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THE ROLE OF SOCIAL FACTORS IN EXPLAINING CONSUMER FRAUD
VICTIMIZATION OF THE ELDERLY

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Abstract

Research cannot always confirm public opinion that elderly are more susceptible to fraud than younger adults. Age-related cognitive and motivational changes increase vulnerability. Social factors are fairly ignored by research but may explain why elderly's vulnerability does not necessarily result in fraud victimization. This systematic review applied a keyword- and reference-based search strategy to explain contradictory research findings and propose a model about social factors mediating and moderating the relationship between age and fraud victimization. Loneliness, social support, decision delegation, age stereotypes, offender characteristics and social environment were suggested as influencing factors. Results have to be validated by future research.

Keywords: elderly fraud, elderly fraud vulnerability, elderly fraud social factors

1 Theory

“The greatest threat many older Americans face is not a criminal armed with a gun, but a telemarketer armed with a deceptive rap” – Clinton (1999)

Older consumers, defined as people with a chronological age of at least 60 years (UN 2015) are a large and financially powerful part of the world's population (Cole et al. 2008, 355). Due to a higher life expectancy (Rowe and Kahn 1997, 433) the number of elderly will further increase during the next years (US Census Bureau 2010). Although the market responded by offering a variety of products targeted at elderly, many elderly are rendered as highly vulnerable to fraudulent marketing practices (e.g. AARP 2003). Elderly fraud can be defined as wrongful or criminal deception against the elderly aimed at financial or personal gain (Oxford Dictionary 2015). Consumer fraud occurs if salespersons intentionally misrepresent advantages of their products to obtain financial benefits (Titus, Heinzelmann and Boyle 1995, 54). Fraud vulnerability and prevalence are two different terms which have to be considered separately by research as explained in the next chapter. The second theory chapter will focus on factors facilitating elderly fraud victimization. Finally, the aims of this review will be formulated based on the research gaps identified.

1.1 Vulnerability and prevalence of elderly fraud

Many research articles support the idea that older adults are more likely to be victimized than younger age groups (e.g. McCabe and Gregory 1998, 363). Other researchers argue that contrary to stereotypic views there is no evidence for age differences in consumer fraud victimization (Ross, Grossmann and Schryer 2014, 427). Studies either refer to elderly fraud vulnerability or prevalence. Vulnerability indicates the exposure to the possibility and inability to withstand fraud attacks (Oxford Dictionary 2015) which according to many articles is manifested by elderly's lacking knowledge about deceptive sales practices or deficient usage of different information sources when evaluating a product or service (e.g. AARP 1999). On the contrary, prevalence is the proportion of a population who have been fraud victims in a given time period (NIH 2016). Some articles cite studies indicating a higher vulnerability e.g. in terms of lacking knowledge as evidence that elderly are more often defrauded than younger adults which is not necessarily the case (Pak and Shadel 2011). Not clearly distinguishing both terms can be misleading and prevent researchers from focusing on factors moderating the relationship between increased elderly vulnerability and actual fraud occurrence. This review will be focusing on this gap. Considering the different types of fraud, elderly seem to be more susceptible to some types of fraud e.g. lottery compared to investment fraud (AARP 2003). Many articles and reviews cite evidence about elderly fraud victimization without considering the characteristics of different types of fraud and generalize their findings to all types of fraud. This review will provide a more detailed insight. To understand factors influencing the relationship between elderly fraud vulnerability and prevalence the next paragraph will highlight changes in elderly which are known to facilitate fraud victimization.

1.2 Factors facilitating elderly fraud victimization

Even though elderly may not experience more fraud than younger adults, it is the crime they experience most likely (Temple 2007) making it essential to focus on factors influencing fraud victimization in elderly. Research has focused on various factors to explain elderly's attractiveness to fraudulent marketers. Age-related changes in memory make them easier targets than younger adults. For example, Kirchheimer (2011) expects that elderly more often accept false claims such as "you forgot to pay".

Cognitive processing takes longer for elderly, they tend to review less information while making decisions (Löckenhoff 2011, 55) and are more prone to the usage of biases (e.g. overconfidence) or satisficing-strategies (Carpenter and Yoon 2011, 1). Satisficing means that elderly tend to choose an alternative that meets an acceptability threshold instead of searching for the best alternative (Schwartz et al. 2002, 1178). In case the task environment contains irrelevant information, elderly are more easily distracted by them than young adults (e.g. McDowd and Filion 1992, 65). Besides cognitive information processing changes research has also focused on motivational changes. Yoon and Lee (2004) examined the role of older consumers' motivation. In their study elderly were more persuaded by cogency of a message instead of peripheral cues in case they had a high motivation besides the cognitive ability to process information. Although all of these factors are important in influencing elderly vulnerability, they do not seem to be sufficient to explain elderly victimization in a reliable way as elderly's increased vulnerability in terms of these changes does not always result in victimization (Ross, Grossmann and Schryer 2014, 427). Every consumer situation occurs in a social setting, but social factors have rarely been addressed in the context of elderly consumer fraud. Social factors can be defined as factors that lead us to behave in a given way in the presence of others (McLeod 2007). This can be the social environment as well as the role and behavior of participants in a situation. Social factors like social support (Lee and Soberon-Ferrer 1997, 70), persuader characteristics (Perry and Brody 2012, 355) and the social environment such as convenience (Fang et al. 2016, 116) influence social interaction and decision making. Stereotypes also play an important role. The activation of negative stereotypes can result in stereotype threat and worsen the quality of decisions (Hess et al. 2003, 3). Stereotype threat is defined as a situational predicament in which an individual feels at risk of confirming a negative stereotype about their group and consequently underperforms (Steele 2010). Although these factors were known to influence social interactions, research has not yet focused on their changing relevance in aging and their potential importance to explain elderly fraud.

1.3 Aims of the review

Considering the contradictory results regarding the question whether elderly are more often fraud victimized than younger adults, the first objective of this review is to analyze study results about fraud vulnerability and fraud prevalence by considering both as separate terms and examine the items by which vulnerability and fraud occurrence were measured in the different studies. A more detailed and critical review of these studies is an essential step to explain inconsistent findings and reveal factors future research has to consider to better understand elderly fraud victimization and take precautions.

The second objective of this review is to highlight the relevance of social factors in the relationship between age and fraud. As social factors influence social interaction and decision making, they may also mediate or moderate the relationship between age and fraud victimization. As research has not yet focused on the importance of social factors, a first step is to collect available studies, derive hypotheses and develop a model to be tested by future research. This is the aim of this review.

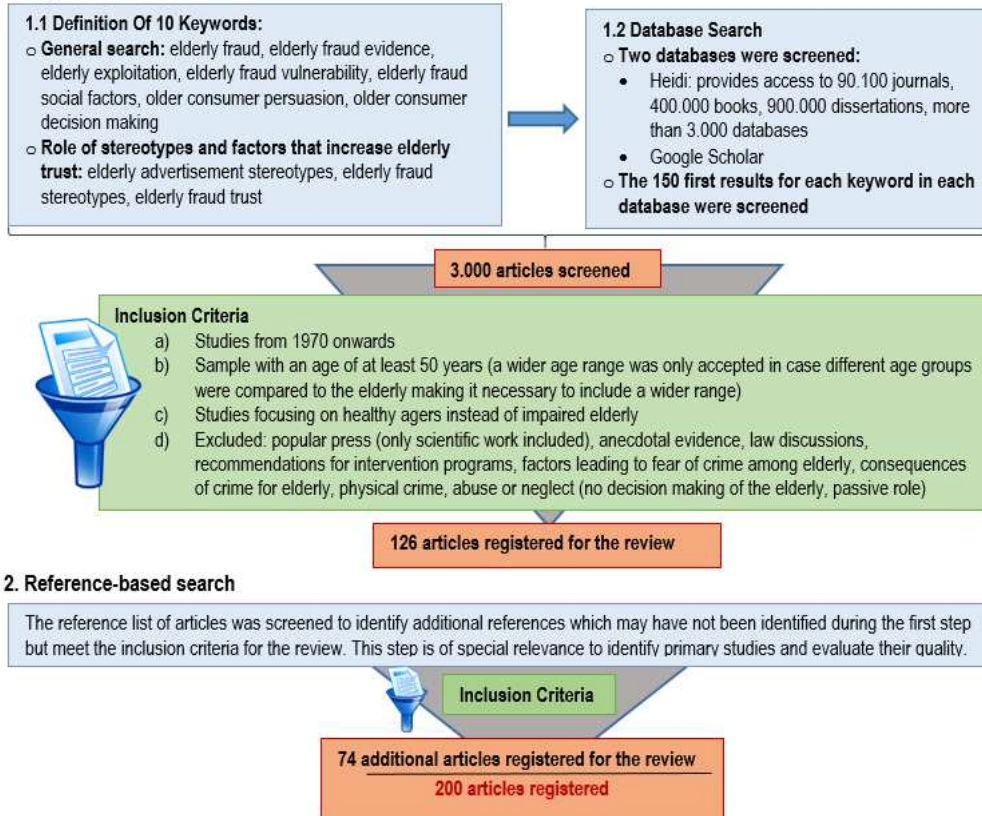
2 Methodology

After the central issues of this study were identified, articles have been selected in a keyword-based database search and a reference-based search. 3.074 articles were screened and 200 have finally been registered for the review. Articles were classified according to the quality of their methodology. Data were extracted and combined based on their content to provide a basis for further research suggestions. All steps including the search strategies applied and all selection criteria are explained in the next paragraphs and in detail in the methodology sheet included in the Excel-database of this review.

2.1 Electronic search

During the electronic search 3.074 articles were identified. After an initial screening based on the title and abstract and considering the inclusion and exclusion criteria, 200 articles were registered for the review. The electronic search included two separate steps as to be seen in picture 1. In the first step a keyword-based search strategy was applied to identify relevant articles. Two databases were screened for the 150 first results for each of the 10 keywords defined. Articles were selected according to strict criteria regarding their year of publication, sample, quality and focus in content (picture 1).

1. Keyword-based search



Picture 1: Flow chart for the keyword-based and reference-based search

All publications dated from 1970 to present were selected. Although elderly are generally defined as people in the age group 60+ (UN 2005) this review considered studies focusing on the age group 50+ or a wider age range if different age groups were compared. Many studies define the cut-off point to define a person as “elderly” differently and generalize their result to all people beyond a certain age which prevents research from clear results in answering the question whether fraud prevalence increases with age. There is no distinct group of elderly beyond the age of 50 or 60 but differences between young-old and old-old. Aging is a gradual, continuous process. By including a wide range of age groups in this review, differences between studies and elderly age-groups can be detected. Studies working with samples of elderly suffering from dementia or other health impairments were excluded as the review focuses on fraud victimization of healthy agers. Only scientific work instead of popular press was included. Compared to popular press, scientific articles provide information about the methodology applied which is important to critically review the quality of the article. Anecdotal evidence has not been considered as cases presented are often based on cherry-picking and authors neither work with a

representative sample nor control relevant factors that influence the outcome (Frost 2012). Including several publications based on identical underlying data can result in an overestimation of effects. All data were screened for duplicates and only included once. During the database search, 3.000 articles have been screened and 126 registered for the review, meaning 4.2% of articles screened during the keyword-based search met the inclusion criteria.

After the keyword-based database search, the second step was a reference-based search (picture 1). The reference list of articles was screened to find additional references which not have been identified during the first step but meet the inclusion criteria of the review. This step is of special relevance to identify primary studies and evaluate the quality of those evidences. 74 additional articles were registered by analyzing the reference list of articles identified during the first step.

2.2 Classification of studies according to their methodology and content

After the studies were identified, they were analyzed in detail and classified according to their underlying methodology in six categories. Table 1 provides an overview of the classification results.

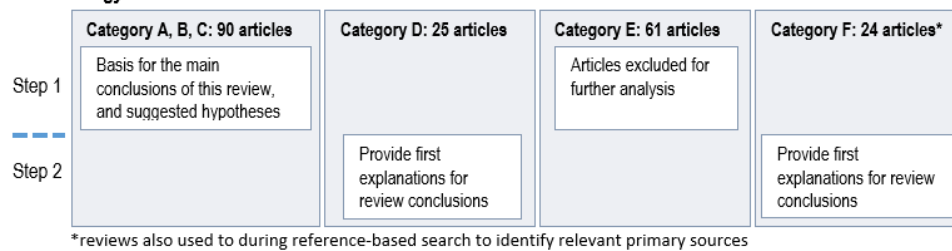
Table 1: Results of the classification of studies according to their methodology □ empirical studies

Classification	Number of articles sorted to each of the categories			Total
	Keyword-based database search		Reference-based search	
	Database 1: HEIDI	Database 2: GOOGLE SCHOLAR		
A - meta-analyses	-	-	1	1
B - well-designed controlled trials, randomized and nonrandomized	8	2	12	22
C - observational studies (e.g. surveys, content analysis, correlational analysis, descriptive studies)	18	24	25	67
D - expert opinion or multiple case reports	6	9	10	25
E - deficient information about sample, methodological insufficiencies, duplicate, other focus in content	20	22	19	61
F - review (narrative or systematic)	13	4	7	24
Total	65	61	74	200

Based on their classification, articles were used for different purposes in this review as to be seen in picture 2. 90 articles were classified as meta-analysis, controlled trials and observational studies (category A, B, C). These empirical studies formed the base for the main conclusions of this review. 61 articles were excluded for further analysis (category E) due to deficient information about their sample, focus in content, methodological insufficiencies or because their basis data were the same as in another article of this review. Articles which have been classified as systematic or narrative reviews (category F), which were 24 articles, were primarily used for reference-based search to identify the underlying

primary studies. Only by analyzing the original studies the quality of these evidences can be evaluated. Reviews were also used to provide first explanations for the identified phenomenons. 25 articles were classified as expert opinions and cases (category D) which are not based on representative samples or comparisons of different age groups. Their results cannot be generalized. Although articles in this category and reviews have not been used for the main conclusions of this analysis, they provide first valuable insights in explaining the relevance of social factors which have been identified by this review.

Methodology Classification



*reviews also used to during reference-based search to identify relevant primary sources

Picture 2: Results of the categorization and relevance of the different categories for this review

After this classification, articles were sorted according to their content, identifying factors with relevance in explaining research inconsistencies in elderly fraud victimization research (table 2). The results based on this analysis are introduced in the next chapter. A list with details about the selected articles, their methodology classification and contents are also included in the Excel-database of this review.

Table 2: Classification of articles according to their topics and categories identified ■ empirical studies

Classification	Number of articles (category A, B, C)	Number of articles (category D)	Numbers of articles (category F)	Total
1. Elderly fraud vulnerability and prevalence: general comparison of age groups or different types of fraud	26	-	1	27
2 a) The role of loneliness and social support	32	14	7	53
b) Relationship of elderly to the marketer and decision delegation tendency of elderly	8	7	4	19
3. The role of stereotypes in elderly fraud	19	5	11	35
4. Offender characteristics in elderly persuasion	3	1	1	5
5. Others: a) communication	2	0	1	3
b) convenience, time pressure	4	2	0	6
Further usage of the articles	→ Basis for main conclusions	→ First explanation for main conclusions	→ First explanation for main conclusions	

3 Results

Based on the analysis of articles included in the review, research gaps about elderly fraud and the potential role of social factors in the relationship between age and fraud prevalence can be identified. The main results indicated by empirical studies are listed in Appendix I and in more detail in the Excel-database of this review. Hypotheses about the relationship between age and fraud as well as a model about mediators and moderators in the relationship are suggested in the next chapters.

3.1 Fraud vulnerability and prevalence in elderly

Several studies included in the review confirm that elderly are more vulnerable to fraud than younger adults (e.g. AARP 1999). There were no studies indicating the opposite. All results about articles focusing on fraud vulnerability are listed in table 3 (Appendix I). In these articles, vulnerability of elderly was measured with items about the knowledge of deceptive sales practices, consumer rights or consumer protection agencies and their usage of information sources to select a product (e.g. AARP 1999). In the past, several articles (e.g. Pak & Shadel 2011) cited studies (e.g. AARP 1993) measuring vulnerability with these items as evidence that elderly are more likely to be defrauded. As vulnerability was only measured by items that do not test whether elderly actually experienced fraud, it is clear that studies indicating a higher vulnerability cannot be used as evidence for actual fraud prevalence. To avoid such inaccuracies, all articles in this review were screened to find out whether they measured fraud vulnerability, e.g. with items about lacking knowledge, or actual fraud experience (Table 3, Appendix I). Results about fraud prevalence, meaning actual fraud victimization, are different from those about elderly fraud vulnerability. Contrary to public opinion, there is no clear evidence that the risk of victimization increases with age. Although elderly might show higher vulnerability in terms of lacking knowledge they do not seem to be more often victimized as indicated in table 3 (Appendix I).

H1: Although elderly are more vulnerable to fraud in terms of lacking knowledge and information sources used to select a product or service, they are not significantly more often defrauded than younger adults.

Several studies focused on providing an empirically-based understanding of elderly fraud. When analyzing these articles in detail they indicate a tendency which has been ignored by research so far. Although all articles included different age groups and age cut-off points, there seems to be a small tendency that young-old are more susceptible to fraud than old-old (Table 3, Appendix I). Young-old were often defined as people up to their 70s and old-old as people beyond 80 years (Holtfreter et al. 2014). On the first sight it seems to be counterintuitive that elderly fraud increases until a certain age and then starts decreasing which may be a reason why it was ignored by research so far. Understanding

vulnerability of different groups of elderly can help us to customize prevention measures. For this reason, the tendency has to be further investigated by future research. One reason for the described effect is suggested in chapter 3.2.2 indicating that young-old are more influenced by negative age stereotypes than old-old (e.g. Hess, Hinson and Hodges 2009, 153).

H2: Young-old are more often fraud victimized than old-old.

In analyzing elderly fraud vulnerability many articles focus on one type of fraud and generalize their results. Some studies indicate that elderly differ in their susceptibility to different types of fraud. AARP (2003) indicates that among participants beyond the age of 45, lottery victims were older than investment victims. The mean age of the general population beyond 45 was 61.0 years, the one of investment victims was 60.6. Lottery victims were significantly older with a mean age of 74.5 years. Anderson (2013) suggests that elderly beyond 55 were significantly more often victims of fraudulent prize promotions compared to younger adults although they are generally less often fraud victimized. In such fraudulent promotions victims were promised to receive a prize after making a payment or purchase (Anderson 2013). What these types of fraud have in common is that e.g. compared to investment fraud the initial investment to be done seems to be low and the small probabilities of winning in the lottery or an advertised prize are often overrated (Burns, Chiu and Wu 2011). Besides this, social factors seem to play an important role in these forms of fraud. Going to the store, buying a lottery ticket, selecting numbers, watching television when the lottery numbers are drawn and redeeming the ticket as it is done by the victims of lottery fraud or similar for prize promotions include higher rates of interaction and excitement compared to other types of fraudulent practices. This can help elderly to overcome loneliness which they often suffer from (Pinquart and Sörensen 2001, 245). It will be the task of future research to investigate to which types of fraud elderly are sensitive to and why (Table 3, Appendix I).

H3: Types of fraud serve as a moderator in the relationship between age and fraud victimization.

Focusing on social factors, elderly seem to be more vulnerable to types of fraud including higher levels of social interaction.

3.2 Social factors influencing fraud victimization of elderly

Analyzing studies dealing with social factors in the relationship between age and fraud experience is the first essential step to identify research gaps and explain why the often suggested higher vulnerability of elderly does not always result in fraud victimization. The following chapter will suggest hypotheses and a model about social factors mediating and moderating the relationship between age and fraud victimization.

3.2.1 The social relationship to the marketer and decision delegation tendency of elderly

Several studies highlight that feelings of loneliness surround the elderly (e.g. Pinquart and Sörensen 2001, 245) and that there is a positive relationship between loneliness and elderly victimization (Table 4, Appendix I). Many studies only measured whether elderly live or feel alone. What research so far did not focus on is the question why loneliness is associated with higher risk of victimization. Understanding why lonely elderly are appropriate targets can help to optimize prevention measures. Loneliness seems to result in the need for social contact and the increased willingness of elderly to communicate with marketers (e.g. Lee and Geistfeld 1999, 245). When interacting with marketers, parasocial relationships and pseudo-friendships seem to play an important role for the elderly (Table 5, Appendix I) and may serve as a substitute for previous role behaviors and relationships which have been lost (Lemon, Bengston and Peterson 1972, 511). In a parasocial relationship one person invests emotional energy and interest whereas the other party is unaware of the other's existence (Lim and Kim 2011, 763) or, in a pseudo-friendship, does not return the same energy and interest. Elderly's attitudes and behavior are expected to be influenced by such relationships to their marketers (Rubin and Step 2000, 635). Being susceptible to parasocial relationships, elderly may be an appropriate market for telemarketers (Lim and Kim 2011, 763). Seeking to build up social contact, elderly might not realize offender's aims and the fact that their relationship is one-sided (Waddell 1975, 164).

H4: The relationship between age and fraud victimization is partly mediated by loneliness.

Loneliness increases the willingness to listen to and the tendency to engage in pseudo-friendship or parasocial relationships with marketers which increases the probability of fraud victimization.

Studies included in the review indicate that elderly are more brand-loyal than younger adults (Table 4, Appendix I). Many articles explain elderly brand loyalty by their decreased information processing ability (e.g. Castensen, Fung and Charles 2003, 103). Research should consider other potentially underlying reasons for such changes in behavior, such as elderly's tendency to engage in pseudo-friendship or parasocial relationships to marketers. Loyalty can be devastating if trusted dealers start to realize that their elderly customer's ability to identify less trustworthy offers decreases (Castle et al. 2012, 848). Dealers are trained to successfully persuade elderly. In a sales trainings from the Alliance for Mature Americans about persuasion tactics targeted at older adults, new hires were trained to engage in fraud by using scapegoating and building rapport to earn the trust of their customers. Scapegoating is the practice of blaming other innocent competitors for misbehaving. Introducing oneself as a legitimate provider at the same time and flattering with customers helps to create an "us versus them" mentality and earn customers' trust (DeLiema, Yon and Wilber 2016, 335). Applying such techniques is expected to increase elderly's feeling of social connectedness to the marketer and reduce skepticism (Perry and Brody 2012, 355). The company was penalized in 1996 for using misrepresentation to sell living trusts and annuities to more than 10.000 elderly in the United States.

H5: Loyalty serves as a mediator in the relationship between age and fraud victimization in case the offer was made by a trusted dealer or brand.

Research did not yet indicate in which social situations elderly are more often defrauded. It can be assumed that elderly are more often victimized in situations characterized by missing social support and someone around to consult about questionable transactions (Table 4, Appendix I). East, Uncles and Lomax (2014, 786) suggest that, related to product opinions, elderly are socially less influenced by their immediate social surrounding than younger adults. They measured the volume of word of mouth as indicator of social influence. Nahemow (1980) suggested that elderly are not in a position to argue their opinions in case they are relatively isolated. As a consequence they become unsure of their own thoughts and are vulnerable to persuasive communication. Many studies measure available social support by

asking whether elderly are married or widowed or whether they have family nearby (e.g. Lee and Soberon-Ferrer 1997, 70). On the other side social support can also vary between situations depending on whether there is someone around besides the marketer and the potential victim. Studies in the review indicate that in situations without someone around to consult, elderly are more likely to base their decision on the information given by the salesperson (Lee and Soberon-Ferrer 1997, 70).

H6: Elderly are more likely to be defrauded in case of missing social support and in situations without someone around to consult about their transactions. Missing social support serves as a moderator increasing the relationship between age and fraud victimization.

Elderly seem to show a higher tendency to delegate decisions to marketers (Table 5, Appendix I). This tendency was shown for example in the context of healthcare. Burack et al. (2000, 817) found that with increasing age the amount of women who report active involvement in the decision to have a mammogram significantly declined. Delegating decisions to people posing as experts can also increase their risk to become a victim of deceptive marketing practices.

H7: The relationship between age and fraud victimization is partly mediated by elderly's increased decision delegation tendency.

Besides the characteristics of the social relationship that facilitate elderly fraud, stereotypes can also play an important role in elderly fraud victimization as described in the next chapter.

3.2.2 Age stereotypes and stereotype threat in elderly

Elderly are often underrepresented in consumer marketing (e.g. Carrigan and Szmigin 2000, 42). Only a few studies conclude that elderly are portrayed in a negative way (Table 6, Appendix I). Most surveys indicate the appearance of several positive elderly stereotypes for example as friendly-warm grandparent (e.g. Miller, Leyell and Mazachek 2002). Even though elderly are presented in a positive way, negative age stereotypes can be activated implicitly in the elderly. Implicit stereotypes are unconscious attributions of qualities of social group members. They can be activated by the environment and operate outside of intentional conscious cognition (Greenwald and Banaji 1995, 4). In commercials

elderly often act minor roles or are models for age related topics like healthcare or medicine (e.g. Carrigan and Szmigin 2000, 42) which can result in negative age stereotype activation. Elderspeak, which is a speech style based on shorter, less complex sentences, simpler vocabulary or repetition and is often used by younger adults when addressing elderly, also reinforces negative age stereotypes (Kemper and Kemtes 2000, 197). The studies in this review suggest that once negative age stereotypes are activated, stereotype threat results in worse decision making in elderly (Table 6, Appendix I). Hess et al. (2003, 3) point out that older adults' memory performance covaries with the degree of negative age stereotype activation, providing support for the idea that stereotype threat can worsen decision making in elderly which could be one explanation for elderly fraud. The results of Levy and Langer (1994, 989) indicate that only in some cultures the relationship between age and fraud victimization is moderated by age stereotypes. Older Chinese performed significantly better than older Americans on memory tasks when age stereotypes were activated which is explained by the predominantly positive views about aging in Asian cultures (Table 6, Appendix I).

H8a: Age stereotype activation and the resulting stereotype threat is a moderator increasing the relationship between age and fraud victimization in cultures without a predominantly positive view about aging.

Some studies found stereotype threat to have greater impact on performance in young-old than in old-old suggesting that old-old are less susceptible to stereotypes (Table 6, Appendix I). This tendency may be explained by the declining salience of the old-age label or devaluation of stereotyped cognitive skills (Hess, Hinson and Hodges 2009, 153). This difference perhaps also partly explains why young-old are seemingly slightly more susceptible to fraud than old-old as indicated in chapter 3.1.

H8b: The relationship between the activation of age stereotypes in elderly and worse decision making through stereotype threat is stronger for young-old than old-old.

3.2.3 Offender characteristics

Several studies confirm that similarity of a persuader increases trust and consequently the chance to experience fraud not only for older age groups (e.g. Perry and Brody 2011, 355). People can hardly imagine that similar individuals behave dishonestly especially in a faith-based setting (Perry and Brody, 2012). When applied to elderly it has to be considered that elderly think of themselves as younger as they are (Table 7, Appendix I). Elderly tend to report their subjective age 10 to 15 years below their actual age. Barak and Stern (1986, 571) argue that the persistence of the self-consistency motive is relatively strong. It keeps elderly from changing their self-view of being young even when others consider them as being old. This tendency leads to the assumption that offenders who are slightly younger than the victim may be especially successful. This is in line with an experimental study by Bristol (1996) who showed that elderly's attitudes toward brands were highest when endorsed by middle-agers. Young adults were perceived as less credible and advertisements with older endorsers were liked less than those with the middle-aged supporter.

H9: The relationship between age and fraud is moderated by offender's characteristics. The relationship increases if the offender is similar but slightly younger than the victim.

3.2.4 Social environment: communication, convenience and time pressure

Research indicates that elderly are more easily persuaded if marketers highlight the advantages of a product for their social surrounding (Table 8, Appendix I). In an experiment Zhang, Fung and Ching (2009, 336) conclude that, compared to younger people, elderly were more likely to be influenced by a message which emphasized eating healthily to protect their beloved ones compared to messages focusing on personal achievement. Based on this result, it can be assumed that elderly may be more receptive to sales messages like: "The product will be preventing you from being a burden to your family". It can also be expected that offenders are more successful when informing the elderly how a product can help them to avoid losses and fulfill obligations. The success of such messages can be expected because elderly have a stronger prevention focus than younger adults (Micu and Chowdhury

2010, 621). Their prevention focus can also serve as another explanation for their increased brand loyalty mentioned in chapter 3.2.1 (Lampert-Pandraud, Laurent and Lampersonne 2005, 97).

H10: The relationship between age and fraud victimization is moderated by information provided by the marketer. The relationship increases if the marketer highlights benefits of the product or service for elderly's social surrounding or how it will help them to avoid losses or fulfill obligations.

Several studies indicate that compared to younger adults elderly are more sensitive for marketing in convenient locations and high quality service (Table 8, Appendix I). Unlike for younger adults, the relationship between sacrifice and perceived value is negative for elderly (Fang et al. 2016, 116). Older adults shopping satisfaction is positively related to experienced convenience (Lim and Kim 2011, 763). This supports the idea that elderly may be appropriate targets for fraudulent door sellers, surrogate shoppers (Hollander and Rassuli 1999) or telemarketers (Lim and Kim 2011, 763).

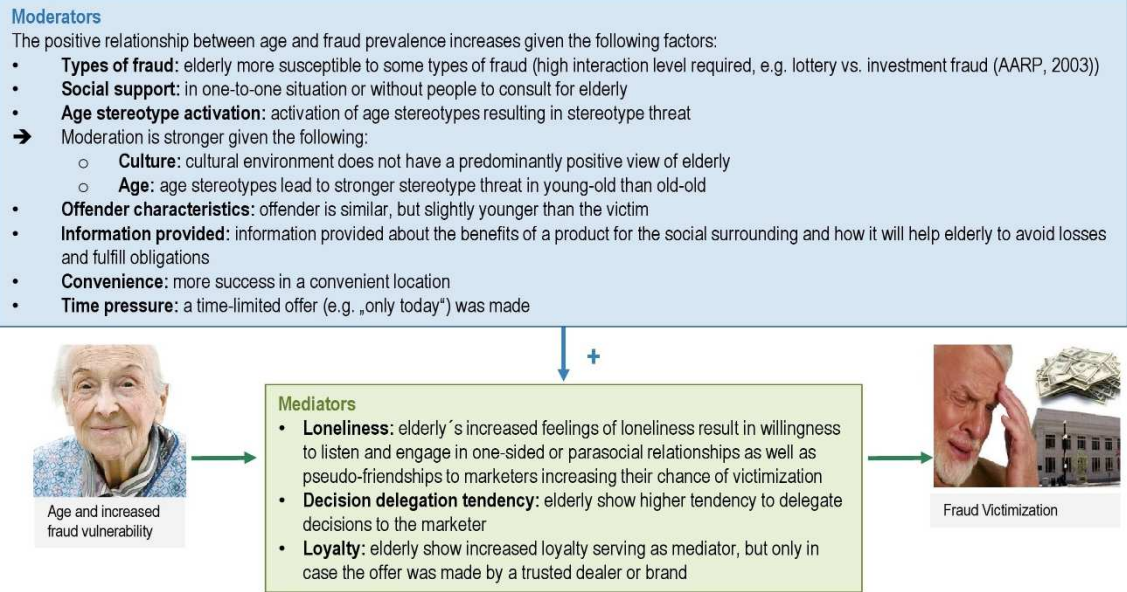
H11: The relationship between age and fraud victimization is moderated by convenience. It increases with higher convenience for the elderly in a given situation.

Time pressure has been found to worsen especially elderly's decision making (Earles et al. 2004, 285). Under time pressure consumers have difficulties in locating their preferred brand. Often they purchase brands they did not intend to purchase (Park, Iyer and Smith 1989, 422). It can be expected that in case offenders induce time pressure to the elderly, e.g. by making a time-limited offer, elderly will be more susceptible (Table 8, Appendix I).

H12: The relationship between age and fraud victimization is moderated by time pressure. The relationship increases in case time pressure is induced.

3.3 A model about social factors in the relationship between age and fraud victimization

Considering the identified research gaps and suggested hypotheses, all results can be summarized in a theoretical model about social factors that are expected to influence the relationship between age and fraud victimization as shown in picture 4.



Picture 4: Model about social factors mediating and moderating the relationship between age and fraud victimization

The model consists of the following parts which have to be validated by future research: Elderly are more vulnerable to fraud e.g. in terms of lacking knowledge (e.g. AARP 1999). The relationship between age and fraud victimization is mediated by loneliness, decision delegation tendency and loyalty.

All three seem to be higher among older than among younger adults. Higher loneliness is expected to increase elderly’s willingness to engage in interactions and one-sided relationships with marketers resulting in a higher probability that they adapt their beliefs to what marketers tell them. The same can be expected through to elderly’s tendency to delegate decisions. Elderly’s increased loyalty makes them relatively easy targets for trusted dealers in case they start to exploit their loyal customers.

There is not a clearly positive relationship between age and actual fraud occurrence. This review tried to explain research inconsistencies by suggesting several moderators that influence the relationship.

Articles suggest that elderly are only more susceptible than younger adults to some types of fraud. Those types seem to include relatively high levels of social interaction compared to other types of fraud. It can be expected that the relationship between age and fraud victimization is stronger in case marketers and elderly interact in a one-to-one situation without people around to consult. In such situations elderly seem to be more gullible than in situations with social support. Elderly are expected to be more often victimized in situations where negative age stereotypes are either directly or indirectly activated.

Stereotype threat is only serving as a moderator in cultures without a predominantly positive view of aging and seems to be stronger for young-old than old-old. Similarity increases offender reliability. As elderly perceive themselves as slightly younger than they actually are, it can be expected that offenders who are similar but slightly younger than the elderly are particularly successful. Elderly seem to be more effectively persuaded in case an offender highlights the benefits of a product for elderly's social surrounding and how it will help them to avoid losses. A convenient location and time pressure are also expected to increase the positive relationship between age and fraud occurrence. The model summarized in picture 4 and the single components have to be validated by empirical research.

4 Implications For Future Research and Critical Reflection

The review suggests that, although elderly are more vulnerable to fraud e.g. in terms of lacking knowledge, they are not always more often victimized than younger adults. Contradictory research findings about elderly fraud can partly be explained by different approaches researchers used to analyze elderly fraud. They all focused on different types of fraud, defined different age cut-off points and generalized their findings. Clearer results can be expected when the definition of elderly is specified and different groups of elderly and types of fraud are considered separately. Results should be compared instead of being generalized to all elderly age groups and types of fraud.

The review was the first one focusing on factors of the social situation influencing elderly fraud victimization. A model about mediators and moderators in the relationship between age and fraud victimization was developed. Future research has to test the suggested hypotheses and model to better understand and inform elderly about which fraud methods they may be sensitive to. With increasing knowledge about deceptive sales practices, their susceptibility is expected to decline (AARP 2003).

There are some limitations of this review and the studies included. A systematic review only provides first insights into a topic. It does not allow definite conclusions without the proposed hypotheses being tested. As the review only includes published studies accessible through databases, publication bias can distort results as unpublished experiments and studies have not been considered. Understanding fraud

prevalence in elderly is a complex and ambiguous issue. Most research is based on surveys and in part different results are inherent in methodologies applied in studies. Some items used to measure factors influencing fraud prevalence have to be critically reviewed. Loneliness or social support were often only measured by asking participants whether they live alone or are widowed (e.g. McMaster 1992) rather than asking for other social networks which they feel connected to. Such networks could serve as a substitute and help prevent elderly from being defrauded. They were ignored by most studies which can explain some inconsistencies in elderly fraud research.

Moreover, several research results are based on descriptive analyses without differences being tested for their significance. As experiencing fraud is something that is hard to be manipulated in experimental designs, researchers often apply ex-post facto designs and survey participants. Even well-designed surveys only indicate correlations but no causalities. Surveys completely depend on the accuracy of self-reports. Factors tested are not manipulated, randomization cannot be applied and there is limited control on other influencing variables. Laboratory designs with random assignment could overcome a variety of shortcomings. As many factors would be neglected which influence fraud experience in everyday life, laboratory research is expected to have limited external validity. Field experiments avoid the disadvantages of laboratory studies and provide more conclusive results as they are conducted in elderly's everyday lives. Deceiving persons in their everyday life seems unethical and field experiments come along with challenges in controlling covariates. Considering all these factors, there are a lot of research challenges in explaining elderly fraud victimization. However, many social factors suggested as influencing factors by this review such as stereotype activation, offender characteristics or the social environment can be manipulated and it can be tested how these factors influence whether elderly believe what a marketer promises. Further focusing on this research area is the first critical step to better prevent elderly fraud or to say it in Clinton's words (1999): to avoid that the greatest threat older people face is a marketed armed with a deceptive rap.

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6 Appendix

Appendix I: List of studies on which the main conclusions of the review are based and their basic data

Detailed references and information as well as additional results are included in the Excel-database attached to this review.

Table 3: Central Studies about Elderly Fraud Vulnerability And Prevalence*

Studies indicating a positive relationship between Age and Fraud Vulnerability					
Author	Year	Method	Sample Size	Age	
Lee, J. & Soberon-Ferrer, H.	1997	survey	957	18+ (with 51,5% in the age of 65+)	
Langenderfer, J. & Shimp T.A.	2001	expert survey	168 BBB offices (Better Business Bureau)	n.a. (experts)	
Berg, L.	2015	survey	2100	18-95	
American Association of Retired Persons	1993	survey	957	wide age range (18+), age groups compared	
American Association of Retired Persons	1999	survey	1504	wide age range, age groups compared	
Studies indicating a positive relationship between Age and Fraud Prevalence					
Mccabe, K. A. & Gregory, S. S	1998	FBI statistics	303.713	2 age group: below 65 (n=300.582) and 65+ (n=3.131)	
E. Lokanan, M.	2014	tribunal cases	1.167	wide age range, age groups compared	
Lichtenberg, P. A., Sugarman, M. A. & Paulson, D.	2016	survey	4.461	wide age range, age groups compared	
Pak, K & Shadel, D.	2011	survey	2.232	wide age range, age groups compared	
Schoepfer, A., & Piquero, N. L.	2009	survey	375	18-91, age groups compared	
Federal Trade Commission	2000	complaint statistics	> 1 Mio.	wide age range, age groups compared	
Ross, S. & Smith, R. G.	2011	survey	202	wide age range, age groups compared	
American Association of Retired Persons	1996	survey	745	50+ (fraud victims compared to percentage of 50+ population)	
Studies indicating a negative relationship between Age and Fraud Prevalence					
Berg, L.	2015	survey	2100	18-95	
Titus, R. M., Heinzelman, F. & Boyle, J. M.	1995	survey	1246	wide age range (18+), age groups compared	
Van Wyk, J. & Mason, K. A	2001	survey	400	wide age range (18+), mean = 45, age groups compared	
Mathur, A. & Mochis, G. P.	1995	survey	1305	25 to 85+, age groups compared	
Lee, J. & McGowan, K. M.	1998	survey	957	wide age range (18+), age groups compared	
Anderson, K. B.	2004	survey	2.500	wide age range, age groups compared	
Anderson, K. B.	2007	survey	3.888	wide age range, age groups compared	
Anderson, K. B.	2013	survey	3.638	wide age range, age groups compared	
Differentiation of Fraud Victimization for different age groups: young-old more often victimized than old-old					
Friedman, M.	1992	survey	Bunco investigators from 331 police depart.	65+	
Lichtenberg, P. A., Sugarman, M. A. & Paulson, D.	2016	survey	4.661	wide age range, age groups compared	
Holtfreter, K., Reisig, M. D., Mears, D. P. & Wolff, S. E.	2014	survey	1000	60-99	
Differentiation of Fraud Victimization for different age groups: old-old more often victimized than young-old					
James, B. D., Boyle, P. A. & Bennett, D. A.	2014	survey	639	82,4 mean	
Kim, E.-J. & Geistfeld, L. V.	2005	survey	6088	50+	
Differences in elderly susceptibility for different types of fraud					
Authors	Year	Method	Sample	Results	
Anderson, K. B.	2013	survey	3.638, wide age range, age groups compared	From 55-74 highest susceptibility for prize promotion fraud	
American Association of Retired Persons	2003	survey	507, wide age range (beyond 45), age groups compared	In population of 45+: lottery victims significantly older (74.5) than investment victims (60.6).	

* list includes empirical studies (category A, B, C according to the methodology classification). Full list of articles included in Excel-database of the review.

Table 4: Central Studies About The Importance Of Loneliness, Missing Social Support and Loyalty in Elderly Fraud Victimization*

Authors	Year	Method	Sample Size	Age	Potentially positive relationship between loneliness and fraud victimization ¹	Potentially positive relationship between missing social support and fraud victimization ²
Lee, J. & Geistfeld, L. V.	1999	survey	1996: n=661, 1997: n=975	50+	X	-
Lee, J. & Soberon-Ferrer, H.	1997	survey	957	18+ (with 51,5% in the age of 65+)	X	X
Naughton, C. & Drennan, J.	2016	survey	2021	65+	-	-
Langenderfer, J. & Shimp T.A.	2001	survey	168 Better Business Bureau officers	n.a. (experts)	X	X
Peterson, et al.	2014	survey	4156	60+	X	X
Friedman, M.	1992	survey	331 bunco investigators	65+	X	X
East, R., Uncles, M. W. & Lomax, W.	2014	survey	2600	Two groups: below 25 and 65+, mean = 40		X
Simcock, P., Sudbury, L. & Wright, G.	2006	survey	230	n=141 below 50, n=89 were 50+		X
Lim, C. M. & Kim, Y.-K.	2011	survey	295	60+	X	
Alves, L. M. & Wilson, S. R.	2008	survey	28	60+	X	X
Smith, R.B. & Moschis, G. P.	1984	survey	286	sample mean: 71.9 years	-	
Van Wyk, J. & Mason, K. A	2001	survey	400	wide age range (18+), age groups compared	-	
McMaster, PA	1992	survey	233	65+		X
Lichtenberg, P. A., Stickney, L. & Paulson, D.	2013	survey	4.461	50+	X	
James, B. D., Boyle, P. A. & Bennett, D. A.	2014	survey	639	82,4 mean		X
Moore, M. & Lee, K.	2000	survey	3091	wide age range, age groups compared		-
Kim, E.-J. & Geistfeld, L. V.	2005	survey	6088	50+		X
Lee, J. & McGowan, K. M.	1998	survey	957	wide age range (18+), age groups compared	X	
Pak, K & Shadel, D.	2011	survey	2.232	wide age range, age groups compared		-
National Institute of Justice	2015	survey	5.777	wide age range, age groups compared	X	X
American Association of Retired Persons	1993	survey	957	wide age range (18+), age groups compared	X	
American Association of Retired Persons	1999	survey	1504	wide age range, age groups compared	X	
Muscat, G., James, M. & Graycar, A.	2002	survey	3.031	n=1334 with 65+, rest younger		-
American Association of Retired Persons	2003	survey	507	45+, different groups of elderly compared	X	-
American Association of Retired Persons	1996	survey	745	50+		X
Dong, X. & Simon, M. A.	2008	survey	412	60+	X	
Forman, A. M. & Sriram, V.	1991	survey	327	wide age range (20-91), age groups compared	X	
Kim, Y., Kang, K. & Kim, M.	2005	survey	419	55+	X	
Lemon, B. W., Bengston, V. L. & Peterson, J.	1972	survey	411	three groups: 1)52- 64, 2) 65- 75, 3) 75+	X	
Graney, M. J. & Graney, E. E.	1974	survey	46 women	62-89	X	
Evanschitzky, H. & Woisetschläger, D. M.	2008	survey	988	wide age range (18-70), age groups compared		Elderly show stability of purchase behavior, loyalty
Lambert-Pandraud, R., Laurent, G. & Lapersonne, E.	2005	survey	28.913	wide age range (18-70), age groups compared		Elderly consistently more brand-loyal.

* list includes empirical studies (category A, B, C according to the methodology classification). Full list of articles included in Excel-database of the review.

■ Confirmed ■ Denied

¹ Studies indicate whether loneliness increases the probability of fraud victimization. Loneliness results in increased willingness of elderly to engage in interactions with marketers and become victimized.

² Study indicate whether missing social support or no one around to consult in a given situation increases probability of fraud victimization

Table 5: Central Studies About The Role Of The Relationship To The Marketer And Decision Delegation In Elderly Fraud *

Authors	Year	Method	Sample Size	Age	Tendency that marketers exploit seniors' need for friendship ³	Tendency that elderly show higher decision delegation to marketers
Finucane, M. L., Slovic, P., Hibbard, J. H., Peters, E., Mertz, C. K. & MacGregor, D. G.	2002	experimental	492	wide age range, age groups compared (n=253 were 65-94, n=239 were 18-64).		X
Burack, R. C., George, J. & Gurney, J. G.	2000	survey	3.863	Wide age range, age groups compared (one group: 40+, second group: 75+)		X
Lim, C. M. & Kim, Y.-K.	2011	survey	295	60+	X	
Price, L., Arnold, E. J. & Folkman Curasi, C.	2000	survey	87	65-95		X
Kim, Y., Kang, K. & Kim, M.	2005	survey	419	55+	X	
Rubin, A. M. & Step, M. M.	2000	survey	235	wide age range (18-92), age groups compared	X	
Rubin, A. M., Perse, E. M. & Powell, R. A.	1985	survey	329	wide age range (18-62), age groups compared	X	
Lemon, B. W., Bengston, V. L. & Peterson, J. A.	1972	survey	411	39% between 52 and 64, 46% between 65 and 75, 15% over 75 years	X	
Graney, M. J. & Graney, E. E.	1974	survey	46 women	62-89	X	

* list includes empirical studies (category A, B, C according to the methodology classification). Full list of articles included in Excel-database of the review. ■ Confirmed ■ Denied

Table 6: Central Studies About Stereotype Threat And Its Influence On Elderly Fraud Victimization

Author	Year	Method	Sample Size	Age	Elderly are presented in a negative way in marketing ⁴	Tendency of stereotype threat in elderly ⁵
Lee, J. & Soberon-Ferrer, H.	1992	survey	957	wide age range (51,5% aged 65+), groups compared	-	
Horton, S., Baker, J., Pearce, W. & Deakin, J. M.	2010	experimental	99	60-75		-
Lee, M. M., Carpenter, B. & Meyers, L. S.	2007	content analysis	5 day videotape	50+	O	
Barber, S. J. & Mather, M.	2013	experimental	56	59-79		X
Donlon, M. M., Ashman, O. & Levy, B. R.	2005	experimental	76	60-92	X	
Mason, S. E., Darnell, E. A. & Prifti, K.	2010	content analysis	19	n.a.-	-	
Hess, T. M., Hinson, J. T. & Hodges, E. A.	2009	experimental	103	two groups: 1) 60-70, 2) 71 - 82		X
Hess, T. M., Auman, C., Colcombe, S. J. & Rahhal, T. A.	2003	experimental	76	two groups: 1) 62-84, 2) 18-30		X
Holtfreter, K., Reising, M. D., Mears, D. P. & Wolff, S. E.	2014	survey	1000	60-99		X
Miller, D. W., Leyell, T. S. & Mazachek, J.	2002	content analysis	1662 commercials	n=69 are 60+	-	
Langmeyer, L.	2012	content analysis	518 commercials	60+	-	
McConatha, J. T., Schnell, F. & McKenna, A.	1999	content analysis	765 ads, 2.505 persons	n.a. "older adults in ads"	X	
Greco, A. J.	1993	content analysis	464	n.a. "older adults in ads"	O	
Carrigan, M. & Szmigin, I.	2000	survey	info missing	n.a. experts, focus on 50+ models	O	
Swayne, L. & Greco, A. J.	1987	content analysis	814	n.a. "elderly characters" (around 65+)	O	
Carrigan, M. & Szmigin, I.	1999	content analysis	75	50+	-	
Massicot, C. M.	2011	content analysis	273 ads	n.a. "elderly"	O	
Levy, B. & Langer, E.	1994	experimental	90	two groups: 1) 15-39, 2) 59-91		X
Earles, J. L., Kersten, A. W., Berlin Mas, B. & Miccio, D. M.	2004	experimental	36	two groups: 1) 18-22, 2) 62-87		X

* list includes empirical studies (category A, B, C according to the methodology). Full list in Excel-database. ■ Confirmed ■ Denied ■ Neutral (minor roles, age related products)

³ Studies indicate whether there is the tendency that marketers exploit seniors' need for friendship and elderly engage in pseudo-friendship or parasocial relationships with marketers

⁴ Explanation: x: elderly often fulfill negative age stereotypes in ads, -: elderly often portrayed positively (e.g. friendly, warm), o: elderly often in minor roles or models for age related products

⁵ Studies indicate whether the activation of negative age stereotypes in elderly lead to stereotype threat in elderly which explains bad decision making and potentially also elderly fraud victimization

Table 7: Central Studies Indicating The Role Of Offender Characteristics In Elderly Fraud Victimization

Authors	Year	Method	Sample Size	Age	Similarity increases probability to successfully persuade elderly	Elderly perceive themselves slightly younger than they are increasing persuader success if slightly younger than the elderly
DeLiema, M, Yon, Y. & Wilber, K. H.	2016	content analysis	n.a., training transcription	n.a	X	
Bristol	1996	experimental	82	senior adults, 60+		X
Nelson, S. L. & Smith, R. B.	1988	survey	info missing	focuses on 50+ models	X	

* list includes empirical studies (category A, B, C according to the methodology classification). Full list of articles included in Excel-database of the review. ■ Confirmed ■ Denied

Table 8: Central Studies Indicating The Role Of The Social Environment In Terms Of Communication, Convenience And Time Pressure In Elderly Fraud Victimization

Authors	Year	Method	Sample Size	Age	Result
Micu, C. C. & Chowdhury, T. G.	2010	experimental	237	n=141 are between 18-28, n=96 are between 60-88	Elderly are more prevention focused influencing the success of arguments to persuade them
Zhang, X., Fung, H. & Ching, B. H.	2009	experimental	215	n=111 younger (18-36), n=104 older 62-86	Elderly are more persuaded by messages that emphasize the importance of a certain product or behavior for the once they love
Fang, J., Wen, C., George, B. & Prybutok, V.R.	2016	survey	651	18-53	The moderation effect of age on the relationship between sacrifice and perceived value is significantly negative
Lim, C. M. & Kim, Y.-K.	2011	survey	295	60+	Positive effects of perceived convenience on satisfaction with TV shopping
Earles, J. L., Kersten, A. W., Berlin Mas, B. & Miccio, D. M.	2004	experimental	36	n=18 younger (18-22) n= 18 older (62-87)	Presence of time pressure in a decision environment has been found to have a detrimental influence on the decision making abilities of consumers, particularly as they age
Park, C. W., Iyer, E. S. & Smith, D. C.	1989	experimental	68	wide age range, age groups compared	Consumers under time pressure, especially if they are in unfamiliar settings, are worse in locating their preferred brand and end up purchasing brands they did not intend to purchase

* list includes empirical studies (category A, B, C according to the methodology classification). Full list of articles included in Excel-database of the review.