

PSYCHOLOGY OF STRESS: MECHANISMS OF ADAPTATION AND EFFECTIVE STRATEGIES FOR COPING

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Abstract: Unfortunately, stress is a problem, although it is an inherent feature of our time. Covid-19, the war in Ukraine, and the unstable global economic situation create conditions for a person's constant emotional overload. Representatives of almost all social classes and nearly all countries of the world, regardless of gender and age, are affected by stressors. Despite existing classifications of stress and various contributing factors, the consequences of stressors lead to the development of psychosomatic diseases such as cancer, hypertension, and others. It also includes anxiety disorders and depression, which are the most harmful negative mental states. In addition, the risk of suicide is increased in people with depression. The presence of post-traumatic stress disorder in people reduces the overall level of happiness in society and triggers numerous problems. The solution to these issues requires significant resources, including economic. This study aims to identify the most effective personal and environmental resources that facilitate coping with and overcoming the effects of stress on the body. Relevant scientific articles were searched in the DOAJ and EBSCOhost databases over the past decade. Numerous factors have been found to increase the body's resistance to the effects of stressors. These include high levels of resilience, problem-solving skills, and others. High levels of resilience are associated with lower levels of anxiety and depression and higher levels of life satisfaction.

Keywords: stress, post-traumatic stress disorder, anxiety, depression, cognitive stress assessment, resilience, protective factors.

1 Introduction

The modern world is experiencing numerous globalization crises. The recent years' instability, vulnerability, and continuous upheavals have left workers restless. Now, as layoffs increase and wages fail to keep up with rising inflation, they continue to worry – in some cases, more than ever. The global crisis, sometimes referred to as the "permacrisis," affects workers of various ages. Among the most significant problems is the anthropological crisis, linked to the loss of individuality, creativity, and intuitive perception of the world. In other words, what makes one unique, distinctive, and "independent". People have had to face many negative phenomena, with stress being one of them.

Stress (derived from the English "stress" – strain, tension, heightened pressure) is a set of nonspecific adaptive reactions of an organism to the influence of various adverse stressors (physical and/or psychological), which disrupt its homeostasis, as well as the state of the organism's nervous system. The term "stress" is used to denote various phenomena:

- A strong, adverse impact that negatively affects the organism.
- An adverse solid physiological or psychological reaction of the organism to the action of a stressor.
- Nonspecific factors of physiological and psychological manifestations of the organism under extreme conditions, which trigger intense adaptive reactions.

The issue of stress and its consequences is extremely important because there is a rapid increase in stress-related behavioral disorders and stress-related illnesses (various forms of neuroses and depressions) observed worldwide, affecting 25 to 35% of the global population. Stress has been identified as a precursor to various health problems and is associated with cognitive, behavioral, and emotional changes that can limit decision-making (Dyess, Prestia, Marquit, Newman, 2018).

According to the stress theory, people can experience emotional, physiological, and behavioral reactions when facing different stresses and challenges. These reactions are considered stress responses that arise from overloading a person's resources beyond their coping capabilities. The theory emphasizes the interplay between a person's behavior, personal characteristics, and environment, explaining why some people may be more prone to stress than others in the same situation (Feng, Xu, Lei, 2023). The analysis and assessment of life events have a significant impact on emotional reactions, coping behavior, and positive or negative adaptation to adverse events. Cognitive appraisals play a key role in mental health outcomes (Padmanabhanunni, Pretorius, 2023).

2 Literature Review

Stress (strain, tension, increased tension) is a combination of non-specific adaptive responses of the organism to the influence of various adverse stressors (physical and/or psychological). Stress disrupts homeostasis, as well as the state of the organism's nervous system. Psychological theories of stress emphasize perception rather than physiology. Pathogenic forms of stress arise in specific situations when demands exceed resources. They are considered complex but not destructive when needs are perceived as within human capabilities and threatening only when demands exceed resources for coping, leading to physical and mental dysfunction (Feng, Xu, Lei, 2023). The term "stress overload" describes a sustained state of excessive demands that increases susceptibility to illness.

In studying the psychophysiological mechanisms of stress development in humans, four phases of stress have been identified that develop sequentially:

- 1) Emotional-Behavioral;
- 2) Vegetative;
- 3) Cognitive (changes in cognitive activity under stress);
- 4) Social-psychological (changes in communication under stress).

If the first two subsyndromes are related to manifestations of adaptive activation stages concerning the low "functional systematicity" of the organism, the last two are determined by individual personality traits that appear in extreme conditions.

The following types of stress are distinguished: chemical, biological, mechanical, physical, traumatic, and post-traumatic. Physical stress is caused by overheating or hypothermia of the organism, exposure to sources of ionizing radiation, hypokinesia, immobilization, etc. Traumatic injuries, tissue and organ damage, and surgical interventions can lead to the development of mechanical stress. Chemical stress may result from poisoning by various toxic agents presence of toxic substances in the atmosphere, water sources, or soil. Microorganisms (parasites, viruses, bacteria, fungi) and products of their life activity, which cause various diseases in humans, lead to the emergence of biological stress. Recently, stress has been linked to the syndrome of emotional burnout. It is characterized by increasing emotional exhaustion that can lead to personality changes in interpersonal communication.

At present, neurophysiology and psychology have accumulated a sufficient amount of scientific data to consider psychological stress from the perspective of a complex physiological phenomenon that is not limited to the nervous system.

There are three main groups of factors that increase the harmful effects of psychological trauma:

- a) Characteristics of the traumatic event itself;
- b) The state of the person's defense mechanisms;
- c) Additional risk factors.

The characteristics of the most traumatizing event are suddenness, absence of similar experiences, duration, lack of control, grief, and losses, constant changes, exposure to death, moral uncertainty, behavior during the event, and the scale of destruction. The more sudden the event, the more destructive it is for the victim. Potential victims can be warned of only a few disasters. The absence of similar experiences, such as misfortunes and disasters, is, fortunately, rare, and people learn to cope in the moment. The duration of the trauma varies from case to case.

Nevertheless, the traumatizing effects can accumulate and intensify with each passing day for people who have experienced certain prolonged horrors. The lack of control is evident because no one can control events during disasters. Even competent, independent citizens may show signs of helplessness if the loss of control is prolonged. Victims may find themselves separated from loved ones, often due to their death, and worst of all, in anticipation of possible losses. In addition, victims lose their social status, most often due to a disaster. The destruction caused by a disaster may be irreparable.

Most researchers identify traumatic events as the primary stressors of psychological trauma, shaping the negative ways in which people respond to life-threatening situations. The disruption of a sense of security triggers traumatic stress experiences, the psychological consequences of which are manifold. Emotional and psychological stress manifestations underlie the etiopathogenic basis for developing Post-Traumatic Stress Disorder (PTSD). Traumatic experiences lead to disturbances in the person's psychological defense system, which reduces its functioning.

Currently, there are three approaches to identifying the causes of post-traumatic stress disorder:

- From the perspective of learning theories;
- In terms of changes in cognitive schemata and dysfunctional cognitions;
- Biological approach.

These approaches are fully compatible and successfully complement each other. As psychological concepts, learning theory and the cognitive approach do not explain hyperarousal symptoms and the peculiarities of psychophysiological changes. Meanwhile, the biological perspectives on the nature of post-traumatic stress are intended to fill this gap.

The theory that explains the individual characteristics of experiencing traumatic stress is the multifactorial concept. Within the provisions of this concept, three groups of factors are identified, the combination of which leads to the development of PTSD:

- Factors related to the traumatic event.
- The severity of the trauma.
- The unexpectedness of its occurrence.

Protective factors include:

- The ability to make sense of what has happened.
- The presence of social support.
- Coping mechanisms.

People who can respond to a traumatic event experience better well-being and are less likely to seek professional help. Risk factors include:

- Age at time of trauma.
- Negative past experiences.
- Mental disorders.
- Low intelligence.
- The low social level of the victim.

The prevalence of post-traumatic stress disorder (PTSD) and other mental disorders is high in conflict settings (Charlson, Ommeren, Flaxman, Cornett, Whiteford, Saxena, 2019). PTSD can develop

after exposure to a highly threatening or frightening event or series of events. It is characterized by all of the following symptoms:

- Re-experiencing the traumatic event(s) in the present (intrusive memories, flashbacks, or nightmares);
- Avoiding thoughts and reminders of the event(s) or avoiding actions, situations, or people that remind you of the event(s);
- A persistent sense of heightened current threat.

These symptoms persist for at least several weeks and cause significant impairment in functioning. Post-traumatic stress can lead to the development of other mental disorders, such as depression, generalized anxiety disorder, aggression, addiction, and suicidal behavior, emphasizing the importance of timely diagnosis and provision of qualified medical-psychological assistance to victims of this profile.

In 2019, one in eight people, or 970 million people worldwide, lived with a mental disorder, with anxiety and depressive disorders being the most common (Institute of Health Metrics and Evaluation. Global Health Data Exchange (GHDx), <https://vizhub.healthdata.org/gbd-results/>, accessed May 14, 2022). In 2020, the COVID-19 pandemic caused a significant increase in the number of people living with anxiety and depressive disorders. Early estimates show 26% and 28% increases in anxiety and major depressive disorder in just one year (Mental Health and COVID-19: Early evidence of the pandemic's impact. Geneva: World Health Organization; 2022). Although effective prevention and treatment options exist, most people with mental disorders lack access to effective help. Many also face stigma, discrimination, and human rights violations. Numerous studies suggest that anxiety and imagined depression are the most harmful negative mental states. They are prevalent in people's daily lives and lead to serious mental health problems over time without effective intervention (Monzonís-Carda, Adelantado-Renau, Beltran-Valls, Moliner-Urdiales, 2021); (Casey, Varela, Marriott, Coleman, Harlow, 2022).

In 2019, 301 million people lived with an anxiety disorder, including 58 million children and adolescents (Institute of Health Metrics and Evaluation. Global Health Data Exchange (GHDx), <https://vizhub.healthdata.org/gbd-results/>, accessed May 14, 2022). Anxiety disorders are characterized by excessive fear, worry, and related behavioral disturbances. The symptoms are severe enough to cause significant distress or impairment in functioning. There are several different types of anxiety disorders, including:

- Generalized anxiety disorder (characterized by excessive worry)
- Panic disorder (characterized by panic attacks)
- Social Anxiety Disorder (characterized by excessive fear and worry in social situations)
- Separation anxiety disorder (characterized by excessive fear or anxiety about being separated from people to whom a person has a deep emotional connection) and others.

In 2019, 280 million people lived with depression, including 23 million children and adolescents (Institute of Health Metrics and Evaluation. Global Health Data Exchange (GHDx), <https://vizhub.healthdata.org/gbd-results/>, accessed May 14, 2022). Depression is different from normal mood swings and short-term emotional reactions to challenges in everyday life. During a depressive episode, a person experiences a depressed mood (feelings of sadness, irritability, emptiness) or loss of pleasure or interest in activities for most of the day, almost every day, for at least two weeks. Several other symptoms are also present, including difficulty concentrating, feelings of excessive guilt or low self-worth, hopelessness about the future, thoughts of death or suicide, sleep disturbances, changes in appetite or weight, and feelings of profound fatigue or lack of energy. People with depression are at increased risk for suicide.

Thus, people in the modern technogenic society are constantly exposed to stressors. The persistent presence of negative emotions, fatigue, and exhaustion leads to a reduction of adaptive resources. As a result, a person is immersed in stress,

develops anxiety states, depression, and post-traumatic stress disorder, significantly reduces the quality of life, influences the growth of numerous diseases, and requires the search for new solutions to increase human resilience.

This research aims to identify the most effective personal and environmental resources that facilitate coping with and overcoming the effects of stress on the body.

3 Materials and methods

For a comprehensive search, the DOAJ and EBSCOhost databases were searched for relevant studies over the past decade. A selection of terms has been created to remove a large number of irrelevant papers during a manual search: "stress/post-traumatic stress disorder," "stress/anxiety," "stress/depression," "stress/cognitive assessment," "stress/coping methods" "stress/resilience," and "stress/protective factors." The same search terms were used to search the EBSCOhost database. The current literature review includes works that focus on mechanisms of stress perception, implementation of modern strategies, and inclusive education methods in contemporary pedagogy.

4 Results

Negative emotions are a general dimension of subjective distress and unpleasant activation that includes various aversive mood states (Feng, Xu, Lei, 2023). From an evolutionary psychology perspective, negative emotions serve adaptive functions, such as helping people identify threats and dangers (Feng, Xu, Lei, 2023). In contrast, from a mental health perspective, negative emotions are more likely to lead to a range of dysfunctional responses and detrimental consequences, such as disruptions in a person's thought and action sequences and chronic burnout from social responsibilities, as well as to predict various forms of psychopathology, including mood disorders (Lapid Pickman, Gellkopf, Greene, 2021); (Liu, Wang, Wang, Wu, Ding, Zhao, 2021).

However, the question remains as to how seemingly unavoidable negative emotions gradually worsen in everyday life, leading to emotional problems or disability in healthy people. Previous research, mainly based on cross-sectional and cross-lagged longitudinal methodologies, has shown that feelings of stress, anxiety, and depression are potential precursors of mood disorders (Asmundson, Paluszek, Landry, Rachor, McKay, Taylor, 2020); (García-Mieres, Montesano, Villaplana, Trujillo, Salla, Paz, 2020); (Armon, Fine, Seligman, Ginzburg, Ben-Zion, 2021) and are closely related to each other (Levine, Milyavskaya, Zuroff, 2019); (Huang, Xie, Owusua, Chen, Wang, Qin, 2021).

Everyday trivialities that a person doesn't pay proper attention to shape their long-term psychological state. For instance, daily tasks better predict stress-related health issues than significant life events (Feng, Lei, 2023). Accumulating adverse reactions to minor stressors will likely lead to health problems and psychological disorders (Johnsson, Zolkowska, McNeil, 2015). Therefore, it is necessary to explore the dynamic internal interaction, mediation, and moderation mechanisms between daily stress and its associated negative emotions (i.e., anxiety and depression) in a natural context.

The perception of stress is the cognitive evaluation by a person of the threat posed by stressors and their ability to cope with these threats (Liu, Wang, Wang, Wu, Ding, Zhao, 2021). In dealing with stressful events, people are prone to experiencing a range of negative emotions such as anxiety, depression, anger, and pain (Huang, Xie, Owusua, Chen, Wang, Qin, 2021).

Perceiving stress at a certain moment in daily life can positively predict imminent anxiety (Du, Xu, 2019). Anxiety can also play a role in stress perception. Anxiety is often closely linked to adverse cognitive styles such as rumination (Feng, Xu, Lei, 2023), leading to higher levels of physical and psychological arousal in people, causing them to hyper-focus on future

stressors, further intensifying their subjective experience of stress (Yang, Liu, 2016). Stress perception maintains a consistently positive relationship with the perception of depression, even across different time intervals (Xu, Wang, Fu, 2018); (Levine, Milyavskaya, Zuroff, 2019). People in stressful situations may evaluate external stimuli differently and respond to them in different ways. It can lead them to adopt negative cognitive styles that can exacerbate depression (Rodríguez-Naranjo, Caño, 2016). However, a persistent sense of depression can lead to an amplification of stress. According to cognitive resource theory, processing depressive emotions can deplete or divert resources needed to perform control functions. Such a diversion of resources leaves people with insufficient cognitive resources to cope with environmental events, leading them to perceive more stress (Bui, Nguyen, Pham, Tran, Ha, 2021). Mothers with depression raising children experience more parental stress than healthy mothers (Ma, Chen, Xian, Wang, Li, 2019).

Depression and anxiety are highly interdependent, meaning that people with high levels of depression (anxiety) tend to experience high levels of anxiety (depression) (González-Mesa, Kabukcuoglu, Blasco, Körükçü, Ibrahim, González-Cazorla, 2020). Despite the common co-occurrence of depression and anxiety, these disorders are distinct in nature. According to the tripartite model of anxiety and depression, anxiety is simply a high level of negative emotion, whereas depression combines a low level of positive emotion with a high level of negative emotion. Anxiety is associated with high physical arousal, whereas depression is not.

Emotions do not arise on their own but are triggered by changes in the internal or external (usually social) environment (Kuppens, Verduyn, 2017). Due to constant changes in one's internal and external environment, temporary emotions shift dynamically. Perceived stress is another dynamic variable that can easily change with time, context, and other factors (Henderson, Child, Moore, Moore, Kaczynski, 2016); (Ekuni, Souza, Cogo-Moreira, Lourenço, Pompeia, 2022). However, most previous cross-sectional and longitudinal studies have typically treated stress and negative emotions as relatively "stable" states. Retrospective questionnaires have been widely used to measure stress, anxiety, and depression. However, this approach may suffer from "memory and experience bias" and may not sensitively capture the dynamic changes of these variables in everyday life, as stress and emotional perception can be situational (Ellison, Trahan, Pinzon, Gillespie, Simmons, King, 2020). Thus, previous findings have relied mainly on observations across different groups over a relatively long time.

In the cognitive-emotional downward spiral, perceptions of stress and negative emotions were mutually reinforcing. This conclusion is consistent with the cognitive model of depression. Stress can induce depression and is likely to be mediated by cognitive biases (Feng, Xu, Lei, 2023). Regarding cognitive resource allocation, the daily experience of stress can cause people to be more vigilant and evoke negative emotions (Bulley, Henry, Suddendorf, 2017). Negative emotions can also significantly occupy attentional resources and prevent people from focusing on information that aids in problem-solving, leading to more passive and rigid thinking (Feng, Xu, Lei, 2023).

Negative emotions associated with threats can lead to rumination. It can impair the analytical thinking and executive control needed to cope with stressful life events. It may also lead to ineffective processing and increased self-criticism as people perceive more stress from unresolved life events (Bernstein, Heeren, McNally, 2017); (Zuroff, Clegg, Levine, Haward, Thode, 2021). This cognitive-emotional spiral process has important theoretical implications for understanding cognitive-emotional interactions.

Symptomatology does not occur in isolation; studying how stress and negative emotions influence each other helps to understand their impact on mental health and how poor mental health outcomes can persist over time. In practice, these findings mean

that interrupting the downward spiral of stress and negative emotions (anxiety and depression) in everyday life effectively prevents mental health problems.

Cognitive assessments fall into two groups:

- Primary assessments, which involve a direct assessment of whether a stressor threatens a person's well-being or goals;
- Secondary assessments, which involve an examination of a person's ability to cope with the stressor and the internal (e.g., sense of coherence) and external (e.g., financial resources and social support) resources available to them (Padmanabhanunni, Pretorius, 2023).

Most cognitive appraisal research focuses on the role of dysfunctional cognitions in the onset and maintenance of mental health disorders (Gómez de La Cuesta, Schweizer, Diehle, Young, Meiser-Stedman, 2015). Appraisals of the loss of essential life investments (e.g., romantic relationships, job opportunities) and feelings of inadequacy are at the core of depression (Mehu, Scherer, 2015). In contrast, dysfunctional appraisals of one's ability to cope with or personally affect negative events are associated with the maintenance of generalized anxiety disorder.

In suicide studies, negative subjective appraisals of problem-solving ability and perceived availability of social support predict suicidal ideation (Padmanabhanunni, Pretorius, 2023). In PTSD, significant differences in assessments are found to explain the persistence of the disorder after traumatic events. Problematic appraisals of the trauma and its consequences and perceptions of constant threat maintain post-traumatic symptomatology. Negative appraisals of personal vulnerability and future harm also explain the unique manifestations of PTSD (Padmanabhanunni, Pretorius, 2023).

Post-traumatic stress disorder (PTSD) develops in response to the impact of traumatic events and is characterized by symptoms of intrusive re-experiencing (such as memories and nightmares of the trauma), physiological arousal, cognitive and mood changes, and cognitive and behavioral avoidance strategies. Data show that college students are at increased risk of experiencing traumatic events, with levels ranging from 48% to 95%, which increases the risk of developing PTSD (Artime, Buchholz, Jakupcak, 2019). In South Africa, McGowan and Kagee (Kagee, McGowan, 2013) examined the prevalence of 14 potentially traumatic events among university students and found that approximately 90% of the sample reported the impact of one or more traumatic events in their lives. In a more recent study, Padmanabhanunni (Padmanabhanunni, 2020) reported a prevalence rate of 97.6% for trauma among the students sampled. They indicated that the most common types of traumas were physical assault, motor vehicle accidents, and sexual violence. Bryant (Bryant, 2019) reported that despite the high prevalence of trauma, a significant portion of the population does not develop PTSD. These findings highlight the potential role of adaptive appraisals, which may protect by buffering the effects of dysfunctional cognitions or facilitating their reappraisal. In addition, the primary emotional response associated with persistent PTSD is helplessness and powerlessness. They are elicited by appraisals of an inability to effectively respond to or resolve problems related to the traumatic event (Littlewood, Gooding, Panagioti, Kyle, 2016).

Adaptive appraisals are the absence of maladaptive cognitions and specific thoughts and beliefs that positively influence outcomes (Gómez de La Cuesta, Schweizer, Diehle, Young, Meiser-Stedman, 2019). Psychological distress is determined by the interaction between negative appraisals of adverse events and positive appraisals of personal control and coping (Padmanabhanunni, Pretorius, 2023). Having positive or adaptive cognitions can help a person tolerate negative appraisals or reassess situations in a way that facilitates coping with stress. For example, a benevolent religious reappraisal of stressful circumstances as a valuable learning opportunity has been found to help young people cope with stress (Padmanabhanunni, Pretorius, 2023).

Empirical support for the role of adaptive appraisals has come mainly from research on self-efficacy, defined as the belief that one can effectively cope with adverse events. Self-efficacy significantly predicted psychological distress and acute stress disorder among nurses during the COVID-19 pandemic (Shahrour, Dardas, 2020) and partially mediated the relationship between cyber-victimization and depression (Trompeter, Bussey, Fitzpatrick, 2018). Low coping self-efficacy predicts high emotional dysregulation among adults (Padmanabhanunni, Pretorius, 2023).

5 Discussion

Different people exposed to the same level of stress or adverse circumstances may not necessarily exhibit the same response to these unfavorable environmental conditions. Differential vulnerability is a concept whereby personal and environmental coping resources react differently to negative circumstances. Examples of variables that make people differentially vulnerable to adverse conditions include:

- social support (Szkody, Stearns, Stanhope, McKinney, 2021);
- willingness to use social support (Padmanabhanunni, Pretorius, Khamisa, 2023);
- locus of control (Pedron, Schmaderer, Murawski, Schwettmann, 2021); (Strong, Gore, 2020);
- problem-solving appraisal (Heppner, Heppner, Wang, Lee, 2019);
- safety evaluation (Padmanabhanunni, Campbell, Pretorius, 2017);
- career vocation (Wu, Hu, Zheng, 2019).

These variables are believed to have either a direct, moderating, or mediating effect.

The hypothesis of direct impact posits that coping resources or protective factors directly link to psychological well-being that exists independently of the level of adverse circumstances a person encounters. The direct effect hypothesis is also referred to as the health support model (Padmanabhanunni, Pretorius, Khamisa, 2023). In its most straightforward formulation, the health support model asserts that coping resources or protective factors operate not only under adverse conditions. Instead, a high level of these resources is generally beneficial for psychological well-being. Moderator variables interact with adverse circumstances, influencing psychological health. A variable acts as a moderator if the negative link between adverse conditions and psychological well-being diminishes as the level of coping resources increases. A mediator variable is a pathway through which an unfavorable state affects psychological well-being. In the mediated path, the adverse state causally precedes the mediator (Pretorius, 2020).

The direct, moderating, and mediating roles of protective factors have been the most prevalent research topic on occupational stress. However, Cooper and colleagues (Cooper, Baglioni, 2018) proposed and found empirical support for the "root" model of the relationship between stress and physical and psychological health. In this model, coping resources causally precede work-related stressors, meaning that coping resources determine how stress is experienced. This, in turn, positively influences psychological well-being. This model assumes that managing resources are always present and impact how stressors are perceived or coped with. In this model, or the indirect effect hypothesis, the mediated pathway is work-related stress, not coping resources (Padmanabhanunni, Pretorius, Khamisa, 2023).

Most research on constructive problem-solving focuses on problem-solving ability, which refers to a person's ability to effectively and successfully use internal and external resources to cope with stress. Problem-solving ability involves both cognitive and behavioral processes. These processes include the following:

- understanding the nature of the problem;
- generating and evaluating potential solutions to the problem;
- assessing the resources available to address the problem;
- implementing strategies and evaluating their effectiveness in addressing the issue.

Furthermore, existing studies (Chu, Walker, Stanley, 2018); (Gabrielian, Bromley, Hamilton, 2019) have predominantly examined the relationship between problem-solving skills and mental health or psychological adjustment, as a deficit in this area increases the risk of depression, suicide, and physical health problems. Comparatively, fewer studies have examined the role of self-reported problem-solving ability in mental health outcomes. In addition, a significant portion of the research on problem-solving ratings was conducted in the late XX century (i.e., during 1970-1999), highlighting the need for further research in this area. Higher self-esteem in problem-solving ability is associated with lower levels of depressive behavior and psychosocial disorders. At the same time, lower problem-solving self-esteem is associated with increased pain, depression, and disability. Reduced problem-solving appraisals are more predictive of suicidal ideation and hopelessness (Padmanabhanunni, Pretorius, 2023).

One effective approach to coping with and perceiving stress is resilience. The construct of resilience lacks a precise definition in the literature: some studies view it as a stable and enduring "trait," while others view it as a dynamic and flexible "state." The latter definitions view resilience as a dynamic process through which a person positively adapts to stressful events or adverse circumstances (Stainton, Chisholm, Kaiser, Rosen, Upthegrove, Ruhrmann, Wood, 2019).

Resilience can be divided into personal assets, such as the ability to regulate emotions, the propensity to use active coping strategies, self-esteem, and locus of control, and external resources, such as social support networks that exist outside of the person. The resilience process involves a person's use of both assets and resources to overcome stressors and achieve positive outcomes (Padmanabhanunni, Pretorius, Khamisa, 2023).

Resilience may be associated with role conflict (Eun, Jin, 2018); (Lee, Seol, Kim, 2021). One study found that resilience mitigates the negative impact of role conflict on the performance of frontline service providers (Yang, Lee, Cheng, 2015). De Clercq (Clercq, 2019) found that high resilience reduces role ambiguity. Employees with high resilience have high energy levels. Without resilience, this energy would lead to stress reactions due to a lack of information about role expectations.

Researchers also hypothesize that resilience positively influences life satisfaction (Prayag, Spector, Orchiston, Chowdhury, 2020), and some studies suggest that resilience plays a mediating role in the relationship between career adaptability and life satisfaction (Santilli, Grossen, Nota, 2020). In addition, resilience has been found to be inversely related to depression and anxiety in people affected by the COVID-19 pandemic (Zhang, Yang, Wang, Li, Dong, Wang, Li, Wei, Zhang, 2020).

Resilience may also protect against anxiety and depression by allowing resilient people to maintain a positive attitude or worldview despite life-threatening events (Kim, Lim, Kim, Park, 2019). Resilience contributes positively to psychological well-being (De Clercq, 2019). Yildirim (2019) found positive associations between resilience and life satisfaction, positive affect, balance, and flourishing. Social support is associated with high-stress resilience, which may enhance psychological well-being. Other protective factors include locus of control (Strong, Gore, 2020) and sense of coherence, both of which have been found to be beneficial for psychological well-being (Padmanabhanunni, Pretorius, Khamisa, 2023).

The negative impact of adverse factors on psychological well-being is well documented in the literature (Kock, Latham, Leslie, Grindle, Munoz, Ellis, Polson O'Malley, 2021), and several studies have demonstrated the mediating role of resilience, as

reported in the systematic review by Li and Hasson (Li, Hasson, 2020). For example, Zeng and colleagues (Zeng, Hou, Peng, 2016) found that resilience mediated the relationship between thinking style and psychological well-being in a sample of college students. Another study showed that resilience fully mediated the relationship between fear of happiness and life satisfaction (Yildirim, 2019). Resilience has also been found to mediate the relationship between traumatic events and post-traumatic stress disorder (Lee, Ahn, Jeong, Chae, Choi, 2014). However, it is essential to note that in these studies, the adverse factor was considered an antecedent of resilience.

Based on Cooper's model, it is possible to assume that resilience is not only demonstrated in the presence of adverse circumstances but is always present, thus influencing how an adverse event or stressor is perceived and overcome, subsequently affecting psychological well-being.

Padmanabhanunni, A., Pretorius, T. B., & Khamisa, N. (Padmanabhanunni, Pretorius, Khamisa, 2023) proposed hypotheses related to Cooper's model:

- High levels of resilience will be associated with low levels of role conflict, which, in turn, will be linked to low levels of anxiety, low levels of depression, and high levels of life satisfaction.
- High levels of resilience will be associated with low levels of role ambiguity, which, in turn, will be linked to high levels of life satisfaction, low levels of anxiety, low levels of depression, and high levels of life satisfaction (Padmanabhanunni, Pretorius, Khamisa, 2023).

6 Conclusions

In this research, based on data from contemporary literature devoted to the study of the psychology of stress, it was established that the most effective means of perceiving and overcoming anxiety and preventing the development of post-traumatic stress disorder is the assessment of problem-solving skills and high resilience. Society should foster these qualities in individuals from an early age. This will help to protect people from the onset of severe psychosomatic disorders, including oncological and cardiovascular diseases, which affect both the duration and quality of life and require significant economic expenses.

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