

A Work Project presented as part of the requirements for the Award of a Master's degree in
Management from the Nova School of Business and Economics.

MINDFULNESS AND FEAR OF FEEDBACK

Investigating the Effects of a Brief Mindfulness Induction on Feedback-seeking Behaviours.

Teresa Marques de Castro Simões

Work project carried out under the supervision of:

Samantha Sim

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Abstract

The present study experimentally investigates the effect of 9-minute mindfulness meditation on feedback-seeking behaviours. Participants were randomly assigned to a mindfulness ($n = 55$) or a mind-wandering ($n = 48$) group. The Brief Fear of Negative Evaluation Scale (BFNE) and the Feedback-seeking Behaviours Scale (FSB) were then completed by participants. The results revealed a significant relationship between mindfulness practice and feedback-seeking and a significant influence of the mediation variable (i.e., fear of negative evaluations). Despite the positive findings of this study, further research is needed to better comprehend the impact of brief, on-the-spot mindfulness meditation on feedback-seeking behaviours.

Keywords: Mindfulness; Feedback-seeking; Fear of Negative Evaluations; On-the-spot meditation

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Introduction

Individuals are subjected to feedback at various stages of their development and in the most varied circumstances. Feedback will always be a part of their college and professional lives. It is used to improve knowledge as well as clarify and validate an individual's understanding of their abilities (Kourgiantakis, Sewell, and Bogo 2019). According to Barnett (2020), it is a tool that has the power to shape individuals into what they are or what they want to be as human beings and professionals. Individuals who seek feedback are better prepared to adjust and respond to changing goals and role expectations (Morrison and Weldon 1990). However, it is not always simple when people experience a fear of negative evaluations (FNE), which results in a general fear of getting feedback. To avoid this dread of feedback becoming an unmanageable reality, it is critical to provide strategies that allow individuals to understand what they can do to cope with it.

Mindfulness meditation has been proven to promote present-moment awareness (Brown and Ryan 2003; Kabat-Zinn 2003), which may help individuals focus on the input they are getting while also acknowledging and accepting their feelings without being influenced by them.

The present Work Project will investigate the effects of a brief mindfulness induction on feedback-seeking behaviours. The first section includes a review of the current literature on what feedback is and why people are afraid of seeking feedback, as well as an explanation of the mindfulness concept and how the two may be related. Nonetheless, the research subject and hypotheses were developed in this section. The experimental research methodology and procedures are described in the second part. The results of the experimental study and their analysis are then reported. Finally, the discussion of the findings, implications and recommendations are presented, and conclusions are drawn.

Literature Review

The role of Feedback

As social beings who thrive on interpersonal interactions, individuals constantly observe, receive, and give feedback (Chandler and Grealish 2019; Reichenberger et al. 2019). Feedback can be described as an opportunity to gain insight into how one is doing in terms of individual growth to achieve a specific goal (Vrabie 2021). It is meant to be formative, playing an important role in effective learning, and can take the form of recognition, coaching, or appraisal (Jug, Jiang, and Bean 2019; Osuala, Onwuagboke, and Agoha 2018; Amonoo, Longley, and Robinson 2021). Individuals can request it directly from others or indirectly by inferring information from their surroundings (Ashford, De Stobbeleir, and Nujella 2016). The more often people seek feedback, the more they learn about themselves, the clearer their role, and the better their performance (Ashford, De Stobbeleir, and Nujella 2016). The frequency with which people seek feedback is influenced by personal and environmental factors (Ashford, Blatt, and VandeWalle 2003). This leads to the fact that, although it is intended to be constructive and non-judgmental information (Amonoo, Longley, and Robinson 2021), it often fails to promote knowledge and improvement (Fulham, Krueger, and Cohen 2022). A possible explanation is that some obstacles make the receivers less receptive and more sensitive to criticism, which might produce a fear of seeking feedback (Jackman and Strober 2003).

Why is there a fear of seeking feedback? There are several theories as to why many individuals are uncomfortable seeking feedback. One is that when they receive negative feedback, they correlate it with critical comments from people when they were younger (e.g., parents and teachers) (Jackman and Strober 2003). This might be due to negativity bias, the tendency for a negative stimulus to have a greater psychological impact and be more easily stored in the memory than a positive stimulus (Ford et al. 2021). As a result, whenever an individual is exposed to evaluative circumstances, particularly unfavourable ones, these

memories are revisited, leading to unpleasant emotional sensations such as frustration and anxiety (Woo et al. 2015). Furthermore, feedback can hurt pride and ego, leading people with low self-esteem and weak egos to avoid seeking feedback to protect themselves and not be perceived as incompetent (Delva et al. 2013; Ashford, Blatt, and VandeWalle 2003; Audia and Locke 2003).

These emotions can arise not just from recalling negative past experiences but also when recipients interpret the feedback as a threat to their sense of self or when it contradicts their perspective (Fulham, Krueger, and Cohen 2022). This sensation of threat to one's self-image generates unpleasant affective reactions that hinder the way the message is processed, frequently leading to the information being rejected or ignored (Audia and Locke 2003). It can develop for a variety of reasons, including misaligned expectations between the receiver and the giver; a lack of relationship between the receiver and the giver; feedback delivered too early in the learning process; and/or the receiver's overconfidence or lack of confidence (Fulham, Krueger, and Cohen 2022; Jug, Jiang, and Bean 2019). These are all barriers to effective feedback that can lead to safety behaviours (e.g., feedback-seeking avoidance), negative emotions (e.g., sadness and stress), and attitudes that will indirectly influence the individual's performance and social skills (Nobre and Valentini 2021).

The previously indicated emotions as a result of negative feedback can also be caused, for instance, by shyness (i.e., fear, anxiety, and evaluative concerns in social circumstances) (Henderson, Gilbert, and Zimbardo 2014), a non-pathological and common personality trait; or social anxiety (i.e., fear, anxiety, or avoidance of social situations where they could be evaluated or judged by others), a clinical condition with symptoms that are beyond the individual's control (American Psychiatric Association 2013; Heiser et al. 2009). Individuals may have greater difficulty controlling their emotions in both circumstances, which can result in somatic

symptoms (e.g., trembling, sweating, blushing), cognitive symptoms (e.g., FNE), and behavioural symptoms (e.g., social avoidance) (Heiser et al. 2009).

The above-mentioned causes may be at the root of the fear felt by people when receiving feedback. The fear that appears in these situations where there is exposure to possible assessment scenarios results in the engagement of neuronal systems linked to the control of emotions and also generates an increase in human body activity (e.g., augmented cortisol production, a hormone released in response to stressful situations that raises the heart rate) (Birk et al. 2019; Feng et al. 2022; Russell and Lightman 2019).

In essence, the greater the degree of FNE, the stronger the negative emotional reaction triggered by the human body, which may reduce feedback-seeking behaviours. These situations will become more difficult to manage over time if the individual does not have the necessary capabilities to deal with them (Birk et al. 2019; Chandler and Grealish 2019).

Mindfulness

The concept of mindfulness commonly stems from the ability to be completely focused and aware of the present moment, and to be able to observe and accept each thought, feeling, or sensation that arises as it is, without judgement (Brown and Ryan 2003; Creswell 2017; Keng, Smoski, and Robins 2011; Zenner, Herrnleben-Kurz, and Walach 2014). Nevertheless, this process of paying attention to the present moment does not coincide with what happens daily (Creswell 2017; Kabat-Zinn 2009; Keng, Smoski, and Robins 2011; Smallwood and Schooler 2015; Zenner, Herrnleben-Kurz, and Walach 2014). Individuals' minds are constantly wandering to the past or the future, leading them to often miss the opportunity to enjoy the richness of the moment in which they live (Kabat-Zinn 2009). This inhibits them from acquiring something constructive from such moments to grow personally or professionally (Kabat-Zinn 2003). In a study conducted by Killingsworth and Gilbert (2010), participants reported mind-wandering nearly 47 per cent of the time across all daily activities tested except making love,

which takes their focus off what they are experiencing (Crosswell, Coccia, and Epel 2019; Kabat-Zinn 2009; Killingsworth and Gilbert 2010). Mindfulness has previously been shown to reduce mind-wandering by training the mind to focus on one thing at a time and providing tools for refocusing attention to the current situation when the mind wanders with non-judgemental acceptance (Belardi et al. 2022). In addition, it can also minimise negative biases (i.e., thoughts that accentuate pessimism) by lowering negative moods and encouraging more positive judgements (Gibb et al. 2022; Kiken and Shook 2011; 2014).

Regarding the health and well-being benefits for practitioners, mindfulness produces neurophysiological, cognitive, emotional, and behavioural effects (e.g., improving immunity, memory, and attention, as well as enhancing mood and sleep quality) (Brown and Ryan 2003; Creswell 2017; Keng, Smoski, and Robins 2011; Petchsawang and McLean 2017). Aside from these intrapersonal effects, they present neuroplasticity changes in the structure and function of neural circuits, comparing the pre-and post-intervention periods (Kiken et al. 2015). All this is possible due to improved self-regulation induced by mindfulness through various mechanisms: (1) *attention regulation*, by recruiting the attentional control circuit, which is required for attention maintenance and redirection (Hölzel et al. 2011; Renjen and Chaudhari 2017; Y.-Y. Tang, Hölzel, and Posner 2015); (2) *body awareness*, allowing individuals to recognise bodily sensations, resulting in greater perceptual clarity of interoception (Hölzel et al. 2011; Gibson 2019); (3) *emotion regulation*, by influencing the types of emotions that emerge, how long they last, and how they are felt and expressed, lowering overall reaction to previously unemotionally friendly stimuli and allowing a return to an emotional baseline following a reactive scenario (Guendelman, Medeiros, and Rampes 2017; Hölzel et al. 2011; Y.-Y. Tang, Hölzel, and Posner 2015; Wilms, Lanwehr, and Kastenmüller 2020); (4) *changes in perspective on the self*, by developing the ability to perceive the self as a transient and dynamic process of change instead of a permanent and immutable one. It minimises self-identification by allowing individuals to

recognise that they are a balance of themselves, others, and nature rather than one with their mind and body. (i.e., “quiet” the ego/ego dissolution) (Huffman, Irving, and Wayment 2015; Xiao et al. 2017; Wayment and Bauer 2017a). Individuals who “quiet” their ego seem to have less negative and more holistic thoughts (Huffman, Irving, and Wayment 2015). This disidentification of the self, however, appears to occur mostly in more experienced mindfulness practitioners (Millière et al. 2018).

The link between mindfulness and fear of seeking feedback: self-regulation mechanisms applied to FNE. The four components of self-regulation may interact so intimately that distinguishing them becomes difficult (Hölzel et al. 2011). This section provides an adapted example from Hölzel (2011) of how mindfulness affects all components and how they facilitate each other in instances where an individual receives negative feedback.

An emotional reaction can be generated by thoughts, sensations, memories, or external stimuli in a negative feedback scenario. In these circumstances, the attention circuits signal the conflict between the emotional reaction and the present moment and seek to refocus attention on the present with an open and non-judgemental attitude. Promoting bodily awareness also helps people recognise physiological aspects of sensations (e.g., muscular tightness and increased heart rate) and identify the subsequent emotional reaction (i.e., fear). Following this identification, emotion regulation mechanisms are activated, allowing internal and external stimuli to be perceived calmly, serenely, and clearly and individuals to become aware of their fear without being influenced by it (Teper, Segal, and Inzlicht 2013). Finally, when the ego is quieted, the individual becomes more motivated and capable of considering the opinions of others. In this way, they can identify with those who are not necessarily the same as themselves and experience situations without being defensive but rather as an opportunity for growth (Wayment and Bauer 2017b).

Hence, individuals can better manage, recognize and appreciate the negative emotions that arise when receiving negative feedback, without affecting the present moment, leading them to a more comfortable position when seeking feedback (Keng, Smoski, and Robins 2011; Sohrabi and Dortaj 2020; Rupprecht et al. 2019). This can be explained by the previously established effects of brief mindfulness practice. It includes the benefits it has on negative affectivity (e.g., fear and nervousness) (Bellosta-Batalla et al. 2020) and how it helps individuals respond more constructively to stressful situations (Razian, Nasab, and Shairi 2015).

Mindfulness conceptualization, and outcomes. Mindfulness may be characterised as a *state* (i.e., the quality of mindful presence experienced during or shortly after mindfulness practice, which might cause temporary changes in the brain state) or a *trait* (i.e., the consistency and regularity of mindful states over time) (Frieze and Hofmann 2016; Kiken et al. 2015; Quaglia and Brown 2015; Y. Tang, Hölzel, and Posner 2015). The latter influences personality traits, which differ from person to person based on life experiences, from a genetic proclivity to be attentive in daily life, and while it appears to be stable in the absence of intervention, the more training, the higher the levels of trait mindfulness (Kiken et al. 2015; Quaglia and Brown 2015; Y. Tang, Hölzel, and Posner 2015; Vasudevan and Reddy 2019). Individuals may need several weeks to cultivate trait mindfulness before seeing significant results (Brown and Ryan 2003; Kiken et al. 2015). However, recent research has found that a single 10-minute mindfulness intervention (Erisman and Roemer 2010) or 15-minute focused-breathing meditation (Arch and Craske 2006a) may instantaneously change an individual's emotional state, as well as reduce outward-focused negative emotions and susceptibility to negative stimuli (Hafenbrack 2017; Arch and Craske 2006a; Erisman and Roemer 2010). This can induce a state of mindfulness in cases where individuals are stressed and experience unpleasant and/or self-threatening emotions (e.g., seeking negative feedback) (Hafenbrack 2017). When

compared to long-term mindfulness interventions, on-the-spot interventions may offer certain advantages (e.g., can be done anywhere, cost less time and money, and are enough to create temporary effects on emotion control and well-being) (Hafenbrack 2017; Arch and Craske 2006a; Guendelman, Medeiros, and Rampes 2017). Besides all the benefits, mindfulness has also been shown to have side effects, particularly in those with high baseline levels of Mindfulness Related Processes (e.g., mindful attention and emotion regulation, mindfulness qualities, and mindfulness meditation practice), and under certain conditions, for certain people, or when taken too far (Britton 2019; Howard 2016).

Present Study

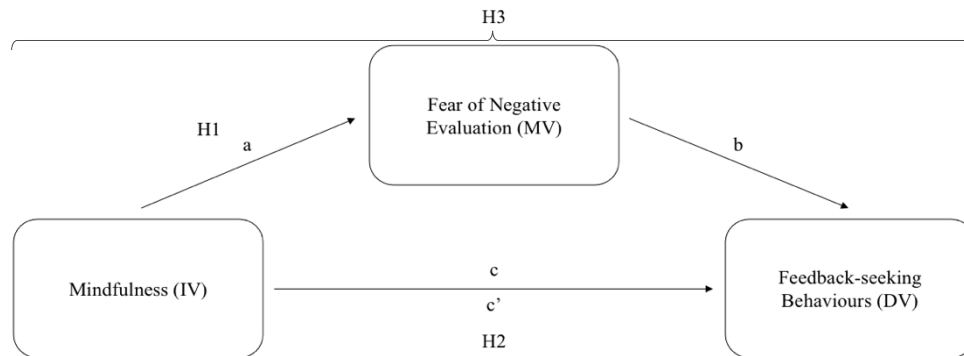
The fear of being negatively evaluated, not appearing competent, giving the impression of a lack of confidence, or seeking praise, are psychological fears. These fears are induced by a lack of balance between the individual and the situational needs, which may cause individuals to avoid seeking feedback (Sohrabi and Dortaj 2020; Crommelinck and Anseel 2013; Delva et al. 2013).

Mindfulness practices can tackle this problem by promoting a state of mindfulness in these stressful situations, encouraging a more constructive receiver's reaction and, consequently, a greater ability to seek negative feedback (Razian, Nasab, and Shairi 2015).

The present study aims to combat an existing gap in the literature, serving as a starting point for investigating the impact of mindfulness on feedback-seeking behaviours. Hence, this Work Project investigates whether the FNE can mediate feedback-seeking behaviours among students. Thus, the research question that guided this study was **“How does mindfulness impact feedback-seeking behaviours?”**.

Figure 1:

Conceptual Framework



Note. Conceptual framework illustrating the indirect effects of Mindfulness on Feedback-seeking Behaviours. IV = independent variable; MV = mediator variable; DV = dependent variable; c' = direct effect of IV on DV; c = indirect effect of IV on DV through MV or $a*b$.

Based on the presented conceptual framework (**Figure 1**), three hypotheses were constructed:

- H1)** A brief mindfulness practice reduces the fear of negative evaluations.
- H2)** A brief mindfulness practice increases feedback-seeking behaviours.
- H3)** The fear of negative evaluations mediates the relationship between brief mindfulness practice and feedback-seeking behaviours.

Methodology

The following section provides an overview of the methodology used in this study by delving into the research method and design, methods (i.e., participants), variable measurements and procedure.

Research Method and Design

The purpose of this study is to explore if there is a link between a single brief mindfulness session and feedback-seeking behaviours. Concurrently, it purposes to investigate if this association may be explained by a reduction in FNE. As a result, participants completed a survey with a quantitative methodology (i.e., a research method commonly used to answer

relational questions regarding variables) (Williams 2007). In the specific case of the underlying study, this is true experimental research with a post-test-only control group design. It enables a high degree of experiment control while also producing a high degree of validity (Williams 2007). Numerical data were collected through an online survey and then analysed using the IBM SPSS software platform. These surveys have proven useful in a variety of ways, including their convenience, ease of dissemination, low administration costs, adaptability, and data analysis (Evans and Mathur 2018).

Method

Table 1

Descriptive statistics: participants' demographic characteristics

Characteristics	<i>n</i>	%
Gender		
Male	36	35.6
Female	65	64.4
Nationality - European Union	101	100

Note. $N = 101$ ($n = 53$ mindfulness group and $n = 48$ mind-wandering group). Participants were on average 21.69 years old ($SD = 2.34$), ranging from 18 to 30 years.

Participants. A total of one hundred and one individuals completed the study (36 (35.6%) males, 65 (64.4%) females; $M_{\text{age}} = 21.69$ years, $SD_{\text{age}} = 2.34$ years). The demographic characteristics of the sample are presented in **Table 1**.

Participants were recruited through snowball sampling, where the researcher invited individuals who fit the research inclusion criteria (i.e., being at least 18 years old and currently studying) to become research participants. They were then invited to recommend other appropriate contacts who might also be willing to participate, who in turn would recommend other potential participants, and so on. All participants were from European Union countries.

Following the instructions provided in the study description, participants were randomly assigned to one of two groups: a control group ($n = 48$) – mind-wandering condition – and an experimental group ($n = 53$) – mindfulness condition.

Induction. Participants who were assigned to the experimental group listened to a 9-minute audio guide focused on breathing mindfulness meditation practice. During this audio, they were guided to observe the present moment and be aware of their bodies' physical sensations, namely the sensation of their breath entering and exiting the body.

The control group participants likewise listened to a 9-minute audio guide but focused on mind-wandering. The speaker instructed participants to let their minds wander freely without trying to focus on anything in particular. Mind-wandering was chosen as the control condition since it was already established as an acceptable baseline for mindfulness-based experiments with valenced stimuli (Arch and Craske 2006b).

Measures

Mediator: Brief Fear of Negative Evaluation Scale (Appendix A). To assess the degree of apprehension of individuals when faced with a negative evaluation situation, the 12-item self-report questionnaire Brief Fear of Negative Evaluation Scale (BFNE; Leary 1983) was adapted to this study. The scale was only slightly modified to allow participants to answer how they felt at that moment if they were exposed to a given situation presented.

The 12 items were rated on a 5-point Likert-type response scale ranging from 1 “Strongly Disagree” to 5 “Strongly Agree”. Of the 12 items, statements 2, 7, and 10 were reverse-coded. Individuals who score highly on this scale tend to behave in ways designed to avoid potential situations where they can be evaluated unfavourably. Cronbach's alpha coefficient ($\alpha = 0.93$) was used to assess the internal consistency of the BFNE Scale, indicating that it is "excellent" (Gliem and Gliem 2003).

Dependent Variable: Feedback-seeking Behaviours Scale (FSB; Appendix B). A 5-item self-report scale (VandeWalle, Ganesan, and Brown 2000) was used in this study. The original version of this scale was constructed and validated to be applied in an enterprise context to understand how frequently subordinates sought feedback from their supervisors (VandeWalle, Ganesan, and Brown 2000). Based on that, the scale was modified to measure how comfortable participants (i.e., students) were with seeking feedback in the hypothetical scenario presented after hearing the audio. The items were rated on a 5-point Likert-type response scale ranging from 1 “Extremely Uncomfortable” to 5 “Extremely Comfortable”. Cronbach's alpha coefficient ($\alpha = 0.85$) was also used to assess the scale's internal consistency, indicating that the internal consistency of the FSB Scale is "good" (Gliem and Gliem 2003).

Procedure

A double-blind (mindfulness vs. mind-wandering) between-subjects experimental design was adopted. At the beginning of the survey, all participants were given a brief explanation of how they should proceed, notably that they should take the survey in a quiet environment with no distractions and with their headphones on. In this part, the participants were also made aware of the ethical considerations of this study, and they could only proceed with the experiment upon submitting the informed consent document (Appendix C). The Qualtrics platform randomly assigned participants to either the focused breathing mindfulness meditation or mind-wandering group after completing an audio test to guarantee no issues with the audio. None of the stakeholders of this study (i.e., participants and experimenters) was aware of the distribution of the groups. After listening to the 9-minute audio of the assigned condition, participants completed the BFNE Scale (Leary 1983), and the FSB Scale (VandeWalle, Ganesan, and Brown 2000), and at the end of the survey, they filled out some demographic questions.

Results

The IBM SPSS statistical software version 28 was used in all analyses presented in this section to assess the hypotheses and produce the study's conclusion. This section is divided into a correlation analysis between five variables (i.e., mindfulness condition, BFNE Scale, FSB Scale, age, and gender), followed by two Univariate Analyses of Variance (Univariate ANOVA), and a mediation analysis.

Table 2

Correlations and Descriptive Statistics

Variables		Mindfulness	BFNE Scale	FSB Scale	Age	Gender
Mindfulness	Pearson Correlation	1	-.299**	.343**	.069	-.005
	Sig. (2 -tailed)		.002	<.001	.495	.964
BFNE Scale	Pearson Correlation	-.299**	1	-.531**	-.068	.167
	Sig. (2 -tailed)	.002		<.001	.499	.095
FSB Scale	Pearson Correlation	.343**	-.531**	1	.234*	-.074
	Sig. (2 -tailed)	<.001	<.001		.019	.463
Age	Pearson Correlation	.069	-.068	.234*	1	.112
	Sig. (2 -tailed)	.495	.499	.019		.264
Gender	Pearson Correlation	-.005	.167	-.074	.112	1
	Sig. (2 -tailed)	.964	.095	.463	.264	

Notes. $N = 101$. BFNE = Brief Fear of Negative Evaluation; FSB = Feedback-seeking Behaviours. **

Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed).

A correlation analysis was performed to determine how some variables are related. As seen in **Table 2**, the correlation between the mindfulness variable and the BFNE Scale is significant ($p = .002$) and negative ($r = -.30$), which means that the higher the level of state mindfulness, the lower the FNE, and there is a small relationship between the two variables. The relationship between the mindfulness condition and the FSB Scale, on the other hand, is positive ($r = .34$) and significant ($p < .001$), and they have a medium correlation. Furthermore, the two scales BFNE and FSB have an inverse ($r = -.53$) and significant ($p < .001$) relationship with each other, and there is a large correlation because the absolute value r is larger than .5.

Additionally, there is a significant and positive correlation between participant's age and feedback-seeking behaviours, meaning that the older the participants, the more willing they were to seek feedback. These initial findings corroborate the study's hypotheses. However, a UNIANOVA and mediation analyses were also performed to test the hypotheses.

Table 3

Descriptive Statistics

Source	Mean	Std. Deviation
Mind-wandering	3.70	.672
Mindfulness	3.22	.839
Total	3.45	.797

Note. $N = 101$ ($n = 48$ mind-wandering group and $n = 53$ mindfulness group). The two groups' average results of the Brief Fear of Negative Evaluation Scale.

Table 4

Univariate Analysis of Variance Results: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5.675 ^a	1	5.675	9.715	.002	0.89
Intercept	1206.582	1	1206.582	2065.745	<.001	.954
Mindfulness	5.675	1	5.675	9.715	.002	.089
Error	57.825	99	.584			
Total	1264.847	101				
Corrected Total	63.500	100				

Note. These results relate to the Brief Fear of Negative Evaluation Scale.

a. R Squared = 0.89 (Adjusted R Squared = .080)

A Univariate Analysis of Variance was performed to compare the effect of the brief mindfulness induction on the FNE.

As indicated in **Table 3**, the mean and standard deviation of the total score for the experimental group of the BFNE Scale were ($M = 3.22$, $SD = .84$) and in the control group were ($M = 3.70$, $SD = .67$), respectively. **Table 4** shows that there was a statistically significant difference between the groups ($F(1,99) = 9.72$, $p = .002$). The current findings demonstrate

that participants in the experimental group had less FNE compared to the control group. Thus, the first hypothesis is supported by these results.

Table 5

Descriptive Statistics

Source	Mean	Std. Deviation
Mind-wandering	3.25	.993
Mindfulness	3.84	.632
Total	3.56	.872

Note. $N = 101$ ($n = 48$ mind-wandering group and $n = 53$ mindfulness group). Average results of the Feedback-seeking Behaviours Scale in the two groups.

Table 6

Univariate Analysis of Variance Results: Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	8.938 ^a	1	8.938	13.189	<.001	.118
Intercept	1265.210	1	1265.210	1867.041	<.001	.950
Mindfulness	8.938	1	8.938	13.189	<.001	.118
Error	67.088	99	.678			
Total	1354.920	101				
Corrected Total	76.025	100				

Note. These results relate to the Feedback-seeking Behaviours Scale.

a. R Squared = 0.118 (Adjusted R Squared = .109)

A Univariate Analysis of Variance was performed again to compare the effect of the brief mindfulness induction on the feedback-seeking behaviours between the two groups.

As is shown in **Table 5**, the mean and standard deviation of the total score for the experimental group of the Feedback-seeking Behaviours Scale were ($M = 3.84$, $SD = .63$) and in the control group were ($M = 3.25$, $SD = .99$), respectively. **Table 6** shows that a statistically significant difference ($F(1,99) = 13.19$, $p < .001$) was found between the two groups. The present results demonstrate that participants in the experimental group were more comfortable

seeking feedback than those in the control group, in the presented hypothetical scenario. Hence, the second hypothesis is also supported by these results.

Additional Analysis: Mediation Analysis

Table 7

Mediation Analysis results through PROCESS macro, SPSS.

Antecedent	Consequent							
	a	M (BFNE Scale)			c'	M (FSB Scale)		
		<i>Coefficient</i>	<i>SE</i>	<i>p</i>		<i>Coefficient</i>	<i>SE</i>	<i>p</i>
Mindfulness	a	-.4661	.1515	.0027	c'	.3354	.1496	.0272
BFNE Scale (mediator)		—	—	—	b	-.4998	.0957	.0000
Constant		3.7068	.7147	.0000		3.6499	.7614	.0000
R ² = .1213				R ² = .3547				
F (3,97) = 4.4627, <i>p</i> = .0056				F (4,96) = 13.1917, <i>p</i> = .0000				

Note. *SE* = Standard Error; BFNE = Brief Fear of Negative Evaluation; FSB = Feedback-seeking Behaviours.

Table 8

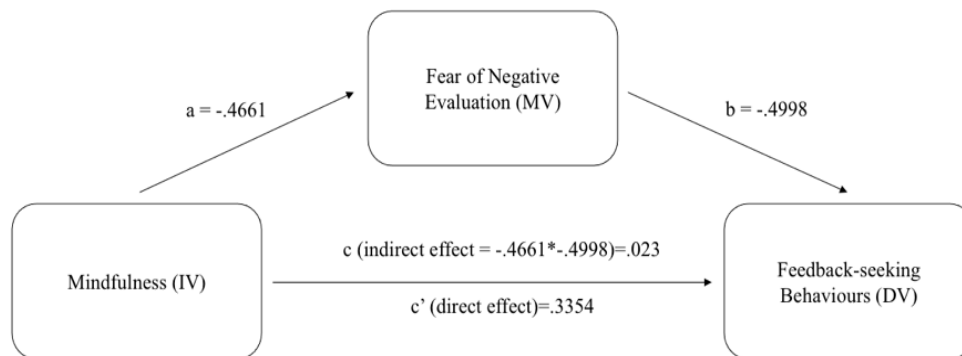
Indirect Effect(s) of Mindfulness condition on the Brief Fear of Negative Evaluation Scale.

Mediator	Bootstrap (SE)	95% Confidence Intervals	
		LL	UL
BFNE Scale	.0926	.0790	.4434
Total	.1610	.2489	.8879

Note. *SE* = Standard Error; *LL* = Lower Limit; *UL* = Upper Limit; BFNE = Brief Fear of Negative Evaluation.

Figure 2:

Indirect Effects Diagram



Note. Diagram of the indirect effects of Mindfulness on Feedback-seeking Behaviours. c' = direct effect of IV on DV; c = indirect effect of IV on DV through MV or $a*b$.

A mediation analysis was conducted using the PROCESS macro in SPSS (version 4.2, model 4, Hayes 2022). Mindfulness was inserted as the independent variable; age and gender as covariates; and the FNE was entered as the mediating variable to predict how comfortable participants were with seeking feedback. Looking at **Table 7** and **Table 8**, which show the regression coefficients that are superimposed on the statistical diagram of the model in **Figure 2**, the three hypotheses initially established were supported. Mediation results indicate that FNE significantly mediates the effect of mindfulness on feedback-seeking behaviours; indirect effect = 0.23; 95% CI [0.8, 0.44]. These results in particular support the third hypothesis.

Discussion

This study aimed to investigate the effect of brief, on-the-spot mindfulness sessions on feedback-seeking behaviours. It was hypothesised that a mindfulness induction, cultivated through a 9-minute focused-breathing meditation, would increase feedback-seeking behaviours, mediated by a reduction of fear when exposed to potential negative evaluation situations.

The results of the data analysis indicate that there is a significant difference between the control group and the experimental group regarding FNE. Participants in the mindfulness group reported lower levels of FNE compared to the mind-wandering group. These findings indicated that the mindfulness group was less afraid of unfavourable assessments in the hypothetical scenario presented. The results are consistent with other studies regarding mindfulness practice's effectiveness in reducing FNE (Sohrabi and Dortaj 2020; Razian, Nasab, and Shairi 2015). This study differs from others by (1) demonstrating positive results with only one on-the-spot meditation, whereas others usually found effects after eight intervention sessions (Sohrabi and Dortaj 2020; Razian, Nasab, and Shairi 2015; Burton et al. 2013); (2) being conducted with a non-clinical population, while the majority of the studies are conducted with clinical samples (e.g., social anxiety) (Razian, Nasab, and Shairi 2015; Burton et al. 2013); and (3) demonstrating, in **Table 2**, that it works regardless of gender, whereas most studies are focused on a specific gender population (e.g., women) (Sousa et al. 2021; Sohrabi and Dortaj 2020; Razian, Nasab, and Shairi 2015). These findings have some implications, namely that on-the-spot meditation is a solution with a broad application to everyday situations for individuals without a specific medical condition and for everyone who has or does not have access and resources to resort to more intensive and prolonged interventions. The authors of other studies justified the positive results of mindfulness, by stating that mindfulness reduces psychological worries and social anxiety symptoms and increases coping skills and emotional self-regulation. Besides that, it also allows individuals to perceive events as less dismal than they are in the present, reducing rumination and fears of being evaluated by others (Sohrabi and Dortaj 2020). Based on these findings, the first hypothesis of this study was supported.

The second hypothesis was also supported by the results of this study since it appears that mindfulness can lead individuals to feel more comfortable seeking feedback than mind-wandering. There is not much research regarding mindfulness's influence on feedback-seeking

behaviours; however, a study has defended that mindfulness helps to calm the ego (Bergeron and Dandeneau 2016) which may increase the tendency to seek feedback. Another study found that mindfulness moderates the indirect effect of feedback-seeking on creativity through thriving at work; nevertheless, the relationship between trait mindfulness and feedback-seeking behaviours is weak ($r = -.03$) (Wang, Wang, and Liu 2022). The current study, on the other hand, adds to the literature that brief mindfulness interventions have the potential to change feedback-seeking behaviours and that there may be something about mindfulness practice that matters for behaviour rather than trait mindfulness.

Although the results appear statistically significant, it is important to consider the effect size. By looking at the value of the Partial Eta Squared in **Table 4** and **Table 6**, it is possible to conclude that the effect size, $\eta^2 = .09$ and $\eta^2 = .12$, respectively, is medium in both cases. This means that there exist other predictors that may additionally explain FNE and feedback-seeking behaviours that remain unassessed in the current experiment (Richardson 2011).

The third hypothesis was tested through mediation analysis. The results presented were in agreement with the tested hypothesis, which means that the relationship between practising a short mindfulness session and feedback-seeking behaviours seems to be mediated by FNE. In other words, the greater the level of state mindfulness, the lower the fear of receiving negative feedback and the greater the level of comfort in seeking feedback.

According to the findings of this Work Project, a brief, on-the-spot mindfulness induction before potential unfavourable evaluations or seeking feedback may be beneficial in dealing with the emotions that may arise during the process.

Limitations

As with all studies, the present paper has some inherent limitations. The first limitation is that there was little control over the sample because it was a snowball sample. Thus, participants

may have self-selected for the study. In addition, because the study was not conducted in a controlled environment such as a lab, it is hard to confirm that individuals were effectively meditating and not distracted. Nevertheless, when we examined some participation information, such as total time spent on the survey, it appeared that the majority of participants finished the study in one sitting, and the primary conclusions did not alter when those with suspiciously long completion times were excluded. Participants were not asked if they were disturbed during the meditation; without such verification, we cannot guarantee the veracity of participation. Future research can be conducted in a lab environment to confirm the results.

The second limitation was that we did not include a manipulation check. This was eschewed as mindfulness and mind-wandering manipulations were established experimental and control manipulations in the literature by other authors (Arch and Craske 2006b). Thus, its inclusion could create some demand characteristics and bias participants' responses, leading them to believe that they should have felt something different than they did during meditation. However, it could have helped to understand whether the independent variable produced the desired effects.

The study design also has some limitations (i.e., post-test-only with control group design). First, there may be a risk of attrition bias, as there were 101 participants who dropped out before completing the survey, rendering the groups somewhat unequal (i.e., 48 vs. 53). However, examining the attrition rates between groups seems to suggest that there were equal dropout proportions in both conditions, so we can conclude that the attrition rate was similar between conditions. Secondly, there was no measure of the BFNE Scale and FSB Scale, before the manipulation. So, we do not know for certain whether participants in the control and experimental groups did not differ on baseline measures of fear of negative evaluations and feedback-seeking behaviours at the beginning of the study. Nevertheless, random assignment

into groups should reduce the likelihood that any differences observed between the two groups are reflective of differences that may already exist.

Recommendations

Future research recommendations

The current study is preliminary evidence that a brief, on-the-spot mindfulness session can improve feedback-seeking behaviours. However, the results should be treated with caution. Although the FSB Scale was adapted from established scales that assess how often participants sought feedback, this study only measured self-reported feedback-seeking intentions. A possible follow-up study is to design a study that captures actual feedback-seeking behaviours, such as a lab study where individuals actually work on a task and then are told that they failed and then see whether or not they want additional feedback.

Future research could also replicate the study with (1) a more precise sample selection and in a more controlled environment to ensure that all individuals complete the survey and meditate without distractions; (2) another population and in another context to understand if the results obtained vary depending on the type of participants selected and the context. It could contribute to a deeper understanding of how a brief mindfulness practice can increase feedback-seeking behaviours in different contexts.

Practical and managerial recommendations

Mindfulness enhances individuals' resilience and compassion, improving subjective well-being (Correia 2020; Keng, Smoski, and Robins 2011). Individuals who live to experience the present moment become more self-aware (Leland 2015), which may mean that they are better able to identify their feelings and accept their limitations.

To reap the benefits of mindfulness, this practice should be applied in the workplaces of, for instance, students (i.e., colleges). Those in charge of colleges can make their students and

employees aware of the benefits of practising mindfulness and make time and space in their schedule for mindfulness sessions by setting aside rooms for this purpose. As a result, everyone will have more motivation to participate in these sessions and enjoy their advantages at no cost. The normalization of mindfulness practice can reduce fear of performance evaluations and increase, among many other things, feedback-seeking behaviours leading to self-improvement, as was proven in this study.

Students are companies' future human resources, so schools should be the beginning point for incorporating this practice into the daily lives of more individuals. This provides an impetus for applying this practice in businesses.

Conclusion

Mindfulness and its benefits are increasingly being examined. Nevertheless, its relationship with feedback-seeking behaviours has been little explored. The current study contributes to the literature by giving new insights into the effects of a brief, on-the-spot mindfulness induction on feedback-seeking behaviours. The current study implies that fostering on-the-spot meditation could be a quick and low-cost way to harness the benefits of mindfulness, enabling more control over the fear of receiving negative feedback and, as a result, increased comfort in asking for feedback. Hence, this Work Project may serve as a driver for additional studies on the benefits of mindfulness on feedback-seeking behaviours.

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Appendices

Appendix A

Brief Fear of Negative Evaluation Scale

Adapted from Leary (1983)

Instructions: Imagine you've just presented an individual work and you believe it didn't go well, and you know you'll need to hear feedback from your professors.

At this point, you are expecting to receive negative feedback from your professors. Read each of the following statements and indicate the degree of how you would feel, based on the scale, if you found yourself in this situation.

Statements:

Right now, if I had to receive negative feedback from my professors, I...

1. would be worried about what they will think of me even if I know it doesn't make any difference.
2. would be unconcerned even if I know they are forming an unfavourable impression of me.
3. would be afraid of them noticing my shortcomings.
4. would be worried about what kind of impression I am making on them.
5. would be afraid they will not approve of me.
6. would be afraid that they will find fault with me.
7. would be unconcerned about it since their opinions of me do not bother me.
8. would be worried about what they may be thinking about me
9. would be worried about what kind of impression I make.
10. would be unconcerned if they judged me because it has little effect on me.
11. would be too concerned with what they think about me.
12. would be worried that I will say or do the wrong things.

Scale points:

1 – Strongly disagree; 2 – Disagree; 3 – Neither agree nor disagree; 4 – Agree; 5 – Strongly agree

Appendix B

Feedback-seeking Behaviours Scale

Adapted from VandeWalle et al. (2000)

Instructions: Respond as if the situation presented were happening **right now**.

There is a contest going on at your school in which you and your group have entered to come up with a proposal for a business project. The best project will be presented to several companies that may want to develop it. A group of professors will serve as judges for this contest and will select the winning project. Your project was chosen as one of the top ten and presented to the jury for the final time two weeks ago.

Following this final phase, you received the decision letter: Your group and eight other groups who made it to the final round of presentations were not chosen to present the project to companies. Consider the possibility of receiving honest and accurate feedback on why your project was not chosen by the professors' jury members. Read the following statements and answer to what extent you feel comfortable seeking feedback from your professors.

Statements:

Right now, I feel comfortable requesting feedback regarding inadequacies about...

1. my overall performance.
2. technical aspects of my work.
3. my behaviours about school attitudes and values (e.g., plagiarism).
4. my performance in relation to their expectations of me.
5. my behaviours regarding the social relationships I maintain with my group team.

Scale points:

1 – Extremely uncomfortable; 2 – Uncomfortable; 3 – Neither comfortable nor uncomfortable;
4 – Comfortable; 5 – Extremely comfortable

Appendix C

Research Study for Work Project of Teresa Simões

Principle Investigators: Professor Samantha Sim and Teresa Simões

Purpose of the study: This study aims to determine whether a mental practice may impact seeking feedback behaviours.

Procedure and Duration: The study consists of taking two brief surveys, a 9-minute audio-guided meditation and some demographic questions. The experiment will take no more than 15 minutes to complete.

Please Note: Before starting, find a quiet place and get yourself a pair of headphones. You shouldn't get distracted or interrupted for the next 15 minutes. It would be greatly appreciated if you could complete the survey with your full attention, carefully reading all instructions and statements and then responding to all of the items.

Potential Trial Risks: No adverse effects are anticipated in this study.

Confidentiality and Privacy of Research Data: All participants' information will be kept anonymous and confidential and used only for academic purposes. Please answer the questionnaire as transparently and honestly as possible

Note that there are no right or wrong answers; each participant will have their own experience.

Your participation is completely voluntary, and you are free to withdraw at any time.

Please press "**I consent**" to continue and then **click on the arrow to begin**. If you don't want to complete the survey, you should close your browser now.