



An Interpretative Phenomenological Analysis of Individuals' Experiences of Stress Related to Mental and Physical Health

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Abstract

Stress is a multifactorial emotion, which is produced in situations of real or imagined danger. The person possessed by stress finds it difficult to control internal or external stressful stimuli. The reactions carried out on a cognitive and physical level most of the time cannot be fully controlled by the individuals, creating effects that need special efforts in order to perceive and manage them. The majority resort to coping strategies, which may temporarily help to reduce the anxiety-provoking stimulus, however, in the long term, it may bring about more extensive consequences on a cognitive and physical level. The present qualitative research aims to investigate five participants through interviews. The interview questions concern their perception of stress, the cognitive processes they take part in, the cognitive and physical changes they observe in stressful situations and finally the coping strategies they use to relieve themselves from stress. The themes that will be analyzed are 1: Anxiety is perceived as a negative state with distorted cognitive patterns, 2: Perceived Adaptive and Maladaptive Coping Strategies and the sub-theme: The physicalization of stress after chronic exposure or unresolved stress. The results of the research show that the majority of participants perceive stress as a major negative factor in their daily lives, creating effects on both their mental and physical health, without having the appropriate tools to deal with it.

Introduction

The term stress, as one of the major attributes of mental health, is widespread and is mostly used to describe psychological phenomena that dominate contemporary society. However, earlier, about 100 years ago, according to Robinson (2018), the term anxiety as a psychological phenomenon did not exist. Many researchers recognize Hans Selye as "the father of stress research", as he is considered the first scientist to recognize the term "stress" and research the hormones produced in different stressful situations. In a study done by (Yong & Yip, 2018) regarding the life and work of Hans Selye, they claim that the discovery began when he was experimentally testing rats by placing them in various stressful situations. The results of the experiments in each case were similar. Adrenal hyperactivity, lymphatic atrophy, and peptic ulcer were detected. So he realized that the findings he had found had to do with an expression of the internal

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environment and the "homeostasis", so he connected the hypothalamus-pituitary-adrenal axis to the way the body dealt with stress (Yong & Yip, 2018). According to Selye (1965), the stress syndrome or otherwise "general adaptation syndrome" develops in three stages, of which the first is the "alarm reaction" and the defense mechanisms are mobilized. The second stage is the "stage of resistance", which reflects the full adaptation to the stressful factor and the third stage is "the stage of exhaustion", which inevitably follows if the stressful factor is serious and chronic. Short-term stress is defined as stress that lasts from a few minutes to a few hours, while long-term stress can manifest itself as the stress of a few hours during the day, week, or even months. It is widely believed that long-term or chronic stress has adverse effects on human health, many of which are mediated through stress-induced effects on the immune system (Dhabhar, 2009).

However, according to Dhabhar (2012) without the biological response to stress many human and non-human species, especially in the distant past, would not have been able to adopt the fight or flight response resulting in dying. Consequently, the process of developing a psychophysiological response to stress functions as nature's fundamental survival mechanism in the face of a disaster. Dhabhar et al. (1995) hypothesized that stress may prepare the human immune system for challenges such as an infection when stressors attack the body, just as the short-term stress response prepares the cardiovascular, neuroendocrine, and musculoskeletal systems for a fight-or-flight response. According to Dhabhar (2014), essentially the definition of stress is expressed through a sum of events and situations, consisting of a stimulus (the stressor), the signaling of a reaction in the brain (the perception of stress), which then activates the normal fight or flight systems (stress response). Dhabhar (2014) argues that the biological response to stress can affect the body or brain is the release of the hormones epinephrine and norepinephrine from the sympathetic system and the release of corticotropin, adrenocorticotropin, and cortisol, which come after the activation of the hypothalamus-pituitary-adrenal axis. These hormones cause changes in almost all cells and tissues and warn of the presence of a stressful factor in the system. According to Chrousos (1997), the human organism tries to keep a dynamic balance, called homeostasis, between intrinsic and external forces, i.e. the stressors. Consequently, according to the researcher, stress is defined as a phenomenon that threatens the homeostasis of the human organism, which is restored by complex physiological and behavioral adaptive responses. However, adaptive responses may not seem sufficient to restore homeostasis or may be excessive. Therefore, when this stable healthy function of homeostasis is not achieved, a pathology can occur.

The evolving research on anxiety was initially carried out by different branches, such as physiology and medicine, but it continued as a study of psychology so that cognitive processes could be investigated (Robinson, 2018). The cognitive processes that take place when anxiety prevails affect the way a person responds to emergencies as well as ordinary situations of everyday life. Researcher Liu (2015) added an interesting explanation. He argues that childhood life stressors usually have a curvilinear relationship with the development of psychopathology in later adulthood. Possible names given to this concept are the "steeling effect" by Rutter (2012), "stress inoculation" by Gunnar, et al. (2009), and "antifragility" by Taleb (2012). Essentially and more specifically, the concepts presented by the researchers support that moderate exposure to stressors in early life may confer resilience to the damaging effects of stressors in later life. In the context of the "steeling effect" moderate stressors, which are not overwhelming but demanding, enable individuals to develop endogenous resources to manage future stressors. On the other hand, very serious stressors overwhelm the individual and his current ability to manage them. Finally, when the stressful factors are minimal and almost absent, the endogenous resources are not stimulated and do not develop effectively. Consequently, minimal as opposed to moderate stressors in early life are likely to be associated with greater sensitivity to future stressors (Liu, 2015). According to Folkman (2012), there are two forms of evaluation of one or many stressful events, where they determine the degree of a situation as to whether it is loss or damage, threat or challenge for the individual. According to the researcher, the primary evaluation lies in the beliefs, values, and goals of the individual, while the second evaluation is shaped by the psychological, material, physical, and spiritual resources that the individual has, to face a stressful situation (Folkman, 2012)

According to Lazarus & Folkman (1984), in related research on anxiety, they suggest that each person perceives stress and stressful situations differently. People consider both the degree of threat of a stressor and the resources available and required to cope with and resolve the stressful situation. In addition, like other researchers and Folkman (2012), who conducted a study on the evaluations and assessments of individuals around stress, he claims that when an individual feels threatened by a stressful factor, emotions such as fear and anxiety are created, when there is an event associated with a loss one feels sadness or anger and when a stressful situation is evaluated as a challenge then mixed emotions prevail, such as excitement and anxiety. In agreement with the above research, Cohen et al. (2016), argue that a stressful experience varies in responses from individual to individual. The same event can be stressful for some people while for the rest it is not, it mostly depends on everyone's interpretation.

Usually, the perception of a stressful event is influenced by the possible damage it can cause, the intensity, the duration as well as the existence of control over each event. The studies of Cohen et al. (2016), and Folkman (2012), underline that indeed the perception of stressful events cause different emotional patterns, however the perception of stress around the events may be shaped differently by the individuals who experience them, as stress is perceived from a different angle.

An important additional role is the values and beliefs of each person as well as the predisposing characteristics of their personality. Therefore, according to Cohen et al. (2016), the coping practices that individuals will follow are focused on actions that are intended to change the threatening event and reshape the behavioral and emotional reactions to the event. According to Cohen et al. (2016), environmental stressful events, which may or may not be threatening, lead to brain-based stress appraisals. When the individual perceives the stressful event as a threat, emotional reactions such as fear, worry, or anxiety are likely to be caused, changing the functioning of some regulatory and endocrine systems such as the parasympathetic nervous system, which results in the onset or worsening of an existing disease. Short-term or long-term stress situations include changes in the individual's emotional levels as they affect their cognitive and behavioral functions. According to Cohen (2000), the feeling of stress is one of the most common and the impact of stress on an emotional level can manifest as feelings of anger, apathy, depression, alienation, hypochondria, or anxiety. Subsequently, he argues that if the duration of the stressful situation persists then cognitive processes such as thinking become more rigid, less productive, and often irrational with self-destructive thinking patterns (Cohen, 2000). The above researches show that the perception of stress, previous stressful experiences, and the formation of a stressor that individuals have can aggravate or develop an existing illness or establish an unhealthy way of thinking.

A study by Elissa et al. (2018) argues that usually the emotional responses to an acutely stressful event are recorded with negative emotions such as fear, anger, and sadness. Additionally, it is emphasized that different stress situations cause distinct social and psychological reactions. These reactions include feelings of interpersonal loss, change in social roles, physical threat, and threat to one's social status. Thus, they are likely to disrupt one's personal ambitions, goals, or plans for the future, as well as one's worldview (Elissa et al., 2018). Moreover, according to Fields et al. (2014), stress intensifies impulsive decision-making, with the result that the individual becomes even more stressed, and leads to harmful behaviors such as abusive smoking or substance use. In addition, when individuals experience intense anxiety they can easily misinterpret their normal sensations and consider various anxiety symptoms as illness or rush to seek

treatment from other health sources, creating a vicious cycle of illness and anxiety (Smyth et al. al., 2013).

Szabo´ & Lovibond (2002) referred to one more cognitive pattern that individuals have when they experience intense stress and that is the catastrophizing worry. The catastrophizing worry process begins with a person focusing on a potential threat or problem. The person may then ruminate on the perceived threat, leading to an increase in anxiety. This anxiety can be further intensified by the person's tendency to imagine the worst possible outcome. Hazlett-Stevens & Craske (2003), highlight that people may also overestimate the likelihood of such an outcome occurring, leading to more fear and worry. This process may cause people to become overwhelmed with worry and can lead to feelings of helplessness and hopelessness as well as to a spiral of negative thoughts and irrational beliefs that the worst-case scenario is bound to happen. The two studies by Szabo´ & Lovibond (2002), and Hazlett-Stevens & Craske (2003), present a particularly important detail, as the results of the research reveal that individuals who have persistent dominant stress thoughts usually think of the worst possible scenario in events, sabotaging themselves and ending up not enjoying their lives.

Another important characteristic of chronic stress is mental fatigue, which can be shown with various dysphoric symptoms. According to Kocalevent et al., (2011) stress has been linked to an increase in the levels of the hormone cortisol in the body, which can lead to a decrease in energy and mental alertness. Stress can also cause changes in the brain's neurotransmitters, which can affect mood, motivation, and focus, leading to mental fatigue. Additionally, chronic stress can lead to poor sleep, which can further contribute to mental fatigue. Long-term stress can also direct to exhaustion, which includes difficulty concentrating and decreased attention and focus. According to Sirois (2014) when people are under high stress, they often feel overwhelmed (Sirois, 2007) and unable to complete tasks, thus procrastinating. This can lead to feelings of guilt (Blunt & Pychyl, 2005), shame, and low self-esteem, as the individual perceives their lack of productivity as a personal failure. Additionally, when people are under a lot of stress, they may not be able to think rationally or make decisions, which can also cause procrastination. Moreover, stress contributes to a decrease in motivation, which can cause people to put off tasks they might otherwise complete. All of these factors can have a serious negative impact on self-esteem. These important research findings present an ideology of stress around which stressful events often affect productivity in a person's life and it is important to emphasize that individuals may surrender to the stressful situation and let it systematically affect the rest of the important interests in their lives.

Beyond the psychological and emotional changes that can occur due to stress, it is important to mention that other physical and organic changes are affected when stress remains and becomes chronic or experienced intensely. According to Hong-Yan et al. (2014), it is argued that irritable bowel syndrome may co-exist with psychological distress. In addition, according to the researchers, a high correlation can also be observed between IBS syndrome and comorbid disorders, mainly depression and anxiety. Way that stress can be involved in the creation or worsening of irritable bowel syndrome is by affecting the gut-brain axis, which is the communication pathway between the brain and the gastrointestinal tract (Konturek et al., 2011). Stress can cause the digestive system to become more sensitive and reactive to certain stimuli, such as certain foods and drinks. This can also increase abdominal cramping and discomfort and it can change the habits in the bowel as well. As Grenham et al. (2011) pointed out, stress can lead to muscle spasms in the gastrointestinal tract, which can also contribute to the symptoms of irritable bowel syndrome. Moreover, apart from IBS, there are other dysfunctional conditions in the gastrointestinal system, to which stress contributes, worsening the symptoms of gastrointestinal dysfunctions (Drossman, 2016). Enck et al. (2017), report that it is quite a common phenomenon, especially in women, due to the hormones progesterone and estrogen, to report symptoms of functional indigestion, such as pain in the upper and lower abdominal area, nausea, early satiety or even bloating. However, the reduced levels of adaptation or the lack of stress resistance can lead to dysfunction of the stomach (delayed gastric emptying) and colon (accelerated colonic motility).

Jiang et al. (2019) add that the response to stressors varies subjectively. Some people may show increased levels of resistance to stress, while others may be more vulnerable. One more topic that is deemed necessary to be mentioned as far as stress is concerned is migraines. Kelman (2007) reports that 80% of individuals consider stress to be a common trigger of migraines. As also observed in the literature, according to Chabriat et al. (1999) stress is the second most common trigger that causes migraine, while the first most common trigger is fatigue, which is often closely related and may be a consequence of stress. Therefore, fatigue and stress could also come under the same umbrella of anxiety, considering anxiety as the culprit for migraines most of the time. Sauro et al. (2009) add that stress can affect the person suffering from migraines at different levels. It can act as a single factor in the initiation of a migraine attack or it can enhance the progression of a migraine into a chronic migraine syndrome. Many of the forms that stress can take are widespread, however, its physicalization may require more research by the sufferers themselves. Stress is closely related to important functions in the human system and as we can see from the literature, stress is a factor that causes aggravation of dysfunctions in a large percentage of people.

The literature research shows us that stress and sleep difficulties are also closely related, especially when there is intense repetitive negative thinking around a stressful event. Takano et al. (2014), consider that negative cognitive processes before sleep and after a stressful situation show a direct correlation with poor sleep quality. Consequently, repeated negative thoughts seem to play an important role in the initiation and maintenance of insomnia (Takano et al., 2012), as well as being associated with delayed sleep time and shorter sleep duration (Nota and Coles, 2015). Additionally, a study by Lund et al. (2010) stated that women tended to report more sleep difficulties and greater emotional distress. Chow et al. (2017), add that women report greater co-rumination and depression symptoms, which are also related to sleep problems. The proper functioning of sleep can help to balance certain functions in the human body, such as energy, a functional digestive system, contributes to the proper functioning of the nervous system, memory and learning functions, as well as to the individual's well-being. In the above studies by (Takano et al., 2012), and Chow et al. (2017), and Lund et al. (2010), it is established that stress is one of the main factors that contribute to sleep dysfunction and by extension to causing dysfunction in the rest of the human systems.

Moreover, as we mentioned above, various malfunctions in the body occur or worsen due to stress. Another dysfunction that is mentioned in the literature and can be related to stressful factors is the susceptibility to acne. As reported by Dréno et al. (2015) stress is a factor, which shows a high correlation with adult acne. Researchers Chlebus & Chlebus (2017) report that while they believed that exacerbations of adult acne are linked to their workplace, which may be more demanding, the participants in their research reported changes in their daily routine and lifestyle as the most common factors of stress. The subjectivity of stressors has a large role in the perception of stress and it is always necessary to investigate the socio-economic context of the population being studied. However, from the study by Chlebus & Chlebus (2017), it becomes clear that when the intensity and severity of stress are high, the risk of acne flare-ups also increases. Although acne is a condition that does not threaten a person's functionality or life, it can nevertheless cause intense psychological distress and anxiety, thus creating a vicious cycle between the development of acne and constant anxiety (Wong et al., 2016).

Last but equally important and indeed quite common and widespread are panic attacks (PA), which are either included in panic disorder or can be created as a result of increased and intense stress. According to Johnson et al. (2014), both unexpected panic attacks (uPA) and expected panic attacks (ePA) are characterized by a sharp increase in cognitive and sensory symptoms, involving the autonomic nervous system. Cognitive symptoms usually consist of loss of control, fear of death, or thoughts of stroke.

Autonomic nervous system symptoms include palpitations, sweating, and hot flashes. Also, other symptoms that manifest in panic attacks can be dizziness, nausea, numbness, hallucinations, and increased respiratory drive. In an article by Craske et al. (2010) regarding PAs, it was noted that heart-related symptoms were the most common during panic attacks (heart pounding at 97%, tachycardia at 86.1%, and palpitations at 78%).

In previous research, it has been established that stress is not considered to be beneficial in terms of mental health as well as physical health. There is a growing body of literature that recognizes the importance of stress reduction, which is considered to be one of the most considerable topics. For this reason, it is appropriate to implement functional coping strategies from a young age to avoid negative mental and physical symptoms in later life.

Anders et al. (2012) in their research have argued that increased stress levels are associated with decreased life satisfaction among college students. Correspondingly, in research with college students, conducted by Bailey and Miller (1998), it is highlighted that college students who had high life satisfaction also noted lower levels of stress in contrast to participants who reported lower life satisfaction. From the research of Bailey and Miller (1998), the results show that stress can have a greater extent in the lives of individuals than cognitive and physical changes. The extent that stress probably takes is related to life satisfaction, which is considered important to underline as it intersects with various aspects of everyday life.

Coping strategies are used by individuals who usually have anxiety and consist of behavioral and cognitive techniques so that they can balance the internal demands and external conflicts that arise (Folkman & Lazarus, 1980). Buser & Kearney (2017), argue that the stress coping strategies used are not always beneficial in terms of the situation and the individuals themselves. Endler & Parker (1990) pointed out that some coping strategies, such as ignoring a problem and blaming oneself, are associated with negative outcomes, while other active coping styles that focus on the problem and plan to deal with the problem immediately are considered adaptive and bring about positive results. Active coping strategies have been defined as problem-focused coping (Folkman & Lazarus, 1980) or task-oriented coping (Endler & Parker, 1990). Carver et al. (1989) identified an element of problem-focused coping, planning, which refers to the active establishment of a plan of action against the stressful factor and determines the optimal course of action in coping. More recent research by O'Brien et al. (2012), and Reeve et al. (2013), reinforce existing research by stating that coping strategies such as accepting the problem, focusing on the problem, a positive reappraisal of the problem, and seeking social support are associated with reduced levels of stress. Conversely, maladaptive coping strategies that are associated with higher levels of stress include behaviors

such as denial, substance use, self-distraction, behavioral disengagement, and blaming oneself and others (Cherkil et al., 2013), (O'Brien et al., 2012). The research of Endler & Parker (1990), O'Brien et al. (2012), and Cherkil et al. (2013), regarding coping strategies, states that individuals may often use dysfunctional coping strategies without realizing it, just to forget about the problem. The subconscious belief that if one ignores a problem it can go away takes place several times a day and reinforces other dysfunctional cognitive and behavioral processes, such as procrastination, lack of productivity, and low self-esteem.

Stress is a factor, which sometimes can directly affect a person's health, causing chronic diseases and health problems, and sometimes it affects it indirectly through the effects of stress-related behaviors (Adler & Matthews, 1994). Brady (1999), adds that stress contributes to the initiation, continuation, and relapse of addiction to alcohol or other substances, creating a dysfunctional stress coping mechanism. In addition to the consumption of alcohol and substances, which behaviors are associated with stress management, research shows that the consumption of unhealthy foods is also common. Research by Anderson et al. (2014), found that 38% of adults reported excessive junk food intake or increased consumption of unhealthy foods due to stress. Additionally, research conducted in Australia in 2015 on well-being and stress found that 75% turned to overeating as a coping strategy for stress. Epel et al. (2001), in a study regarding the increase in cortisol due to stress, found that women who secreted higher levels of cortisol in response to a laboratory stressor consumed more food, particularly sweets, while they recovered from the stress. The research of Anderson et al. (2014), highlights the automatic behavior of individuals to consume unhealthy foods. The percentage that results in the research in question is large enough to understand that the majority of individuals are likely to unconsciously or consciously turn to self-destructive behaviors, such as the consumption of unhealthy foods in order to relieve or distract themselves from a stressful event.

#Enns et al. (2018), express an interesting point of view regarding the ways that individuals cope with stress. Beyond the coping strategy, which is considered an important stress-fighting factor, another factor is Emotional Intelligence (EI). Arora et al. (2011) report that under stressful conditions, individuals with increased levels of EI are observed to experience less deterioration in mood, exhibit less cortisol secretion, and experience faster recovery compared to individuals with reduced levels of EI. Based on the above research, Zeidner et al. (2012) explain how individuals with higher levels of EI manifest reduced levels of anxiety, saying that they are possibly more likely to resort to more adaptive coping strategies such as seeking social support and less likely to use maladaptive strategies such as avoiding the problem. Additionally, Enns et al. (2018) and Saklofske et al. (2012) explain that individuals with higher EI can more easily handle

stressful situations because they are in a position to perceive, understand and more adequately regulate negative emotions in themselves and other individuals. Research on EI shows that an indirect way to more adaptive perception and management of stress is the development of emotional intelligence. It is considered very important to further understand and research the early development of EI so that individuals prefer to resort to functional coping strategies to combat stressful situations wisely.

In addition, research evidence has shown that physical exercise is a coping strategy for stress both when it has already occurred and for preventive reasons and its role is to protect against the harmful effects of stress (Barlow et al., 2006), (Jonsdottir et al., 2010). Additionally, clinical trials such as that of Connell et al. (2009) and Wilcox et al. (2008) have shown that participation in regular exercise and acute bouts of exercise are important factors in reducing perceived stress and improving quality of life. In a study conducted by Traustadottir et al. (2005), it appeared that the cortisol response to a psychosocial stressor was significantly reduced in women who regularly performed aerobic exercise relative to women who did not follow the same frequency of aerobic exercise. Finally, among the research on physical exercise, the integration of aerobic exercise into people's daily lives is considered important, as a healthy means of both preventing and dealing with stress. According to the aforementioned research, physical exercise can contribute both to stress management and to maintaining well-being, as it is considered a particularly functional method that aims at the balance of the human system.

The existing literature refers to a range of quantitative studies regarding stress and the possible consequences caused by it, however, there is a lack of qualitative research, which should be dominated by the subjective opinion and perception of the human population around such mental health issues. The form of qualitative research around mental health issues has rather evolved to a level that offers researchers the ability to study issues such as anxiety in depth. The aim of the existing qualitative research is to contribute to the strengthening of the existing literature through the subjective investigation of individuals who are subjected to stressful events in their lives, as well as through the unique experience of each participant on the perception of stress, and the subjective influence they believe the participants that stress exerts on their mental and physical health. The purpose of this research is to empirically analyze the issue of anxiety in terms of the psychological and cognitive background of the participants, as well as the extent that anxiety takes in terms of the physical level. At the end of the study, it is intended that questions will have been answered and analyzed through the interviews of the participants and also through the analysis that will be carried out. These questions include the perception of stress defined by the participants, the impact that

stress may have on a cognitive and mental level, the coping strategies that the participants tend to use to cope with stressful situations, and finally if there is any physical impact because of stress.

Methodology

Design.

The current study will be using an Interpretative Phenomenological Analysis (IPA) to analyze the data set. IPA is an idiographic and phenomenological analysis technique that was introduced by Johnathan Smith (1996). The specific approach has a primary role in the investigation of how people understand their experiences. According to Taylor (1985), humans are "self-interpreting beings" as they are actively engaged in interpreting and understanding the situations, emotions, people, and objects in their lives. The specific approach is indicated for the present study as what I want to investigate is the participants' perception of stress. The reason I chose this approach is to allow the participants to give an interpretation regarding stress, how they perceive it, the possible influence that stress can have on their physical and mental health, as well as the way they function when they experience stressful situations to relieve themselves. The main theoretical principles of this method are phenomenology, hermeneutics, and idiographic perception. Phenomenology has its roots in philosophy, which is considered a touchstone for IPA research. Husserl considered that phenomenology as an eidetic science focuses on species, the logical concepts that are gathered and organized within the mind. Husserl (2012) states that concepts that can be understood (through consciousness) can be precisely described as intuitive with the help of a method, which he called phenomenological stance and reduction. Edmund Husserl (1990), underlined the term bracketing, in an attempt to suspend prejudices and assumptions. He believed that bracketing was primary in a phenomenological study, as it offered a premise of personal honesty about the phenomenon (Hamill & Sinclair, 2010). Another underpinning of IPA is hermeneutics, whose founder was Heidegger (1962). Hermeneutic phenomenology tries to discover and understand the deeper layers of human experience and how the world, as experienced by the individual, affects this experience (Bynum & Varpio, 2018). As reported by Teherani et al. (2015) interpretive phenomenology is a research approach, which seeks to explain the essence of a phenomenon, investigating it from the perspective of the individual who has experienced it. The goal of this approach is to discover and describe meaning in an experience both in terms of what was experienced and how it was experienced. Hermeneutic phenomenology focuses on interpreting the narratives of research participants concerning their perspectives, intending to make sense of the

fundamental structures of the individual and understand the shaping of the decisions made by the individual (Heidegger, 1962). Idiography constitutes the third theoretical background of IPA. An idiographic approach aims to analyze a phenomenon in depth and focus on a particular, one without focusing on aggregated data (Smith, 2004). Considering all of the above, it was determined that this method would better serve the purpose and results of this research for several reasons. The IPA was deemed appropriate for me to present research related to experiences concerning a phenomenon that deserves to be analyzed in depth. Anxiety is a phenomenon that affects a large number of people and needs detailed research. Each person's experience is different, as everyone has their way of perceiving events, situations, feelings, and symptoms related to anxiety. IPA contributes to the investigation of individual beliefs and thoughts about the experiences of individuals and I believe that it would be the most beneficial for this research, as beyond being descriptive, it can also give meaning to the experiences of the participants.

Participants.

In the present study, the sample of participants consists of 5 female participants, from 20 to 30 years old. The sample was chosen based on this age, as individuals in this transitional age of their lives possibly experience the most stressful situations and anxiety regarding work, their personal life, and their interactions with individuals in the work environment. The sample consists of female participants, as the female gender tends to distinguish better and perceive with greater accuracy the symptoms of stress either in their physical and/or mental health. For example Enck et al. (2017), noted that the phenomenon of dysfunctional digestion is observed more often in women, which in the majority is caused by stressful factors. Also, in research conducted regarding stress responses between males and females by Heponiemi et al. (2004), showed that females experienced a stronger heart rate response. Moreover, the study by Stroud et al. (2002), noted that females respond more strongly to social rejection, which is closely related to stress responses. The non-probability sampling method to be used in the study is convenience sampling/availability sampling. The specific method is suitable for the study as the collection of data and other elements are provided easily. Moreover, given that the majority of individuals experience stressful periods and by extension stress of everyday life, the choice of the sample and the data to be obtained are helpful for the study. The aforementioned method does not allow concluding a larger population, however, for the present study, it is suitable as the sample is small. The exclusion criteria in this research are people who are over 30 years old or younger than 20 years old, as well as the male population.

Materials.

The materials and sources used in this research consist of the interview questionnaire, a mobile phone, which will audio-record the entire interview process, and a laptop, on which the audio-recorded interviews will be written in a transcript form. For the present research, semi-structured questions targeting the keywords of the research questions will be used. Such interview questions give the participants the scope to describe in detail the phenomenon related to the research from their point of view. For example, open-ended questions like, "What kind of thoughts do you have when you feel stressed?" or "What kind of emotions do you feel when you are under stressful conditions?" they give the participant the opportunity to describe from his own point of view the thoughts and feelings he has when feeling stressed. Also, with the question "Do you notice differences in your body or skin when you go through stressful periods?" the participant is given the opportunity to identify some physical signs, which he has associated with stress. Such questions are needed in order to give the freedom to each participant to express the perception he has formed around stress on a psycho-emotional or physical level.

Procedure.

To start the research, it was necessary to find the participants who would take part in the study. This was done through the snowball sampling technique, which helped to gather five participants who were willing and ready to help in the process of selecting personal data. All interested participants were contacted by email, and I informed them about the subject of the study and their involvement in the process. Based on the inclusion and exclusion criteria, the five participants were selected. After the participants gave their consent to be interviewed, a discussion took place about the specific time and place where we would meet for the interview. Before the interview process started, the participants were once again informed about the purpose and rationale of the research study, making them free to ask anything, so that a better understanding was achieved. Afterward, participants were given all the necessary forms, which included the participant information sheet, the consent form, and the demographic form. The interviews took place in quiet cafes where the participants felt comfortable or in outside places without fuss at the time agreed between the researcher and the participant. The details of the interview process as well as the rights of the participant to withdraw from the interview at any time if they feel uncomfortable or uncomfortable. The interviews were recorded with a mobile phone and lasted approximately 15 minutes. After completing the interview, the

researcher warmly thanked the participants who volunteered to take part in the study, and the debriefing form was delivered to them. A period of two weeks was indicated so that they had the right to withdraw their data. Additionally, personal contact information for the researcher and supervisor was provided in case any participant needed further clarification. Finally, the recordings were transcribed and each participant was identified with a pseudonym to achieve anonymity and confidentiality. The interviews were read several times and scrutinized to identify the appropriate themes.

Plan for Data Analysis.

The analysis plan used in the present research is IPA. The specific method of analysis allows both the participants and us to enter deeply into the phenomenon under investigation, which in this case is anxiety. In the present study, I am invited to enter the position of the participant, seeing through their thoughts, behaviors, and emotions how they experience anxiety, what emotions, and thoughts anxiety causes them, and how they manage and process what happens to them. Through my observation I want to understand and examine the data of the interviews that I will receive from the participants as well as analyze them through the psychological lens, creating themes and possibly finding similarities or differences between the perceptions of each participant. IPA is the most useful method that could be used in this research as it is appropriate for the research questions and related to the way of analyzing the stress phenomenon.

Analysis

After an extensive examination of the interview transcripts, three dominant themes were derived. The first issue is the perceived frequency of stress, which individuals experience daily. The second issue that emerges is that stress is perceived by the majority as a negative situation that creates distorted cognitive patterns, both in the sense of thinking and feeling. The last issue that arises is that stress, depending on the chronicity and intensity, is likely to become physical. The resulting subtheme is the adaptive and maladaptive coping strategies that each individual uses to relieve stress. The theme is closely related to the concept of embodied anxiety that can result from maladaptive coping strategies or chronically unresolved anxiety. The choice of topics to be analyzed are two, anxiety is perceived as a negative state with distorted cognitive patterns and the physicalization of stress after chronic exposure or maladaptive coping strategies, as well as the sub-theme.

Theme 1: Anxiety is perceived as a negative state with distorted cognitive patterns

In this specific theme, a variety of emotional and cognitive processes are illustrated, which take place during a stressful period or situation and are unique to each individual, as stress is a subjective experience and manifests differently from individual to individual. A few decades ago, Selye (1965) introduced the term "general adaptation syndrome", where he argued that the individual is involved in three stages of stress, of which the first is the "alarm reaction", the second is the "stage of resistance" and the last is "the stage of exhaustion". In these three stages, the individual is faced with different emotions and thoughts which affect the way they interpret the events and express themselves. Some characteristic emotions that have emerged from the literature are anger, sadness, disappointment, or the feeling of being out of control (Cohen et al., 2016). The majority of participants seem to experience almost all the stages and cognitive difficulties of the anxiety phases, observing the most intense in some participants.

Extract 1:

"I feel that I won't make it and I won't succeed in any of my goals. In most situations, I just feel like I put a wall in front of me, which I cannot overcome and I am thinking that I am not good enough for anything and I will stay stagnant forever. For example, I will not attempt to read a course if I have failed a previous one because I know that I will fail again. I am basically destroying all the self-esteem I have created till now and I am also fearful of disappointing others. I believe that when I fail in situations other people may be angry at me because I did not succeed, and I do not deserve their love. Also, when I feel stressed I usually talk badly to others and I shout because I cannot handle what others say to me at the moment. In short, it is like I am sabotaging myself and that I do not have any control of myself" (Jojo, page 1, lines 13-27)

Jojo seems to experience stress greatly as she details what happens to her when she is under stressful situations. In Jojo's case, it is observed that the feelings of fear associated with failure come to the surface when she experiences intense stress. A small failure can cause her entire psychological and emotional breakdown. This ideology is related to the relevant research done by Cohen (2000), where he claims that the cognitive process when the individual experiences intense stress can become more rigid, and irrational thought patterns that include self-destruction can be followed. Szabo & Lovibond (2002) have also mentioned in their related research the term "catastrophizing worry", where an individual focuses

particularly on the problem or a potential threat and then ruminates on the perceived threat, which is followed by greater levels of anxiety. The stress situation can become even more intense when the person tends to imagine the worst possible outcome. For example, Jojo said that "I will not attempt to read a course if I have failed a previous one because I know I will fail again". This sentence shows that she has already created a spiral of negative thoughts, feeling helpless and hopeless about the immediate future. In addition, when she experiences intense anxiety she is faced with feelings of anger and sadness, and she feels that she cannot handle situations as she would like either with herself or with those around her, as she feels she has no control and is in a state of mental fatigue. Furthermore, in Jojo's case it seems that when she experiences stress and feels like she has failed, she is overwhelmed by feelings of guilt and low self-esteem. She feels that those around her will not support her and that they will be angry and will not want her because she failed. Blunt & Pychyl (2005) in their research reported that the feelings of guilt and shame as well as the reduced self-esteem that the individual experiences possibly come from the idea that they feel that personal failure brings destruction both to their relationships and to themselves.

Extract 2:

"I perceive stress as something negative because I feel like I am stagnant. Most of the time when I am anxious about something I usually try to avoid the situation by doing something else, but nothing for the stressful condition. The main thoughts that I have when stressed are that I am stagnant, that I am not doing anything about this feeling and I procrastinate a lot. I also feel blocked and apathetic, usually I experience mood changes more easily and I become more irritable and moody."(Amalia, page 4, lines 11-23)

Amalia experiences stress differently than the previous participant with several fluctuations in behavior and with the main thought that she is stagnant. The feelings she describes are mainly those of apathy, which she has when a stressful event or situation comes to her mind. Amalia states that while she recognizes the real situation and her mood, she is not in a position to act on it, showing apathy and irritability. These data are also referred to in the research conducted by Cohen (2000), where he argued that when a person is under stress, emotions such as anger, apathy, sadness, and alienation can manifest. Another factor that can contribute to the procrastination of the situation is the feeling of helplessness and hopelessness, as argued by Szabo & Lovibond (2002). What we notice is that Amalia may not feel the security she would like to be able to act on the stressful factor which has the effect of insecurity and a lack of trust in herself or others. Procrastination is a situation where the individual does not try to act on the stressful factor but instead spends

himself in situations, which will initially make him forget about the real stressful factor but subsequently will not bring him helpful results as far as the stressful factor is concerned. Sirois (2004), argues that when people are under intense stress, they often feel overwhelmed by emotions and unable to complete tasks, so they procrastinate. In this particular case, Amalia experiences procrastination, apathy, and easy mood swings as a result of stress.

Extract 3:

“When I am stressed I know that I do not have control over a situation and this makes me even more stressed. I am a person that gets stressed quite easily over small things and I tend to think about them a lot with the consequence to lost in my thoughts and overanalyzing them. When this happens I usually lose my calm and I get disoriented from the goal. For example, if I have a flight in the afternoon, I can start getting anxious in the morning.” (Miranda, page 3, lines 20-23)

Miranda presents a different way of manifesting stress in herself under stressful conditions. She describes to us that she is a person who gets stressed quite easily with simple tasks during her day. Specifically, she states that when anything stresses her out, she tends to overthink it and overanalyze it. Overanalysis is a person's tendency to dwell too much or examine situations, thoughts, and decisions to the point of feeling overwhelmed by indecision. In this particular case, Miranda does not seem to be at a point where her functioning during the day is affected, however, her over-analysis of thoughts and events make her anxious, with the result that her cognitive perception is affected and she is not sure about the decisions he has to make during the day. In the long term, such behavior can cause a feeling of being stuck in a loop of thoughts, with the result that she wants confirmation from others regarding decisions she has to make and by extension causing her an ever-increasing level of anxiety.

Extract 4:

“I remember a situation where I was over a lot of stress and I could not think clearly. I recall that I was out of control without wanting to do anything and giving up on everything. The emotions that I experienced through that stressful situation were the fear of the unknown and the feeling of insecurity” (Jo, page 5, lines 12-18)

Extract 5:

“Usually when I am stressed I feel that things depend more on luck or other factors that I cannot control and make me feel weak. I have a feeling of division, weakness, and fear for the present and the future. I often compare being in an ocean that I have to swim to survive and telling myself to swim so that I do not sink.” (Niki, page 6, lines 16-20, 42-43)

The last two participants show some common characteristics in the explanation they give when they are under stressful conditions. The feeling of having a lack of control, the feeling of helplessness and hopelessness, and the fear of the result for the present or for future. Jo describes the concept of "catastrophizing worry", in which she thinks about the worst possible scenario and wants to relieve herself of the anxiety by giving up whatever she's been doing up to that point. These feelings can have a big impact on the lives of the participants as the feeling of helplessness can further intensify stress levels and negatively affect well-being. Nikki illustrates a very interesting simile in times of stress. "I often compare being in an ocean that I have to swim to survive and telling myself to swim so that I do not sink." This analogy reinforces the theory of Folkman (2012), as the feeling of fear of the unknown, together with disappointment and sadness are related to those of the theory of Szabo & Lovibond (2002), regarding the feeling of helplessness, hopelessness, and lack of control.

Theme 2: Perceived Adaptive and Maladaptive Coping Strategies

The specific theme arises from the view that each individual has his way of using coping strategies to combat stress. Coping strategies may transitory relieve individuals from the experience of stress, however, they are not always appropriate and functional for the individual and for the impact they have on his life.

Extract 1:

“I believe that when I am stressed I eat a lot, and most of the time it is junk food. I also have observed that every time that I am stressed I try to trash myself with words because I feel that I do not deserve anything. I ruin my whole routine, whether it is sports or nutrition, and also my sleep is affected. Usually, I drink a lot of coffee and I smoke a lot when I am under a lot of stress. Afterward, to feel better I am trying to go for swimming or to do a very intense type of exercise or running.” (Jojo, page 2)

In this passage, Jojo narrates the method that she usually uses to relieve herself from stress, but also the

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copied mechanisms that she has embraced and has seen that they temporarily help her, or so she feels. She has noticed that during periods when she is under intense stress, her eating routine is strongly affected, with the result that she eats a larger amount of food and usually unhealthy foods, consumes a lot of coffee during the day, and smokes heavily. This behavior as a way of coping with stress has been argued to be dysfunctional by Anderson et al. (2014). It seems that relevant research has recognized that a large part of the population is turning to unhealthy food consumption due to stressful lifestyles and stressful conditions. In addition, Jojo reveals that in intense stress situations, she tends to blame herself for the events by saying "I try to trash myself with words". Also, she adds that she tends to ruin her routine in terms of nutrition and fitness, where she is distracted from her goal. In the literature review, researches such as that of Endler and Parker (1990) and Cherkil et al (2013) are identified, where they support that such behaviors as blaming oneself and choosing behaviors such as self-distraction and behavioral disengagement are part of dysfunctional coping strategies, as they intensify the problem of anxiety and create a vicious cycle between discomfort, anxiety, and dysfunctional behaviors. On the other hand, she claims that to feel better after these behaviors, she tries to do a very intense type of exercise, to go for a run or swim to discharge herself. This corrective behavior has been shown by research to have beneficial effects and is characterized as a functional coping mechanism. Jonsdottir et al. (2010) have argued that physical exercise can serve either as a protective factor to prevent high levels of stress or once a stressful event has already occurred for relief.

Extract 2:

"I usually get lost in my thoughts, because I constantly think about stressful situations. I use to overanalyze and overthink and then I lose my calm and get disoriented from the goal. When I reach the point, where I cannot deal with my thoughts I usually try to talk to someone, to a relative, to a close friend of mine and I feel better because I get reassurance over the situation. I also try to do other things to de-stress, like watching Netflix or drinking tea to make me relax." (Miranda, page 3, lines 20-21, 42-45)

Miranda exhibits various ways that make her relax when she is in stressful situations. Usually, she overanalyzes events and situations and repeatedly thinks about the stressful event. Thinking around stressful events, and creating a plan of action to combat the stressful situation can potentially work positively in combating anxiety. However, what Miranda manages to do with her over-analysis is to get upset over and over again about the situation, a fact that leads to the rumination of negative thoughts and the constant magnifying glass of anxiety. Additionally, when Miranda is faced with a stressful situation, she will try to

ignore the problem, and turn her attention elsewhere, such as watching a series. This coping mechanism may not be maladaptive and not harm her health, but it is a passive way of dealing with the problem (Endler and Parker, 1990). The protective factor and the adaptive coping in Miranda's case are that she can accept the problem and seek social support from friends and family when she feels that she cannot cope with negative and stressful thoughts. O'Brien et al. (2012) argued that stress levels are lowered when the individual who is under stress seeks to communicate his problem with his social environment and seek help and social support.

Extract 3:

“I know that when I am stressed, most of the time I consume unhealthier foods. Generally, when I am on a stressful period I mostly prefer to ignore the problem and not to give it so much importance. Other times, depending on the situation, stress bothers me so much that I get to the point of not sleeping and because I do not sleep I feel like it is destroying me. When I have anxiety, I try to shift the focus of my attention to other activities such as sports and continue my daily life as it is.” (Amalia, page 5, lines 32-35, 41-44)

The coping strategies shown in Amalia's case indicate that when she is in stressful situations, she follows strategies that will get her out of the difficult situation and will prefer to ignore the existing issue. Such coping strategies are described by Endler and Parker (1990) as maladaptive, as in this case, Amalia does not choose to follow a plan of action that refers to the resolution of the current stressful issue directly but instead prefers to direct her attention on other issues to avoid the situation. What is described in the research of Cherkil et al. (2013) as denial of the problem and self-distraction seems to apply in Amalia's case. The adaptive way of coping in the above case is Amalia's attempt to devote time to sports and by extension to lower her stress levels through them. However, ignoring problems and procrastination in solving stressful issues generate deeper feelings of mental fatigue and worsening of the situation, creating more intense stress.

Subtheme 1: The physicalization of stress after chronic exposure or unresolved stress

In the above theme, which refers to perceived functional and dysfunctional coping strategies, the part of participants' adaptability to stressful situations was investigated. As mentioned above, there are many coping mechanisms used by the participants to respond to the daily stressful factors, however, the extent that stress can take on individuals often seems to exceed the limits resulting in somatization and physical

consequences. It is observed in almost all of its participants that beyond the dysfunction caused by anxiety on a mental and cognitive level, it can also spread to the body in various ways. In this subtheme to be analyzed, the participants' experiences will be examined through the exploration of embodied anxiety.

Extract 1:

“Usually when a stressful condition is happening my chest hurts, I get short of breath and I feel like I cannot breathe, and most of the time I also have migraines... My migraines are very intense, I have even been to the hospital. Also, I think that when I am stressed out I get a lot of pimples and I usually gain weight. Last but not least, my sleep is often ruined as I can't fall asleep easily at night and wake up very early, unable to go back to sleep” (Jojo, page 2, lines 25, 29-32)

In this particular passage, Jojo explains that her anxiety most of the time is so intense that she usually suffers from migraines. She also claims that she has even been admitted to the hospital to get rid of her migraines. In research related to headaches, Kelman (2007) argued that 80% of the population believes that stress is a common trigger of migraines. Sauro et al. (2009) add that stress can act either as a factor in the initiation of migraine or as a factor that enhances a chronic migraine syndrome. The fact that Jojo may have pimples is possibly due to a combination of factors. In a previous passage on the topic analyzed above, Jojo had argued that usually when she goes through stressful situations, she consumes more unhealthy foods, smokes a lot, and drinks more coffee. Therefore, the change in the routine of nutrition and well-being and the combination with increased stress are possibly contributing factors in the appearance of adult acne. It has been argued by Chelbus & Chelbus (2017) that when the intensity and severity of stress are high then the risk of acne breakouts is increased. Also in Jojo's case, difficulty in sleeping is mentioned, as she suffers from insomnia at times and takes a long time to fall asleep and most of the time she wakes up quite early without having the ability to return to the sleep stage. Difficulty in sleeping is closely related to anxiety. Takano et al. (2012) emphasized that repeated negative thoughts play an important role in the induction and maintenance of insomnia, as well as being related to delayed sleep time and shorter sleep duration. Finally, Jojo shows mild panic attack symptoms when a stressful factor arises. She explains that she is short of breath and feels like she can't breathe. Researchers Johnson et al. (2014) explain that panic attacks are characterized by an intense increase in cognitive and sensory symptoms. Central nervous system symptoms most often include shortness of breath, rapid heartbeat, and sweating.

Extract 2:

“Anxiety usually hits me in the stomach and I find it difficult to eat. As soon as I get stressed I get discomfort and I feel a knot in my stomach. I also experience rapid heart rate in intense stressful situations and symptoms such as sweating and then I need cool air so I can breathe. I also have noticed that I have migraines most of the time I am stressed.” (Miranda, page 3, lines 26-28, 32-34)

Miranda appears to experience panic attack symptoms when faced with an intense stressor. It causes symptoms such as an intense heart rate and the sensation of sweating. Craske et al. (2010) report that heart-related symptoms are the most common in panic attacks. Quantitatively in their research, 97% reported heart pounding, 86% tachycardia, and 78% palpitations). Miranda also reports that anxiety makes her stomach ache and she finds it difficult to eat when she is anxious as she feels discomfort and a knot in her stomach. Enck et al. (2017) reported that the phenomenon of functional dyspepsia is relatively common, especially in women due to progesterone and estrogen hormones. They claimed that symptoms that may occur include upper and lower abdominal pain, nausea, early satiety, and bloating. Finally, Miranda mentions that her migraines come along with anxiety, a symptom we also noticed in the previous participant.

Extract 3:

“I feel that I have very strong palpitations, shortness of breath, I sweat and it also affects my sleep. When I am stressed happen to wake up from the palpitations. I have seen differences in my skin, as it becomes more prone to acne when I am stressed, but this also might be because I eat unhealthier during stressful situations.” (Amalia, page 4, lines 28-30, 32-35)

In this passage, the symptoms described by Amalia seem similar to those in Jojo's case. The symptom of intense heartbeats, shortness of breath, and sweating seems to be common with the previous participants. These symptoms that are included in the panic attacks concern almost all of the participants with the result of making their daily activities and well-being miserable. Amalia reports that because of these symptoms, she often wakes up during the night with intense heartbeats, thinking about stressful events. Takano et al. (2014) state that negative cognitive processes after a stressful event show a strong connection with poor sleep quality. Chow et al. (2017) add that women often report greater co-rumination and depressive symptoms combined with anxious thoughts, which are also associated with sleep problems. In addition, the onset or worsening of acne appeared to be present in almost all participants. "I have noticed differences in

my skin and I am more vulnerable to developing acne" (Jo, page 5, line 24) as well as Niki "I have noticed that that the accumulated stress and chronic stress cause my skin to become oily and due to the hormones by extension, acne appears"(Niki, page 7, lines 28-30). Chlebus & Chlebus (2017) claim that while they initially believed that acne flare-ups were linked to the workplace because it might be more demanding and caused them anxiety, they finally found from their participants that the most stressful factors that might be linked to the worsening of acne are the changes in the daily routine and the way of life. Moreover, Wong et al. (2016) argue that while acne may not be a life-threatening factor, it causes great discomfort, thus compounding more stress around this issue, leading individuals to a vicious cycle between stress and acne.

Extract 4:

“The most important issue that has emerged due to stress is that I suffer from Irritable Bowel Syndrome (IBS) so I have very intense pain in the intestine and usually I have diarrhea. Most of the time it is combined with anorexia and because of the pain in the intestine I cannot eat. I also experience weakness as if I were sick because I am dehydrated and I feel tired. Due to IBS, I have swelling, bloating, and flatulence. For me, stress is pathological because IBS has been created and I know that it needs a lot of patience to combat it.” (Niki, page 7, lines 22-25, 28, 32-33)

In the specific case of Niki, it seems that the anxiety often takes a toll on her psychologically. Because of the intense and chronic stress, IBS has developed, which troubles her and can isolate her from various activities she would like to participate. The constant stress Niki experiences worsens her IBS condition preventing her from living her daily life as she would like. The cycle around the syndrome, anxiety, and discomfort possibly causes an intense concern around issues of work, social interaction, and nutrition. Hong-Yan et al. (2014), argue that IBS may coexist with psychological distress. The way that stress can be involved in the onset and progression of IBS is influenced by the gut-brain axis, which is considered the communication pathway between the brain and the gastrointestinal tract. Grenham et al. (2011) state that stress can contribute to the sensitivity of the digestive system and make it more reactive to certain stimuli, such as certain foods or drinks. The sensation of anorexia is due to various factors and symptoms that are related to IBS and include the feeling of bloating, pain in the lower and upper abdominal area, or nausea, significantly affecting gastrointestinal function. The pathology that has arisen in Niki's case continues to negatively affect various aspects of her daily life and does not offer her the satisfaction she would ideally like to have.

Discussion

The results of the research explored the subjectivity of each experience in terms of stress and how each participant is affected by it on a daily basis. These results show that each participant experiences the concept of stress differently, however, the coping strategies they use have some common characteristics. The majority of participants usually turn to coping mechanisms, which are immediate relief from stressful factors, however, in the long term, they do not seem to serve the full healing of stressful situations, leaving residues, which may appear as psychosomatic or affect physical functioning. Among the results of the research, an awareness is made regarding the influence that anxiety has on the lives of the participants in terms of the psychological part, the mental fatigue, the unpleasant feelings that develop, and by extension in their social and personal life. The statements of the participants regarding stress, on a cognitive level, are consistent with previous research such as Folkman (2012), in which it is argued that emotions such as fear, anger, and sadness coexist with anxiety. Furthermore, there is agreement between participants and researchers Szabo and Lovibond (2002), where it is argued that emotions such as hopelessness and helplessness as well as persistent negative thoughts around stressful situations and perceived threats enhance catastrophizing anxiety, creating a vicious circle around the unpleasant feelings and the increasing and continuous stress. In addition, some of the results, which are consistent with previous research (Blunt & Pychyl, 2005), and (Sirois, 2014) are the sense of guilt, shame, and low self-esteem, which come from individuals who experience stress, as well as the lack of productivity that results in constant procrastination.

The coping strategies noted by the participants, in the majority, reveal that they are usually associated with the dysfunctional coping strategies found in the literature. Research by Cherkil et al. (2013), and Endler & Parker (1990) suggest that behaviors such as denial of the stressful event, self-distraction, behavioral disengagement, and self-blame are examples of dysfunctional coping strategies. Three of the five participants state that they embrace this coping mechanism to disconnect from the torturous thoughts. Also, it is observed that some of the participants in stressful prevailing situations consume unhealthy types of food, a fact that corresponds to a still dysfunctional way of dealing with stressful conditions and is in line with the research of Anderson et al. (2014), in which it is argued that many individuals turn to maladaptive tactics, such as antigenic food consumption due to stress. Another coping strategy, which is followed by some participants and aims at the balance of well-being, is physical exercise, which is considered a functional stress coping mechanism, as it prevents but also reduces high cortisol levels due to stress (Jonsdottir et al., 2010).

The coping strategies used by the participants to combat stress, as judged by the results of the research, are not always beneficial in terms of health. When stress continues to exist in people's lives, without being effectively combated, it tends to produce direct or indirect effects, which are likely to become irreversible. Some important examples of participants that are consistent with the negative effects of stress shown in previous research are IBS, which was discussed in the research of Hong-Yan et al. (2014), migraine syndrome, supported and analyzed by Kelman (2007), poor sleep quality, which is strongly associated with anxiety and supported by Takano et al. (2014), and Takano et al. (2012). In addition to the difficulties mentioned above, which significantly contribute to the quality of life of the participants, other problems make the daily life of the participants difficult, such as adult acne, which is mentioned in research by Chelbus & Chelbus (2017), and in majority increases during stressful periods of the person's life. Finally, from the results of the research, the majority of the participants suffer from intense symptoms, which also appear during panic attacks. The symptoms reported are rapid heartbeat, tachycardia, and dyspnea, which are significantly related to stress and are consistent with the research of Johnson et al. (2014).

In regards to the assessment of the particular research is concerned, the impossibility of extrapolation and generalization of the findings, due to the limited number of samples and the nature of the qualitative methodology used, may be an implication and should be taken into serious consideration. Nevertheless, the important point of the research was to examine the perception of stress among different opinions and experiences and the influence that stress has on the psyche and the functioning of the individual on a cognitive and physical level. The diversity of participants' cognitive and physical experiences of stress provides a variety and subjectivity to the topic.

Further research should be conducted to explore more complex points at which stress is involved and to explore innovative ways to equip individuals with tools to deal with stress and manage stress properly. Future research could explore how feasible it is for school communities to provide children with tools from a young age, for example at the beginning of adolescence or even earlier, so that they are equipped with knowledge and ways to prevent adverse effects of stress in older age. Most importantly, because the proper management of stress, in conjunction with other psychological difficulties, requires resources and the help of mental health professionals, a future idea would be to make it a priority of the state, to actively cover costs in terms of resources and psychological care, to people who need it. Cognitive behavioral therapy (CBT) is considered one of the most appropriate treatments for stress, as it reframes and reconstructs the individual's dysfunctional beliefs, cognitions, and behaviors. Therefore, a future idea would be for the state

to cover the costs of mental health services so that free CBT is offered to people who lack of available resources.

To reach a conclusion, the small sample used, as well as the qualitative methodology, make the above findings less generalizable, however, the main concern was to highlight each participant's perception and explore in depth their subjective experiences. The mental and physical health of the individuals were found to be affected particularly negatively, as far as stress issues are concerned, however, some coping mechanisms that they use seem to temporarily help them maintain balance.

Reflexivity

Since the methodology chosen was interpretive phenomenological analysis, the researcher is expected to be involved in the analysis of the data. Interpretation includes initially the participants' attempt to understand various phenomena and then the researcher's interpretation of their meaning. In addition, certain assumptions and personal beliefs of the researcher may influence the development of the interpretation. More specifically, I believe that stress and stressful periods in life are an integral part of anxiety and fear for individuals. Regardless of the fact that, I personally have not been faced with great stress in my life, there have been times when I have been in stressful situations and the first way out that came to my mind was to panic. Therefore, it is plausible that the experience narrated by each participant regarding stress was to report the negative aspects of stress. Possibly, in life there are also stressful situations that can bring beneficial effects both mentally and emotionally, however, the preference of the participants to emphasize negative experiences of stress must be taken into account.

References

- Adler, N., & Matthews, K. (1994). Health psychology: Why do some people get sick and some stay well?. *Annual review of psychology*, 45(1), 229-259.
- Anderson, N. B., Belar, C. D., Breckler, S. J., Nordal, K. C., Ballard, D. W., Bufka, L. F., ... & Wiggins, K. (2014, February). Stress in America: are teens adopting adults' stress habits. In *Am Psychol Assoc* (Vol. 1, pp. 1-47).
- Anders, S. L., Frazier, P. A., & Shallcross, S. L. (2012). Prevalence and effects of life event exposure among undergraduate and community college students. *Journal of counseling psychology*, 59(3).

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449.

- Arora, S., Russ, S., Petrides, K. V., Sirimanna, P., Aggarwal, R., Darzi, A., & Sevdalis, N. (2011). Emotional intelligence and stress in medical students performing surgical tasks. *Academic Medicine*, 86(10), 1311-1317.
- Australian Psychological Society. *Stress & Wellbeing: How Australians Are Coping with Life: The Findings of the Australian Psychological Society Stress and Wellbeing in Australia Survey 2015*; Australian Psychological Society: Melbourne, Australia, 2015.
- Bailey, R. C., & Miller, C. (1998). Life satisfaction and life demands in college students. *Social Behavior and Personality: an international journal*, 26(1), 51-56.
- Barlow, C. E., LaMonte, M. J., FitzGerald, S. J., Kampert, J. B., Perrin, J. L., & Blair, S. N. (2006). Cardiorespiratory fitness is an independent predictor of hypertension incidence among initially normotensive healthy women. *American journal of epidemiology*, 163(2), 142-150.
- Blunt, A. K., & Pychyl, T. A. (2000). Task aversiveness and procrastination: A multi-dimensional approach to task aversiveness across stages of personal projects. *Personality and Individual Differences*, 28(1), 153-167.
- Brady, K. T., & Sonne, S. C. (1999). The role of stress in alcohol use, alcoholism treatment, and relapse. *Alcohol Research & Health*, 23(4), 263.
- Buser, J. K., & Kearney, A. (2017). Stress, adaptive coping, and life satisfaction. *Journal of College Counseling*, 20(3), 224-236.
- Bynum, W., & Varpio, L. (2018). When I say... hermeneutic phenomenology. *Medical Education*, 52(3), 252-253.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: a theoretically based approach. *Journal of personality and social psychology*, 56(2), 267.
- Chabriat, H., Danchot, J., Michel, P., Joire, J. E., & Henry, P. (1999). Precipitating factors of headache. A prospective study in a national control-matched survey in migraineurs and nonmigraineurs. *Headache: The journal of head and face pain*, 39(5), 335-338.
- Cherkil, S., Gardens, S. J., & Soman, D. K. (2013). Coping styles and its association with sources

-
- of stress in undergraduate medical students. *Indian Journal of Psychological Medicine*, 35(4), 389-393.
- Chlebus, E., & Chlebus, M. (2017). Factors affecting the course and severity of adult acne. Observational cohort study. *Journal of Dermatological Treatment*, 28(8), 737-744.
 - Chow, C. M., Homa, J., & Amersdorfer, A. (2017). Gender differences in sleep problems: The mediating role of co-rumination and depressive symptoms. *Personality and Individual Differences*, 108, 10-13.
 - Chrousos, G. P. (1998). Stressors, stress, and neuroendocrine integration of the adaptive response: The 1997 Hans Selye Memorial Lecture. *Annals of the New York Academy of Sciences*, 851(1), 311-335.
 - Chrousos, G. P. (2009). Stress and disorders of the stress system. *Nature reviews endocrinology*, 5(7), 374-381.
 - Cohen, J. I. (2000). STRESS AND MENTAL HEALTH: A BIOBEHAVIORAL PERSPECTIVE. *Issues in Mental Health Nursing*, (Vol. 21(2), page 185–202).
 - Cohen, S., Gianaros, P. J., & Manuck, S. B. (2016). A stage model of stress and disease. *Perspectives on Psychological Science*, 11(4), 456-463.
 - Connell, C. M., & Janevic, M. R. (2009). Effects of a telephone-based exercise intervention for dementia caregiving wives: A randomized controlled trial. *Journal of Applied Gerontology*, 28(2), 171-194.
 - Craske, M. G., Kircanski, K., Epstein, A., Wittchen, H. U., Pine, D. S., Lewis-Fernández, R., & Hinton, D. (2010). Panic disorder: a review of DSM-IV panic disorder and proposals for DSM-V. *Depression and anxiety*, 27(2), 93-112.
 - Dhabhar, F. S., Miller, A. H., McEwen, B. S., & Spencer, R. L. (1995). Effects of stress on immune cell distribution. Dynamics and hormonal mechanisms. *Journal of immunology (Baltimore, Md.: 1950)*, 154(10), 5511-5527.
 - Dhabhar, F. S. (2009). Enhancing versus suppressive effects of stress on immune function: implications for immunoprotection and immunopathology. *Neuroimmunomodulation*, 16(5), 300-317.
-

-
- Dhabhar, F. S. Positive effects of stress. TED@ Vancouver. 2012.
 - Dhabhar, F. S. (2014). Effects of stress on immune function: the good, the bad, and the beautiful. *Immunologic research*, 58, 193-210.
 - Dréno, B., Thiboutot, D., Layton, A. M., Berson, D., Perez, M., Kang, S., & Global Alliance to Improve Outcomes in Acne. (2015). Large-scale international study enhances understanding of an emerging acne population: adult females. *Journal of the European Academy of Dermatology and Venereology*, 29(6), 1096-1106.
 - Drossman, D. A. (2016). Functional gastrointestinal disorders: history, pathophysiology, clinical features, and Rome IV. *Gastroenterology*, 150(6), 1262-1279.
 - Enck, P., Azpiroz, F., Boeckxstaens, G., Elsenbruch, S., Feinle-Bisset, C., Holtmann, G., ... & Talley, N. J. (2017). Functional dyspepsia. *Nature Reviews Disease Primers*, 3(1), 1-20.
 - Endler, N. S., & Parker, J. D. (1990). Multidimensional assessment of coping: a critical evaluation. *Journal of personality and social psychology*, 58(5), 844.
 - Enns, A., Eldridge, G. D., Montgomery, C., & Gonzalez, V. M. (2018). Perceived stress, coping strategies, and emotional intelligence: A cross-sectional study of university students in helping disciplines. *Nurse education today*, 68, 226-231.
 - Epel, E., Lapidus, R., McEwen, B., & Brownell, K. (2001). Stress may add bite to appetite in women: a laboratory study of stress-induced cortisol and eating behavior. *Psychoneuroendocrinology*, 26(1), 37-49.
 - Fields, S. A., Lange, K., Ramos, A., Thamocharan, S., & Rassu, F. (2014). The relationship between stress and delay discounting: a meta-analytic review. *Behavioural pharmacology*, 25(5 and 6), 434-444.
 - Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of health and social behavior*, 219-239.
 - Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: cognitive appraisal, coping, and encounter outcomes. *Journal of personality and social psychology*, 50(5), 992.

-
- Folkman, S. (2013). Stress, coping, and hope. *Psychological aspects of cancer*, 119-127.
 - Grenham, S., Clarke, G., Cryan, J. F., & Dinan, T. G. (2011). Brain–gut–microbe communication in health and disease. *Frontiers in physiology*, 2, 94.
 - Hamill, C., & Sinclair, H. A. (2010). Bracketing–practical considerations in Husserlian phenomenological research. *Nurse researcher*, 17(2).
 - Hazlett-Stevens, H., & Craske, M. G. (2003). The catastrophizing worry process in generalized anxiety disorder: A preliminary investigation of an analog population. *Behavioural and Cognitive Psychotherapy*, 31(4), 387-401.
 - Heidegger, M. (1962). *Being and time* Blackwell.
 - Heponiemi, T., Keltikangas-Järvinen, L., Kettunen, J., Puttonen, S., & Ravaja, N. (2004). BIS–BAS sensitivity and cardiac autonomic stress profiles. *Psychophysiology*, 41(1), 37-45.
 - Husserl, E. (2012). *Ideas: General introduction to pure phenomenology*. Routledge.
 - Jiang, Y., Greenwood-Van Meerveld, B., Johnson, A. C., & Travagli, R. A. (2019). Role of estrogen and stress on the brain-gut axis. *American Journal of Physiology-Gastrointestinal and Liver Physiology*, 317(2), G203-G209.
 - Johnson, P. L., Federici, L. M., & Shekhar, A. (2014). Etiology, triggers and neurochemical circuits associated with unexpected, expected, and laboratory-induced panic attacks. *Neuroscience & Biobehavioral Reviews*, 46, 429-454.
 - Jonsdottir, I. H., Rödger, L., Hadzibajramovic, E., Börjesson, M., & Ahlborg Jr, G. (2010). A prospective study of leisure-time physical activity and mental health in Swedish health care workers and social insurance officers. *Preventive medicine*, 51(5), 373-377.
 - Karoly, P., & Ruhlman, L. S. (2006). Psychological “resilience” and its correlates in chronic pain: findings from a national community sample. *Pain*, 123(1-2), 90-97.
 - Kelman, L. (2007). The triggers or precipitants of the acute migraine attack. *Cephalalgia*, 27(5), 394-402.
 - Kocalevent, R. D., Hinz, A., Brähler, E., & Klapp, B. F. (2011). Determinants of fatigue and stress. *BMC research notes*, 4(1), 1-5.
-

-
- Konturek, P. C., Brzozowski, T., & Konturek, S. J. (2011). Stress and the gut: pathophysiology, clinical consequences, diagnostic approach and treatment options. *J Physiol Pharmacol*, 62(6), 591-9.
 - Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.
 - Liu, R. T. (2015). A developmentally informed perspective on the relation between stress and psychopathology: when the problem with stress is that there is not enough. *Journal of abnormal psychology*, 124(1), 80.
 - Li, C. T., Cao, J., & Li, T. M. (2016, September). Eustress or distress: An empirical study of perceived stress in everyday college life. In *Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Adjunct* (pp. 1209-1217).
 - Liu, S., Lithopoulos, A., Zhang, C. Q., Garcia-Barrera, M. A., & Rhodes, R. E. (2021). Personality and perceived stress during COVID-19 pandemic: Testing the mediating role of perceived threat and efficacy. *Personality and Individual differences*, 168, 110351.
 - Lund, H. G., Reider, B. D., Whiting, A. B., & Prichard, J. R. (2010). Sleep patterns and predictors of disturbed sleep in a large population of college students. *Journal of adolescent health*, 46(2), 124-132.
 - Nota, J. A., & Coles, M. E. (2015). Duration and timing of sleep are associated with repetitive negative thinking. *Cognitive Therapy and Research*, 39, 253-261.
 - O'Brien, L., Mathieson, K., Leafman, J., & Rice-Spearman, L. (2012). Level of stress and common coping strategies among physician assistant students. *The Journal of Physician Assistant Education*, 23(4), 25-29.
 - Qin, H. Y., Cheng, C. W., Tang, X. D., & Bian, Z. X. (2014). Impact of psychological stress on irritable bowel syndrome. *World journal of gastroenterology: WJG*, 20(39), 14126.
 - Reeve, K. L., Shumaker, C. J., Yearwood, E. L., Crowell, N. A., & Riley, J. B. (2013). Perceived stress and social support in undergraduate nursing students' educational experiences. *Nurse education today*, 33(4), 419-424.
 - Robinson, A. M. (2018). Let's talk about stress: History of stress research. *Review of General Psychology*, 22(3), 334-342.
-

-
- Rutter, M. (2012). Resilience as a dynamic concept. *Development and psychopathology*, 24(2), 335-344.
 - Saklofske, D. H., Austin, E. J., Mastoras, S. M., Beaton, L., & Osborne, S. E. (2012). Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. *Learning and Individual Differences*, 22(2), 251-257.
 - Sauro, K. M., & Becker, W. J. (2009). The stress and migraine interaction. *Headache: The journal of head and face pain*, 49(9), 1378-1386.
 - Selye, H. (1965). The stress syndrome. *AJN The American Journal of Nursing*, 65(3), 97-99.
 - Sirois, F. M. (2007). “I’ll look after my health, later”: A replication and extension of the procrastination–health model with community-dwelling adults. *Personality and individual differences*, 43(1), 15-26.
 - Sirois, F. M. (2014). Procrastination and stress: Exploring the role of self-compassion. *Self and Identity*, 13(2), 128-145.
 - Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative research in psychology*, 1(1), 39-54.
 - Smyth, J., Zawadzki, M., & Gerin, W. (2013). Stress and disease: A structural and functional analysis. *Social and Personality Psychology Compass*, 7(4), 217-227.
 - Stroud, L. R., Salovey, P., & Epel, E. S. (2002). Sex differences in stress responses: social rejection versus achievement stress. *Biological psychiatry*, 52(4), 318-327.
 - Szabó, M., & Lovibond, P. F. (2002). The cognitive content of naturally occurring worry episodes. *Cognitive Therapy and Research*, 26, 167-177.
 - Takano, K., Iijima, Y., & Tanno, Y. (2012). Repetitive thought and self-reported sleep disturbance. *Behavior therapy*, 43(4), 779-789.
 - Takano, K., Sakamoto, S., & Tanno, Y. (2014). Repetitive thought impairs sleep quality: An experience sampling study. *Behavior Therapy*, 45(1), 67-82.
-

-
- Taleb, N. N. (2012). *Antifragile: things that gain from disorder*. iBook ePub version. New York, NY, US: Random House.
 - Teherani, A., Martimianakis, T., Stenfors-Hayes, T., Wadhwa, A., & Varpio, L. Choosing a qualitative research approach. *J Grad Med Educ*. 2015; 7: 669–70.
 - Traustadóttir, T., Bosch, P. R., & Matt, K. S. (2005). The HPA axis response to stress in women: effects of aging and fitness. *Psychoneuroendocrinology*, 30(4), 392-402.
 - Wilcox, S., Dowda, M., Leviton, L. C., Bartlett-Prescott, J., Bazzarre, T., Campbell-Voytal, K., ... & Wegley, S. (2008). Active for life: final results from the translation of two physical activity programs. *American journal of preventive medicine*, 35(4), 340-351.
 - Wong, A., Zhang, B., Jiang, M., Gong, E., Zhang, Y., & Lee, S. W. (2016). Oxidative stress in acne vulgaris. *J Clin Dermatol Ther*, 3(020), 1-6.
 - Zeidner, M., Matthews, G., & Roberts, R. D. (2012). The emotional intelligence, health, and well-being nexus: What have we learned and what have we missed?. *Applied Psychology: Health and Well-Being*, 4(1), 1-30.

