analysis of data derived from a representative sample of Portuguese school-aged children obtained from the cross-sectional 'Health Behaviour in School-aged Children' (HBSC) study, conducted in collaboration with the World Health Organization Regional Office for Europe in 2014. The HBSC is an international epidemiological study carried out every 4 years in 44 countries and regions across Europe and North America, and surveys adolescents' health and health behaviours. The participants were recruited via a clustered sampling design (the sampling unit was the class) to meet the required number of students for each school grade from selected national public schools, according to the HBSC/WHO international standardized research protocol [24]. Web-based online surveys were administered in the classroom by teachers, with voluntary student participation and self-completion. Beforehand, all schools gave their approval and legal guardians gave

signed informed consent. Further, confidentiality was ensured as questionnaire responses were anonymous. For the purpose of this research, we only considered adolescents (14.1±1.7 years old) living with both parents and with at least one parent unemployed (*n*=1311, 53.2% girls).

The HBSC/WHO Portuguese study follows the principle outlined in the Declaration of Helsinki, and was approved by the Portuguese Ministry of Education and Health, by the scientific committee, by the ethics committee of São João Hospital, and by the national ethics committee.

Measures

The socio-demographic variables examined were gender, age, type of parental unemployment and socioeconomic status. We hypothesized there are gender-specific differences particularly because of same-gender parental role models (sons-fathers and daughters-mothers) and the possibility of a differential relationship between mother and fathers with their sons and daughters. Therefore, all analyses of the effects of parental unemployment were examined for boys and girls separately.

Three types of parental unemployment were considered. Both parents unemployment (mother and father were unemployed); father unemployment (only the father was unemployed), and mother unemployment (only the mother was unemployed).

The family affluence scale was used as a measure of socioeconomic position. The scale score of four items that self-report material affluence (e.g. car or computer ownership, family holidays last year and own bedroom) was used. Responses were coded as "low SES", "medium SES" and "high SES" according to the summed score of the items. This scale has been validated and widely used in health research with adolescent populations [25].

Emotional well-being related to father and/or mother unemployment status was assessed by a single-item measure, based on the self-reported health scale, which is a widely recognized measure of morbidity and mortality in health psychology [26]. This measure was specifically incorporated on the HBSC/WHO Portuguese survey of 2014 to monitor the effects of parental unemployment, after being revised by a panel of experts from the HBSC study network. Respondents were asked to rate if their well-being is negatively influenced by their father's and/or mother's unemployment on a rating scale of one to four points (not at all to very much) and was recoded into a binary variable (0 = not influenced vs. 1 = negatively influenced).

Satisfaction with the family life and with peer interactions were evaluated with two separate Cantril's self-anchoring ladders [27]. Adolescents were asked to picture a ladder with 10 steps and to tick next to the number that best describes where they stood at the moment. The top of the ladder, 10 was the best possible family environment or peer interactions and at the bottom, 0 was the worst possible. This scale has been validated and used in several studies with adolescent populations [28].

Statistical analyses

Descriptive analyses for all variables (means, standard deviations, and percentages) were calculated for the total sample and stratified by gender, Chi-square tests and T-tests were used to investigate the statistical significant differences between not being affected/being affected in terms of well-being related to parental unemployment by socio-demographic variables (gender, age, type of parental unemployment and SES), and satisfaction with the family life and peer relationships, for the total sample and by the adolescents' gender. Binary logistic regressions were used to estimate the relationship between being affected by parents' unemployment and type of parental unemployment, socio-demographic variables, and satisfaction with family life and peers. A binary logistic regression analysis was conducted to analyse the effects that socio-demographic variables and satisfaction with the family life and peer relationships had on perceiving being affected by parental unemployment. Adjusted and unadjusted odds ratios (OR) with 95% confidence intervals (CIs) were calculated for each gender. All data analysis was completed using Statistical Package for Social Sciences (SPSS) version 22.0, and α was set at .05.

RESULTS

Table 8.1 shows the sample characteristics by total and stratified by gender. In general, the most common form of parental unemployment was mother unemployment (60.7%), followed by father unemployment (25.2%) and both parents unemployment (14.1%). More than half of the adolescents with unemployed parents reported a medium socioeconomic status (53.3%). Moreover, almost 53% of the adolescents said that their well-being is negatively influenced by their father's unemployment, and 60.8% reported that their mother's unemployment does not affect their well-being.

Table 8.1. Sample descriptive characteristic, Portuguese adolescents with unemployed parents. HBSC study collected in Portugal in 2014. Total and by gender (N=1311)

Variables	Total n=1311	Boys n= 614	Girls n= 697	
	n (%)	n (%)	n (%)	P^a
Parental unemployment				
both parents unemployed	185 (14.1)	97 (15.8)	88 (12.6)	n.s.
father unemployed	330 (25.2)	160 (26.1)	170 (24.4)	
mother unemployed	796 (60.7)	357 (58.1)	439 (63.0)	
SES				
low	273 (21.0)	129 (21.3)	144 (20.7)	n.s.
medium	694 (53.3)	318 (52.4)	376 (54.2)	
high	334 (25.7)	160 (26.4)	174 (25.1)	
Emotional well-being (father unemployment)				
not influenced	239 (47.3)	121 (49.0)	118(45.7)	n.s.
negatively influenced	266 (52.7)	126 (51.0)	140 (54.3)	
Emotional well-being (mother unemployment)				
not influenced	629 (60.8)	299 (63.6)	330 (58.4)	
negatively influenced	406 (39.2)	171 (42.1)	235 (41.6)	n.s.
	Mean ± SD	Mean ± SD	Mean ± SD	P^b
Age	14.1±1.7	14.1 ±1.6	14.1±1.7	n.s.
Family environment	8.7 ± 1.9	8.8 ± 1.7	8.6 ± 2.0	<0.01
Peer relationships	8.5 ± 1.8	8.4±1.7	8.5 ± 1.8	n.s.

[a] Tested by chi-square.
[b] Tested by *t*-test.
n.s. = non significant.

Table 8.2 shows the results of bivariate analysis of the relationship between the effect of fathers' unemployment on emotional well-being and socio-demographic variables, type of parental unemployment, and satisfaction with family life and peers. There was a significant relationship between socioeconomic status and the effect of father unemployment on well-being; [χ^2 (2) =9.435, $p < .01$]. A high proportion of adolescents with high socioeconomic status (56.6%) reported that their father's unemployment did not affect their well-being. Such relationship was also statistically significant in girls; [χ^2 (2) =6.087, $p < .05$]. There were a high proportion of girls with medium socioeconomic status (61.8%) reporting that their father's unemployment has affected their well-being. Older adolescents significantly reported higher frequency of being emotionally affected by father's unemployment compared to younger adolescents; [t (485) = 3.916, $p < .05$]. In girls, those less satisfied with family life reported to feel affected by their father's unemployment; [t (234) = 20.717, $p < .001$].

Table 8.2. Bivariated analyses between the effect of father's unemployment on emotional well-being and type of parental unemployment, socio-demographic variables, and satisfaction with family life and peer relationships, in a sample of Portuguese adolescents with unemployed parents (total and by gender).

Variables	Father unemployment related well-being								
	Total			Boys			Girls		
	not influenced n (%)	negatively influenced n (%)	*P* [a]	not influenced n (%)	negatively influenced n (%)	*P* [a]	not influenced n (%)	negatively influenced n (%)	*P* [a]
Parental unemployment									
both parents	76 (43.9)	97 (56.1)	n.s.	37 (42.5)	50 (57.5)	n.s.	39 (45.3)	47(54.7)	n.s.
father	155 (49.4)	159 (50.6)		81 (53.6)	70 (46.4)		74 (45.4)	89 (54.6)	
mother	-	-		-	-		-	-	
SES									
low	67 (52.8)	60 (23.4)	<0.01	33 (50.0)	33 (50.0)	n.s.	34 (55.7)	27 (44.3)	<0.05
medium	105 (40.7)	153 (59.3)		53 (43.4)	69 (56.6)		52 (38.2)	84 (61.8)	
high	56 (56.6)	43 (43.4)		30 (62.5)	18 (37.5)		26 (51.0)	25 (49.0)	
	Mean ± SD	Mean ± SD	*p* [b]	Mean ± SD	Mean ± SD	*p* [b]	Mean ± SD	Mean ± SD	*p* [b]
Age	13.9±1.6	14.3±1.7	<0.05	14.0±1.6	14.5±1.7	n.s.	13.9±1.6	14.1±1.7	n.s.
Family life	8.7±1.9	8.3±2.1	n.s	8.4± 2.3	8.5± 1.8	n.s.	9.0± 1.4	8.2± 2.4	<0.001
Peer relationships	8.6±1.9	8.1±1.9	n.s	8.5 ± 2.0	8.1± 1.8	n.s.	8.7 ± 1.8	8.2 ± 1.9	n.s.

[a] Tested by chi-square.
[b] Tested by *t*-test.
n.s. = non significant.

Table 8.3 shows the results of bivariate analysis for the effect of mother's unemployment on emotional well-being and all other variables. There was a significant relationship between type of parental unemployment and the effect on well-being related to mother unemployment; [χ^2 (1) = 7.243, $p < .01$]. Those with only the mother unemployed tended to report not to be affected by her unemployment, while a high proportion of those with both parents unemployed tended to report the opposite. This relationship was only significant for boys. Moreover, the majority of the adolescents from a high socioeconomic status (72.7%) said their well-being was not influenced by the mother's unemployment, while a great proportion of adolescents from low-medium socioeconomic status (43.1%-41.3%) reported to be negatively impacted by her unemployment; [χ^2 (2) = 16.518, $p < .001$]. This relation was also significant for girls; [χ^2 (2) = 11.161, $p < .001$].

Older girls, but not boys, tended to report that their well-being was affected by their mother's unemployment; [t (505) = 6,085, $p < .05$].

Generally, adolescents who reported to be more satisfied with their family life (9.0±1.7) also tended to say that their mother's unemployment had no effect on their well-being compared to those less satisfied with their family (8.3±2.0); [t(882) = 20.096, $p < .001$]. The same was true for girls; [t (481) = 13.340, $p < .001$].

Table 8.3. Bivariated analyses between the effect of mother's unemployment on emotional well-being and type of parental unemployment, socio-demographic variables, and satisfaction with family life and peer relationships, in a sample of Portuguese adolescents with unemployed parents (total and by gender).

Variables	Mother unemployment related well-being								
	Total			Boys			Girls		
	not influenced n (%)	negatively influenced n (%)	*P* [a]	not influenced n (%)	negatively influenced n (%)	*P* [a]	not influenced n (%)	negatively influenced n (%)	*P* [a]
Parental unemployment									
both parents	89 (53.0)	79 (47.0)	<0.01	46 (54.1)	39 (45.9)	<0.01	43 (51.8)	40 (48.2)	n.s.
father	-	-		-	-		-	-	
mother	491(64.1)	275 (35.9)		227 (66.4)	115 (33.6)		264 (62.3)	160 (37.7)	
SES									
low	112 (56.9)	85 (43.1)	<0.001	51 (60.0)	34 (40.0)	n.s.	61 (54.5)	51 (45.5)	<0.01
medium	286 (58.7)	201 (41.3)		132 (60.6)	86 (39.4)		154 (57.2)	115 (42.8)	
high	181 (72.7)	68 (27.3)		89 (72.4)	34 (27.6)		92 (73.0)	34 (27.0)	
	Mean ± SD	Mean ± SD	*p* [b]	Mean ± SD	Mean ± SD	*p* [b]	Mean ± SD	Mean ± SD	*p* [b]
Age	14.0±1.6	14.2±1.7	n.s.	14.1±1.6	14.0±1.6	n.s.	14.0±1.6	14.3±1.8	<0.05
Family life	9.0±1.7	8.3±2.0	<0.001	9.1±1.5	8.7±1.6	n.s.	8.9±1.8	8.1±2.2	<0.001
Peer relationships	8.6±1.7	8.3±1.7	n.s.	8.6±1.6	8.2±1.7	n.s.	8.6±1.8	8.3±1.8	n.s.

[a] Tested by chi-square.
[b] Tested by *t*-test.
n.s. = non significant.

Results of the binary logistic regression analysis for the associations of parents' unemployment with negative emotional well-being and all other variables (age, type of parental unemployment, socioeconomic position, satisfaction with family life and peers) are shown in Table 8.4 for father's unemployment and in Table 8.5 for mother's unemployment. For boys, being older implied a greater chance of reporting that father's unemployed has had a negative effect on their emotional well-being (Table 8.4), even after adjusting for type of parental unemployment, SES and satisfaction with family life and peers (OR 1.25, 95% CI: 1.05-1.47, $p < .01$). For girls, having a medium SES was associated to a greater probability of reporting negative emotional well-being related to father's unemployment (OR 1.99, 95% CI: 1.02-3.90, $p < .05$) in comparison to those with lower SES. Moreover, lower satisfaction with the family and peer relations increased the girls' odds of perceiving their well-being to be negatively affected by father's unemployment. Nonetheless, only family satisfaction remained a significant factor after adjustment (OR 0.83, 95% CI: 0.70-0.98, $p < .05$).

Table 8.4. Logistic regression analyses with odds ratios (OR) and 95% confidence intervals (CI) by perceiving well-being to be negatively affected by father's unemployment including unadjusted and adjusted ratios for type of parental unemployment, socio-demographic variables and satisfaction with family life and peer interactions variables, on a sample of Portuguese adolescents (boys and girls) with unemployed parents

Explanatory variables	Boys		Girls	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Parental unemployment				
both parents	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
only father	0.64 (0.38-1.09)	0.76 (0.42-1.36)	1.00 (0.59-1.69)	0.96 (0.53-1.73)
SES				
low	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
medium	1.40 (0.77-2.52)	1.49 (0.78-2.87)	2.17 (1.19-3.97)**	1.99 (1.02-3.90)*
high	0.66 (0.32-1.38)	0.83(0.36-1.92)	1.23 (0.59-2.58)	1.35 (0.60-3.04)
Age	1.19 (1.02-1.39)*	1.25 (1.05-1.47)**	1.08(0.94-1.26)	1.04 (0.89-1.23)
Family satisfaction	1.02 (0.90-1.16)	1.13 (0.95-1.35)	0.79 (0.68-0.92)**	0.83 (0.70-0.98)*
Peer satisfaction	0.90 (0.78-1.03)	0.87 (0.72-1.05)	0.87 (0.75-1.00)*	0.92 (0.78-1.07)

Abbreviations: Ref., reference group; CI, confidence interval; SES, socioeconomic status
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Boys were less likely to report to be negatively affected by mother's unemployment (Table 8.5) if it is only the mother who was unemployed (OR 0.60, 95% CI: 0.37-0.97, $p < .05$); however, the association did not remain after adjusting for other variables (OR 0.74, 95% CI: 0.43-1.26, $p = 0.27$). Additionally, low satisfaction with family and peer relations increased the odds of boys reporting negative emotional well-being related to mother's unemployment (OR 0.86, 95% CI: 0.76-0.98, $p < .05$; OR 0.87, 95% CI: 0.77-0.98, $p < .05$); however, after controlling for other variables it lost its significance (OR 0.91, 95% CI: 0.78-1.06, $p = 0.24$; OR 0.92, 95% CI: 0.79-1.06, $p = 0.23$).

For girls, having a high SES was associated to a greater probability of reporting less negative emotional well-being related to mother's unemployment in comparison to girls with lower SES, and remained after adjustment (OR 0.48, 95% CI: 0.27-0.85, $p < .01$). Moreover, being older and having lower satisfaction with one's family life increased the girls' odds of perceiving that mother's unemployment has had a negative effect on their emotional well-being. Nonetheless, only family relationship remained significant after adjustment (OR 0.83, 95% CI: 0.75-0.93, $p < .001$).

Table 8.5. Logistic regression analyses with odds ratios (OR) and 95% confidence intervals (CI) by perceiving well-being to be negatively affected by mother's unemployment including unadjusted and adjusted ratios for type of parental unemployment, socio-demographic variables and satisfaction with family life and peer interactions variables, on a sample of Portuguese adolescents (boys and girls) with unemployed parents.

Explanatory variables	Boys		Girls	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Parental unemployment				
both parents	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
only mother	0.60 (0.37-0.97)*	0.74 (0.43-1.26)	0.65 (0.41-1.05)	0.78 (0.47-1.31)
SES				
low	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
medium	1.06 (0.65-1.71)	1.26 (0.72-2.19)	0.85 (0.56-1.28)	0.90 (0.56-1.44)
high	0.65 (0.37-1.14)	0.76 (0.40-1.44)	0.40 (0.24-0.66)***	0.48 (0.27-0.85)**
Age	0.98 (0.87-1.10)	0.98 (0.86-1.11)	1.14 (1.03-1.26)**	1.05 (0.93-1.17)
Family satisfaction	0.86 (0.76-0.98)*	0.91 (0.78-1.06)	0.82 (0.75-0.90)***	0.83 (0.75-0.93)***
Peer satisfaction	0.87 (0.77-0.98)*	0.92 (0.79-1.06)	0.95 (0.86-1.04)	1.04 (0.92-1.17)

Abbreviations: Ref., reference group; CI, confidence interval; SES, socioeconomic status
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

DISCUSSION

The purpose of this study was to investigate the socio-demographic characteristics of young people with unemployed parents; to study the associations and estimations between reporting feeling emotionally affected by father and/or mother unemployment and socio-demographic factors and satisfaction with family life and peers' interaction variables. The results showed that the most common forms of unemployment among the Portuguese adolescents' families are mother's unemployment followed by father's unemployment. This is in line with the statistical rates that show that women are historically more affected by unemployment than men[23]. Moreover, a high proportion of the Portuguese adolescents with at least one parent unemployed have a medium socioeconomic position. Such results, contradicts evidence that says that families in which parents are unemployed may experience high hardship [3]. However, this might be related to the increase in the unemployment rate as a consequence of the recession during the year of data collection [23]. Thus, it is possible that this proportion of high socioeconomic status among unemployed families wouldn't normally show during other economic cycles.

Most of the adolescents reported to be significantly affected by father's unemployment but not by mother's unemployment. Some studies have found similar results with regards to other health outcomes [12]. There is evidence which suggests that mothers, when facing unemployment, are likely to turn to household chores and taking care of their children [29], however, if living with an unemployed partner may experience

higher levels of psychological distress [30]. The underlying argument in favour of mothers coping worse with unemployment due to increased socioeconomic deprivation is that in our results the power of the association between negative emotional well-being and mother's unemployment decreased when adjusted for all other socioeconomic variables. Nonetheless, more research is needed to better understand this link.

The findings of this study highlighted that the probability of feeling negatively affected by father's unemployment is higher for older boys, and of feeling negatively affected by mother's unemployment is higher for older girls. This is in line with the idea that older adolescents may have better sense of the real difficulties parents face, and may also worry more about their own future, considering the recessionary context and especially if their same-gender role model is unemployed [19].

Our results further suggest that girls from lower socioeconomic status are more likely to report that their well-being is negatively influenced by parents' unemployment (father or mother). Previous studies have also suggested that girls who live in low socioeconomic contexts and in stressful environments tend to score higher in outcomes such as feeling helpless and other depressive symptoms in comparison to boys [31,32]. Based on the available literature, we may expect that the exposure to these differential risk factors may increase health and well-being inequalities across the life course of these girls [15,18].

Satisfaction with family life was negatively associated with feeling affected by father's or mother's unemployment among girls and boys. These findings are concordant with indications previously found [11,22] that family relations may buffer the possible negative consequences of parental unemployment on youth well-being. However, when accounting for all other variables, it was only girls with poor family satisfaction who were more likely to report negative emotional well-being related to their father and mother's unemployment. Other studies have shown that girls tend to be more vulnerable to family stress and conflicts and tend to cope in a more ruminative way, and to reveal internalizing symptoms regarding parent interaction disturbances [33-35].

This study has some limitations. Given the cross-sectional design of the HBSC study, one cannot be certain that the association between socioeconomic position and family or peer relation measures and youth well-being related to parental unemployment is causative. For example, the association between low well-being related to parental unemployment and low family satisfaction may take place by reverse causation, whereby low family satisfaction may cause adolescents to relate low well-being to parents' unemployment and not the opposite. The emotional well-being related to parental

unemployment was measured by a single item, which may decrease the strength of the analyses. Nevertheless, studies have previously shown that single item self-rating scales on health are strong identifiers of at-risk individuals and should not be ruled out [36]. In this study different circumstances in which one parent does not work (involuntary, by choice or necessity) were all coded as "unemployment" and this could be considered as a limitation especially when analysing maternal unemployment. However, other studies have shown no differences between housewives and involuntary unemployed mothers with regard to its consequences on the health of their children [10]. Moreover, this study does not include other important variables such as information about parents and adolescents' mental health prior to the unemployment situation. However, we presume that these cofounders were evenly distributed in our study due to the size of the sample. Parental unemployment consequences on youth' well-being may take a longer time to become evident [37] and this study is unable to distinguish between the long-term and short-term effect of parental unemployment on emotional well-being; therefore long-term analysis (ideally longitudinal) and a mixed methods approach would be useful to better explore the various factors highlighted by this study and understand the possible enduring consequences of parental unemployment.

Besides the abovementioned limitations, the present research is based on a well-recognized international study (HBSC/WHO), which has the strengths of having rigorous methodological procedures and the possibility of assessing a nationally representative sample of the student population. Moreover, to our knowledge, this is the first large-scale study using a specific measure to analyse the emotional well-being related to parental unemployment on sons and daughters using the family stress and social support models as theoretical frameworks.

The present findings bring, therefore, valuable insights about the socio-demographic and relational factors on the association between adolescents' low well-being and parental unemployment in a country vastly hit by the economic recession and high unemployment rate. Based on these results, it may be helpful for the tailoring of any health promotional and preventive action targeting unemployed families to grant special attention to the socioeconomic and relational factors that may influence the impact of parental unemployment on youth well-being.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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9. SCIENTIFIC PAPER

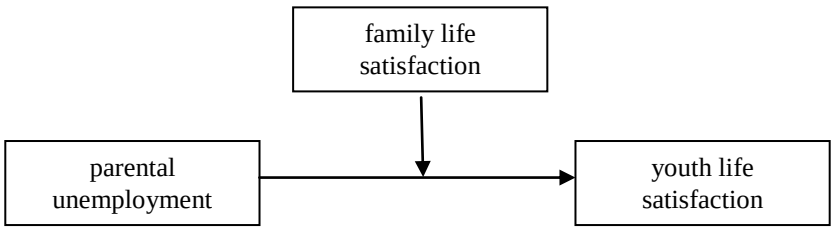
PARENTAL UNEMPLOYMENT AND YOUTH LIFE SATISFACTION: THE MODERATING ROLES OF SATISFACTION WITH FAMILY LIFE

Diana Frasquilho • Margarida Gaspar de Matos • Fergus G. Neville • Tânia Gaspar • José Miguel Caldas de Almeida

This manuscript focused on the association between parental unemployment and young people's life satisfaction level, and explored the moderation roles of satisfaction with family relationships and subjective family socioeconomic situation. The development of this research was supported by the findings using the unemployed parents dataset presented on the 4th scientific paper of this thesis.

The main findings of this study suggested that parental unemployment is associated with low youth life satisfaction, and satisfaction with the family life moderates such link (Fig. 9.1). These findings are consistent with what we found with the adult data set on paper 4, and suggest that young people satisfied with their family life are less vulnerable to the negative effects of parental unemployment on their life satisfaction levels independently of the family socioeconomic situation. The manuscript is presented on the following pages.

Figure 9.1. Conceptual diagram for the simple moderation analysis: the effect of parental unemployment and family life satisfaction in predicting youth life satisfaction.



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ORIGINAL PAPER

Parental Unemployment and Youth Life Satisfaction: The Moderating Roles of Satisfaction with Family Life

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ABSTRACT

Background While Europe is slowly recovering from the economic recession, its effects on labour markets are still visible. The number of jobless families has increased and previous research has shown that unemployment can affect the well-being of both parents and their children.

Objectives In this study we explored the links between parental unemployment and youth life satisfaction by considering the potential moderating roles played by satisfaction with family life and perceived family wealth.

Methods Descriptive statistics, correlations, simple moderation and moderated moderation models of regression were performed on data from a representative sample of 3937 Portuguese students (M_{age} = 13.9 years; SD±1.7; 48% boys).

Results showed that the negative effects of parental unemployment on youth life satisfaction were moderated by youth perceived satisfaction with family life but not by perceived wealth.

Conclusion This study provides evidence that during family unemployment, young people satisfied with their family life are less vulnerable to the negative effects of parental unemployment on their life satisfaction. The relationship between parental unemployment and youth well-being requires further research, especially during periods of labour market crisis.

Keywords: adolescence, life-satisfaction, parental unemployment, family relations.

INTRODUCTION

Unemployment is a major risk factor for psychological distress among adults [1]. Furthermore, there is evidence that unemployment in the family may follow an intergenerational course which can affect the well-being of both parents and their children [2]

Studying the possible effects of unemployment in the family on youth well-being is pertinent because the economic recession has increased unemployment rates and therefore the number of young people living in unemployed households in the Eurozone (from 7.6% before the crisis 2007 to 10.5% in 2013) [3] and also because adolescence is an important developmental period susceptible to influences in the family environment that can ultimately modify youth developmental trajectories [4]. In Portugal, where this study was conducted, the rate of unemployment increased from 9% (before the crisis) up to 17% during the crisis in 2013.

There is growing support for the claim that young people living in jobless families have poorer mental well-being, and decreased cognitive and social–emotional outcomes in comparison to those living in working families [2,5-7]. Along similar lines, the *family stress model* [8] argues that young people's well-being deteriorates following parental job loss due to heightened parental distress levels and strain in family relations caused by economic hardship and pressure. Unemployed families experience more financial deprivation than working families [9-11] and unemployed parents who become distressed may be short-tempered and less nurturing with their children [12]. Several studies have found that financial deprivation is associated with harsher parent-adolescent relationships [2,13-16].

Young people living in jobless families may therefore be affected by changes in daily family life which may increase vulnerability to low well-being. However, some studies have found that good family interactions may buffer the possible negative consequences of parental unemployment on youth well-being [17-19].

This study examined during a period of high unemployment in a nationally representative sample of school-aged children, first if parental unemployment is associated with young people's low life satisfaction scores, and second if youth perceived family life satisfaction and financial deprivation may moderate such a relationship. Parental unemployment is expected to be negatively associated with young people's life satisfaction, and perceiving a positive family life is expected to moderate this association. Furthermore, perceived family wealth may interact with this interaction by moderating the moderation effect of family life satisfaction.

METHODS

Participants and procedures

The analyses were based on data from the Health Behaviour in School-aged Children survey (HBSC/WHO) conducted in 2014. The HBSC study is carried out internationally every 4 years in 44 European and North American countries, in collaboration with the World Health Organisation. For each survey wave, three nationally representative sample of students in three school grades (average ages approximately 11.5, 13.5 and 15.5, respectively) complete a survey in a classroom setting. For this study, we only included the sample of those who responded to question about parental unemployment (n=3937, Mage = 13.9 years, SD±1.7; 48% boys). Approximately, 19% of the students reported to be living with one or both parents who were currently unemployed and looking for a job.

According to the HBSC/WHO international standardized research protocol, the participants were recruited via a clustered sampling design (whole classes were used as sampling units) to meet the required number of students for each school grade from selected national schools [24]. All participant schools gave their approval and students' legal guardians gave signed informed consent. Students' participation was voluntary and the survey was self-completed after being sent to schools and administered in the classroom by teachers. Confidentiality was ensured as questionnaire responses were anonymous.

Ethics approval for the 2014 Portuguese HBSC was given from the Portuguese Ministry of Education and Health, by the ethics committee of São João Hospital, and by the national ethics committee.

Measures

Parental employment status was dichotomised into two groups: 1) both parents employed; 2) at least one parent unemployed (both parents were unemployed and looking for a job; only the father was unemployed and looking for a job; only the mother was unemployed and looking for a job).

Life satisfaction was measured by an adapted version of the Cantril Ladder [20] on which adolescents rated their current life satisfaction as a measure of subjective well-being [21]. They were asked to indicate on a picture of a ladder where they felt they stood at the time (the top of the ladder 10 was the best possible life and the bottom 0 was the worst

possible life). This scale has been validated and used in several studies to assess associations between several variables and mental and physical health in adolescents [22-26].

Satisfaction with family environment was evaluated with a Cantril's self-anchoring ladder [20]. Individuals were asked to picture a ladder with 10 steps and to tick next to the number that best described where they stood at that moment. The top of the ladder, 10 was the best possible family environment and at the bottom, 0 was the worst possible.

Perceived family low wealth is an indicator that combines the perception of family absolute and relative economic wealth, measured by asking 'How well-off do you think your family is?'. The response was coded as: 1) 'very well-off', 2) 'quite well-off'; 3) 'average', 4) 'not so well-off' and, 5) 'not at all well-off' [27].

Statistical analyses

Data were analyzed firstly using descriptive statistics (mean and standard deviation) and correlations. To analyze the effects of parental unemployment, satisfaction with family environment and perceived family wealth in predicting change in youth life satisfaction, simple moderation and moderated moderation models of regression were performed using Hayes' PROCESS macro for SPSS [28]. Significance was determined at 95% bias-corrected confidence intervals and each analysis utilized a bootstrapping approach. To avoid multicollinearity issues all variables were centred prior to analysis, and the estimated effects reported are unstandardized regression coefficients [28]. Youth gender and age were controlled for in all models.

RESULTS

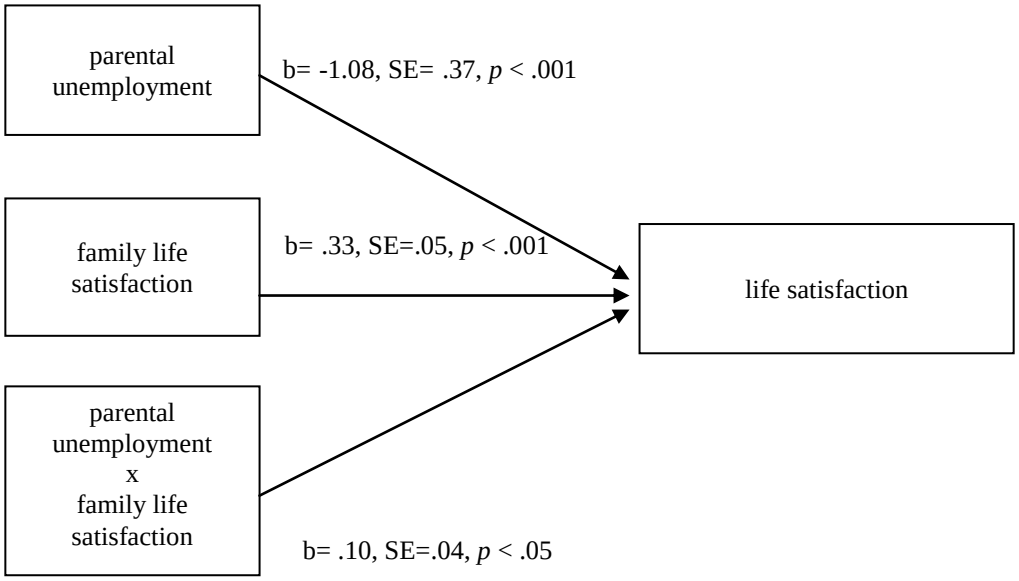
Table 9.1 presents descriptive statistics and correlations for the main variables. Life satisfaction was positively correlated with family life satisfaction, and negatively correlated with subjective family low wealth.

Table 9.1. Means, standard deviations, and correlations of key variables, *p < .01.

	Mean (SD)	1	2	3
1. Life satisfaction	8.80 (1.80)	-		
2. Family life satisfaction	7.44 (1.96)	.45*	-	
3. Perceived family low wealth	3.26 (0.70)	-.25*	-.17*	-

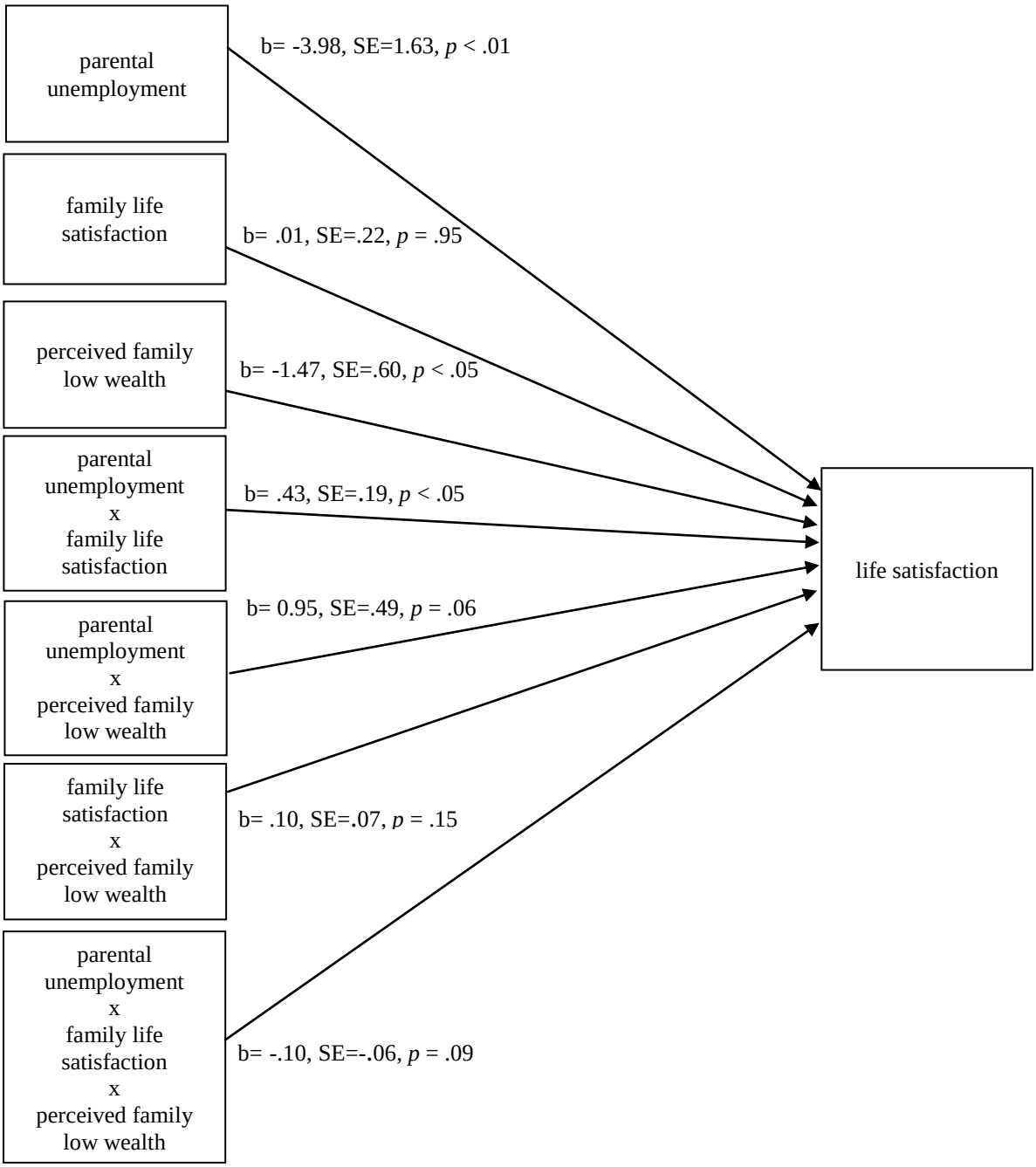
Parental unemployment and family life satisfaction accounted for a significant amount of variance in youth life satisfaction, $R^2 = 0.22$, F (5, 3662) = 210.73, $p < .001$. The interaction between these two variables (Fig. 9.2) accounted for a statistically significant proportion of the variance in youth life satisfaction, ($\Delta R^2 = .0013$, $p = .013$). Examination of the conditional effect values showed that good family life satisfaction has a moderation effect on the negative effect of parental unemployment on youth life satisfaction.

Figure 9.2. Simple moderation analysis results with unstandardized regressions coefficients



Altogether the model accounted for a significant amount of variance in youth life satisfaction, $R^2 = 0.26$, F (9, 3658) = 141.12, $p < .001$. The interaction between parental unemployment and family life satisfaction accounted for a significant moderation effect on life satisfaction (b = .43, t (3658) = 2.27, $p < .05$) but perceived family low wealth did not significantly affect the strength of this relationship (Fig. 9.3). Examination of the conditional effect values showed that family life satisfaction buffered the negative effects of parental unemployment on youth's life satisfaction independently of perceived low wealth.

Figure 9.3. Moderated moderation analysis results with unstandardized regressions coefficients



DISCUSSION

In this study we examined the effect of parental unemployment on youth life satisfaction and the moderating roles of family life satisfaction and perceived family wealth. The results confirmed the hypothesis that parental unemployment is associated with youth low life satisfaction, and that satisfaction with family life moderates this relationship. This means that the link between parental unemployment and youth low life

satisfaction weakens when family life is perceived as being positive, and corroborates the idea that good family environment may act as a protector of the effects of parental unemployment on youth well-being [17-19].

Corroborating prior research, the results further demonstrate that, in adolescents, life satisfaction is negatively influenced by life changes (such as family unemployment) and by the quality of family relationships [29,30,31].

Furthermore, the moderated moderation analysis revealed that the association between parental unemployment and youth low life satisfaction was not moderated by combining family life satisfaction with perceived family economic position. This means that the moderation role of satisfaction with family life on the association between parental unemployment and youth's low life satisfaction was independent of the perceived wealth of the family. The results give some support to the *family stress model* [32] by showing that parental unemployment is associated with youth low well-being, and that this association is moderated by the quality of the family life. Moreover, perceived family economic position did not influence this moderation link, suggesting that the association between parental unemployment and youth well-being goes beyond the financial situation of the family. The results provide support for other studies which have also found that the association between parental unemployment and young people's well-being is not so much related to family economic situation[33-36].

Nonetheless, these findings should be interpreted with caution since causal inference and generalization are limited to the cross-sectional design of this study. Moreover, it is important to consider that the analysis was performed with self-reported data, which has the advantage of measuring youth's perception of family wealth but can differ from 'reality' (e.g. young people may not want to reveal socially undesirable family economic positions) and this could have modified the effect of perceived family wealth in the model. However, the variable used to assess family well-off in this study has been shown to reflect dimensions of family socioeconomic position while relating to health and health behaviour outcomes in the HBSC study [27]. It is also important to note that although the moderating role of family life satisfaction on the relationship between parental unemployment and youth life satisfaction was significant, the variance accounted for by this moderation was relatively low. We believe this is because unemployment in the family is a complex phenomenon and many variables that we could not account for may also operate in the moderation model (e.g. duration of the unemployment and level of parental

stress). Despite the low value, its statistical significance indicates an association which warrants further research.

This study contributes to a deeper understanding of the effect of parental unemployment in youth life satisfaction in school-aged children, and is the first to our knowledge to use a nationwide population-sample. The moderating role of youth satisfaction with family life on the effect of parental unemployment on life satisfaction highlights the importance of accounting for the family context in jobless homes. In particular, the results point to the importance of quality of family life—rather than solely the financial consequences—on youth well-being during unemployment in the family. Future research is needed to provide evidence for causality of the effects (e.g. longitudinal design studies) and raise awareness of the associations between parental unemployment and changes in youth well-being. Moreover, this body of research might help improve policy-making by suggesting that jobless families not only need financial assistance, but may also require additional resources to maintain and improve family life satisfaction during periods of labour market crisis and economic recession (e.g. making parenting support programmes available for families facing unemployment). Supporting jobless families may help interrupt the deleterious intergenerational consequences of unemployment for well-being, thereby maximising the health opportunities of young people in unemployed families.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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10. SCIENTIFIC PAPER

YOUNG PEOPLE'S WELL-BEING AND THE ECONOMIC CRISIS: HOW DOES PARENTAL UNEMPLOYMENT AND FAMILY WEALTH AFFECT THE DOWNTURN EXPERIENCE?

Diana Frasquilho • Margarida Gaspar de Matos • Tânia Gaspar • José Miguel Caldas de Almeida

The findings from the previous studies support the hypothesis that parental unemployment is associated with youth low well-being. But this research project also wanted to assess if having unemployed parents would affect young people's perceptions of the repercussions of the economic recession. Parental unemployment was found to be significantly associated with youth perceived repercussions of the economic recession. The key findings of this research are summarized below and the manuscript is presented on the following pages.

- youth life satisfaction is negatively associated with perceived negative repercussions of the economic recession;
- there is a positive association between parental unemployment and perceiving repercussions of the economic recession;
- and a negative association with perceived family wealth and the perception of repercussions of the recession.

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Young people's well-being and the economic crisis: How does parental unemployment and family wealth affect the downturn experience?

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ABSTRACT

Background: Portugal is among the European countries most severely hit by the economic recession and the fifth with the highest unemployment rate. Given that adolescents' development is highly influenced by their living contexts, monitoring the repercussions of the economic recession is essential for the evaluation and improvement of their current and future public health.

Objective: To investigate youth perceived repercussions of the economic recession, its association with life satisfaction, as well as to assess differences across parental employment status and family perceived wealth.

Methods: Data were drawn from the Portuguese 2014 Health Behaviour in School-aged children survey, a WHO collaborative cross-national study, with a nationally representative sample of 2748 students (Mage = 14.7 years ±1.2; 48% boys). Descriptive statistics and linear regression models were performed.

Results: Levels of life satisfaction are lower when young people perceive that the economic recession generated negative lifestyle changes. Having unemployed parents was found to be significantly associated with perceiving such repercussions and family wealth to decrease the perception of repercussions of the recession.

Conclusions: Findings enhance our understanding of how Portuguese youth are being affected by the socioeconomic conditions surrounding them. Such information contributes to improve future research and also allow some considerations about the policies aimed at protecting young people's well-being during a period of high unemployment and socioeconomic downturn.

Keywords: adolescents; economic recession; life satisfaction; parental unemployment; perceived family wealth; Portugal.

INTRODUCTION

Adolescents are highly affected by the socioeconomic context where they live and grow because of the profound neurological, hormonal and psychosocial maturation processes they go through [1,2]. Many studies have demonstrated this social gradient phenomenon among young people [3-5].This means that what happens during young years influences life trajectories and future achievements which shape adulthood health and well-being outcomes and, therefore, social expenditure of countries [1,6].

In 2008-2009 an economic recession struck European economies with already low growth. This was the case of Portugal, the context of this particular study. In order to re-establish the confidence of international financial markets, a financial assistance programme was agreed between Portugal and the European Union, the European Central Bank and the International Monetary Fund (IMF). This programme was based on fiscal consolidation and structural adjustments which accompanied reduced public spending, marked increase in unemployment rates (from 9% in 2008 up to 17% in 2013) and an overall reduction of available income [7-9].

The negative repercussions entailed by this economic recession (e.g. unemployment and economic decline) may affect families and adolescents' well-being across the social gradient [10]. Because of its possible public health implications, the economic recession's repercussions in youth are an increasingly important topic to international policy. In 2014, UNICEF highlighted that recessionary contexts impact families and in turn young people's well-being. The channels of transmission of the recession repercussions in the family context may be essentially three: labour market (e.g. unemployment), financial market (e.g. low income), and public sector (e.g. health and social protection). As a consequence, in countries with high exposure to the economic recession and high unemployment rates, young people's well-being might be at risk, and this may generate long-term consequences [11]. A specific UNICEF report from Portugal shows that families and young people are struggling with the economic recession due to family income deterioration and unemployment [12].

Of all variables that seem to moderate the impact of the economic recession, parental labour market situation is of particular importance [11]. Unemployment is a reality that affects a growing number of families with children in countries that are facing economic recession and harsh market pressures. In Portugal, the number of young people

living in unemployed households doubled from 5% before the crisis in 2008 to 10% in 2013 [13].

The detrimental effects of parental unemployment on the well-being of their children have been established in the literature [14-16]. For instance, there is evidence showing that young people living with unemployed parents are more likely than their peers to report lower life satisfaction [17]. This data is important since life satisfaction is a valuable measure of adolescents' both physical and psychological health [18]. Additionally, families in which parents are unemployed may experience lower levels of income and higher financial hardship than working families which may have a partial negative effect on adolescents' well-being [11,12]. Therefore, during recession periods, young people living with unemployed parents and facing family wealth decline may be even more vulnerable to the negative lifestyle changes of their living socioeconomic context.

Despite the international evidence, the research gap of the recessionary effects and unemployment on families and youth well-being is especially large in Portugal. This is a timely opportunity to assess adolescents' perceived repercussions of the economic crisis and how it relates to well-being and how it differs by socioeconomic position. This information may be useful for informing public health policy makers in Portugal and in other countries enduring economic downturns. Therefore, using the most recent wave of the Health Behaviour in School-aged Children Survey [19], this study aims to provide an overview on how Portuguese school-children perceived the consequences of the economic recession in their daily lives, the association with life satisfaction, as well as to assess whether parental employment status and subjective family socioeconomic position play a role on such perceptions.

METHODS

Study population and procedures

The population included in this study was a representative sample of 2748 Portuguese students (M_{age} = 14.7 years ±1.2; 47.8% boys; response rate of 79%) that were surveyed by the Health Behaviour in School-aged Children survey (HBSC/WHO) conducted in 2014 in Portugal. This survey is carried out in collaboration with the World Health Organisation every 4 years in 44 European and North American countries. The study is comprised by a HBSC/WHO international standardized research protocol, that

recommends that the participants are recruited via a clustered sampling design (in our study the whole classes were used as sampling units) [20]. All participants voluntarily self-completed the survey that was administered in the classroom by the school teachers. All answers were anonymous.

Ethically, approval for the 2014 Portuguese HBSC was given from the Portuguese Ministry of Education and Health, by the ethics committee of São João Hospital, by the national ethics committee, by all schools that participated as well as students' legal guardians who gave signed informed consent.

Measures

Economic crisis repercussions scale

This scale is composed by 15 items aimed to assess the repercussions of the economic recession. The scale was inspired by the findings of the research report of UNICEF Ireland "Change the Future: Experiencing Youth in Contemporary Ireland. Happiness, Bullying and the Recession" [21], and was further developed between the Portuguese, Spanish and Greek HBSC teams [8]. In Portugal the items were revised by a panel of experts from the Aventura Social research team and were pilot-tested following its inclusion to the Portuguese HBSC 2014 survey. After data collection, principal components analyses were conducted to combine the responses. The items were loaded on 3 factors of an orthogonal rotation method (varimax) that explained 41.4% of the variance: 1) minor lifestyle changes; 2) negative lifestyle changes; 3) major negative lifestyle changes. For this study, only the first two subscales were used in the analysis because the third factor showed collinearity issues with parental employment status (e.g. "parents are jobless and spend more time at home").

Minor lifestyle changes assessed experiences of having to adapt to minor lifestyle changes: "I value more what I have"; "I feel more responsible for having good grades"; "I try to save money that people give to me or on house expenses (electricity, water…)"; "When with my friends we now choose to do things that do not make us spend money"; "We are more united/closer together at home"; "I reuse and recycle things to save pocket money"; "In my spare time I now volunteer to help others". The coding was 0-no and 1-yes, such that higher scores denoted more adaptation experiences to the crisis.

Negative lifestyle changes this variable assessed the perceptions of negative changes in daily life due to the recession: "There is less money around"; "My parents are more irritable and nervous than before"; There are less family outings and vacations and

we need to spend more time at home"; "I feel my parents need more my support". The coding was either 0-no or 1-yes, such that higher scores denoted more negative experiences related to the economic crisis.

Parental employment status

Parental employment status was assessed using two groups: 1) both parents employed; 2) at least one parent unemployed (both parents were unemployed and looking for job; only the father was unemployed and looking for job; only the mother was unemployed and looking for job).

Life satisfaction

Life satisfaction of young people was measured by the Cantril Ladder [22], which is a scale ranging from worst possible life (0) to the best possible current life satisfaction (10). This variable as been recommended as a measure of subjective well-being in adolescents' studies [23].

Perceived family wealth

Perceived family wealth was used to increase knowledge about the adolescents' socioeconomic position (rather than just using the indicator of parental employment status). This variable combines the perception of family absolute and relative economic position and has been used as a wider concept of adolescents' socioeconomic position that correlates well with health and well-being variables [24,25]. The young people were asked to evaluate 'How well-off do you think your family is?'. The response ranged from 1) 'not at all well-off '; 2) 'not so well-off'; 3) 'average'; 4) 'quite well-off; to 5) 'very well-off ' [26].

Statistical analyses

Descriptive analyses for sociodemographic variables (means, standard deviations, and percents) were calculated for the sample. Linear regression analyses were used to model the relationship between life satisfaction (dependent variable) and minor and negative lifestyle changes (independent variables), to model the relationship between minor and negative lifestyle changes (dependent variables) and parental unemployment (independent variable) and to test if reporting minor and negative lifestyle changes during recession relate to low family wealth. Age and gender were used as statistical controls for all models. All data analysis was completed using Statistical Package for Social Sciences (SPSS), version 22.0 and significance was set at .05.

RESULTS

The study population demographic characteristics included gender, parental job status, and age; and can be found on Table 10.1. Of the 2748 Portuguese students (M_{age} = 14.7 years ±1.2), 48% were boys and 19% had at least one parent unemployed (mother, or father or both).

Table 10.1. Descriptive characteristics of the Portuguese HBSC sample.

	% (N)
Gender	
boys	47.8 (1317)
girls	52.2 (1441)
Parental employment status	
both employed	81.1 (2236)
at least one parent unemployed	18.9 (512)
	M ± SD
Age	14.7±1.2 (12.6-19.9)
Minor lifestyle changes	2.5±1.9 (0-7)
Negative lifestyle changes	1.6±1.4 (0-4)

Linear regression analyses were conducted to evaluate whether the perceived repercussions of the economic recession were associated with life satisfaction. The results are presented on Table 10.2. Life satisfaction in young people was found to significantly decrease with negative lifestyle changes caused by the economic recession (B = -0.27; $p \leq 0.001$) but not with minor lifestyle changes (B = -0.03; $p = 0.071$).

Table 10.2. Summary of linear regression analysis for the association between life satisfaction and perceived repercussions of the economic recession adjusted for age and gender.

Independent variables	Life satisfaction	F	Adj R^2
	B (95% CI)		
Minor lifestyle changes	-0.03 (-0.07;0.00)	19.38	0.02
Negative lifestyle changes	-0.27 (-0.32;-0.22)***	57.69	0.62

Regression coefficients (B)
*p≤0.05; **p ≤0.01; ***p ≤0.001

With respect to the parental employment effects (Table 10.3), parental unemployment was found to be positively associated with minor lifestyle changes (B = 0.19; $p \leq 0.05$) and negative lifestyle changes caused by the recession (B = 0.44; $p \leq 0.001$). Since differences found in the repercussions of the economic recession across parental employment status could arise from other variables, a regression analysis was conducted to test the association between minor and negative lifestyle changes and family wealth variable in both parental employment status. The results are presented in Table 10.3.

Family wealth significantly reduces perceived minor lifestyle changes when both parents are employed (B = -0.66, $p \leq 0.001$) and when parents are unemployed (B = -0.44, $p \leq 0.001$) and more so perceived negative lifestyle changes when both parents are employed (B =-0.83; $p \leq 0.001$) or unemployed (B =-0.72; $p \leq 0.001$).

Table 10.3. Summary of linear regression analysis of the relationship between minor and negative recessionary lifestyle changes and parental unemployment (ref) and perceived wealth by parental employment status (adjusted for age and gender).

Independent Variables		Minor lifestyle changes	F	Adj R^2	Negative lifestyle changes	F	Adj R^2
		B (95% CI)			*B* (95% CI)		
At least one parent is unemployed		0.19 (0.01;0.38)*	22.42	0.02	0.44 (0.30;0.57)***	27.45	0.03
Perceived wealth	Both parents' employed	-0.66 (-0.78;-0.55)***	60.53	0.08	-0.83 (-0.91;-0.74)***	145.86	0.17
	At least one parent is unemployed	-0.44 (-0.67;-0.21)***	11.11	0.06	-0.72 (-0.88;-0.56)***	29.53	0.15

Data are given as regression coefficients (B) and 95% confidence intervals.
*p≤0.05; **p ≤0.01; ***p ≤0.001

DISCUSSION

The findings in the present study derive from a nationally representative sample that participated in the HBSC survey carried out in Portugal in the context of economic recession (2014). Results indicated that students reporting negative lifestyle consequences of the economic recession tend to have lower life satisfaction outcomes. Moreover, students who have unemployed parents and low perceived family wealth were expected to report minor and negative lifestyle changes due to the recession. Such associations show possible implications for young people's life satisfaction and find support on the Portuguese Committee for UNICEF's report [12] that states that the negative impact on well-being of the economic recession is associated with increasing household's economic hardship and unemployment that is affecting a growing number of families. This information is especially relevant for unemployed families, since 52% of the Portuguese unemployed population does not have access to unemployment benefits. Moreover, given that the economic recession makes it difficult to unemployed parents to regain employment fast (due to lack of available jobs), and that the longer youth live in deprivation the worse its impact in terms of development and well-being assets - social gradient phenomenon [3-5]. Thus, we might be facing a particularly serious public health issue. It may be beneficial to consider the extension of protection to families in low socioeconomic positions, especially

those facing unemployment, and to provide psychosocial support with the aim of interrupting a possible deleterious effect of the unemployment situation and deprivation on youth daily life experiences. In fact, even though the country is facing a period of resource constraints, there are relatively low cost programmes that can offer protection to the most vulnerable subgroups of the population that the country may want to consider [27].

This study is the first to our knowledge to use a nationwide population-sample to contribute to a deeper understanding of the effect of economic recession's lifestyle changes on youth life satisfaction, and the particular association between such changes and parental unemployment and family wealth. The findings should, however, be interpreted with caution because of the use of self-reported data and the cross-sectional design of this study which limits causal inference. For instance, it could be the case that perceiving lifestyle changes due to the recession is affected by youth life satisfaction and not the other way around. Nevertheless, literature about what changes in the life of families during recession provides strength to the direction of the results. Another limitation, is related to the fact that due to sample representativeness issues this study is not able to capture regional differences on the perception of potential outcome of the economic downturn (e.g. urban vs. rural) that may be present and that future research may want to consider.

Despite the limitations, this study presents a new effort to better capture adolescents' perceptions of the changes that occurred under the recessionary period and how it relates to well-being, as well as pinpointing the importance of parental unemployment and family socioeconomic position on such association. Thus, findings strengthen evidence of surrounding factors that shape adolescents' well-being during economic recessions and also allow some considerations on policy-making and strategies to diminish future health and social expenditure and maximize young people's life opportunities.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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11. SCIENTIFIC PAPER

YOUNG PEOPLE LIVING WITH UNEMPLOYED PARENTS DURING A LABOUR MARKET-CRISIS: HOW DO PORTUGAL AND SCOTLAND COMPARE?

Diana Frasquilho • Margarida Gaspar de Matos • Candace Currie • Fergus G. Neville • Ross Whitehead • Tânia Gaspar • José Miguel Caldas de Almeida

Countries with different unemployment rates, unemployment protection policies and family support programmes may experience different extent of the effects of the unemployment situation. Thus, the manuscript presented on the following pages shows the results of an opportunistic comparison of the association between parental unemployment and the well-being of young people in two countries (Portugal and Scotland) with contrasting unemployment rates (18% vs. 7%) and protection policies. The key findings are presented below:

- the percentage of young people with unemployed parents is higher in Portugal than in Scotland;
- both Portuguese and Scottish young people with unemployed parents report low levels of life satisfaction;
- having unemployed parents predicted health complaints among young people from Portugal but not among young people from Scotland;
- countries' associations between parental unemployment and adolescents' well-being are not equal for all health indicators.

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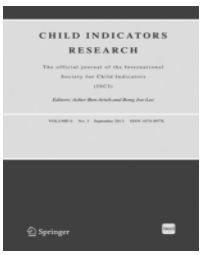

Young People Living with Unemployed Parents during a Labour Market-Crisis: How do Portugal and Scotland Compare?

ABSTRACT

Introduction In Europe the rate of unemployment increased due to the 2008-2009 economic recession. The negative effect of unemployment on adult well-being has been demonstrated and there are strong reasons to believe that young people living in unemployed households may be also affected. Unemployment protection policies and family support programmes might help buffer such effects.

Objectives The aim of this study was to explore the associations between parental unemployment and youth mental well-being outcomes, and to examine possible heterogeneity between two countries with different labour market policies and parental support programme availability (Portugal and Scotland).

Methods Data were collected in 2014 by the Health Behaviour in School-aged Children study in Scotland and Portugal with two nationally representative samples of 13- and 15-year olds: 2748 Portuguese students (M_{age} = 14.7 years ±1.2; 47.8% boys); and 4512 Scottish students (M_{age} = 14.6 years ±1.0; 50.0% boys). Life satisfaction and subjective health complaints scales were used to assess youth mental well-being. Descriptive and linear regression analyses were performed.

Results Young people with one or more unemployed parents report lower levels of youth life satisfaction in both countries. In the Portuguese sample, parental unemployment was also positively associated with the frequency of subjective health complaints among young people.

Conclusion The association between parental unemployment status and youth low well-being were observed in both countries but there were some differences. These are discussed in the context of cross-national differences in unemployment rates and family protection policies in the two countries.

Keywords: Adolescence; Economic recession; HBSC; Unemployment; Well-being.

INTRODUCTION

The global economic recession in 2008-2009 pushed European countries into an economic recession with widespread consequences for the labour market. In the first quarter of 2013, the rates of unemployment in the European Union rose to a record level of 11%. The highest unemployment rates were recorded in Greece (27%), Spain (26%) and Portugal (18%), while the lowest rates were found in Norway (4%), Austria (5%) and Germany (5%) [1].

Many studies using adult samples have demonstrated an association between unemployment and poor well-being [2] that is especially strong during economic recession and high unemployment periods [3]. In the United Kingdom (UK) – of which Scotland is a member - there is data showing a high prevalence (23%) of common mental disorders among jobseeker's allowance beneficiaries [4]. Although there is no such data available for this group in Portugal, it has been suggested that the comparable figure would be even higher since mental health problems are already very common amongst the general population (23%) [5].

Young people living with unemployed parents may be affected by changes in daily life and by parents' distress and financial difficulties [6]. This in turn may lead to negative consequences for young people's well-being. The available evidence supports such an argument. For instance previous research based on European data (e.g. Portugal, Denmark, Finland, Iceland, Norway, Sweden and Slovakia) has demonstrated associations between parental unemployment and adverse effects on youth well-being [7-9].

This paper represents an opportunistic comparison of the association between parental unemployment and the well-being of young people between two countries, Portugal and Scotland, which have contrasting unemployment rates 18% vs. 7%, respectively. As well as different unemployment rates, as described above they also differ with respect to the support available for individuals and families suffering unemployment. Research from OECD member states shows that the provision of such support can potentially mitigate the impact of unemployment [10,11].

Both Portugal and Scotland have made changes to their welfare systems as a response to pressure on public expenditure during the economic recession. However, in relation to unemployment protection, data from OECD and Eurostat show that after the recession, public spending efforts on *active labour market policies* (programmes that support jobseekers and unemployment benefit beneficiaries with enhanced access to

training, skills development and psychosocial support) as a per cent of GDP have decreased in Portugal along with decreased spending on *passive labour market policies* (unemployment cash benefits and related paid benefits) [12].

In the UK, however, while there was a decrease in passive benefits, the public spending efforts on active labour market policies have increased [12,13]. There is evidence that *active labour market policies*, together with improved social welfare protection, are associated with improvements in population health [14]. Additionally, unemployment protection coverage rates vary between countries; Portugal has a lower coverage rate than the UK and Scotland [15].

Nevertheless, the UK (Scotland) has recently faced significant changes to their welfare system with the introduction of the universal credit payment. This is paid once a month, and merges six working-age benefits where applicable (jobseeker's allowance, income-related employment and support allowance, income support, child tax credit, working tax credit and housing benefit) [16]. Overall, benefits to Scottish families are now capped, and sanctions and qualifications are stricter. The effects of these changes are yet to be evaluated.

In addition to unemployment protection measures, state supported parenting programmes may help to buffer some of the effects of unemployment on families' well-being as they are considered helpful in breaking intergenerational transmission of distress and inequity between parents and their children [17]. There is evidence that supporting families facing unemployment may bring short-term health outcomes and long-term economic gains for societies [14,18]. In Portugal, however, national-systematic delivery of such programmes is rare compared to Scotland (e.g. Scottish Psychology of Parenting Project – PoPP) [19].

Overall, Portugal is struggling with cuts to public budgets, high unemployment rates and a lack of jobs. The resources to support unemployed individuals and their families are lacking in comparison to Scotland. Because school-age is such an important developmental period and there is already well-established evidence showing an association between parental unemployment and low well-being in young people, it is important to focus research on youth living in unemployed households. This paper provides an opportunity to compare the situation in Scotland with Portugal where unemployed people and their children may be less protected due to the higher rates of unemployment and less investment in protection policies. Thus, the purpose of this study was to examine how Portugal and Scotland, two countries facing different levels of

challenge and state support, compare in terms of the associations between parental employment status and adolescents' self-reported well-being.

METHODS

Participants and procedures

The analyses were based on data collected as part of the Health Behaviour in School-aged Children (HBSC) survey conducted in 2014 in Portugal and Scotland. The HBSC study is carried out internationally every 4 years in 44 European and North American countries, in collaboration with the World Health Organisation. The HBSC data collection is stratified by age group. For this study we only included nationally representative samples of 13- and 15-year old students.

According to the HBSC international standardized research protocol [20], the participants were recruited via a clustered sampling design (whole classes were used as sampling units) to meet the required number of students for each school grade from. All participating students' legal guardians gave signed informed consent. Students' participation was voluntary and the survey was self-completed. Confidentiality was ensured as questionnaire responses were anonymous.

Ethics approval for the 2014 Portuguese HBSC was given from the Portuguese Ministry of Education and Health, by the ethics committee of São João Hospital, and by the national ethics committee. Ethics approval for the 2014 Scottish HBSC was given from the University of St Andrews Teaching and Research Ethics Committee.

Measures

We examined health and well-being outcomes across two parental employment status groups: 1) both parents employed; 2) at least one parent unemployed and looking for a job (both parents were unemployed and looking for job; only the father was unemployed and looking for job; only the mother was unemployed and looking for job). Unemployed parents who were students, retired or stay-at-home parents were considered to be voluntarily jobless and therefore were not included as being unemployed and looking for job, and were excluded from the analysis.

Subjective health complaints were assessed by the HBSC Symptom Checklist (HBSC-SCL). Students were asked how often in the last 6 months they had experienced:

headache; stomach-ache; backache; feeling low; irritability; nervousness; difficulties in getting to sleep; and dizziness. The response options for each item ranged from (4) "feel this about every day" to (0) "rarely or never feel this". For this study we used an eight-item composite scale ranging from (0) non-occurrence of complaints to (32) frequent occurrence of complaints. The items included in the scale have been found in previous studies to be sensitive measures of young peoples' mental health status [21].

Life satisfaction was measured using an adapted version of the Cantril Ladder [22] on which adolescents rate their current life satisfaction as a measure of subjective well-being. They were asked to indicate on a picture of a ladder (the top of the ladder 10 is the best possible life and the bottom 0 is the worst possible life) where on the ladder they felt they stood at the time. This scale has been validated and used in several studies to assess mental well-being in adolescents [23,24].

Statistical analyses

Descriptive analyses of sociodemographic variables were calculated for the sample. Linear regression analyses were conducted to examine if having unemployed parents predicted subjective health complaints and life satisfaction scores in both countries. The first model shows the unadjusted results and the second model shows the adjusted results by gender and age to control for these known effects on life satisfaction and health complaints [25,26]. All data analyses were completed using (SPSS v22.0), and α was set at .05.

RESULTS

The final samples consisted of 2748 Portuguese students (M_{age} = 14.7 years ±1.2; 47.8% boys), and 4512 Scottish students (M_{age} = 14.6 years ±1.0; 50.0% boys). The Portuguese sample showed a much higher proportion of young people reporting having at least one parent unemployed (19%) in comparison to the Scottish sample (7%).

The coefficients of linear regression analyses are shown in Table 11.1 for the Portuguese sample and Table 11.2 for the Scottish sample.

For Portugal, the model predicting life satisfaction with parental unemployment as the only predictor was statistically significant, $F(1, 2746) = 12.775$, $p < .001$, and accounted for approximately 0.5% of the variance in life satisfaction. Having unemployed parents significantly predicted lower levels of life satisfaction (B = -0.32, $p < 0.001$). This

remained statistically significant in the model containing also gender and age (B= -0.29, $p < 0.001$).

Subjective health complaints among Portuguese students were also predicted by parental employment status, before and after adjusting for gender and age, F (1, 2746) = 7.883, $p < .01$; F (3, 2744) = 100.207, $p < .001$. In the unadjusted model parental unemployment accounted for approximately 5.4% of the variance of subjective health complaints. The prediction model containing also gender and age accounted for 31% of the variance. Having unemployed parents significantly predicted higher levels of subjective health complaints among the Portuguese young people (B = 0.91, $p < 0.01$), even after adjusting for age and gender (B = 0.71, $p < 0.05$).

Table11.1. Summary of linear regression analyses for parental unemployment predicting subjective health complaints and life satisfaction among adolescents from Portugal, adjusting for gender and age B (95% CI).

Variables	**Portuguese sample**			
	Life satisfaction		**Health Complaints**	
	B (95% CI)		**B (95% CI)**	
	Model 1	Model 2	Model 1	Model 2
unemployed parents	-0.32 (-0.50;-0.15)***	-0.29 (-0.46;- 0.11)***	0.91 (0.27;1.55)**	0.71 (0.11;1.32)*
gender		-0.41 (-0.54;-0.27)***		3.70 (3.22;4.17)***
age		-0.15 (-0.21;-0.09)***		0.76 (0.56;0.96)***
R^2	0.005	0.026	0.054	0.314
ΔR^2		0.01		0.10
F	12.775***	24.125***	7.883**	100.207***

Data are given as regression coefficients (B) and 95% confidence intervals.
*p≤.05; **p ≤.01; ***p ≤0.001

For Scotland (Table 11.2), the model predicting life satisfaction with parental unemployment was statistically significant, F (1, 4395) = 23.477, $p < .001$, and accounted for approximately 0.5% of the variance in life satisfaction . The model adjusting for gender and age was also statistically significant, F (3, 4393) = 76.207, $p < .001$ and accounted for 4.9% of the variance. Having unemployed parents significantly predicted lower levels of life satisfaction among Scottish young people (B = -0.52, $p < 0.001$), even after adjusting for age and gender (B = -0.53, $p < 0.001$).

In terms of subjective health complaints, the unadjusted model was not statistically significant, F (1, 4371) = 0.807, p = 0.369. Parental unemployment alone did not significantly account for variance in subjective health complaints among the Scottish sample (B=0.39, p = 0.369). The predictive effect of parental unemployment remained non-significant (B=0.32, p = 0.433) after adjusting for age and gender.

Table 11.2. Summary of linear regression analyses for parental unemployment predicting subjective health complaints and life satisfaction among adolescents from Scotland, adjusting for gender and age B (95% CI).

Variables	**Scottish sample**			
	Life satisfaction		**Health Complaints**	
	***B* (95% CI)**		***B* (95% CI)**	
	Model 1	Model 2	Model 1	Model 2
unemployed parents	-0.52 (-0.73; -0.31)***	-0.53 (-0.74;-0.33)***	0.39 (-0.46;1.23)	0.32 (-0.48;1.12)
gender		-0.51 (-0.61;-0.40)***		4.26 (3.86;4.65)***
age		-0.27(-0.32;-0.22)***		0.94 (0.74;1.13)***
R^2	0.005	0.049	0.000	0.108
ΔR^2		0.02		0.02
F	23.477***	76.207***	0.807	178.118***

Data are given as regression coefficients (B) and 95% confidence intervals.
*p≤.05; **p ≤.01; ***p ≤0.001

DISCUSSION

In this study, data from the Portuguese and Scottish HBSC survey 2014 were used to analyse the associations between parental employment status and youth well-being outcomes. We examined the results in light of both countries different unemployment rates, labour market policies and family support systems.

The percentage of young people with unemployed parents was higher in Portugal than in Scotland, which corroborates the official unemployment statistics of both countries [27]. Our findings firstly re-emphasise the association between parental unemployment and youth low well-being [6-9]. Secondly, the fact that having unemployed parents predicted health complaints among young people from Portugal but not among young people from Scotland suggest that countries' associations between parental unemployment and adolescents' well-being are not equal for all health indicators.

Furthermore, the findings partly support the study hypothesis that young people with unemployed parents report worse health and well-being outcomes, and that these differ by country. In Portugal we found two associations between having unemployed parents and health outcomes (lower levels of life satisfaction together with higher frequency of health complaints) and in Scotland only one association was significant (lower life satisfaction).This heterogeneity of results between the two countries may be due to unemployed families in Portugal facing more socioeconomic difficulties then the Scottish and thus exacerbating the deleterious well-being effects of unemployment. Research conducted by Holstein and colleagues [28] showed that high level of health complaints among youth is usually associated with lower socioeconomic backgrounds.

This study used data from the Health Behaviour in School-aged Children (HBSC) international study (same data source for the current study), which included comparable samples of 37 European countries (including Portugal and Scotland). The apparent differences between Portugal and Scotland may also reflect the countries' variation in terms of unemployment and family protection policy. Nevertheless, further analysis is needed to better explain this difference.

The aim of this study was to make a cross-country comparison on how the effect of parental employment status on youth mental well-being differed in two contexts with different unemployment rates, labour market policies and family support programmes delivery. This was possible because the indicators used in both countries were identical. Nevertheless, caution is advised in the interpretation of the results, since the cross-sectional design of this study prevents causal inferences. For instance, it could be the case that youth with more complaints and lower satisfaction with life require additional caring responsibilities making it harder for parents to keep jobs and not the other way around. Nevertheless, the survey in both countries asked the reason for parents' unemployment, thus, to ensure minimum bias, in both samples the unemployed parents' group did not include non-voluntarily unemployed parent(s) (e.g. parents taking care of family members and stay-at-home parents). In addition, self-report measures are sometimes considered to be unreliable and cultural differences in responding style between Portugal and Scotland might also have affected the results. However, we do not consider this to be as a major threat to the validity of the study, because. Especially the instruments used have been methodologically validated (with equivalent protocols in all HBSC countries) allowing for cross-national comparisons. Moreover, the literature shows that life-satisfaction and health complaints are valuable measures of both physical and psychological health that correlate well with youth well-being outcomes [21,25]. A further limitation is the limited scope within the current paper to provide an in-depth analysis of the various formal and informal individual and family protection policies in each country. We have instead highlighted the source material from which readers can garner more detailed information, and note that broadly speaking we are comparing labour market and family support strategies in Portugal, and in Scotland.

There are several lines of inquiry that future research should explore. For instance, during labour market crises and recessions, there are numerous factors such as family conflicts, duration of unemployment, structural problems related to the country's economy and health services that can increase risk or protect mental health and well-being of young

people living with unemployed parents. Future studies may structure research to focus on such factors, for example using multilevel analysis adjusting for macro-level determinants (e.g. national unemployment rates, GDP and Gini Index).

Although the findings suggest that in both countries young people with unemployed parents had poorer well-being outcomes than those with employed parents, at the time of data collection Portugal had a higher unemployment rate compared to Scotland and had less effective resources to support unemployed individuals and their families: 1) its labour market policies were based on *passive* spending (unemployment insurance and related paid benefits) which is less effective than *active labour policies* (programmes that support jobseekers and unemployment benefit beneficiaries with enhanced access to training and skills development and psychosocial support), 2) the delivery of parenting programmes in Portugal is rare in comparison to Scotland. Thus, we argue that although Scotland needs to improve protection of young people living in families where unemployment exists, a shift towards investing in effective protection of these families seems crucial to implement in Portugal given the additional structural risk factors (e.g. high unemployment rate and family economic deprivation). These may make a positive difference to adolescents' overall well-being.

Conclusion

This study provides evidence for the association between parental employment status and adolescents' well-being in two countries that differ in unemployment rates, labour market policies and availability of family support programmes (Portugal and Scotland). Results from both countries highlight that adolescents with both parents employed report better scores on well-being indicators compared to those with unemployed parents. In Portugal but not Scotland, young people living with unemployed parents reported a greater number of subjective health complaints than the sample with employed parents. The findings can be useful for both countries and others to focus attention on young people living in families coping with unemployment since they may be more vulnerable to distress. Ultimately, assisting these families and young people may bring better health outcomes and socioeconomic gains for both countries.

Declarations

Competing Interests

The authors declare that they have no conflict of interest.

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CHAPTER IV - DISCUSSION

This section of the dissertation provides an integrative overview and discussion of the main findings of the eleven empirical studies. Moreover, the strengths and limitations will be critically addressed as well as future research avenues and the implications for public policy.

1. DISCUSSION OF THE MAIN FINDINGS

The findings provided by the eleven scientific papers of this thesis addressed a major mental health risk factor, particularly during the context of economic recession[1] – unemployment – in a country with one of the highest unemployment rates in Europe [2], and aimed to contribute to the knowledge about the association between the unemployment situation and well-being that was theoretically integrated within a life-course perspective[3]. Figure IV-1 graphically depicts the conceptual integration of the main research findings. The findings were grouped in topics in compliance with the outlined specific aims and to improve the discussion of the results:

1. **Economic recession and mental health outcomes: vulnerability of unemployed people and their families**
2. **Individual level unemployment effects on well-being and associated factors**
3. **Effects of unemployment on the family**
4. **Parental unemployment and youth well-being**

Figure IV-1 illustrates how economic recessions, in the absence of the adequate policy responses, may increase the risk factors for poor mental health (unemployment, precarious work, indebtedness, economic strain and worsening of pre-existing risks to mental health)[1,4]. Focusing specifically on unemployment, the figure shows how it can affect the mental well-being of people at different levels (individual-level, family level, and indirectly the young people) [5-9]. This conceptualization also shows how, in turn, these effects can perpetuate a cycle of inequality in health (e.g. young people living with unemployed parents and that experience low well-being so early in life may not achieve the highest health and well-being status possible, leading to a higher likelihood of facing additional mental health risks and also of becoming unemployed in the future) [10-12]. The specific possible effects of unemployment during the recession context and at the different levels are discussed in the following sections.

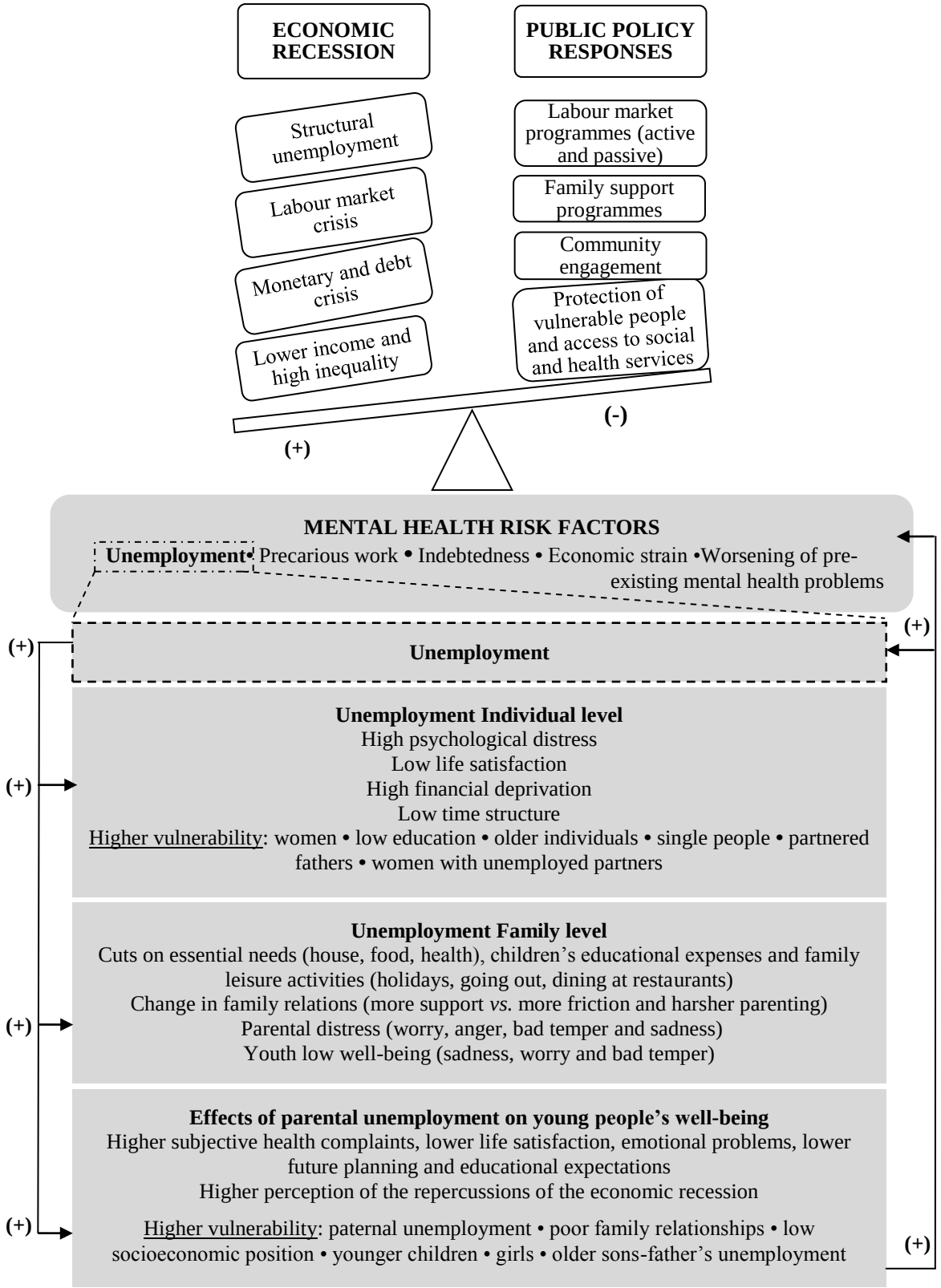

Figure IV.1. Conceptual integration of the main findings from the present study within a life-course perspective, suggesting that in the absence of adequate protection responses the negative effects of the economic crisis increase the risks for mental health problems. Focusing on the particular case of unemployment, the framework indicates the possible effects of unemployment on the mental well-being and lifestyle of unemployed individuals, their family and their children. And also indicates a possible perpetuated cycle with lifelong consequences for the mental well-being of children (increased likelihood of mental health problems and unemployment in adulthood).

1.1. Economic recession and mental health outcomes: Vulnerability of unemployed people and their families

Overall, the findings of the systematic literature review (empirical study 1) suggested the existence of associations between economic downturn periods and related factors, and increased prevalence of psychological distress and common mental disorders, substance disorders, and ultimately suicidal behaviour among the general population. The findings also highlighted that unemployed people and their children are more vulnerable to the recession's adverse repercussions.

These findings are in agreement with the suggestions of WHO that this recession was likely to aggravate and boost mental health morbidity via unemployment, financial strain, debts and job-related problems [1]; and offer support to other collections of available evidence [13-19].

Given the centrality of this issue to the Portuguese and European contemporary socioeconomic context, in which a large amount of people are unemployed and have children, better understanding of these effects could help diminish the research gap and improve informed policies and measures to tackle the extent of the risk factors faced by these sub-groups of the population. Such findings supported the extension of our research, the development of the objectives and methodology of the empirical studies that constitute this thesis.

In compliance with the above results, empirical study 10 also presented findings of a positive association between youth low well-being and higher perception of the negative repercussions of the economic recession and having unemployed parents and perceiving such repercussions. The findings offer support to UNICEF's reports [20-23], about the possible intergenerational course of the vulnerability to the economic recession, in which the well-being of both unemployed parents and their children is affected.

These suggestions are also theoretically supported by the Family Stress Model, that economic hardship resultant from economic negative events (e.g. unemployment) and financial pressure (e.g. economic recession environment) can overall indirectly impact youth mental health and well-being [24].

1.2. Individual level unemployment effects on well-being and associated factors

The second set of results (empirical studies 2 and 3) showed a great prevalence of psychological distress and lower life satisfaction among unemployed people. In line with previous studies, this suggested that in comparison to the general population unemployed people might have increased levels of distress [8,9,19]. The findings also allowed the identification of a number of specific factors that explain the variability of outcomes in people facing unemployment.

As argued by McKee-Ryan and collaborators [9], our findings indicated that unemployed women are more vulnerable to distress during unemployment; this mirrors the display of worse mental health by European women [25] and the significantly higher prevalence of common mental disorders and lower well-being among women found in cross-national comparative studies[26]. Evidence shows, however, that these gender differences in rates of mental health problems are narrower in contexts with increased gender role equality [26,27]. This information is particularly relevant since Portugal is one of the most unequal countries in the European Union in terms of gender roles [28] (e.g. although a large number of women are employed full-time their involvement in housework is the highest in Europe and they earn on average much less than men), and also the country where the gender gap in depression is larger [29]. Thus, the lower levels of mental well-being in unemployed women reported in this study may be related to a general pattern of social gradient in women's mental health in Portugal. Nevertheless, the findings are still insufficient to establish a complete picture of how gender moderates the unemployment effects on well-being and more research is still needed.

As expected, lower education was associated with higher distress among the sample of unemployed people [9,30]. These findings provide further evidence that mental health is associated with higher levels of education [3]. We hypothesised some explanation for this, and stated that educational attainment itself may provide a certain amount of status, identity and income savings that are considered protective. Moreover, unemployed people with low levels of education may partly expect re-employment chances to be remote due to their low qualifications and this may increase their distress levels [30].

Corroborating prior research [31,32], the findings also demonstrated that in unemployed adults greater psychological distress is more prevalent among older adults than in younger people. Possible explanations include higher discrimination of older adults in job searching activities given the scarcity of jobs during recession [33], less access to

social interaction, structure of time, and perceived lower social status than younger unemployed adults [32]. Nevertheless, to conclude such explanations, further analysis in which we specifically compare age groups and access to work benefits would be necessary; however, this was not the specific aim of the study.

Living in partnership correlated positively with life satisfaction. These findings are concordant with indications elsewhere [9,34,35], that single people are less satisfied with their lives than those living in partnership. It can be hypothesised that living with a partner would give access to more resources (economical and psychological) to cope with job loss.

Partner employment status only explained the variation in women's life satisfaction. This might suggest that women expect men to carry out their traditional role of the "breadwinner". This could provide them with acceptable access to the social role of the "housewife" while workless. This explanation is consistent with the traditional gender roles present in southern European countries like Portugal [27]. Thus, the findings among partnered women oppose the hypothesised process in which unemployed people whose partner is also unemployed experience a lesser drop in life satisfaction than when the partner is employed [36,37].

Regarding parental status of unemployed adults, the association between being a parent and reporting low well-being was only statistically significant among partnered men. Corroborating other studies [38], partnered men reported higher life satisfaction when childless. It may be the case that being a father and a partner during unemployment increases the social pressure to be the "breadwinner". This would provide an explanation for why status deprivation was negatively associated with life satisfaction in partnered fathers but not in partnered mothers. Moreover, there is evidence that mothers when facing unemployment are more likely to cope by looking more after the family or home and, therefore, are likely to be more available to children than fathers [39,40]. This gender factor may also vary by countries, since there is evidence that most fathers, particularly in southern European countries, tend to devote on average the same amount of time in caring for and educating children regardless of whether they are employed or unemployed [41,42].

Overall, the gender differences found in our study tend to follow the social gradient and gender inequality of the Portuguese social context[28]. The hypotheses of lower well-being among unemployed women, single, unemployed couple, older age and lower educated were supported by the research findings. However, this study failed to show that experiencing long-term unemployment and repeated unemployment was associated with

lower well-being [9,43]. Then again, we suspect that the non-significant associations might be explained by the limitations of our study design that are explained further below.

1.3. Deprivation of access to the latent and manifest benefits of work

The strong link found between low well-being outcomes and the deprivation of access to economic (income) and non-economic (e.g. time structure, social contact, status, collective purpose, and activity) factors related to work, was framed within the theoretical models of unemployment: the Latent Deprivation Model and the Agency Restriction Model [44,45]. Confirming prior research [46], the findings of this thesis (empirical study 2 and 3) demonstrate that financial income and time structure were the work related factors that unemployed individuals more frequently reported to have lost access to, and were also the factors that when not accessed were more strongly associated with psychological distress and low life satisfaction. It can be the case that financial difficulties place a restriction in time structure as unemployed individuals often feel unable to invest in leisure activities, and when they do they do not feel it as enjoyable than if they were employed [47,48]. In fact, it is likely that it takes massive personal endeavour to make arrangements to structure one's time when resources are limited [44].

Thus, this thesis' hypotheses that unemployed people report low well-being and have high levels of deprivation of manifest and latent benefits of work was supported by the research findings. We argue that the maintenance of the manifest and latent benefits of work during unemployment should allow better coping with being unemployed and consequently improve levels of psychological well-being among the unemployed population[9]. Thus, it is expectable that interventions that promote financial protection during the period of unemployment (generous unemployment-benefits) and help unemployed people plan and organize their days in a purposeful way (increase structured time) would be beneficial to improve unemployed populations overall well-being [9].

Nevertheless, it is important to highlight that employment plays an important role in terms of personal identity in modern societies [45,49], and thus 'artificial' protection of the latent and manifest benefits of work during unemployment may not actually mimic what people had prior to the job loss. Several studies have shown that these needs may only be totally fulfilled by re-employment, since employment (even if not very satisfying) is usually better than not having a job at all [44,48,50]. Thus, on one hand we argue that measures that allow people to get re-employed faster could be a transversal aim of any psychosocial

intervention targeting unemployed people, and, on the other hand the maintenance of the manifest and latent benefits of work during unemployment should be considered a priority of public policies during economic recessions when jobs are scarce and re-employment may take longer time to be achieved.

Exploratory analysis in the adult unemployed sample (see appendix V) shows that a major proportion of people reported needing help to manage emotional problems during their unemployment situation and valued the importance of having access to specialized psychological support during the unemployment situation. However, the great majority reported not having sought professional support, possibly meaning that the needs of this population are unmet. Further research is, therefore, recommended.

In sum, the findings about the sociodemographic factors and the latent and manifest benefits that are associated with lower well-being in unemployed adults may help improve our knowledge about the possible determinants of mental health of unemployed populations in the Portuguese context (although this is limited by the representativeness issues that are explored in the limitation section of this discussion). The findings may also help tailor improved actions and interventions to support the unemployed people most at risk in coping better with job loss, both psychologically and socioeconomically. Therefore, interventions to increase the probability of reintegration of social capital into labour market when jobs become available again may want to consider: limiting periods of inactivity, diminishing economic deprivation, helping coping with distress while considering gender, age, household structure and education level.

1.4. Effects of unemployment on the family

Reports from job seeking parents allowed a better understanding of how unemployment changes family life (empirical study 5). Corroborating other studies [22,23,51], the findings indicated that job seeking parents perceive their unemployment as a source of economic strain that implies significant cutbacks on essential needs such as food, health services, house expenditures and even on children's educational expenses. The experience of deprivation was found to restrain the access to family activities (e.g. holidays and going out), which can lower individuals' well-being [52]. Moreover, there were reports of heightened self-distress (worry, anger, bad temper and sadness), lower well-being among youth (sadness, worry and bad temper) and changes in family relations either positive (more proximity and support) or negative (more friction, conflicts and harsher parenting).

Quality of family relationship variation is expected to depend partly on the family cohesion status prior to the unemployment situation [53].

These results offer additional support to the Family Stress Model [24] and attest the effects of unemployment on family available income and investments, on family relationships, and on the well-being of parents and their children. Moreover, the findings highlight the need for individualized assessment of the unemployment situation to prevent extreme deprivation situations and potential psychological distress which may be particularly critical to young people's development.

1.5. Parental unemployment and youth well-being

Portuguese young people with jobless parents showed higher frequency of subjective health complaints than young people with both parents employed (empirical studies 6 and 11). These findings are concordant with evidence that parental unemployment is associated with a higher frequency of psychosomatic symptoms in young people [54-56]. Furthermore, the findings (empirical studies 8, 9 and 11) also suggested that parental unemployment is related to young people's decreased emotional well-being outcomes. This has been previously observed in other studies focusing on the effects of parental unemployment [56,57].

In regards to adolescents' future planning and educational expectations, our findings (empirical study 7) suggested that those with unemployed parents have decreased levels of future and education ambitions than those with both parents employed, and also suggested that low expectations are associated to lower life satisfaction scores. These findings are supported by further evidence that parental unemployment decreases young people's level of education ambition [58,59]. Possible disengagement from school and further education, especially during recessionary contexts, may increase the likelihood of young people falling into 'not in employment, education or training' - NEET status [10,11].

In brief, the findings strongly suggest that parental unemployment may have deleterious effects on young people's mental well-being and educational ambitions, and bring valuable insights about the factors that may possibly predict the association between parental employment status and Portuguese adolescents' well-being. The exploration of this complex association and its determinants is discussed below. All in all, the improvement of our knowledge about the possible factors acting in the relation between parental unemployment and youth low well-being in the Portuguese context is important as

it may be informant to the designers of health promotion and preventive actions to better target the support offered to unemployed adults and their families.

1.5.1. Family relations

Family relations emerged as a significant moderator to the association between parental unemployment and related distress, and youth low well-being outcomes, in both the adult unemployed sample and the adolescent sample (empirical study 4 and 9). Similar results were found by other studies [12,60-62].

The findings can be explained in the light of the Family Stress Model, which suggests that altogether economic deprivation, parental distress and change in family relations affect adolescents' well-being [24]. However, unlike the Family Stress Model, in both samples (adult and adolescents) the moderation effect was not modified by financial deprivation. Although the results were somewhat unexpected, we found other studies showing similar findings; parental distress associations with youth low well-being outcomes were independent, at least directly, of economic deprivation [55,63-65]. Several explanations can be hypothesised. For instance, because economic deprivation in this study was a subjective measure, the participants may have reported their real financial situation as better than it objectively was due to societal stigma. Other studies have shown the presence of such report bias [51]. It can also be the case that additional social variables (e.g. good coping skills for handling the job loss and good relation skills) might help explain better than financial deprivation this complex association between parental distress and youth emotional well-being in an unemployment situation.

Overall, the results help to refine our understanding of the transmission of distress across parents and young people during family unemployment, highlighting the protective moderation role of positive family relations which seems to go beyond the financial situation of the family; and give support to the argument that parental unemployment also entails important social consequences (rather than solely financial) that should be considered when addressing, researching and supporting jobless families and their children.

1.5.2. Gender and socioeconomic position

Findings from the empirical study 8 showed that, medium and low socioeconomic positions were highly associated with negative emotional well-being during parental unemployment among girls; while in boys such factor was not statistically significant.

Furthermore, lower family life satisfaction was negatively related to girls' emotional well-being during parental unemployment but not to boys'. These results suggest that in girls more factors correlate with well-being during parental unemployment compared to boys. Thus, the findings seem to suggest that adolescent girls may be more vulnerable to emotional distress during parental unemployment and that poor socioeconomic and stressful family environments may add to the variance of such association. Other research studies have found that girls from low socioeconomic background and in stressful family contexts (e.g. unemployment in the family) tend to report lower mental well-being in comparison to boys [66,67]. A possible explanation for the gender differences found in the present study may also rely on the gender inequality gap found in Portugal [28], since evidence has indicated that gender differences in psychological complaints is stronger in countries where the gender development index is lower [68].

1.5.3. Parents' gender

When asked about their emotional well-being related specifically to maternal and paternal unemployment, more than half of the Portuguese young people said that having an unemployed father affected them negatively, whereas having an unemployed mother did not (empirical study 8). Prior studies confirm that the effect of mothers' joblessness on youth well-being is less negative than that of the fathers [69,70]. It could be the case that mothers while jobless spend more time taking care of children compared to fathers [40]. In fact there is evidence showing that, in general, fathers' involvement in caring for children does not change in relation to their employment status [41]. Taken together, the findings strongly suggest that adolescents' emotional well-being may be more negatively affected by paternal unemployment than by maternal unemployment.

1.5.4. Age

In terms of demographic factors, age was found to be an important determinant in the association between parental employment status and youth well-being. The results from empirical study 6 suggested that young and middle-aged adolescents (12 and 14 year-olds) with unemployed fathers reported higher frequency of low mood and irritability than the older adolescents. Maternal joblessness was only associated with irritability and feeling low among the middle-aged adolescents (14 years old). Thus, middle-aged adolescents seemed to be negatively affected by both maternal and paternal joblessness alike, while

younger or older adolescents seem to be more affected by paternal joblessness (empirical study 6).

Nevertheless, results from our empirical study 8, based on stratified analysis by adolescents' gender and parents' gender, showed that older boys had a greater chance of reporting high negative emotional well-being in relation to paternal unemployment compared to younger boys; and older girls were more likely to report feeling negatively affected by their mother's unemployment when not adjusted for other variables. Thus, older adolescents, particularly boys, may have better sense of the real difficulties parents face, especially if it is their same-gender role model who is unemployed. Nevertheless, the age factor seems stronger for boys. Gender maturation processes may not be a reasonable explanation for this difference, because both boys and girls report diminished closeness with their parents along with age [71]. Therefore, a possible explanation for these differences may rely on the traditional gender roles still present in Portugal [27]. On one hand, girls may have a weaker labour force attachment due to a traditional view of men being the "workers" and women being "caretakers" [57]. On the other hand, compared to their younger counterparts, older boys get to be more worried, for instance with future expenses and their own work ambitions, as a process of fulfilment of their social role [72]. This would explain why the effects of parents' unemployment are more likely to stay stable with age in girls but not in boys. Nevertheless, we should not rule out the existence of differences in terms of social roles regarding urban and rural contexts that due to sample representativeness issues we were unable to control for. Therefore, further investigation is needed to improve knowledge about age differences effects of parental unemployment on sons and daughters well-being outcomes.

1.6. Possible effects of public policies and programmes

The association between youth mental well-being outcomes and parental unemployment (empirical study 11) that was opportunistically observed in two countries with different unemployment rates, labour market policies and parental support programme availability (Portugal and Scotland) showed that: whilst in the Scottish sample living with unemployed parents was only associated with low life satisfaction, in the Portuguese students' sample there was a negative association between parental unemployment in more than one well-being indicator (life satisfaction and subjective health complaints). The findings were somewhat expected since evidence shows that populations from countries

with lower unemployment rates, active labour market policies, together with improved social welfare protection, tend to report better health status [73].

Overall, the results from both countries reinforced the indication that young people living with unemployed parents report poorer well-being outcomes than those with employed parents. Furthermore, the findings support the need to improve protection of young people living in families where unemployment exists, particularly in Portugal given the additional structural risk factors, such as higher unemployment rate, little implementation of active labour market measures and family support programmes.

2. STUDY'S LIMITATIONS AND STRENGTHS

This research work has a number of theoretical and methodological strengths that support the validity of its results for the contribution to the scientific knowledge about the mental well-being related to the unemployment experience across life stages and during the context of economic recession. For instance, the aims were underpinned by well-established theoretical models, namely Jahoda's latent-deprivation model [44], Fryer and Payne's Agency Restriction Model [45,74], as well as the Family Stress Model applied to the family unemployment context [75]. Nonetheless, the most important feature of the thesis is that altogether, and through the lens of two key informants, the findings enabled a deeper understanding of how unemployment is experienced by job seeking adults, parents and children in a country vastly hit by debt and financial crisis and with a high unemployment rate. Thus, this thesis' set of findings gives an important contribution to a topic where evidence is not yet very abundant.

In addition, the empirical results show the heterogeneity of the needs expressed by people experiencing unemployment and this may allow a better design of specific interventions aimed at supporting unemployed people and their families to better cope with the situation.

The interpretation of the research findings should also consider the major methodological limitations that are next highlighted.

2.1. Self-report bias

Empirically, the research work was based on self-report measures. Additionally, unemployed parents also provided the reports about children's emotional adjustment to their unemployment. Whilst there is evidence stating that parents and children diverge in self-report data [76], there is also evidence showing that both parents and their children usually tend to perceive health-related quality of life consistently [77]. Only capturing the perspectives of two members of the same family (parent and child) would allow confirming which of the affirmations is the most correct.

In addition, from a young person's perspective it seems difficult to objectively know if parents are jobless because they voluntarily choose to stay at home or if they are actually seeking a job, and it might also be the case that parents do not disclose about their unemployment to children in order to protect them from worrying about the situation. Moreover, due to social stigma in relation to unemployment some young people might not

feel comfortable sharing parental employment status information. Nevertheless, the findings presented in this thesis showed that parental unemployment is constantly negatively associated with youth well-being outcomes across all empirical studies and the findings were supported by other studies in this research area.

Despite the possible self-reported bias, it is important to state that the instruments used were methodologically sound to provide valuable insights (e.g. General Health Questionnaire-12; Latent and Manifest Benefits Scale; HBSC standardized variables) [78-80].

2.2. Causality bias

Causal inferences are limited to the cross-sectional designs of the studies. For instance, the high prevalence of psychological distress, low life satisfaction and deprivation (latent and manifest) among the unemployed sample might be correlated with factors other than unemployment itself. For instance, it is known that people suffering from mental health problems have higher odds of becoming unemployed during economic recession impairing their mental health even further [81]. In addition, it could be the case that parental distress and changed family relations are affected by youth problems and not the other way around. Nevertheless, the qualitative research findings about what changes in the life of families when experiencing unemployment provided strength to the direction of the results as well as most longitudinal studies included in the systematic literature review [82].

2.3. Representativeness

The unemployed participants were approached directly in their civil parishes because they were benefit claimants and it was part of their commitment with the state to present evidence of active job search activities to their local authorities. Thus, generalization of findings may be questionable due to the convenience sampling method. For instance, it can be the case that these unemployed people are more protected (at least financially) than those who are not entitled to benefits. Related to the convenience sampling technique, and because only people who volunteered answered the survey, it is possible that a self-selection issue is present since those who were highly stressed may be underrepresented because they may be less likely to be willing to participate in the study and thus the mean outcomes presented in this thesis could have been somewhat attenuated.

The sample has a high number of first-time unemployed. This could probably be related to the increase in the unemployment rate as a consequence of the recession during the year of data collection [83]. As a result, it is possible that the inclusion of some of these participants, who wouldn't normally be unemployed during other economic cycles, has an effect on the correlation between unemployment and mental health outcomes. We believe, however, that this phenomenon increases the strength of study by outnumbering the unemployed individuals who may have lost their jobs due to the economic cycle of contraction and not so much because of personal factors (e.g. prior mental disorder).

In contrast to the unemployed adult study, however, the HBSC study does not have many sample representativeness issues. It is a study with a nationwide representative sample that follows a strict international protocol [80,84] and sampling is done in randomly selected clusters (schools and classrooms).

Notwithstanding the aforementioned limitations, this study brings major contributions. Firstly, the development and inclusion of new measures to assess the effects of parental unemployment on youth mental well-being as well as a scale to measure the repercussions of the economic recessions in the national Health Behaviour in School-aged Children study. Although these measures need further validity testing, they look promising and have already inspired other countries in the HBSC network that were also hit by the recession (e.g. Spain and Greece) to adapt and use it in their own national surveys [21]. Secondly, this research work provides essential national epidemiological information about young people's mental well-being in the context of parental unemployment that may help to identify subgroups that are most likely to be affected. Such knowledge is instrumental to better design actions to improve the contexts in which youth develop and to achieve consequent reduction of health inequalities across the life span [85]. Thirdly, given the scarcity of available studies focusing on distress and deprivation factors among the unemployed population in the Portuguese context, this study brings innovation by focusing on job seekers, and particularly those that are parents, during the Portuguese context of economic recession period. Such findings are encouraging to continue further research, to improve awareness and investment in unemployment and family protection policies.

3. IMPLICATIONS FOR FUTURE RESEARCH

This research study revealed insights about how adults, parents and young people experience unemployment in terms of their mental well-being outcomes in a country severely hit by the economic recession. Given that little research [19,86] has been done on this topic in Portugal and in the specific context of economic recession, further studies are still required.

There are several lines of inquiry that future research may want to consider and explore in the future. For instance, to improve deeper knowledge about the effects of parental unemployment in young people, it would be useful to use a parallel multi-informant research design. This way we could have two versions of the same story (parents and their children) and would improve knowledge about the specific paths that explain the association between youth well-being and parental employment status. To address such issues and provide stronger inferences about the effects of parental unemployment on youth well-being, study designs that provide causal directionality (cohort studies) are therefore desirable. Nonetheless, these types of studies are costly and the country is facing economic constraints. Therefore, and considering that the HBSC study is conducted quadrennially and is readily available, repeated cross-sectional analyses using more than three time-points (before, during and after the onset of the recession) would allow further monitoring of young people living with unemployed parents during the economic recession period. Furthermore, even though the findings of this research study are related to a specific period of economic recession they lack to inform about the influence of structural factors related to the country's economy and health services. Thus, future studies may want to consider using multilevel analysis to adjust analysis for macro-level determinants (e.g. national unemployment rates, GDP and Gini Index).

4. IMPLICATIONS FOR PUBLIC POLICY

The economic recession may have decreased people's mental well-being, especially for those who lost their job and for their children. Nevertheless, protecting and improving mental health may be an important contributor to the recovery of the country's economy by improving individuals' fully participation and contribution to society – "*no wealth without mental health*" [87,88].

Available evidence shows that countries with good social protection seem to better shield people against the mental health risks related to economic contractions [4,73,89]. Additionally, there are already some cost-effective based recommendations of measures that could help decrease exposure and vulnerability to mental health risks during and after an economic recession [1,4]:

- **Improve health services capacity** to respond to the mental health demands that are likely to increase as a result of the challenges of the economic recession. This could be achieved by switching the investment to strengthen access and responsiveness of primary care services and community-based mental health services. Moreover, developing an effective interface between health, welfare and economic policies is crucial to better protect the most vulnerable groups (e.g. unemployed, families, people facing debts);
- **Improve social and labour market policies**. There is evidence that investment in active labour market programmes (activation strategies that improve access to training and skills development, certification, job-matching, and career guidance services to job seekers) can help reduce unemployment rates [90] and can be protective of people's health during economic recessions [73];
- **Implement and improve access to psychosocial interventions.** Based on the idea of providing alternative sources of manifest and latent functions of work (e.g. time structure and financial security) to prevent and reduce the negative outcomes of job loss on mental health and promote high-quality reemployment. Some countries (e.g. Ireland, Finland and Netherlands) have already implemented, with promising results, group-based psychological and educational intervention programmes to assist people during an unemployment situation - JOBS programme [91-94]. Overall, the interventions aim at limiting periods of inactivity and helping coping with job loss related distress and lifestyle changes;

- **Investing in family support programmes**. Support the well-being of parents and their children may help reduce the risks of transmission of poor mental health [73] and low development outcomes with long-term consequences throughout young people's life course [85]. Such programmes may bring important social and economic gains to countries [95];
- **Strengthen social capital.** Empowering people and engaging communities may increase better knowledge about their unmet needs and local socioeconomic stressors. This knowledge helps build the case for support and action at the local level and is extremely important when resource allocation needs to be maximised and actions need to be cost-effective [96]. Social networks and groups can also constitute a safety net against the health risks posed by economic recessions and unemployment, and may help provide innovative responses to socioeconomic thought times;
- **Develop debt relief and financial counselling programmes.** The availability of such programmes during recessions is instrumental to protect mental health by diminishing economic deprivation and financial stress [97];
- **Increase regulation of the marketing of alcoholic beverages, restrictions on their availability, and taxation.** Distressed people may turn to alcohol to cope. Thus, restricting access to alcohol may help reduce its consumption and the associated health risks (e.g. alcohol-related disorders) [98]. Nevertheless, this hypothesis requires further investigation in the Portuguese context because of the tradition of home distilling practices. We suspect that increasing the price of alcohol would possibly lead to an increase of home making alcohol (especially in rural areas) which could be even more harming since it lacks control.

In Portugal, the provision of such support measures would possibly decrease the mental health costs of unemployment across the life stages, while improving the development of a fairer society and a stronger economy.

5. CONCLUSION

"No country, however rich, can afford the waste of its human resources.
Demoralization caused by vast unemployment is our greatest extravagance."
Franklin D. Roosevelt, September 30, 1934

The work conducted as part of this thesis aims to broaden evidence in the field of the associations between unemployment and mental well-being of individuals and their children, in the unique context of economic recession.

Whilst unemployment is a complex phenomenon, this research and set of findings provide indications that, overall, unemployed adults and their children experience low well-being. More specifically, the findings allowed the identification of factors that predict significantly worse well-being outcomes among adult job seekers (gender, age, education, partnership, parenthood, financial deprivation and time structure) and among children with unemployed parents (gender, age, family relations, and socioeconomic position). In addition, findings also highlighted that family relational factors seem to moderate the effects of parents unemployment and related distress on young people's well-being.

This set of findings is important because mental health and well-being are fundamental characteristics of collective and individual positive prospects in terms of health, human rights and wealth [88,99]. In addition, the findings inform about subgroups that are especially vulnerable in terms of mental health and such information is useful for policy makers since Portugal is among the top 5 European countries with the highest unemployment rates (considering only the percentage reported by official statistics) and resources to support unemployed individuals and their families are scarce.

The cost of inaction, besides being a moral case, can potentially increase health and social demands, the loss of productivity and consequent loss of government revenues. Because children are also affected by their parents' unemployment, failing to protect them may mean a perpetuated cycle of health and welfare costs with future ill-adults.

Therefore, the set of results of this thesis strongly indicate that Portugal would benefit by placing the mental well-being of unemployed adults and their children among the priorities in health, social and economic policy development agendas. Actions should be facilitated to target the reduction of levels of unemployment and the improvement of the living standards of the unemployed people and their families by addressing their specific needs. There is well-established evidence showing these programs are feasible, relatively affordable and cost-effective. Nevertheless, these programmes should neither be imposed

upon anyone nor function as coercive mechanisms; however, they should be made available and should constitute a meaningful and inclusive method of support.

Achieving such a goal will require coordinated actions between the government, job centres, municipal and local authorities, health services, non-governmental and social organizations and the community. And despite the limited resources that Portugal faces as a result of the economic constraints, the state should try to balance appropriate resources to achieve higher population mental health and well-being and protect those at risk. These are desirable assets of developed societies, and for wealthy and more productive countries.

This thesis concludes with a quote from the United Nations' declaration on human rights that reaffirms its statement:

'Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment or other lack of livelihood in circumstances beyond his control.' - Article 25(a) of the United Nations Universal Declaration on Human Rights (UN, 1948).

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CHAPTER V - APPENDICES

APPENDIX I: Questionnaire - Psychosocial impact of unemployment on the family and the individual in times of economic crisis

Impacto Psicossocial do Desemprego na Família e no Indivíduo em tempos de Crise Económica

Exmo. (a). Sr.(a).

Cerca de 18% da população portuguesa (quase 1 milhão de pessoas) está em situação de desemprego.

Portugal conta com a 3ª maior taxa de desemprego da União Europeia.

O período que atravessamos é de Crise Económica.

Apesar de vários estudos internacionais referirem que tais fatores causam múltiplos impactos na sociedade, na família e no indivíduo, poucos são os estudos realizados em Portugal.

Assim, no âmbito de Doutoramento na Faculdade de Ciências Médicas da Universidade Nova de Lisboa, esta é uma investigação sobre o impacto psicossocial da situação de desemprego na família e nos indivíduos.

Pretendemos compreender quais os efeitos da situação de desemprego no comportamento e bem-estar psicológico das pessoas, bem como na qualidade das relações pais-filhos.

A sua colaboração é fundamental.

Convidamo-lo(a) a partilhar as suas experiências através da resposta ao questionário que se segue.

O questionário é **anónimo e confidencial**. Não há respostas certas ou erradas. A melhor resposta é a sua opinião sincera e pessoal.

É **muito simples** e **muito importante**.

Ao responder contribuirá para um maior conhecimento desta situação, o que permitirá delinear soluções para minimizar os seus possíveis efeitos negativos.

OBRIGADA

☐ TOMEI CONHECIMENTO

DATA ……/……/…..

PARTE I

As próximas questões são relativas aos seus dados sociodemográficos. Pedimos-lhe que responda a todas as questões de forma sincera e espontânea, seguindo as instruções.

1. Sexo:
☐Masculino ☐Feminino

2. Idade: _____anos

3.Nacionalidade:
☐Portuguesa
☐Outra_____

4. Qual o nível de escolaridade que completou?

☐Menos que o 1º Ciclo (menos que a 4ª classe)
☐1º Ciclo (4ª classe)
☐2º Ciclo (6º ano/ antigo 2º ano)
☐3º Ciclo (9º ano/ antigo 5º ano)
☐Secundário (12º ano)
☐Bacharelato
☐Licenciatura
☐Outro.
Qual?_____

5. Estado Civil
☐Solteiro(a)
☐Casado(a)/União de facto
☐Divorciado(a)/Separado(a)
☐Viúvo(a)

6. Com quem vive? (Por favor, escolha uma ou várias opções)
☐Sozinho(a)
☐Marido/Esposa/Companheiro(a)
Qual a situação de emprego dele(a)?
☐Empregado(a)
☐Desempregado(a)
☐Filho(a)/s
☐Outro(a)/s. Quem?_____

7. Tem filhos a cargo?
☐**SIM.** Quantos?_____
☐**NÃO**

8. É a primeira vez que está desempregado(a)?
☐**SIM**
☐**NÃO**

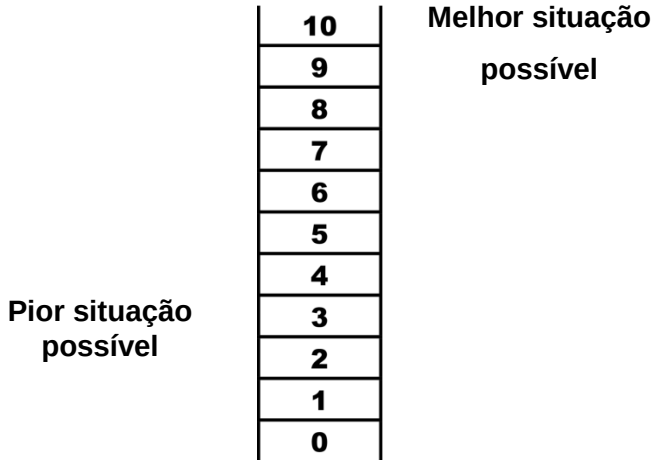
9. Há quanto tempo está desempregado(a)?

☐Há **menos de 1 ano**
☐Há 1 ano ou mais mas há **menos de 2 anos**
☐Há **mais de 2 anos**

10. Qual foi a sua última atividade profissional/trabalho?

_____

11. Imagine que esta escada representa a sua vida. A base da escada (0) representa "a pior situação possível" e o topo da escada (10) representa "a melhor situação possível". **Neste momento, como <u>classifica a sua situação atual de desemprego</u>** (assinale com 1 círculo)



12. Escreva as 3 primeiras palavras que lhe surgem quando pensa em "Crise Económica":

_____ ; _____; _____.

PARTE II

Para responder às próximas questões, **Siga por favor as INSTRUÇÕES:**

1. Em cada questão, **LEIA SEMPRE A FRASE DA COLUNA A E A FRASE DA COLUNA B**
2. Decida qual a **frase com que mais se identifica**;
3. **ASSINALE (X) APENAS UM NÚMERO de 1 a 7** que será aquele que melhor corresponde àquilo que tem sentido nos últimos tempos, tendo em atenção que:

- Se se identificar com a **frase da coluna A**: assinale um número **mais próximo do 1**.
- Se se identificar com a **frase da coluna B**: assinale um número **mais próximo do 7**.

Embora algumas questões lhe possam parecer repetitivas **é muito importante que complete todo o questionário**.

COLUNA A		**COLUNA B**
Costumo ter demasiado tempo livre durante o dia	① ② ③ ④ ⑤ ⑥ ⑦	**Não costumo ter demasiado** tempo livre durante o dia
Quase sempre sinto que ocupo um lugar necessário na sociedade	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca sinto** que ocupo um lugar necessário na sociedade
Com os meus rendimentos **costumo poupar** dinheiro	① ② ③ ④ ⑤ ⑥ ⑦	Com os meus rendimentos **quase nunca poupo** dinheiro
Habitualmente sinto que sou uma pessoa importante para os meus amigos	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca sinto** que sou uma pessoa importante para os meus amigos
Consigo sempre fazer todas as tarefas que tenho para executar	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca consigo** fazer todas as tarefas que tenho para executar
Consigo manter um bom equilíbrio entre as minhas responsabilidades e o meu tempo livre	① ② ③ ④ ⑤ ⑥ ⑦	**Não consigo manter** um bom equilíbrio entre as minhas responsabilidades e o meu tempo livre
Conheço frequentemente novas pessoas	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca conheço** novas pessoas
Durante a maior parte do dia **não tenho** coisas para fazer a horas certas	① ② ③ ④ ⑤ ⑥ ⑦	Durante a maior parte do dia **tenho** coisas para fazer a horas certas
Sinto que o papel que desempenho na sociedade **tem valor**	① ② ③ ④ ⑤ ⑥ ⑦	Sinto que o papel que desempenho na sociedade **não tem valor**

COLUNA A		**COLUNA B**
Os meus rendimentos **costumam permitir** que faça as coisas que desejo	① ② ③ ④ ⑤ ⑥ ⑦	Os meus rendimentos **quase nunca permitem** que faça as coisas que desejo
Participo regularmente em atividades sociais com pessoas minhas conhecidas	① ② ③ ④ ⑤ ⑥ ⑦	**Não costumo participar** regularmente em atividades sociais com pessoas minhas conhecidas
Os meus amigos **costumam valorizar** a minha companhia	① ② ③ ④ ⑤ ⑥ ⑦	Os meus amigos **quase nunca valorizam** a minha companhia
Contribuo bastante para a comunidade onde vivo	① ② ③ ④ ⑤ ⑥ ⑦	**Não contribuo quase nada** para a comunidade onde vivo
Costumo sentir que o tempo passa devagar	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca sinto** que o tempo passa devagar
Consigo sempre fazer tudo o que tenho para fazer	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca consigo** fazer tudo o que tenho para fazer
Costumo sentir necessidade de ter mais coisas para fazer para preencher os meus dias	① ② ③ ④ ⑤ ⑥ ⑦	**Não costumo sentir necessidade** de ter mais coisas para fazer para preencher os meus dias
Os meus dias estão normalmente **bem organizados**	① ② ③ ④ ⑤ ⑥ ⑦	Os meus dias estão normalmente **pouco organizados**
Os meus rendimentos **costumam permitir** que faça planos para o futuro	① ② ③ ④ ⑤ ⑥ ⑦	Os meus rendimentos **quase nunca permitem** que faça planos para o futuro
Costumo ter muitas oportunidades para conviver com pessoas	① ② ③ ④ ⑤ ⑥ ⑦	**Não costumo** ter muitas oportunidades para conviver com pessoas
Normalmente mantenho-me ocupado durante a maior parte do dia	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca me mantenho ocupado** durante a maior parte do dia
Os meus rendimentos **permitem** que viva tão bem como grande parte dos meus amigos	① ② ③ ④ ⑤ ⑥ ⑦	Os meus rendimentos **não permitem** que viva tão bem como grande parte dos meus amigos
As pessoas à minha volta **costumam dar-me valor**	① ② ③ ④ ⑤ ⑥ ⑦	As pessoas à minha volta **quase nunca me dão valor**
Costumo não ter nada para fazer	① ② ③ ④ ⑤ ⑥ ⑦	**Costumo ter coisas** para fazer
Costumo sair e encontrar-me com pessoas	① ② ③ ④ ⑤ ⑥ ⑦	**Não costumo** sair e encontrar-me com pessoas

COLUNA A		**COLUNA B**
As pessoas em geral **respeitam-me**	① ② ③ ④ ⑤ ⑥ ⑦	As pessoas em geral **não me respeitam**
Os meus rendimentos **costumam permitir** que eu tenha atividades de ocupação dos tempos livres com a frequência que desejo	① ② ③ ④ ⑤ ⑥ ⑦	Os meus rendimentos **quase nunca permitem** que eu tenha atividades de ocupação dos tempos livres com a frequência que desejo
Participo regularmente em atividades sociais com outras pessoas	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca participo** em atividades sociais com outras pessoas
Existe demasiado tempo morto no meu dia-a-dia	① ② ③ ④ ⑤ ⑥ ⑦	**Não existe** tempo morto no meu dia-a-dia
Muitas vezes sinto que dou um contributo importante à sociedade em geral	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca sinto** que dou um contributo importante à sociedade em geral
Não tenho oportunidades de encontrar pessoas minhas amigas	① ② ③ ④ ⑤ ⑥ ⑦	**Tenho muitas oportunidades** de encontrar pessoas minhas amigas
Sinto frequentemente que tenho muito tempo por minha conta	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca sinto** que tenho muito tempo por minha conta
Geralmente sinto que faço completamente parte da minha comunidade	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca sinto** que faço completamente parte da minha comunidade
Geralmente tenho dinheiro suficiente para comprar “mimos” para mim próprio/a	① ② ③ ④ ⑤ ⑥ ⑦	**Quase nunca tenho dinheiro** suficiente para comprar “mimos” para mim próprio/a
Costumo passar muito tempo com outras pessoas	① ② ③ ④ ⑤ ⑥ ⑦	**Não costumo** passar muito tempo com outras pessoas

Latent and Manifest Benefits Scale (LAMB-*Scale*)

(Muller, Creed, Waters & Machin, 2005; Sousa-Ribeiro & Coimbra, 2007)

PARTE III

O conjunto de questões que vai responder pretende saber como as pessoas se têm **sentido nos últimos tempos,** relativamente aos acontecimentos de vida em geral. Por favor, responda a todas as questões, pondo uma cruz **X** na resposta que melhor se aplica a si.
Lembre-se que queremos informações sobre como se sente **no presente** ou como se tem sentido **recentemente**, e não sobre como se sentiu no passado.

Tendo em conta o que é o seu "costume"

Recentemente:

1. Tem conseguido concentrar-se no que faz?

Melhor que habitualmente ☐	Como habitualmente☐	Menos do que habitualmente ☐	Muito menos do que habitualmente ☐

2. Tem perdido muitas horas de sono por estar preocupado?

Não, de maneira nenhuma ☐	Como habitualmente☐	Mais do que habitualmente ☐	Muito mais do que habitualmente ☐

3. Tem sentido que tem um papel importante nas coisas em que se envolve?

Melhor que habitualmente ☐	Como habitualmente☐	Menos do que habitualmente ☐	Muito menos do que habitualmente ☐

4. Tem-se sentido capaz de tomar decisões?

Melhor que habitualmente ☐	Como habitualmente☐	Menos do que habitualmente ☐	Muito menos do que habitualmente ☐

5. Tem-se sentido constantemente sob pressão?

Não, de maneira nenhuma ☐	Como habitualmente☐	Mais do que habitualmente ☐	Muito mais do que habitualmente ☐

6. Tem sentido que não consegue ultrapassar as suas dificuldades?

Não, de maneira nenhuma ☐	Como habitualmente☐	Mais do que habitualmente ☐	Muito mais do que habitualmente ☐

7. Tem sentido prazer nas suas atividades diárias?

Melhor que habitualmente☐	Como habitualmente☐	Menos do que habitualmente ☐	Muito menos do que habitualmente ☐

8. Tem sido capaz de enfrentar os seus problemas?

Melhor que habitualmente☐	Como habitualmente☐	Menos do que habitualmente ☐	Muito menos do que habitualmente ☐

9. Tem-se sentido triste ou deprimido/a?

Não, de maneira nenhuma ☐	Como habitualmente☐	Mais do que habitualmente ☐	Muito mais do que habitualmente ☐

10. Tem perdido confiança em si próprio/a?

Não, de maneira nenhuma ☐	Como habitualmente☐	Mais do que habitualmente ☐	Muito mais do que habitualmente ☐

11. Tem-se considerado uma pessoa sem valor?

Não, de maneira nenhuma ☐	Como habitualmente☐	Mais do que habitualmente ☐	Muito mais do que habitualmente ☐

12. Apesar de tudo, tem-se sentido razoavelmente feliz?

Melhor que habitualmente☐	Como habitualmente☐	Menos do que habitualmente ☐	Muito menos do que habitualmente ☐

QUESTIONÁRIO DE SAÚDE GERAL (GHQ-12 itens)

Desenvolvido por Goldberg, 1978 Traduzido e adaptado por Laranjeira, 2008

PARTE IV

As 3 questões que vai responder pretendem saber quais as necessidades de ajuda que tem sentido nos últimos tempos.
Por favor, responda a todas as questões, assinalando a resposta que melhor se aplica a si.

1. Ultimamente, tem sentido necessidade de falar com alguém sobre:

"nervos" ou problemas emocionais (seus ou dos seus filhos)

☐**SIM** ☐**NÃO**

problemas com álcool ou drogas (seus ou dos seus filhos)

☐**SIM** ☐**NÃO**

1.1 Se respondeu SIM a alguma das anteriores. Com quem já falou?

Sobre os seus problemas	**Sobre os problemas dos seus filhos**
☐Médico(a) de família ou de clínica geral	☐Médico/a de família ou de clínica geral
☐Psiquiatra	☐Psiquiatra
☐Outros médicos	☐Outros médicos
☐Psicólogo(a)	☐Psicólogo(a)
☐Assistente social	☐Assistente social
☐Outros profissionais de saúde mental (psicoterapeuta, enfermeiro de saúde mental)	☐Outros profissionais de saúde mental (psicoterapeuta, enfermeiro de saúde mental)
☐Enfermeiro(a)	☐Enfermeiro(a)
☐Técnicos dos Gabinetes de Inserção Profissional	☐Técnicos dos Gabinetes de Inserção Profissional
☐Farmacêutico(a)	☐Farmacêutico(a)
☐Padre ou outro orientador espiritual	☐Padre ou outro orientador espiritual
☐Profissionais de medicinas alternativas	☐Profissionais de medicinas alternativas
☐**Outro. Quem?**_____	☐**Outro. Quem?**_____
☐**Nenhum. Porquê?**_____	☐**Nenhum. Porquê?** _____

(WHO WMH-CIDI Section 23: Services)

1.2. Que tipo de soluções obteve? (podem ser várias)

☐ Medicação
☐ Aconselhamento
☐ Apoio psicológico/ consultas de psicologia/psicoterapia
☐ Orientação profissional/apoio social/apoio financeiro
☐ Outra. Qual?_____

1.3. No geral, ficou satisfeito(a) com as soluções que recebeu?

☐ Nada Satisfeito(a) ☐ Pouco Satisfeito(a) ☐ Satisfeito(a) ☐ Muito Satisfeito(a)

2. Na sua opinião, que importância tem o apoio psicológico numa situação de desemprego?

☐ Nada Importante ☐ Pouco Importante ☐ Importante ☐ Muito Importante

2.1.Porquê?_____

_____.

3. Comentários adicionais acerca da sua situação de desemprego.

Utilize o espaço abaixo para nos dizer, por exemplo, **o que tem feito para lidar** com a sua situação de desemprego, que **planos e expetativas** tem para o futuro, ou outros comentários.

_____

_____

_____

_____

_____

_____

_____.

FIM
Muito Obrigada

PARTE B

(Responda apenas se tem filhos entre os 10 e os 19 anos)

As próximas questões são relativas às suas **perceções enquanto pai ou mãe de um ou mais jovens entre os 10 e os 19 anos.**
Pretendemos saber quais os potenciais efeitos da situação de desemprego no bem-estar dos seus filhos e na vossa relação.
Pedimos-lhe que responda a todas as questões de forma sincera e espontânea, seguindo as instruções.

1. Quantos filhos tem entre os 10 e os 19 anos? _____.

2. Que idade têm o/s seu/s filho/s:

(Se tem **mais do que um filho/a entre os 10-19 anos,** por favor assinale com uma **X** apenas a **idade do filho mais velho e a idade do filho mais novo)**

2.1 Filho único ou mais velho	10	11	12	13	14	15	16	17	18	19
2.2 Filho mais novo	10	11	12	13	14	15	16	17	18	19

3. Qual o sexo do/s seu/s filho/s?*

3.1. Filho único ou mais velho
☐Masculino
☐Feminino

3.2. Filho mais novo
☐Masculino
☐Feminino

*(Para tornar mais simples a leitura e compreensão das questões vamos usar apenas a expressão –filho/s – quer se trate de menino ou de menina)

4. Numa escala de 0 a 10, onde **0 significa " a pior relação possível"** e **10 significa "a melhor relação possível"**

Classifique com um (X) a sua relação atual com o seu:

Filho único ou mais velho

Pior relação possível

10	**Melhor relação possível**
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	

Filho mais novo

Pior relação possível

10	**Melhor relação possível**
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	

5. Acha que o seu desemprego tem afetado a sua relação com os seus filhos?

☐ Nada ☐ Um pouco ☐ Bastante ☐ Muito

5.2. Tem afetado <u>para melhor</u> ☐

Tem afetado <u>para pior</u> ☐

5.3.Porquê?_____.

6. Numa escala de 0 a 10, onde **0 significa "nada disponível"** e **10 significa "muito disponível", como considera atualmente a sua <u>disponibilidade</u> para escutar e comunicar com:**

O seu filho único ou mais velho

Nada Disponível — **Muito Disponível**

10 9 8 7 6 5 4 3 2 1 0

O seu filho mais novo

Nada Disponível — **Muito Disponível**

10 9 8 7 6 5 4 3 2 1 0

7. Coloque uma ☒ para sinalizar, <u>quanto acha que sabe sobre</u>:

	Filhos	Não sei nada	Sei pouco	Sei muito	Não se aplica
Quem são os **amigos dos seus filhos**	**Único/ Mais velho**	☐	☐	☐	☐
	Mais novo	☐	☐	☐	☐
Como é que os seus **filhos gastam o dinheiro**	**Único/ Mais velho**	☐	☐	☐	☐
	Mais novo	☐	☐	☐	☐
Onde estão os seus **filhos depois da escola**	**Único/ Mais velho**	☐	☐	☐	☐
	Mais novo	☐	☐	☐	☐
Onde os seus filhos **vão sair à noite**	**Único/ Mais velho**	☐	☐	☐	☐
	Mais novo	☐	☐	☐	☐
O que fazem os seus filhos nos **tempos livres**	**Único/ Mais velho**	☐	☐	☐	☐
	Mais novo	☐	☐	☐	☐

(Parental monitoring scale HBSC/WHO)

8. Dá aos seus filhos algum dinheiro por semana/mês?

☐**SIM.**
☐**NÃO** (por favor, passe para a **pergunta 9**

8.2. Sente-se satisfeito(a) com a quantidade de dinheiro que dá aos seus filhos?

☐	☐	☐	☐
Nada Satisfeito(a)	Pouco Satisfeito(a)	Satisfeito(a)	Muito Satisfeito(a)

9. Na sua opinião, o desemprego tem afetado <u>negativamente</u> o bem-estar emocional dos seus filhos?

Filho único/mais velho				**Filho mais novo**			
☐	☐	☐	☐	☐	☐	☐	☐
Nada	Um pouco	Bastante	Muito	Nada	Um pouco	Bastante	Muito

Quais foram as maiores alterações?

Filho único/mais velho	**Filho mais novo**
☐ Está mais triste	☐ Está mais triste
☐ Está mais irritado ou de mau humor	☐ Está mais irritado ou de mau humor
☐ Está mais nervoso	☐ Está mais nervoso
☐ Com alterações do sono/apetite	☐ Com alterações do sono/apetite
☐ Com mais medos/preocupações	☐ Com mais medos/preocupações
☐ Anda mais vezes adoentado	☐ Anda mais vezes adoentado
☐ Convive menos na escola/colegas	☐ Convive menos na escola/colegas
☐ Convive menos com os amigos	☐ Convive menos com os amigos
☐ Está mais desinteressado pela escola	☐ Está mais desinteressado pela escola
☐ Está mais agressivo/mal comportado	☐ Está mais agressivo/mal comportado
☐ Tem piores notas	☐ Tem piores notas
☐ Outra. Qual?_____	☐ Outra. Qual?_____

9.3 Se notou <u>alterações positivas</u> nos seus filhos, quais foram?

_____.

10. Utilize este espaço para nos dizer como a sua situação de desemprego provocou <u>alterações na sua vida familiar</u> ou outros comentários adicionais relativos ao seu desemprego e à crise económica.

_____
_____
_____
_____.

FIM
Muito Obrigada

APPENDIX II: STUDY ETHICAL APPROVAL DECISION

ETHICS COMMITTEE
MEDICAL SCHOOL OF NOVA UNIVERSITY OF LISBON

Decisão final sobre o projecto "Mental Health, Employment Status and Parenthood: The Impact of the Economic Downturn on Portuguese Youth Mental Health"

A Comissão de Ética da NMS/FCM-UNL (CEFCM) decidiu, por unanimidade, aprovar o projeto de investigação intitulado "Mental Health, Employment Status and Parenthood: The Impact of the Economic Downturn on Portuguese Youth Mental Health" (nº37/2014/CEFCM), submetido pela Dra. Diana Frasquilho.

Lisboa, 31 de Julho de 2015

O Presidente da Comissão de Ética,

(Prof. Doutor Diogo Pais)

TO WHOM IT MAY CONCERN

The Ethics Research Committee of the NOVA Medical School/Faculty of Medical Sciences (Faculdade de Ciências Médicas da Universidade Nova de Lisboa) has unanimously approved the Project entitled "Mental Health, Employment Status and Parenthood: The Impact of the Economic Downturn on Portuguese Youth Mental Health" (nr.37/2014/CEFCM), submitted by Dr. Diana Frasquilho.

Lisbon, July 31th, 2015

The Chairman of the Ethics Research Committee,

(Prof. Doutor Diogo Pais)

Campo dos Mártires da Pátria, 130 | 1169-056 Lisboa | Portugal | T. +351 218 803 000 – Ext. 20447 E-mail cefcm@fcm.unl.pt

APPENDIX III: LISBON MUNICIPALITY AND CIVIL PARISHES COLLABORATION REQUEST LETTER

A/c Departamento de Desenvolvimento Social
Divisão de Cidadania e Inovação Social
Câmara Municipal de Lisboa

Assunto: Colaboração com a investigação "Impacto Psicossocial do Desemprego no Individuo e na Família em tempos de Crise Financeira"

Exma. Sr.ª Dr.ª _,

Agradeço desde já o interesse manifestado em colaborar na Investigação de Doutoramento da Faculdade de Medicina da Universidade Nova de Lisboa, intitulado **"Impacto Psicossocial do Desemprego no Individuo e na Família em tempos de Crise Financeira".**

O estudo é financiado pela Fundação para a Ciência e Tecnologia e orientado pela Professora Dra. Margarida Gaspar de Matos (coordenadora do projeto *Aventura Social*) e pelo Professor Dr. Caldas de Almeida (diretor da Faculdade de Ciências Médicas da Universidade Nova de Lisboa).

Tendo em conta que o desemprego é um fenómeno contemporâneo e em crescimento exponencial, com impactos inequívocos na economia e na sociedade, pretendo estudar quais os seus efeitos ao nível individual e familiar.

A **amostra deste estudo** são os adultos que se encontrem em situação de desemprego e que, beneficiando de subsídio de desemprego, tenham que se apresentar às Juntas de Freguesia do Município e ou Gabinetes de Inserção Profissional (GIPs) de 15 em 15 dias (≈1000 pessoas).

A **recolha de dados** consistirá na administração de um questionário sociodemográfico e de avaliação dos efeitos psicossociais do desemprego, aos indivíduos que se dirijam aos GIPs e que voluntariamente queiram participar no estudo.

Os resultados deste estudo permitirão avaliar **quais as necessidades psicossociais desta população e suas famílias**, que muitas vezes podem apresentar-se como fatores cruciais para reencontrar novo trabalho, e **quais as soluções que podem ser implementadas** para colmatar as necessidades encontradas.

Contando com a **Vossa importante colaboração** e na expectativa de proporcionar um acervo informativo útil para a autarquia, solicito o acesso à população pretendida. Concretamente, no que se refere à Câmara Municipal de Lisboa, seria imprescindível o envio de um pedido de colaboração às Juntas de Freguesia do Município e/ou aos Gabinetes de Inserção Profissional.

O anonimato e a confidencialidade dos resultados serão garantidos e a Vossa colaboração será fundamental para a realização do estudo.

Manifesto a minha inteira disponibilidade para qualquer esclarecimento adicional em reunião a agendar.

Desde já grata pela atenção e disponibilidade.

Melhores cumprimentos,

Diana Frasquilho

Exmo.(a). Sr.(a). Dr.____
Responsável pelo Gabinete de Inserção Profissional da Junta de Freguesia_____,

Assunto: Colaboração na investigação "Impacto Psicossocial do Desemprego no Individuo e na Família em tempos de Crise Financeira"

O nosso contacto surge após o **interesse manifestado pela Divisão de Acção Social da Câmara de Lisboa em que o vosso Gabinete colabore na Investigação** de Doutoramento da Faculdade de Medicina da Universidade Nova de Lisboa, intitulado **"Impacto Psicossocial do Desemprego no Individuo e na Família em tempos de Crise Financeira"**. O estudo é financiado pela Fundação para a Ciência e Tecnologia e orientado pela Professora Dra. Margarida Gaspar de Matos (coordenadora do projeto Aventura Social) e pelo Professor Dr. Caldas de Almeida (diretor da Faculdade de Ciências Médicas da Universidade Nova de Lisboa).

Tendo em conta que o desemprego é um fenómeno contemporâneo e em crescimento exponencial, com impactos inequívocos na economia e na sociedade, pretendemos estudar quais os seus efeitos ao nível individual e familiar. Após reunião com a Dr___no passado mês de Fevereiro 2013, ficaram especificadas e acordadas as seguintes características do estudo:

- a recolha de dados consistirá na administração de um questionário sociodemográfico e de avaliação dos efeitos psicossociais do desemprego pela responsável do estudo, aos indivíduos que se dirijam ao GIP e que voluntariamente queiram participar no estudo.

-uma amostra de aprox. 500 adultos que se encontrem em situação de desemprego e que tenham que se apresentar aos Gabinetes de Inserção Profissional (GIPs) de 15 em 15 dias.

A responsável do estudo compromete-se:
- a realizar as atividades que estão supracitadas (nomeadamente a administração do questionário);
- a manter o anonimato e confidencialidade dos dados;

Note que os resultados deste estudo permitirão avaliar quais as necessidades psicossociais desta população e suas famílias (que muitas vezes podem apresentar-se como fatores cruciais para reencontrar novo trabalho) bem como as soluções que podem ser implementadas para colmatar as necessidades encontradas.

Contando com a **Vossa importante colaboração** e na expectativa de proporcionar um acervo informativo útil para a autarquia e para o Vosso GIP, solicito o acesso à população pretendida para administração dos questionários. Concretamente, no que se refere ao GIP, seria imprescindível que formalizasse o Vosso conhecimento e aval quanto ao projeto de investigação.

Manifesto a minha inteira disponibilidade para qualquer esclarecimento adicional em reunião a agendar.

Desde já grata pela atenção e disponibilidade.

Melhores cumprimentos,

Diana Frasquilho

APPENDIX IV: PERMISSION TO COLLECT DATA FROM LISBON MUNICIPALITY AND CIVIL PARISHES

Data: 15 de Fevereiro de 2013 á28 18:36
Assunto: Impacto Psicossocial do Desemprego no Individuo e na Familia em tempos de Crise Financeira
Para: "dianafguerreiro@gmail.com" <dianafguerreiro@gmail.com>

Boa tarde Drª Diana Frasquilho expus superiormente a situação do estudo.
Foi aceite e decidido que lhe enviaríamos diretamente os contactos das Juntas de freguesia que têm GIP's de forma a que possa fazer um contacto direto.

Juntas de Freguesia Lisboa com GIP:

Campolide
- gip.campolide@gmail.com

S.F.Xavier
- gip.jfsfranciscoxavier@gmail.com

S.J.Deus
- gip.jfsaojoaodeus@gmail.com

Benfica
- gipboavista@gmail.com

S.João - Espaço Construir o Futuro
- geral@jf-saojoao.pt

Caso tenha alguma dúvida não hesite em contactar.
Com os melhores cumprimentos,

Cláudia Prazeres
Chefe de Divisão

Câmara Municipal de Lisboa
Direção Municipal de Habitação e Desenvolvimento Social
Departamento de Desenvolvimento Social
Divisão de Cidadania e Inovação Social
Campo Grande, 25, 7º A | 1749-099 Lisboa
Telefone: (+351) 21 798 81 56 | Fax: (+351) 21 817 12 52
www.cm-lisboa.pt | E-mail: claudia.prazeres@cm-lisboa.pt

Campolide civil parish

Gmail by Google

Colaboração no Estudo: Impacto Psicossocial do Desemprego

Gabinete Inserção Profissional- Junta de Freguesia de Campolide <gip@jf-campolide.pt>
Para: Diana Frasquilho Guerreiro <dianafguerreiro@gmail.com>

Boa tarde,

Venho por este meio confirmar que poderá iniciar a recolha na próxima semana, confirme-me o dia para que possa dar a indicação nos serviços.

Atenciosamente,

São João civil parish

De: **Junta de Freguesia de São João GIP** <gipsaojoao@gmail.com>
Data: 17 de Abril de 2013 às 14:47
Assunto: Faculdade de Medicina-Colaboração no estudo-Impacto Psicossocial do Desempregado.
Para: Diana Frasquilho Guerreiro <dianafguerreiro@gmail.com>
Cc: Pelouro Acção Social <accao.social@jf-saojoao.pt>, "Dr. Diogo Amaral" <diogoamaral87@gmail.com>

Boa tarde Dra. Diana Frasquilho,

Com a devida autorização do responsável pelo Pelouro da Ação Social, venho pelo presente confirmar o dia proposto.

Ficamos a aguardá-la.

Com os melhores cumprimentos,

Elvira Mendes
Junta de Freguesia São João / Espaço Construir o Futuro

Benfica civil parish

Colaboração no Estudo - Impacto Psicossocial do Desemprego

Paula Grosso <chefeseccao@jf-benfica.pt>
Para: Diana Frasquilho Guerreiro <dianafguerreiro@gmail.com>

Dra. Diana,

Contaremos então com a vossa presença nos dias indicados, sem qualquer problema.

Sempre ao dispor, enviamos os melhores cumprimentos

Paula Grosso | Coordenadora Técnica

Av. Gomes Pereira nº 17 | 1549-019 Lisboa
Tel: 217 123 000 | Fax: 217 123 006
www.jf-benfica.pt

São João de Deus civil parish

Impacto Psicossocial do Desemprego em tempos de Crise Financeira

Gabinete de Inserção Profissional de São João de Deus <gip.jfsjd@gmail.com>
Para: Diana Frasquilho Guerreiro <dianafguerreiro@gmail.com>

Boa tarde,

Cá a esperamos para essa árdua tarefa.

Boa Páscoa

São Francisco de Xavier civil parish

Faculdade de Medicina - Impacto do Desemprego

GIP Junta Freguesia S. Francisco Xavier <gip.jfsfranciscoxavier@gmail.com>
Para: Diana Frasquilho Guerreiro <dianafguerreiro@gmail.com>

Bom dia Diana,

Por nós não existe qualquer impedimento.

Cumprimentos,

Ana Margarida Barros
(Psicóloga GIP S. Francisco Xavier)

APPENDIX V: ADDITIONAL EXPLORATORY RESULTS

Assessing the need of psychological support in a sample of unemployed adults from Lisbon in a context of economic recession

Diana Frasquilho • Margarida Gaspar de Matos • Tânia Gaspar • José Miguel Caldas de Almeida

Background: Portugal is facing an economic recession since 2008-09 and one of the highest unemployment rates in Europe. It is known that unemployed people tend to report lower psychological well-being, and are especially vulnerable during crisis[1,2].

Objectives: This study aims to examine the proportion of people reporting the need of help to manage emotional problems during unemployment, the reported value of psychological support during the unemployment situation, and the proportion of people actually seeking professional support.

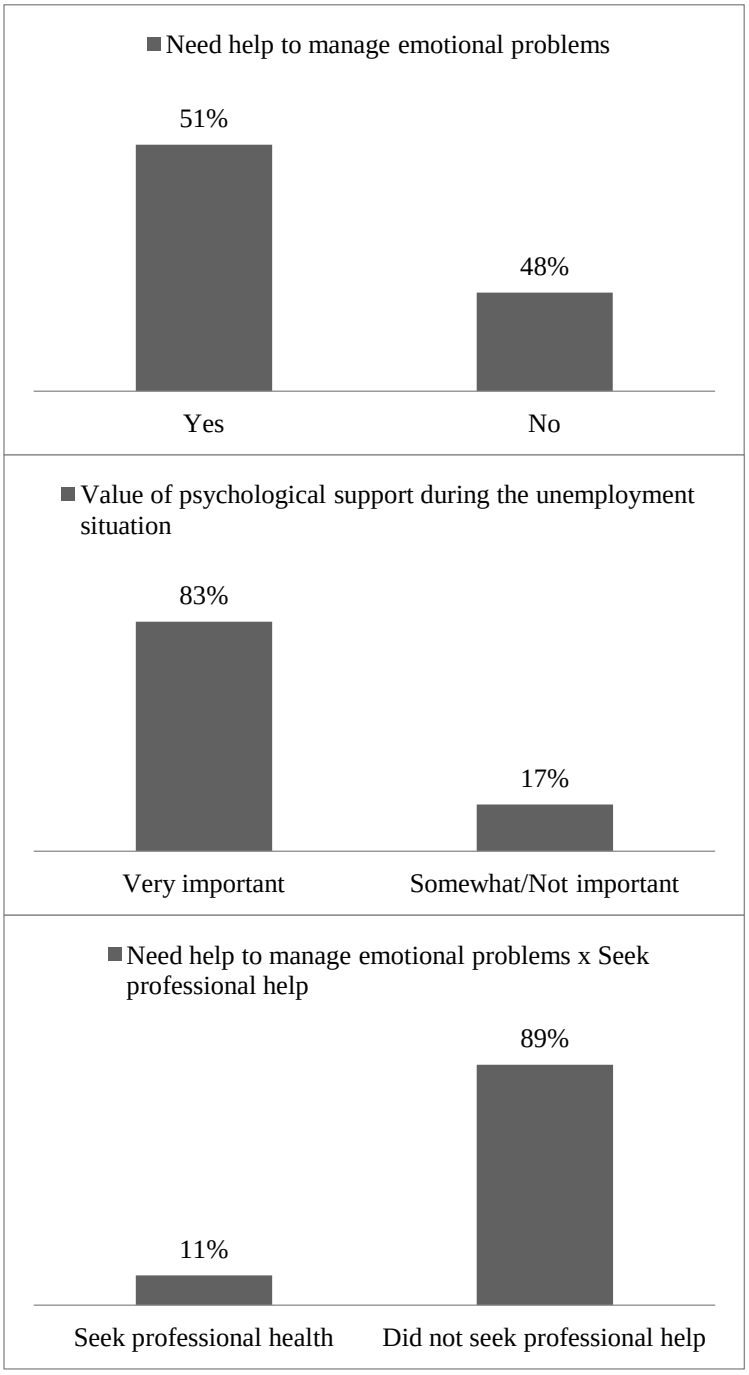
Methods: Data were obtained from a sample of 748 unemployed adults from Lisbon (Portugal) using the service use questionnaire section of the World Mental Health (WMH) Survey Initiative Version of the World Health Organization (WHO) Composite International Diagnostic Interview. Descriptive statistics were used.

Results: A substantial percentage of people reported needing help to manage emotional problems (51%) and the majority (83%) value the importance of having access to psychological support during the unemployment situation. However, only 11% did seek for professional health or social support.

Conclusion: The findings raise awareness for possible unmet needs for support in this population and this warrants further research.

Keywords: economic recession; mental well-being; psychological support; unemployment; unmet needs.

Exploratory Results



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