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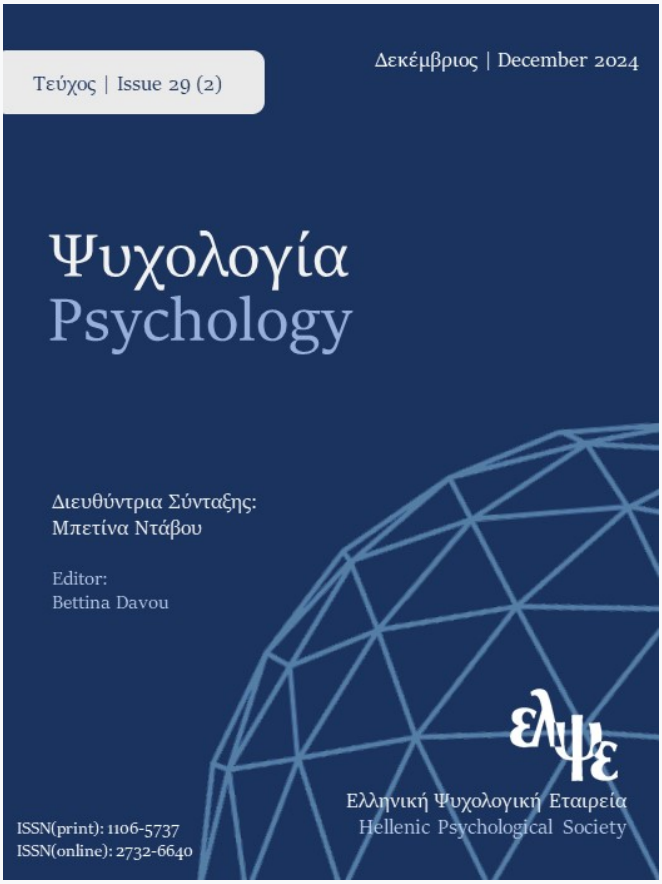

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An investigation into the relationship between stress mindset and stress responses: The role of coping mechanisms

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KEYWORDS

Stress mindset
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ABSTRACT

The positive and negative beliefs that people hold about stress influence their psychological reactions during stressful situations. In the long term, intense responses to stress can affect health and productivity. This study aims to examine how coping mechanisms mediate the relationship between stress mindset and stress responses. Additionally, its purpose is to provide rich qualitative insight into how individuals respond to stress on behavioural, cognitive, and emotional levels. A total of 238 healthy adults (Mean age: 28.04, SD: 15.55) responded to an online survey. Stress mindset and coping mechanisms were assessed via the Stress Mindset Measure-General (SMM-G) and the brief COPE inventory. Stress responses were assessed via open-ended questions. Qualitative data were thematically analyzed and transformed into quantitative data through content analysis. A mediation analysis was performed to examine the ability of coping mechanisms to mediate the relationship between stress mindset and stress responses. The thematic analysis categorized behavioural, cognitive, and emotional responses to stress. Within those three supraordinate themes, seven themes emerged. The total stress mindset was found to have significant negative relationship with stress response intensity and avoidant coping. Stress response intensity had a significant positive relationship with avoidant coping. Mediation analysis revealed that avoidant coping mechanisms mediated the relationship between stress mindset and responses to stress. Results suggest that adopting a less negative mindset about stress may lead to more beneficial coping mechanisms, which can, in turn, enhance the regulation of stress responses.

Introduction

Stress is widely understood as an experience with negative consequences (Liu et al., 2017). Literature indicates longstanding associations between stress and reduced health (Imtiaz & Ahmad, 2009; O'Connor et al., 2021; Yaribeygi et al., 2017). It is now indicated that stress is associated with the occurrence, maintenance, or exacerbation of several health conditions over the lifetime, both directly through physiological changes and indirectly via alterations in health behaviors (Slavich, 2016). More precisely, chronic stress appears to influence the central nervous system, immune system, and endocrine system, which can explain the important role that stress plays in the etiopathogenesis of certain diseases (Zafferino et al., 2021). Physiological changes of chronic stress include higher systolic blood pressure, increased heart rate, and elevated inflammatory markers (Gouin et al., 2012; Mariotti, 2015). These changes increase individuals' vulnerability to health problems. Certain health conditions such as cardiovascular diseases have been firmly associated with stress experience. Moreover, autoimmune diseases, such as multiple sclerosis, alopecia areata, and psoriasis have been strongly related to acute or chronic stress (Dar et al., 2019; Shah & Shinha, 2013; Tobore, 2021). Recent research also explains that stress can affect what we learn and remember. In particular, stress appears to influence learning from feedback

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and processing the feedback-related information, while it also has impairing effects on long-term memory retrieval (Klier & Buratto, 2020; Paul et al., 2019). Furthermore, prolonged stress weakens our ability to control attention and maintain alertness during task performance (Liu et al., 2020). On the psychological side, individuals experiencing high levels of stress more frequently report difficulties with both the quantity and quality of sleep, as well as high levels of irritability (Bland et al., 2010). A link has also been established between stress, depression, and vertigo (Omara et al., 2022). Moreover, the literature reveals that stress can affect our social interactions, our ability to understand others and our empathy levels. Increased stress tends to provoke, particularly in men, less adaptive social responses, such as egocentricity (Tomova et al., 2014). According to the General Adaption Syndrome (Selye, 1950), the physiological and psychological responses mentioned above occur in a series of stages. First, in the alarm reaction phase (fight-or-flight), the energy levels rise. Next, if the stress continues, the body enters the resistance stage, characterized by poor concentration and irritability. Prolonged energy consumption in the resistance stage leads to the exhaustion stage, where physical and emotional resources are drained, leading to fatigue and depression (Selye, 1950).

While the debilitating nature of stress is well-established, the benefits of stress are often overlooked. The physiological alterations that stress provokes might result in positive changes for the body. For instance, it has been suggested that the average level of oxidative stress can act protectively on tissue aging and aging-related health conditions (Yan, 2014). Moreover, it has been indicated that controlled levels of stress in several species, including humans, could improve cell performance during in vitro fertilization (Pribenszky et al., 2012). Stress can also positively affect specific cognitive abilities. In more detail, it is now indicated that stress can improve selective attention, which assists us in focusing on one task while ignoring irrelevant surrounding information (Hoskin et al., 2014). Additionally, chronic academic stress can also have an enhancing effect on concentration control, by diminishing the conflict monitoring and improving the conflict resolution procedure (Qi et al., 2024). Lastly, experiencing stressful life situations is linked to a phenomenon known as stress-related growth: stressful experiences prompt individuals to create a narrative about their experience, broaden their perspectives, and build mental resilience (Losavio et al., 2011). Emphasis on the adaptive role of stress, which can lead to personal growth and resilience after a difficult situation, has also been supported lately (Smith et al., 2023). To a further extent, stressful events appear to provide an opportunity for growth, especially for individuals with anxious attachment style (Graci & Fivush, 2016).

The Stress Mindset Theory

Lazarus & Folkman (1984) emphasized the significance of interpreting stressful events, noting that different individuals may perceive the same event differently. They highlighted the role of cognitive appraisal in determining physiological and psychological stress responses. Specifically, they proposed that perceiving a stressor as a challenge can lead to beneficial outcomes while appraising it as a threat tends to result in negative consequences. Harvey et al. (2010) confirmed that whether a stressful situation is appraised as challenging or threatening influences physiological responses.

Building on the concept of cognitive appraisal, Crum et al. (2013) introduced the idea of stress mindset as a crucial factor for understanding stress. Stress mindset is defined as the extent to which an individual views stress as beneficial for health, performance, productivity, and well-being (stress-is-enhancing mindset), versus perceiving it as having debilitating effects on these life-domains (stress-is-debilitating mindset). While stress appraisal pertains to the evaluation of a specific stressor as either challenging or threatening, stress mindset reflects individuals' overall feelings about stress itself (Crum et al., 2013).

Stress mindset has been shown to predict health, well-being, productivity, and professional development (Huebschmann & Sheets, 2020; Keech et al., 2018; Kim et al., 2020). Specifically, Keller et al. (2012) found that individuals with high levels of stress and a stress-is-debilitating mindset were at greater risk of illness and

premature death compared to those who also experienced high levels of stress, but did not perceive it as harmful to their health. Furthermore, a stress-is-enhancing mindset has been found to promote self-control and reduce the likelihood of depression (Park et al., 2018). Jiang et al. (2019) explained that positive beliefs about stress protect individuals from depression by mitigating the negative effects of stressful life events. Interestingly, these perceptions of stress can be manipulated: Jamieson et al. (2018) found that individuals who received information framing stress as beneficial performed better.

Stress mindset influences stress responses at physiological, behavioural, cognitive, and emotional levels. Crum et al. (2017) demonstrated that a stress-is-enhancing mindset is associated with increased production of anabolic hormones, which are essential for metabolic processes. Additionally, perceptions of stress mindset can impact how individuals react behaviourally to stress. For example, employees with a more positive stress mindset made greater efforts to cope during high workload days compared to those with a negative stress mindset (Casper et al., 2017). A stress-is-enhancing mindset has also been found to generate a higher attentional bias towards positive stimuli and greater cognitive abilities compared to a stress-is-debilitating mindset (Crum et al., 2017). Moreover, Laferton et al. (2019) demonstrated that individuals with a stress-is-debilitating mindset experience more fear and negative affect when confronted with daily stressors. Furthermore, a systematic review (Liu et al., 2019) revealed that reappraisal interventions aimed at shifting stress mindset were effective in reducing subjective responses to stress.

Coping mechanisms, which individuals use to manage perceived stress, are closely associated with stress mindset (Crum et al., 2013). According to Lazarus and Folkman (1984), coping refers to appraising the stressful situation and then activating cognitive and behavioural resources to control the stress response. Among the various conceptualizations of coping, the most prominent are avoidant and approach coping techniques. Avoidant coping refers to the process of withdrawing from the stressful situation or ignoring the related emotions, while approach coping involves directly addressing the stressful situation (Litman, 2006). Approach coping techniques, such as seeking social support, problem-focusing, and positive reconstruction of the event, have been linked to decreased distress in individuals with physical disability (Desalegn et al., 2023). Furthermore, with respect to well-being, problem-focusing, and re-appraisal strategies have been found to elicit positive emotions, while social support-oriented strategies play an important role in individuals' life satisfaction (Lacomba-Trejo et al., 2022). Moreover, interventions based on approach coping have effectively helped individuals experiencing emotional pain to accept their pain and improve their emotional state (Konstantinou et al., 2024). Conversely, avoidant-oriented coping strategies-such as evading the stressor, using substances, or fantasizing that the problem will disappear- have been shown to mediate the relationship between victimization and the depressive clinical picture in transgender adults (Hughto et al., 2017). Additionally, avoidant coping has been associated with increased diabetes-related anxiety in adolescents with diabetes type 1, which may lead to dysregulation of self-management and glycaemic control (Iturralde et al., 2017). Crum et al. (2013) found that individuals with a stress-is-enhancing mindset employed more approach coping mechanisms, whereas those with a stress-is-debilitating mindset tend to use more avoidant coping mechanisms.

Horiuchi et al. (2018) reported a mediating role of coping mechanisms in the relationship between stress mindset and psychological stress responses. Specifically, they proposed that stress mindset entails a meta-cognition element regarding the consequences of stress, which can affect the activation of coping mechanisms. Individuals with a stress-is-debilitating mindset were found to use emotional expression more frequently, which was associated with more intense psychological responses to stress (Horiuchi et al., 2018). Previous research has focused on the relationship between stress mindset and stress responses, with significant emphasis on emotional responses (Laferton et al., 2019). Furthermore, stress responses are usually assessed through questionnaires, limiting qualitative insight into the behavioural, cognitive, and emotional reactions to

stressors (Bland et al., 2010). Few studies have examined coping mechanisms as a variable, and only one has provided initial evidence that coping mediates the relationship between stress mindset and stress responses (Horiuchi et al., 2018).

The present study

Stress-management interventions typically focus on cognitive appraisal and coping, while stress mindset is often neglected (Alhurani et al., 2018). Understanding these mechanisms will inform more comprehensive interventions, leading to better-regulated stress responses, improved health outcomes, and optimized performance and productivity. Thus, the primary aim of the present study is to examine whether coping mechanisms (avoidant or approach) mediate the relationship between the stress mindset (stress-is-enchasing or stress-is-debilitating mindset) and the intensity of the stress responses. A secondary aim of this study is to provide deeper insight into the subjective experience of stress. Although nearly everyone experiences stress, there are substantial individual differences in responses to it (Claessens et al., 2010). By assessing behavioural, cognitive, and emotional responses to stress, this study aims to provide a holistic view of the different ways people experience stress. Based on the stress mindset theory and previous literature, the research questions of this study are: (1) Do participants with a higher stress-is-enhancing mindset report experiencing less intense responses to stress (such as increased energy levels, higher concentration and memory abilities, excitement, and motivation)? (2) Do participants with a higher stress-is-enhancing mindset utilize more approach coping techniques? (3) Do approach and avoidant coping techniques mediate the relationship between stress mindset and stress responses?

Method

Design

The study was a cross-sectional survey with a mixed-methods design, incorporating both established questionnaire measures and open-ended questions. This mixed-method design allows for the integration of quantitative and qualitative data, leading to a more complete understanding of the studied area (Cresswell & Clark, 2017). Participants submitted their responses between May and June 2020 via an online survey hosted by the Qualtrics© survey software.

Participants

A total of 295 participants responded to the survey, of whom 253 healthy individuals (62 males, 188 females; mean age = 28.04, SD = 15.55) met the inclusion criteria of being 18 years or older. Participants were recruited worldwide through social media platforms. Of the 253, 208 participants provided data for all three parts of the survey. The socio-demographic characteristics of the sample are presented in Table 1. Most participants (52.36%) reported having very good health. The sample predominantly consisted of well-educated women, with 45.28% holding at least an undergraduate degree.

Measures

Stress Mindset. Stress Mindset Measure–General (SMM-G; Crum et al., 2013) measures the dominance of stress-is-enhancing or stress-is-debilitating mindset. The scale consists of four 5-point Likert-scale items applying to the stress-is-enhancing mindset ("*Experiencing stress enhances my performance and productivity*") and four describing the stress-is-debilitating mindset ("*Experiencing stress inhibits my learning and growth*"). Negatively worded items are reversed-scored, and a mean score is calculated for all items. Higher SMM-G

scores indicate a stronger stress-is-enhancing mindset. This measure demonstrated high reliability in the present study (Cronbach's alpha = .86).

Table 1. *Socio-demographic characteristics of the sample*

Variables	N (%)
Gender	254
Male	63 (24.8%)
Female	188 (74.02%)
Transgender-male	0 (0%)
Transgender-female	2 (.79%)
Intersex	1 (.39%)
Other	0 (0%)
Education	254
Less than high school diploma	0 (0%)
High school degree or equivalent	41 (16.14%)
Undergraduate degree	115 (45.28%)
Postgraduate degree	91 (35.83%)
Doctorate or PhD	7 (2.76%)
General Health	254
Excellent	55 (21.65%)
Very good	133 (52.36%)
Good	58 (22.83%)
Fair	8 (3.15%)
Poor	0 (0%)

Coping mechanisms. The brief COPE inventory (Carver, 1997) consists of 28 four-point Likert-scale items, measuring the frequency with which participants use approach or avoidant coping techniques in response to stressful events. The approach coping style includes six subscales: active coping, positive reframing, planning, acceptance, seeking emotional support, and seeking informational support. The avoidant coping style includes six subscales: denial, substance use, venting, behavioural disengagement, self-distraction, and self-blame. Additionally, there are two subscales that do not exclusively belong either to approach or avoidant coping styles: humour and religion. A sum score is calculated for each subscale, and a total score is created for approach and avoidant coping, with higher scores indicating more frequent use of the specific coping style. Most subscales in this study exhibited moderate internal reliability (Cronbach's alpha ≥ .60).

Stress Responses. Responses to stress were assessed qualitatively through open-ended questions. Participants answered the following questions regarding their behavioural, cognitive, and affective responses to stress: "Think about the recent times you have experienced stress. How did stress affect your behaviour? How did stress affect your cognitive abilities? How did stress affect your emotions?"

Procedure

The quantitative and qualitative data were collected concurrently through the survey. First, qualitative data were analyzed using thematic analysis. These data were then transformed into quantitative data through content analysis. Finally, the quantitative data derived from the content analysis were integrated with the quantitative data collected from the questionnaires and analyzed through SPSS.

Ethical Considerations

Ethical approval for the study was granted by the University of Westminster Research Ethics Committee. Prior to the survey, participants were informed about the study's purposes, the procedure, the anonymity of their data, and their right to withdraw. Informed consent was obtained before participants completed the study measures. A debriefing form including contact details for support, in case of any discomfort, was provided at the end of the survey.

Treatment of data

Thematic analysis and content analysis. The thematic analysis was conducted following stages proposed by Braun & Clarke (2006). Responses were read for familiarisation, after which initial codes were created, systematically allocating relevant features that described behavioural, cognitive, or emotional responses to stress to each code. Potential themes were generated, and codes were assigned to each theme. Lastly, the generated themes were reviewed by the researchers on two different levels: evaluating whether the themes were coherent in relation to the coded quotations and assessing whether the themes adequately covered the entire data set. After reviewing the generated themes, a final definition and naming of the themes were conducted.

According to Sandelowski (2000), quantitative and qualitative data sets can be combined by converting qualitative data to quantitative form. Therefore, after conducting thematic analysis, content analysis was performed. Each response provided by participants contained specific information. Each item of information was scored by the researchers on a 4-point system: *1=positive/less intense response, 2=mild response, 3=moderate response and 4=intense response*. A total score for each participant was created by calculating the mean score of all items included in their responses. The focus of the content analysis was on the quality and intensity of stress responses rather than the quantity of stress (Lazarus, 1990). The content analysis was underpinned and framed by a theoretical model, The General Adaption Syndrome (Selye, 1950). Additionally, guidelines about what constitutes positive, mild, moderate, and intense expressions of stress were followed for objective scoring (The American Institute of Stress, 2020). A less intense response is defined as a reaction where the alteration due to stress is experienced but at a level that can be considered positive (The American Institute of Stress, 2020). Thus, in the present study "positive response" and "less intense response" were treated as parts of the same category. An example of a positive response is, "Stress motivates me to study harder". A mild response is represented by statements like, "Normally stress makes me feel tense," while a moderate response could be, "I cannot fully understand what I'm reading". Lastly, intense responses may include statements as, "I feel like I can't control anything".

Statistical data analysis. The data were analyzed using SPSS Statistics 23 and the PROCESS macro (3.5). A mediation analysis was conducted to explore how stress mindset influences stress responses. In this analysis model, the total score of stress mindset was treated as the predictor variable (IV), the intensity of stress responses was the outcome variable (DV), while approach and avoidant coping were treated as the mediator variables (MV).

The mediating role of coping mechanisms is assessed based on the satisfaction of the following conditions: 1. a significant relationship between IV and DV without controlling for the MV (or significant total effect of the IV to the DV); 2. a significant relationship between the IV and MV (or significant effect of the IV to the MV); 3. the strength of the relationship between the IV and DV should be weaker after controlling for MV (or a smaller direct effect of the IV to the DV); 4. a significant relationship between the MV and DV (or significant indirect effect of the MV to the DV) (Preacher & Hayes, 2008). The last condition was tested using non-parametric bootstrapping. The indirect effect is inferred to be significant if zero falls outside of the 95% confidence interval (CI) (Mackinnon et al., 2004). The aforementioned four conditions were examined sequentially; if one condition was not confirmed, the subsequent condition was not examined.

Results

Thematic Analysis

Behavioural stress responses

Impacted health behaviours. Participants frequently discussed changes in health behaviours while stressed. For example, they reported that the quality of sleep was affected. Additionally, participants noted changes in eating habits as a result of stress. This was characterized by loss of appetite, excessive eating, or consuming low-quality food. Another behavioural change was the increase of alcohol and tobacco consumption.

Participants discussed how stress makes them treat their bodies differently, either consciously or unconsciously. Participants reported that when they feel stressed, they struggle to remain still. Other body-focused behaviours varied, ranging from nail-biting and lip peeling to more severe forms of self-harm. One participant shared, “I have to turn to self-harm” to avoid panic attacks.

Changes in social interactions. Participants discussed how stress altered how they interacted with other people. Some noted a tendency to withdraw from social interaction when they experience stress. Conversely, others resorted to more aggressive behaviour, with one participant sharing that they “tended to argue with family” when stressed. Additionally, participants observed that stress seemed to deteriorate their communication skills. They mention being less talkative, struggling to find the right words, or being unable to respond: “When someone speaks to me, I always asking him to repeat it again”.

Changes in functioning. Responses revealed that stress leads to different levels of everyday functioning. Participants noticed energy levels were either increased or decreased following stress. One individual wrote, “There is a period of shock when the stress sets in when I am unable to do anything.” In contrast, another felt “energized, hyper, trying to find a solution” following a stressful situation. For some, stress led to procrastination or the abandonment of tasks altogether: “It caused me to postpone my further responsibilities”. Conversely, other participants stated that stress makes them more engaged with their daily responsibilities, with one sharing, “When I experience stress I am more committed to the task”.

Cognitive stress responses

Changes in thinking process. Participants noticed differences in their usual thought processes when confronted with stress. Some discussed that stress changes the quality of their thoughts, in that they were more negative about themselves, their current situation, and their future. For example, one wrote, “I make automatic thoughts for everything that can go wrong”. Interestingly, participants reported differences in the clarity of their thoughts. For some, thoughts became more befuddled, while others noticed their thoughts were more concrete and clearer. One discussed how stress makes their thinking a “blur” while another wrote that “usually

makes my thinking clearer." Finally, participants reported that stress led to a higher quantity of thoughts: "I spent more time ruminating on negative thoughts or experiences."

Cognitive processes affected. Participants discussed how stress influences the perception of information, concentration abilities, memory, comprehension, and decision-making. Some discussed how stress responses affected how they saw their environment: "Sometimes (stress) makes it difficult to see the 'bright side' of things." While some participants found that it is difficult to concentrate under stress, others observed that it actually helped them concentrate. One individual wrote, "It helps me pay attention to what I'm doing". Participants' memory capacity varied. Some experienced memory loss and feeling "unable to recall information", while others found stress led to higher capability of "memorizing stuff under stress". Lastly, participants reported a deterioration of the decision-making process, and a tendency to make poor decisions.

Emotional stress responses

Influencing other emotions. Participants discussed the interrelatedness of stress with other emotions, such as fear, insecurity, disappointment, vulnerability, excitement, and motivation. A sense of fear following a stressful situation was a common pattern. One wrote, "I fear that other people will judge what I say". Participants also discussed feeling tired, hopeless, and depressed following stress. Hopeless feelings were characterized by feeling insecure and disappointed with themselves and feeling uncertain about the future. In contrast to the negative feelings brought about by stress, some have positive emotions, such as motivation and excitement. For example, one participant wrote, "A small amount of stress can get me excited". Interestingly, stress tended to lead to an imbalance of emotions or "abrupt mood swings", characterized by rapid shifts between negative and positive within a short time.

Altered intensity of emotions. Participants noticed how stress leads to an alteration of the emotions' intensity. For some, the feeling of stress overshadowed and decreased the intensity of other emotions. One participant shared, "Stress supresseses my other emotions and I feel a little disconnected from my emotions." In contrast, others noted that stress increased the intensity of other emotions.

Table 2 demonstrates the themes that occurred from the thematic analysis. Indicative quotes and associated scores from the content analysis are also presented.

Data Analysis

Assumptions for mediation analysis were checked. First, the assumption of normality was tested. A visual inspection of the histogram, normal Q-Q plots, and box plots revealed that although the data were a little bit skewed and kurtotic, they did not differ significantly from normality. The normality assumption was also met through a bootstrap version of the classical skewness-kurtosis test (via PROCESS) (Psaradakis & Vavra, 2019). Therefore, it was assumed that stress response intensity was normally distributed. Furthermore, the assumption of the absence of multicollinearity between the variables was also confirmed. Lastly, the assumption of homoscedasticity and the linear relationship between the independent variable and the dependent variable were also tested through the normal P-P plot and scatterplot.

Means and standard deviations for each study variable are reported in Table 3. The sample as a whole had high scores for total stress mindset, high scores for approach coping, and average scores for avoidant coping. Total stress mindset had a significant negative relationship with stress response intensity ($r = -.378$, $p < .01$) and avoidant coping ($r = -.188$, $p = .005$). Stress response intensity had a significant positive relationship with avoidant coping ($r = .226$, $p = .001$). Pearson's correlations are presented in Appendix 1.

Table 2. *Themes, indicative quotes, associated codes and content analysis score*

Themes	**Quotes and content analysis score**	
	Indicative Quotes	Associated Scores (content analysis score*)
Behavioural		
Impacted health behaviours	"I think some nights stress made it hard to fall asleep"	Sleeping problems (3)
	"I may not eat, or I eat too much"	Eating problems (3)
	"I smoke and drink more"	
	"It brings restlessness"	Unhealthy habits (3)
Changes in social interactions	"I wanted to be alone. I couldn't deal with anyone else's behavior at this point"	Isolation (4)
	"I became more aggressive to the people around me"	
	"Couldn't properly talk"	
		Aggressiveness (4)
		Communication (3)
Changes in functioning	"Stress renders me a perfectionist"	Personality (3)
	"I was not able to try new things which were out of my comfort zone"	
	"In the most extreme cases it made me give up"	Personality (3)
	"Made me hyperactive"	
		Abandonment (3)
		Energy levels (2)
Cognitive		
Changes in thinking process	"I am not good enough"	Negative self-thinking(3)
	"I would not be able to properly utilize critical thinking skills in situations"	Thinking processes (3)
	"Sometimes it makes my thinking like 'blur'"	
		Clarity of thoughts (3)
Cognitive processes affected	"perception of the reality, as it is harder or more difficult or as I don't have control over it"	Perception (3)
	"constantly think about what stressed me out so I can't concentrate on what I am doing"	
	"I am more capable of memorizing stuff under stress"	
	"I made irrational fast decisions"	Concentration (2)
		Memory (1)
		Decision making (3)
Emotional		
Influencing other emotions	"Usually it makes me feel chaotic or scared"	Fear (3)
	"I was fragile and I cried more than before"	
	"Stress made me feel doubtful about the future"	Vulnerability (3)
	"Stress can make me more easily irritable"	
	"I felt trapped in the situation and was unable to do something"	Uncertainty (3)
	"I find more motivation"	
		Irritability (3)
		Loss of freedom/control (4)
		Motivation (1)
Altered intensity of emotions	"I enter a stance of 'void'"	Disconnection (4)
	"I experienced more vivid and powerful emotions, such as extreme upset and crying"	Over experiencing emotions (3)

**Note. 1=positive/less intense response, 2=mild response, 3=moderate response, and 4=intense response*

Table 3. *Descriptive statistics for total stress mindset, stress response intensity, approach coping and avoidant coping*

Variable	Descriptive statistics	
	Mean (± Standard Deviation)	***N***
Age	28.04 (±15.55)	182
Total stress mindset*	1.54 (±.56)	238
Stress response intensity	2.62 (±.54)	208
Approach coping**	35.24 (±6.09)	218
Avoidant coping***	26.87 (±5.23)	218

**Note.* Scores range from 0-2.88, ** Scores range from 14-48, ***Scores range from 12 to 42

Mediation analysis

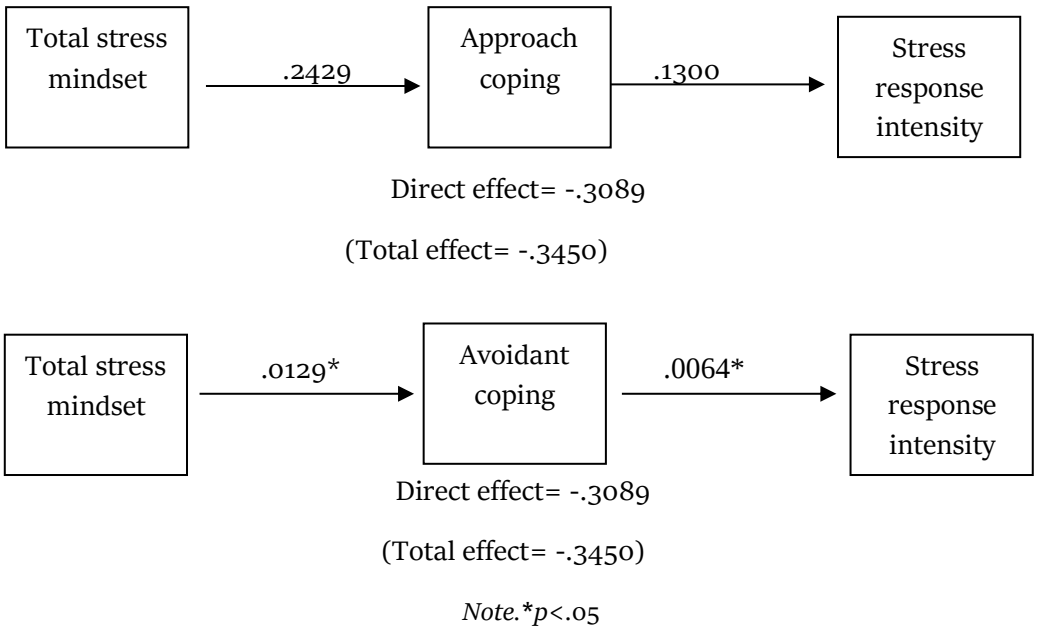
To investigate whether coping mechanisms mediate the relationship between stress mindset and intensity of stress responses a simple mediation analysis was perform. For the purpose of this analysis stress response intensity was used as a continuum variable, with 1 representing less intense responses to stress and 4 representing more intense responses to stress.

Mediation analysis is presented in Figure 1. The total effect of stress mindset on the intensity of stress responses was negative, and statistically significant (b= -.3450, s.e= .0582, p<.001), which indicates that people with stress-is-debilitating mindset experience more intense responses to stress. The effect of stress mindset on approach coping was positive but not significant (b=.8465, s.e= .7227, p=.2429). The effect of stress mindset on avoidant coping was negative but statistically significant (b= -1.5466, s.e= .6163, p= .0129). The direct effect of stress mindset on stress response intensity (b= -.3089, s.e= .0586, p<.001) was smaller in comparison to the total effect (b= -.3450). The indirect effect of stress mindset on the intensity of stress responses through avoidant coping (IE=-.0287) was statistically significant, 95%CI= [-.0648, -.0023]. Thus, the hypothesis that avoidant coping mediates the relationship between stress mindset and stress response intensity was supported.

Integration of qualitative and quantitative results

In the quantitative arm, the analysis revealed that people with a stress-is-enhancing mindset experience less intense responses to stress than people with a stress-is-debilitating mindset. Also, people with a stress-is-debilitating mindset use avoidant coping techniques more frequently. Furthermore, avoidant coping techniques, but not approach coping techniques, were found to mediate the relationship between stress mindset and responses to stress. Qualitatively, thematic analysis explores the meaning of “less intense” responses that people with a stress-is-enhancing mindset might experience. Quotes reveal ways in which stress can lead to a less intense or even positive experience following stress. People with a stress-is-enhancing mindset experience increased energy levels, higher concentration, and memory abilities, excitement and motivation. In contrast, quotes from individuals with a stress-is-debilitating mindset demonstrate the intense and negative consequences of stress, including poor eating and sleeping patterns, withdrawal from social situations, inability to communicate, negative self-thinking, and fear.

Figure 1. *Mediation models of approach and avoidant coping on the relationship between total stress mindset and stress responses intensity.*



Note.$p<.05$

Discussion

This study investigated the extent to which coping styles mediate the relationship between stress mindset and the intensity of stress response. Participants' accounts of their stress responses were qualitatively explored and organized into behavioural, cognitive, and emotional experiences. The first hypothesis test indicated that participants with a stronger stress-is-enhancing mindset experienced less intense responses to stress. In other words, those with a more positive outlook on stress responded to stressful situations with increased energy levels, better cognitive performances, and feeling more motivated. Conversely, people with a negative appraisal of stress reacted more intensely, with stress adversely affecting their behavioural patterns, connections with their significant others and their relationship with their selves. These findings are in accordance with a study that identified a positive relationship between positive stress beliefs and behavioural responses to stress (Casper et al., 2017). Additionally, they are congruous with the Crum et al. (2017 study, which demonstrated that a stress-is-enhancing mindset is associated with beneficial changes in cognitive and emotional responses to stress.

The outcome of the second hypothesis test revealed that a stress-is-debilitating mindset was associated with the frequent use of avoidant coping techniques. There was no significant relationship with approach coping techniques for either negative or positive stress mindsets. This finding is partially in line with Crum et al. (2013) study, which indicated that individuals with a stress-is-debilitating mindset use more avoidant coping techniques. However, the current study did not confirm Crum et al.'s (2013) finding that those with a stress-is-enhancing mindset use more approach coping techniques. A possible explanation for this inconsistency is that participants with a stress-is-enchasing mindset may indeed be using approach coping techniques but recognize them more as responses to stress and not as ways to deal with stress. For instance, when someone reports that

stress motivates them, they might have already subconsciously engaged with the stressor actively but fail to identify this as a coping style.

The results of the final hypothesis test indicated that there is a mediating role of the avoidant, but not the approach coping styles. In other words, the effect of stress mindset on the responses to stress was mediated by avoidant coping, but not approach coping. This finding suggests that holding a negative mindset about stress influences the activation of avoidant coping, which in turn affects the occurrence of intense responses to stress. Specifically, when individuals believe that stress will negatively impact their health and well-being, they are more likely to use avoidant coping techniques such as denial, substance use, and self-distraction, which influence their behavioural, cognitive, and emotional responses to stress. This aligns with previous literature that posits coping mediates the relationship between stress-is-debilitating mindset and stress response (Horiuchi et al., 2018). However, Horiuchi et al. found that only emotional expression among the coping mechanisms had a mediating effect, while in the current study, only avoidant coping mediated the relationship between stress mindset and responses to stress. This difference could be attributed to the fact that Horiuchi et al.'s study was conducted in a different population and utilized different measurements for coping. No mediating effects of approach coping techniques were found in the current study. A possible explanation for this is that a positive stress mindset might directly reduce the intensity of the stress responses, making the use of coping mechanisms less necessary. When individuals believe that stress can positively influence them-by sharping their attention or reinforcing their motivation-they might directly experience less intense responses to stress. The mediating role of avoidant coping found in this study is also consistent with recent research, revealing that individuals with a hardy attitude toward potential difficulties tend to use less avoidant coping techniques, which in turn is associated with lower levels of stress responses (Thomassen et al., 2021). Although this previous study used psychological hardiness rather than stress mindset as a predictor variable, both constructs reflect attitudes towards life stressors.

Regarding the qualitative findings, the themes that are reported here are aligned with those mentioned in previous literature (Bland et al., 2010). Specifically, the impact on health behaviours and stress influencing other emotions are in accordance with earlier findings that stress can lead to sleep problems, poor mood, and irritability. Despite several similar findings between the two studies, positive responses to stress-such as increased concentration, motivation, and excitement-were observed only in the current study. This discrepancy could be attributed to the differences in the studied populations. Bland et al. (2010) conducted their study among undergraduate students, who identified as main stressors: "schoolwork, money, time management, parents, and friends". A possible explanation is that, as it is well established, undergraduate students deal with a great amount of stress and therefore they might not have experienced yet the positive responses to stress that other people mention later in life.

The results contribute to the literature by shedding light on the complex relationship between the three variables and the different responses to stress. In addition to examining the associations between the variables, the current study revealed the underlying mechanisms through which these variables are linked to each other. The finding that avoidant coping techniques mediate the relationship between stress mindset and stress responses, suggest potential applications in stress-management interventions. When designing stress regulation interventions, it is essential to consider participants' stress mindsets and whether these mindsets prompt the use of avoidant coping techniques. Research has indicated that, rather than solely focusing on reducing stress, interventions could aim to convert stress into a positive experience through cognitive processes (Jamieson et al., 2013). Therefore, a more holistic approach that encompasses both the positive and negative responses to stressful situations could potentially facilitate better regulation of stress responses, and consequently, lead to better health outcomes.

The current research is subject to several limitations. First, a cross-sectional study design limits the conclusion of a causal relationship between variables. Future longitudinal studies are warranted to establish a cause-effect relationship between stress mindset and responses to stress. Second, the survey design of this research raises concerns about self-reported bias. There is a possibility that participants' responses in the stress and coping mechanisms surveys may be affected by social desirability bias and recall bias (Van de Mortel, 2008). More objective measures of responses to stress and the creation of experimental stress conditions are suggested. Third, intercoder reliability for the codes that emerged from the content analysis was not assessed in this study. Although Lacy et al. (2015) note the absence of intercoder reliability increases the risk of personal bias, the theory-based protocol followed for coding and the intracoder reliability that was assessed across different time points can possibly reduce the risk of personal bias. Future research should consider incorporating intercoder reliability techniques in their methodologies to achieve higher levels of accuracy and consistency. Fourth, few of the responses that participants reported on the open-ended questions about their reactions to stress overlapped with certain coping mechanisms. For instance, alcohol consumption was reported both as a response to stress and as a coping technique. It is recommended that future studies use measurements that will entirely differentiate between these two variables.

Conclusion

This study found that avoidant coping mechanisms may mediate the relationship between stress mindset and stress responses. Participants reported behavioural, cognitive, and emotional responses to stress that were both negative and positive. Consequently, a balanced mindset toward stress may lead to more beneficial coping strategies, contributing to better regulation of stress responses and a reduction in stress-related health problems.

References

Alhurani, A. S., Dekker, R., Ahmad, M., Miller, J., Yousef, K. M., Abdulqader, B., Salami, I., Lennie, T. A., Randall, D. C., & Moser, D. K. (2018). Stress, cognitive appraisal, coping, and event free survival in patients with heart failure. *Heart & Lung,* 47(3), 205–210. https://doi.org/10.1016/j.hrtlng.2018.03.008

Bland, H. W., Melton, B. F., & Gonzalez, S. P. (2010). A qualitative study of stressors, stress symptoms, and coping mechanisms among college students using nominal group process. *Journal of the Georgia Public Health Association*, *5*(1), 15.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Claessens, S. E. F., Daskalakis, N. P., van der Veen, R., Oitzl, M. S., de Kloet, E. R., & Champagne, D. L. (2010). Development of individual differences in stress responsiveness: An overview of factors mediating the outcome of early life experiences. *Psychopharmacology*, *214*(1), 141–154. https://doi.org/10.1007/s00213-010-2118-y

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine*, *4*(1), 92–100. https://doi.org/10.1207/s15327558ijbm0401_6

Casper, A., Sonnentag, S., & Tremmel, S. (2017). Mindset matters: The role of employees' stress mindset for day-specific reactions to workload anticipation. *European Journal of Work and Organizational Psychology*, *26*(6), 798–810. https://doi.org/10.1080/1359432x.2017.1374947

Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. SAGE Publications.

Crum, A. J., Akinola, M., Martin, A., & Fath, S. (2017). The role of stress mindset in shaping cognitive, emotional, and physiological responses to challenging and threatening stress. *Anxiety, Stress, and Coping*, *30*(4), 379–395. https://doi.org/10.1080/10615806.2016.1275585

Crum, A. J., Salovey, P., & Achor, S. (2013). Rethinking stress: The role of mindsets in determining the stress response. *Journal of Personality and Social Psychology*, *104*(4), 716–733. https://doi.org/10.1037/a0031201

Dar, T., Radfar, A., Abohashem, S., Pitman, R. K., Tawakol, A., & Osborne, M. T. (2019). Psychosocial Stress and Cardiovascular Disease. *Current Treatment Options in Cardiovascular Medicine,* 21(5). https://doi.org/10.1007/s11936-019-0724-5

Desalegn, G. T., Zeleke, T. A., Shumet, S., Mirkena, Y., Kassew, T., Angaw, D. A., & Salelew, E. (2023). Coping strategies and associated factors among people with physical disabilities for psychological distress in Ethiopia. *BMC Public Health,* 23(1), 20. https://doi.org/10.1186/s12889-022-14877-0

Graci, M. E., & Fivush, R. (2016). Narrative meaning making, attachment, and psychological growth and stress. *Journal of Social and Personal Relationships,* 34(4), 486–509. https://doi.org/10.1177/0265407516644066

Gouin, J.-P., Glaser, R., Malarkey, W. B., Beversdorf, D., & Kiecolt-Glaser, J. (2012). Chronic stress, daily stressors, and circulating inflammatory markers. *Health Psychology*, *31*(2), 264–268. https://doi.org/10.1037/a0025536

Harvey, A., Nathens, A. B., Bandiera, G., & Leblanc, V. R. (2010). Threat and challenge: Cognitive appraisal and stress responses in simulated trauma resuscitations. *Medical Education*, *44*(6), 587–594. https://doi.org/10.1037/a0025536

Horiuchi, S., Tsuda, A., Aoki, S., Yoneda, K., & Sawaguchi, Y. (2018). Coping as a mediator of the relationship between stress mindset and psychological stress response: A pilot study. *Psychology Research and Behavior Management*, *11*, 47–54. https://doi.org/10.2147/prbm.s150400

Hoskin, R., Hunter, M. D., & Woodruff, P. W. R. (2014). Stress improves selective attention towards emotionally neutral left ear stimuli. *Acta Psychologica*, 151, 214–221. https://doi.org/10.1016/j.actpsy.2014.06.010

Huebschmann, N. A., & Sheets, E. S. (2020). The right mindset: Stress mindset moderates the association between perceived stress and depressive symptoms. *Anxiety, Stress, and Coping*, *33*(3), 248–255. https://doi.org/10.1080/10615806.2020.1736900

Hughto, J. M. W., Pachankis, J. E., Willie, T. C., & Reisner, S. L. (2017). Victimization and depressive symptomology in transgender adults: The mediating role of avoidant coping. *Journal of Counseling Psychology,* 64(1), 41–51. https://doi.org/10.1037/cou0000184

Imtiaz, S., & Ahmad, S. (2009). Impact of stress on employee productivity, performance and turnover: An important managerial issue. *International Review of Business Research Papers*, *5*(4), 468–477. https://www.bizresearchpapers.com/38.Subha.pdf

Iturralde, E., Weissberg-Benchell, J., & Hood, K. K. (2017). Avoidant coping and diabetes-related distress: Pathways to adolescents' Type 1 diabetes outcomes. *Health Psychology,* 36(3), 236–244. https://doi.org/10.1037/hea0000445

Jamieson, J. P., Crum, A. J., Goyer, J. P., Marotta, M. E., & Akinola, M. (2018). Optimizing stress responses with reappraisal and mindset interventions: An integrated model. *Anxiety, Stress, & Coping*, *31*(3), 245–261. https://files.eric.ed.gov/fulltext/ED585077.pdf

Jamieson, J. P., Mendes, W. B., & Nock, M. K. (2013). Improving Acute Stress Responses. *Current Directions in Psychological Science*, *22*(1), 51–56. https://doi.org/10.1177/0963721412461500

Jiang, Y., Zhang, J., Ming, H., Huang, S., & Lin, D. (2019). Stressful life events and well-being among rural-to-urban migrant adolescents: The moderating role of the stress mindset and differences between genders. *Journal of Adolescence*, *74*, 24–32. https://doi.org/10.1016/j.adolescence.2019.05.005

Keech, J. J., Hagger, M. S., O'Callaghan, F. V., & Hamilton, K. (2018). The Influence of University Students' Stress Mindsets on Health and Performance Outcomes. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, *52*(12), 1046–1059. https://doi.org/10.1093/abm/kay008

Keller, A., Litzelman, K., Wisk, L. E., Maddox, T., Cheng, E. R., Creswell, P. D., & Witt, W. P. (2012). Does the perception that stress affects health matter? The association with health and mortality. *Health Psychology,* 31(5), 677–684. https://doi.org/10.1037/a0026743

Klier, C., & Buratto, L. G. (2020). Stress and long-term memory retrieval: A systematic review. *Trends in Psychiatry and Psychotherapy,* 42(3), 284–291. https://doi.org/10.1590/2237-6089-2019-0077

Kim, J., Shin, Y., Tsukayama, E., & Park, D. (2020). Stress mindset predicts job turnover among preschool teachers. *Journal of School Psychology, 78*, 13–22.

Konstantinou, P., Trigeorgi, A., Georgiou, C., Michaelides, M., Gloster, A. T., McHugh, L., Panayiotou, G., & Karekla, M. (2024). Coping with emotional pain: An experimental comparison of acceptance vs. avoidance coping. *Journal of Contextual Behavioral Science,* 33, 100820. https://doi.org/10.1016/j.jcbs.2024.100820

Lacy, S., Watson, B. R., Riffe, D., & Lovejoy, J. (2015). Issues and best practices in content analysis. *Journalism & Mass Communication Quarterly*, *92*(4), 791–811. https://doi.org/10.1177/1077699015607338

Lacomba-Trejo, L., Mateu-Mollá, J., Bellegarde-Nunes, M. D., & Delhom, I. (2022). Are coping strategies, emotional abilities, and resilience predictors of well-being? Comparison of linear and non-linear methodologies. *International Journal of Environmental Research and Public Health,* 19(12), 7478. https://doi.org/10.3390/ijerph19127478

Laferton, J. a. C., Fischer, S., Ebert, D. D., Stenzel, N. M., & Zimmermann, J. (2019). The effects of stress beliefs on daily affective stress responses. *Annals of Behavioral Medicine*, 54(4), 258–267. https://doi.org/10.1093/abm/kaz046

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.

Lazarus, R. S. (1990). Theory-Based Stress Measurement. *Psychological Inquiry*, *1*(1), 3–13. https://doi.org/10.1207/s15327965pli0101_1

Litman, J. A. (2006). The COPE inventory: Dimensionality and relationships with approach- and avoidance-motives and positive and negative traits. *Personality and Individual Differences*, *41*(2), 273–284. https://doi.org/10.1016/j.paid.2005.11.032

Liu, J. J. W., Vickers, K., Reed, M., & Hadad, M. (2017). Re-conceptualizing stress: Shifting views on the consequences of stress and its effects on stress reactivity. *PLOS ONE*, *12*(3). https://doi.org/10.1371/journal.pone.0173188

Liu, J. J. W., Ein, N., Gervasio, J., & Vickers, K. (2019). The efficacy of stress reappraisal interventions on stress responsivity: A meta-analysis and systematic review of existing evidence. *PLOS ONE*, *14*(2). https://doi.org/10.1371/journal.pone.0212854

Liu, Q., Liu, Y., Leng, X., Han, J., Xia, F., & Chen, H. (2020). Impact of Chronic Stress on Attention Control: Evidence from Behavioral and Event-Related Potential Analyses. *Neuroscience Bulletin*, 36(11), 1395–1410. https://doi.org/10.1007/s12264-020-00549-9

LoSavio, S. T., Cohen, L. H., Laurenceau, J.-P., Dasch, K. B., Parrish, B. P., & Park, C. L. (2011). Reports of Stress-Related Growth From Daily Negative Events. *Journal of Social and Clinical Psychology,* 30(7), 760–785. https://doi.org/10.1521/jscp.2011.30.7.760

Mackinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence Limits for the Indirect Effect: Distribution of the Product and Resampling Methods. *Multivariate Behavioral Research*, *39*(1), 99–128. https://doi.org/10.1207/s15327906mbr3901_4

Mariotti, A. (2015). The effects of chronic stress on health: new insights into the molecular mechanisms of brain–body communication. *Future Science OA*, *1*(3). https://doi.org/10.4155/fso.15.21

O'Connor, D. B., Thayer, J. F., & Vedhara, K. (2021). Stress and Health: A Review of Psychobiological Processes. *Annual Review of Psychology*, 72(1), 663–688. https://doi.org/10.1146/annurev-psych-062520-122331

Omara, A., Basiouny, E. M., Shabrawy, M. E., & Shafei, R. R. E. (2022). The correlation between anxiety, depression, and vertigo: a cross-sectional study. *The Egyptian Journal of Otolaryngology,* 38(1). https://doi.org/10.1186/s43163-022-00318-7

Paul, M., Bellebaum, C., Ghio, M., Suchan, B., & Wolf, O. T. (2019). Stress effects on learning and feedback-related neural activity depend on feedback delay. *Psychophysiology,* 57(2). https://doi.org/10.1111/psyp.13471

Park, D., Yu, A., Metz, S. E., Tsukayama, E., Crum, A. J., & Duckworth, A. L. (2018). Beliefs about stress attenuate the relation among adverse life events, perceived distress, and self-control. *Child Development*, *89*(6), 2059–2069. https://doi.org/10.1111/cdev.12946

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879–891. https://doi.org/10.3758/brm.40.3.879

Pribenszky, C., Lin, L., Du, Y., Losonczi, E., Dinnyes, A., & Vajta, G. (2012). Controlled stress improves oocyte performance-cell preconditioning in assisted reproduction. *Reproduction in domestic animals = Zuchthygiene*, 47 Suppl 4, 197–206. https://doi.org/10.1111/j.1439-0531.2012.02076.x

Psaradakis, Z., & Vávra, M. (2019). Bootstrap-assisted tests of symmetry for dependent data. *Journal of Statistical Computation and Simulation*, *89*(7), 1203–1226. https://doi.org/10.1080/00949655.2019.1575384

Qi, M., Gai, R., Wang, Y., & Gao, H. (2024). Chronic academic stress improves attentional control: Behavioral and electrophysiological evidence. *International Journal of Clinical and Health Psychology :* IJCHP, 24(3), 100484. https://doi.org/10.1016/j.ijchp.2024.100484

Sandelowski, M. (2000). Combining Qualitative and Quantitative Sampling, Data Collection, and Analysis Techniques in Mixed-Method Studies. *Research in Nursing & Health*, *23*(3), 246–255. https://doi.org/10.1002/1098-240x(200006)23:3

Shah, A. A., & Sinha, A. A. (2013). Oxidative stress and autoimmune skin disease. *European Journal of Dermatology* : EJD, 23(1), 5–13. https://doi.org/10.1684/ejd.2012.1884

Slavich, G. M. (2016). Life Stress and Health: A Review of Conceptual Issues and Recent Findings. *Teaching of Psychology*, 43(4), 346–355. https://doi.org/10.1177/0098628316662768

Selye, H. (1950). Stress and the General Adaptation Syndrome. *British Medical Journal*, *1*(4667), 1383–1392. https://doi.org/10.1136/bmj.1.4667.1383

Smith, B., Albonico, K., Guzman, A., deCruz-Dixon, N., Phan, A., & Schodt, K. (2023). The brief thriving scale: Assessing the ability to learn, grow, and find benefits in stressful events. *International Journal of Wellbeing,* 13(3). https://doi.org/10.5502/ijw.v13i3.2801

The American Institute of Stress. (2020, September 11). https://www.stress.org/stress-effects

Tobore, T. O. (2021). Oxidative/Nitroxidative Stress and Multiple Sclerosis. *Journal of Molecular Neuroscience,* 71(3), 506–514. https://doi.org/10.1007/s12031-020-01672-y

Tomova, L., von Dawans, B., Heinrichs, M., Silani, G., & Lamm, C. (2014). Is stress affecting our ability to tune into others? Evidence for gender differences in the effects of stress on self-other distinction. *Psychoneuroendocrinology,* 43, 95–104. https://doi.org/10.1016/j.psyneuen.2014.02.006

Thomassen, Å. G., Johnsen, B. H., Hystad, S. W., & Johnsen, G. E. (2021). Avoidance coping mediates the effect of hardiness on mental distress symptoms for both male and female subjects. *Scandinavian Journal of Psychology,* 63(1), 39–46. https://doi.org/10.1111/sjop.12782

Van de Mortel, T. F. (2008). Faking it: Social desirability response bias in self-report research. *Australian Journal of Advanced Nursing, The*, *25*(4), 40. http://epubs.scu.edu.au/cgi/viewcontent.cgi?article=1001&context=hahs_pubs

Yaribeygi, H., Panahi, Y., Sahraei, H., Johnston, T. P., & Sahebkar, A. (2017). The impact of stress on body function: A review. *EXCLI Journal*, *16*, 1057–1072. https://doi.org/10.17179/excli2017-480

Yan, L. J. (2014). Positive oxidative stress in aging and aging-related disease tolerance. *Redox Biology*, 2, 165-169. https://doi.org/10.1016/j.redox.2014.01.002

Zefferino, R., Di Gioia, S., & Conese, M. (2021). Molecular links between endocrine, nervous and immune system during chronic stress. *Brain and Behavior*, 11(2). https://doi.org/10.1002/brb3.1960

Appendices

Table 1. *Bivariate correlation matrix*

	Total stress mindset	Stress response intensity	Approach coping	Avoidant coping
Total stress mindset	1	-.378*	.071	-.188*
Stress response intensity		1	-.093	.226*
Approach Coping			1	.229*
Avoidant coping				1

*.correlation is significant at the .01 level (2-tailed)

ΕΜΠΕΙΡΙΚΗ ΕΡΓΑΣΙΑ | RESEARCH PAPER

Μελέτη της σχέσης μεταξύ των πεποιθήσεων για το στρες και των αντιδράσεων που σχετίζονται με το στρες: Ο ρόλος των μηχανισμών αντιμετώπισης

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ΛΕΞΕΙΣ-ΚΛΕΙΔΙΑ

Πεποιθήσεις για το στρες
Αντιδράσεις που σχετίζονται με το στρες
Μηχανισμοί αντιμετώπισης

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ΠΕΡΙΛΗΨΗ

Οι θετικές και αρνητικές πεποιθήσεις που έχουν οι άνθρωποι για το άγχος επηρεάζουν τις ψυχολογικές τους αντιδράσεις κατά τη διάρκεια στρεσογόνων καταστάσεων. Μακροπρόθεσμα, οι έντονες αντιδράσεις στο στρες μπορούν να επηρεάσουν την υγεία και την παραγωγικότητα. Στόχος αυτής της έρευνας είναι να εξετάσει πώς οι μηχανισμοί αντιμετώπισης μεσολαβούν στη σχέση μεταξύ των πεποιθήσεων για το στρες και των αντιδράσεων που σχετίζονται με το στρες. Επιπλέον, στοχεύει να παρέχει πλούσια ποιοτική γνώση σχετικά με τον τρόπο που τα άτομα ανταποκρίνονται στο στρες σε συμπεριφορικό, γνωστικό και συναισθηματικό επίπεδο. Συνολικά 238 υγιείς ενήλικες (μέση ηλικία: 28,04, SD: 15,55) απάντησαν σε μια διαδικτυακή έρευνα. Οι πεποιθήσεις για το στρες και οι μηχανισμοί αντιμετώπισης αξιολογήθηκαν μέσω του Stress Mindset Measure-General (SMM-G) και του συνοπτικού καταλόγου COPE αντίστοιχα. Οι αντιδράσεις που σχετίζονται με το στρες αξιολογήθηκαν μέσω ερωτήσεων ανοιχτού τύπου. Τα ποιοτικά δεδομένα αναλύθηκαν μέσω θεματικής ανάλυσης και μετατράπηκαν σε ποσοτικά δεδομένα μέσω της ανάλυσης περιεχομένου. Πραγματοποιήθηκε μια ανάλυση διαμεσολάβησης για να εξεταστεί η ικανότητα των μηχανισμών αντιμετώπισης να μεσολαβούν στη σχέση μεταξύ πεποιθήσεων για το στρες και αντιδράσεων στο στρες. Η θεματική ανάλυση κατηγοριοποίησε τις συμπεριφορικές, γνωστικές και συναισθηματικές αντιδράσεις στο στρες. Μέσα σε αυτά τα τρία ανώτερα θέματα, προέκυψαν επτά θέματα. Οι συνολικές πεποιθήσεις για το στρες είχαν σημαντική αρνητική συσχέτιση με την ένταση απόκρισης στο στρες ($r = -.378$, $p < .001$) και την αποφυγή αντιμετώπισης ($r = -.188$, $p = .005$). Η ένταση της απόκρισης στο στρες είχε σημαντική θετική συσχέτιση με την αποφυγή αντιμετώπισης ($r = .226$, $p = .001$). Η ανάλυση διαμεσολάβησης αποκάλυψε ότι οι μηχανισμοί αποφυγής αντιμετώπισης μεσολάβησαν στη σχέση μεταξύ των πεποιθήσεων του στρες και των αντιδράσεων στο στρες (IE=-.0287, 95%CI= [-.0648, -.0023]). Τα αποτελέσματα έδειξαν ότι μια λιγότερο αρνητική νοοτροπία για το στρες μπορεί να οδηγήσει σε πιο ωφέλιμους μηχανισμούς αντιμετώπισης, οι οποίοι με τη σειρά τους μπορούν να βελτιώσουν τη ρύθμιση των αντιδράσεων στο στρες.

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