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The relationship between anxiety and emotional distress in nicotine addiction

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Abstract: This study investigates the interrelationship between anxiety and emotional distress in the context of nicotine addiction. Multivariate statistical analysis was applied to determine whether anticipatory anxiety is associated with increased levels of emotional distress, and whether this association is mediated by severity of nicotine dependence. Results indicate a significant correlation between anxiety and emotional distress, with nicotine dependence serving as a partial mediator. These findings suggest that clinical interventions designed to reduce anxiety may play a key role in reducing emotional distress and potentially facilitating smoking cessation. The study contributes to the existing literature by emphasizing the importance of addressing psychological comorbidity in the treatment of nicotine addiction and provides insight for the development of more effective therapeutic strategies.

Key words: relationship, anxiety, emotional distress, addiction, nicotine

1. Anxiety

Janet P. characterises anxiety as a condition marked by unwarranted fear, manifested by psychomotor restlessness, autonomic changes and dysfunctional behaviour. This condition presents a disruptive potential, overshadowing current experience with the anticipation of a hostile and ineluctable future (Tudose F. et al., 2011).

Anxiety, as an emotional response, can initiate the body's physiological alert mechanisms, facilitating adaptation to unfamiliar circumstances. It is intrinsic to the body's defence systems, such as fear and the flight impulse, functioning as protective mechanisms against threats. However, when anxiety becomes excessive and pervasive, it can disrupt daily functioning and transition into a pathological state. Pathological anxiety differs from transient anxiety or adaptive fear, which can optimize concentration and effort in the face of challenges (Tudose et al., 2011).

Anxiety is characterized by spontaneous onset, without an identifiable external stimulus, referring to a vague and imminent danger, often elusive, which can induce a state of continuous vigilance. The anxious individual may experience a sense of helplessness and disorder in the face

of this perceived danger. Furthermore, anxiety can coexist with disturbing somatic symptoms such as gastrointestinal dysfunction or heart palpitations, creating a self-perpetuating cycle of anxiety maintenance (Tudose et al., 2011).

Anxiety is a fundamental psychological construct in most contemporary theories of personality and is considered a driving force behind a wide range of behavioral consequences, from insomnia to ethically questionable behaviors (Spielberger, 1966).

Beck and Emery (1979) differentiated fear from anxiety, conceptualizing fear as an awareness and appraisal of imminent danger, whereas anxiety is perceived as an adverse affective state and a secondary physiological reaction to induced fear. Anxiety is distinguished by two essential features: it is an emotion similar to fear, but unlike fear, the stimulus that precipitates it does not precede or coincide with the emotional state, but is projected into the future (Estes & Skinner, 1941).

Anxiety is understood as a state of uncertainty, fear and worry about unfavorable eventualities in the future. In extreme cases, it can escalate into panic, when a person perceives a future in which catastrophic consequences can be seen. For example, the fear of failing to fulfill the parenting role or the fear that an unfortunate event may occur independently of one's actions, such as an accident that causes disability, are manifestations of anxiety related to an uncertain personal future (Zaleski, 1996).

Eysenck (1992) argues in the cognitive approach to anxiety that its main function is to facilitate the early identification of signs of threat or danger in potentially risky situations. Furthermore, Eysenck (1992) suggests that worry is frequently correlated with increased anxiety, whereas behavioral avoidance is related to decreased anxiety. The value of the threat is determined by four factors: the subjective probability of the occurrence of an aversive event, its perceived imminence, the degree of aversion felt, and the anticipated coping capacity after the event.

Generalized anxiety disorder is characterized by chronic and excessive worry, often related to matters such as finances, family, health and the future, and is difficult to control. This type of worry is often accompanied by non-specific psychological and physical symptoms. The nomenclature "generalized anxiety disorder" may erroneously lead to the perception that symptoms are nonspecific, which may result in inappropriate diagnosis for anxious patients (Stein & Sareen, 2015).

2. Emotional distress

Distress is conceptualized as an umbrella term for various reactions to stress, with no universally recognized assessment tool. It generally refers to negative emotions such as anxiety, depression and anger, as well as somatic distress (Matthews, 2016).

Emotional distress is defined as „a negative experience of an emotional, psychological, social or spiritual nature". It ranges on a continuum from normal and habitual feelings of vulnerability, sadness and fear, to debilitating problems such as clinical depression, severe anxiety, panic and feelings of isolation or spiritual crisis (Holland & Bultz, 2007).

This definition emphasizes that emotional distress exists on a spectrum from common negative emotions (frustration, disappointment, nervousness, low mood) to debilitating emotional states that require clinical intervention (depression, anxiety, despair) (Dean & Street, 2014).

Distress can encompass a wide range of states, such as dependence, feelings of incompetence, immobilization, vulnerability, apprehension, repressed anger, and other anxious states (Duval, 1984).

Psychological distress is conceptualized as a state of emotional suffering, typified by manifestations of depressive symptoms, such as diminished interest, pervasive sadness, and a sense of hopelessness, coupled with anxiety-related symptoms including persistent restlessness and a palpable sense of tension. This condition may also present with somatic complaints, notably insomnia, headaches, and a general depletion of energy. Cultural factors play a significant role in shaping the experience and expression of these symptoms, as elucidated in the research by Drapeau et al. (2012).

While numerous criteria have been posited for the delineation of psychological distress, there lacks a consensus regarding their universal acceptance. Specifically, the stress-distress model posits that the cardinal characteristics of psychological distress encompass exposure to a stress-inducing event with the capability to impact physical or mental well-being, the subsequent incapacity to manage this stressor effectively, and the ensuing emotional disruptions attributed to this inadequate coping mechanism, as detailed in the study by Drapeau et al. (2012).

Psychological distress is often described as a nonspecific mental health problem (Dohrenwend & Dohrenwend, 1982). However, Wheaton (2007) notes that this lack of specificity needs to be nuanced, as psychological distress is clearly characterized by symptoms of depression and anxiety. In fact, instruments used to assess psychological distress, depressive disorders, and generalized anxiety disorder share many common elements. Thus, although psychological distress and these mental disorders are distinct phenomena, they are not completely independent (Payton, 2009).

The term „distress” is frequently used in the literature to describe patient discomfort associated with acute or chronic disease symptoms, pre- or post-treatment anxiety, or compromised fetal or respiratory status. Psychological distress is rarely defined as a distinct concept and is often embedded in the context of stress and strain. This ambiguity can create difficulties for medical personnel in managing the care of individuals experiencing psychological distress (Ridner, 2004).

Rhodes and Watson (1987) define distress symptoms as „the need to modify (withhold or reproduce) behaviors in response to a subjective perception of distress”. Symptomatic distress is the degree of physical or mental disturbance generated by a particular symptom, such as fatigue, whereas distress symptoms are subjective perceptions of the overall stress response. In this paradigm, the term „symptom” is used to indicate a cause, manifestation, and effect of stress. Therefore, in this interpretation, the symptom becomes a stressor according to Selye's (1976) theory.

Masse (2000) identified that experiences associated with psychological distress can be categorized into six general dimensions: demoralization and pessimistic outlook on the future, agitation and stress, self-devaluation, social withdrawal and isolation, somatization, and excessive introspection.

The term „distress” denotes a spectrum of subjective responses to stress that are often unpleasant, such as anxiety and depression, and may include descriptions of behaviors and physical symptoms („somatic distress”). Stress responses are characterized by difficulties in adapting to external stressors and can alternate between debilitating („distress”) and stimulating („eustress”)

effects. Distress can be conceptualized as internal tension generated by an external stressor (Matthews, 2016).

Social structure influences distress recognition. This recognition may vary according to certain thresholds of perception, being ignored, labeled as a permanent characteristic of the individual, or attributed to some aspect of physical constitution, family environment, personality, or destiny. Persistent labeling, even with apparent recovery, can have lasting effects due to difficult-to-reversal changes in role and social status (Kirmayer, 1989).

In times of emotional distress, individuals may prioritize short-term well-being over long-term goals such as abstinence or saving. Emotional distress appears to affect motivation rather than ability (Tice et al., 2001).

Furthermore, emotional distress disrupts self-regulation predominantly when individuals believe that emotional states are ephemeral and that relinquishing impulse control in a particular domain may facilitate obtaining rewards or pleasures that could alleviate distress and improve emotional state (Tice et al., 2001).

Psychological distress can be alleviated by strengthening the individual's confidence and positive self-evaluation, as well as by improving skills that can lead to favorable outcomes in problematic situations (Matthews, 2016).

Emotional distress is a widespread human condition that occurs in stressful circumstances and can affect an individual's ability to cope. It is often associated with the experience of a range of negative emotions and requires coping mechanisms to regain balance and achieve desired goals (Sinha, 2001).

Psychological distress refers to nonspecific symptoms of stress, anxiety, and depression, and high levels of distress suggest compromised mental health, possibly reflecting common mental disorders such as depressive disorders and anxiety (Cuijpers et al., 2009).

The concept of psychological distress is widely used in public health and epidemiological studies, but its definition remains ambiguous and often applied indiscriminately to an amalgam of symptoms, from depression and general anxiety to personality traits and behavioral dysfunctions (Drapeau et al., 2012).

Distress is a diagnostic criterion for certain psychiatric disorders and, along with daily dysfunction, an indicator of symptom severity in other disorders, such as major depression and generalized anxiety disorder (Drapeau et al., 2012). Its status in psychiatric nosology is controversial and widely discussed in the literature (Wheaton, 2007).

In the medical context, emotional distress is particularly relevant when it is accompanied by other symptoms that meet the diagnostic criteria for a psychiatric disorder. Otherwise, it is considered a transient phenomenon, according to the stress-distress model, consistent with a "normal" emotional reaction to stress (Drapeau et al., 2012).

The concepts of spirituality and spiritual distress are complex because their definition depends on the perspective of the observer (Heliker, 1992). This paper focuses on the somatic and mental dimensions of distress.

Empirical benchmarks for psychological distress have been suggested to encompass hyperactivation, the breakdown of coping strategies, and detrimental effects on the individual, as delineated by Ridner (2004). Distress that arises from an incapacity to contend with life's demands is characterized by a spectrum of symptoms and is associated with fluctuating emotional states.

This contributes to a perceived dysfunction in the individual's life and engenders feelings of inadequacy, as explored in the research by Arvidsdotter et al. (2015).

The recognition that each struggling individual has unique needs and personal coping strategies suggests that counseling and self-help programs should be tailored to reflect individual preferences, thereby maximizing acceptance and adherence while providing quality emotional support. The human factor in self-help is essential for reducing distress; its importance cannot be overestimated (Marley, 2011).

Inefficiencies in appropriate care and difficulties in identifying psychological distress are sources of frustration for both patients and health professionals. Considering that psychological distress can foreshadow mental, physical and emotional exhaustion, it is essential to implement preventive or early interventions to prevent the development of complex disorders in patients. People experiencing psychological distress should participate in patient-centered, salutogenic dialogues to gain awareness and strengthen their capacities to improve health and well-being (Arvidsdotter et al., 2015).

3. Addiction

Psychology, because of its interdisciplinary nature, is uniquely positioned to synthesize experimental clinical science and apply multidimensional understandings toward the pragmatic goal of reducing the incidence of addiction (Gifford, 2007). This discipline examines the individual within a contextual framework, essential to the advancement of clinical and research goals in the field of addiction (Gifford, 2007).

Addiction is defined as a behavioral disorder characterized by a compulsive desire for sustained use of certain substances, such as narcotics or alcohol. Considerable difficulties in self-regulation of consumption are observed, despite awareness of the negative impact on health and social or professional functioning (Tudose & Tudose, 2011).

Addiction is described as a process where an action, initially sought for pleasure or relief of discomfort, becomes recurrent and difficult to control, persisting despite adverse consequences (Goodman, 1990).

DSM-IV defines substance dependence as a pattern of excessive use, often in amounts or durations that exceed original intent, with harmful somatic or psychological consequences, possibly exacerbated by substance use (American Psychiatric Association, 1994).

Addiction designates a set of repetitive behaviors or processes, dominated by an intense search and passionate consumption of a specific object or situation, with potentially harmful effects on the individual (Tudose & Tudose, 2011).

In the context of addiction, the individual is focused exclusively on the addictive behavior, neglecting other interests and having difficulties in the option of abstinence, even in the absence of pleasure (Tudose & Tudose, 2011).

Addiction transcends a purely physiological process, reflecting the behaviors of multidimensional subjects who react in specific ways in given contexts. Tolerance and withdrawal, although frequently associated with dependence, are not mandatory concomitants of addictive behavior (O'Brien et al., 2006).

Conceptualizations of addiction often incorporate phrases such as „craving” or „loss of control” to articulate continued substance use despite harmful consequences (West, 2006).

Addictive behavior can be a reaction to failure to fulfill responsibilities, affecting personal success and generating feelings of personal and social inadequacy. It can manifest following separation or loss, with the consequence of an existential void or a loss of personal boundaries. Thus, addiction can be interpreted as the inability to manage inner pressures or as an expression of a "fundamental violence" (Tudose & Tudose, 2011).

The concept of addiction has been the subject of extensive controversy within the scientific community, both among mental health professionals and outside the field, based on several criticisms. Its use can be unintentionally broad, without a concrete definition or clear delineation, leading to a lack of precision and practical applicability. In addition, a tendency to attribute moralistic connotations has been signaled, which can corrode the foundation of objectivity required in empirical research. Moreover, it can be considered redundant within the current scientific paradigm, as it does not provide additional information compared to that conveyed by other concepts or terminologies already established and recognized in the field of mental health (Goodman, 1990).

Psychological approaches to the mechanisms of natural phenomena suggest that the study of addiction is intrinsically focused on the analysis of interactions between subjects and their environments of existence (Gifford, 2007). Addiction manifests itself through complex behavioral and neurobiological adaptations at multiple levels of functioning, being modulated by a diversity of contextual influences, not just by therapeutic intervention. Thus, a thorough understanding of addiction and recovery processes requires a direct exploration of these dynamics (Gifford, 2007).

The conceptualization of addiction reflects the interaction between a recurrent behavior and various other processes or dimensions of an individual's existence. It is characterized as a process in which a behavior, sought for immediate gratification or the relief of psychological discomfort, evolves into a behavioral pattern defined by the inability to self-regulate and persevere in the activity, regardless of adverse repercussions. Whether a behavior is classified as addictive is not determined by its nature, frequency or social acceptability, but by the impact it has on the individual's functioning and quality of life, according to established diagnostic criteria (Goodman, 1990).

The addiction process is not uniform and may reflect preexisting or developed individual variation during engagement in addictive behaviors. Some individuals who self-describe as addicted report a subjective distinction from others, characterized by feelings of discomfort, isolation, or unfulfillment, prior to the development of recognized addiction (Jacobs, 1986). Others notice no differences prior to engaging in behaviors that later become addictive, these behaviors being initially valued for their immediate positive effects and the desire to repeat the experience (Haertzen et al., 1983).

The notion of positive addictions suggests the existence of addictive behaviors that can provide temporary benefits such as mood changes, pleasure, relaxation, behavioral disinhibition, coping strategies, simplifying decision-making, and enhancing identity or meaning in life (Griffiths, 1996).

Addiction is usually characterized by initial exposure to a stimulus and repeated attempts to reiterate the experience of the stimulus, with dependence gradually becoming stronger. The nature and severity of addiction can vary over time, with periods of abstinence or regaining control, sometimes culminating in long-term or even permanent recovery (West, 2001).

4. Research methodology

4.1. Objectives

Starting from the analysis of specialized literature, the general objective of the research is to analyze the relationship between anxiety and emotional distress in nicotine addiction. The secondary objectives of the research that will determine the achievement of the main objective are the following:

1. Analyzing the link between anxiety and nicotine addiction.
2. Analyzing the link between emotional distress and nicotine addiction.
3. Analysis of gender differences in nicotine dependence.

4.2. Hypotheses

1. It is hypothesized that there is a significantly positive correlation between anxiety and nicotine addiction.
2. It is hypothesized that there is a significantly positive correlation between emotional distress and nicotine addiction.
3. It is assumed that there is a significant difference between female and male gender in terms of nicotine addiction.

4.3. Study participants

In order to achieve the objectives of the research and verify the working hypotheses, 60 subjects, aged between 18 and 65, were questioned, of which 30 were male and 30 were female. All 60 participants live in Constanța, in an urban environment.

The sampling method we opted for is the non-probabilistic one, namely convenience or accidental sampling, through which we chose the available participants, who volunteered to contribute to the realization of this research.

4.4. Research tools

To carry out this study, the following tools were used:

1. Anxiety Testing - The Endler Multidimensional Anxiety Assessment Scales (EMAS) Manual - is a set of three easy-to-administer scales that measure different types of anxiety.
2. The EMAS-S scale - is a pencil-paper instrument for self-assessment of anxiety as a state, consisting of 20 items, of which 10 measure the emotional-physiological component of anxiety as a state, and the other 10 measure the cognitive component of the state of anxiety.
3. Emotional Distress Profile- is a 26-item scale that measures dysfunctional negative emotions and functional negative emotions in the „fear” and „sadness/depression” categories.
4. Nicotine Addiction Testing - Fagerstrom test

5. Analysis and interpretation of the results

Hypothesis 1: It is hypothesized that there is a significant positive correlation between anxiety and nicotine addiction.

Correlations

		Nicotine addiction	Anxiety
Spearman's rho	Nicotine addiction	1,000	,751**
	Correlation Coefficient	.	,000
	Sig. (2-tailed)	60	60
	N	,751**	1,000
Anxiety	Correlation Coefficient	,000	.
	Sig. (2-tailed)	60	60
	N		

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

The analysis of the table shows that there is a positive correlation between anxiety and nicotine addiction, where $n = 60$, at a significance threshold of $p = 0.000$ showing that the higher the anxiety, the higher the nicotine addiction.

Anxiety and nicotine dependence may be interconnected through behavioral mechanisms in which tobacco use is used as a compensatory or self-medicating mechanism. Individuals experiencing anxious states may resort to smoking as a strategy to temporarily relieve anxious symptoms. Smoking is often perceived as a means of alleviating stress and reducing the intensity of anxiety, even if the benefits are short-lived. Thus, a predilection for nicotine addiction is created as a method of emotional management of anxiety.

Furthermore, nicotine addiction may induce an illusory sense of control or security in stressful contexts for people with anxiety disorders. Smoking may function as a self-regulatory and anxiety-moderating mechanism under certain circumstances. However, the perceived relief of anxiety symptoms through smoking is ephemeral and may set up a perpetual cycle in which tobacco use becomes an essential tool in anxiety management.

It is crucial to recognize that the apparent benefits of nicotine in controlling anxiety states are actually ephemeral and potentially misleading. In the long term, nicotine can exacerbate anxiety symptoms and have negative repercussions on overall health. Chronic tobacco use can intensify anxious manifestations and contribute to anxiety disorders, while increasing the risk of cardiovascular pathologies and other smoking-related medical complications.

Regarding the psychological dependence associated with cigarette consumption, it is essential to emphasize the existence of an intricate connection between this behavior and the state of anxiety. Individuals who experience anxiety may develop a close association between the act of smoking and the management of stress or anxiety symptoms. By smoking, they may perceive a

way to cope with the emotions associated with anxiety, release built-up tension, and gain an illusion of control over their situation.

In a larger context, this strong connection between anxiety and tobacco use may contribute to the establishment and maintenance of nicotine addiction. It is crucial to highlight that cigarette smoking does not provide a genuine solution to anxiety-related problems and may in fact worsen symptoms in the long term. Nicotine, the active substance in tobacco, can negatively influence the central nervous system and participate in perpetuating cycles of anxiety and addiction.

Moreover, quitting smoking can be a significant challenge for individuals affected by anxiety, as they may experience more intense withdrawal symptoms and experience a loss of a usual strategy to manage stress and anxiety.

Properly addressing this complex issue, which includes anxiety and nicotine addiction, requires the development of an individualized treatment plan. This may include therapeutic interventions such as cognitive-behavioral therapy to manage anxiety, nicotine replacement therapy and specialized assistance in the process of quitting smoking. These therapeutic approaches have the potential to support individuals in developing healthy strategies for managing anxiety and overcoming nicotine dependence in an effective and sustainable manner.

Another aspect worthy of investigation in this direction would be the analysis of the transition from occasional to daily smoking and the degree of nicotine dependence in young adults, according to research by McKenzie et al. (2010). At the same time, there is a possibility that the symptoms of depression and anxiety observed in adolescents, which tend to be recurrent and fluctuating in intensity, constitute a risk factor for the development of tobacco use among young adults, as suggested by the studies of Weiss and colleagues (2005).

Also, adolescents who resort to smoking and develop symptoms of depression and anxiety, perhaps as a result of factors related to puberty, biological or psychological development, developmental task challenges, or sensitivity to stress, may be at increased risk of progressing toward greater nicotine use and dependence among young adults as a form of self-treatment for persistent symptoms of depression and anxiety, according to findings by McKenzie et al. (2010).

Adolescents who smoke and exhibit significant symptoms of depression and anxiety are at increased risk of developing nicotine dependence in early adulthood. This finding, obtained from a prospective investigation conducted three years after high school graduation, provides further evidence that symptoms of depression and anxiety are a significant risk factor for the development of heavy tobacco use (McKenzie et al., 2010).

The scholarly review conducted by Breslau in 1991 unveiled that the smoking population is diverse with respect to their association with major depression and anxiety disorders. Central to these associations are the existence and severity of nicotine dependence. Specifically, it was observed that a moderate level of nicotine dependence, as opposed to a mild one, is significantly correlated with an elevated risk of onset of major depression and anxiety disorders.

A study examined the severity and evolution of depressive and anxiety symptoms according to the degree of smoking and nicotine dependence in patients diagnosed with depression/anxiety disorders. The results confirmed that symptoms of depression, anxiety and agoraphobia were more severe in nicotine-dependent smokers. Nicotine-dependent smokers were also observed to have slower recovery of depressive and anxiety symptoms compared to groups of never-dependent smokers, ex-smokers, and non-dependent smokers (Jamal et al., 2012).

A recent study of German adults identified a significant comorbidity between daily smoking and the presence of an anxiety disorder (John et al., 2004). The results indicated that former daily smokers and current daily smokers had a 1.4 and 1.6 times higher risk of developing an anxiety disorder, respectively, compared to individuals who had never smoked. Individuals who reported three or more addiction symptoms were 3.7 times more likely to have an anxiety disorder compared to those without addiction symptoms, while individuals who reported one to two symptoms of addiction had a 1.6 times higher risk of having an anxiety disorder. These findings support the hypothesis that higher levels of nicotine dependence are associated with anxiety disorders (Morrell & Cohen, 2006).

Hypothesis 2: It is hypothesized that there is a significant positive correlation between emotional distress and nicotine addiction.

Correlations

		Emotional distress	Nicotine addiction
Spearman's rho	Emotional distress	Correlation Coefficient	1,000
		Sig. (2-tailed)	,355**
		N	,005
	Nicotine addiction	Correlation Coefficient	60
		Sig. (2-tailed)	,355**
		N	60

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

The analysis of the table shows that there is a positive correlation between emotional distress and nicotine addiction, where $n = -355$, at a significance threshold of $e = 0.005$, showing that the higher the emotional distress, the greater the nicotine addiction. big.

Cigarette smoking can be perceived as a strategy adopted to cope with or relieve symptoms of emotional distress. Nicotine contained in tobacco can induce a temporary anxiolytic effect, generating a feeling of calmness and relaxation in the face of emotional stress and anxiety. Thus, nicotine-dependent individuals may find temporary benefit in the act of smoking as a way to reduce their level of emotional distress.

Smoking cigarettes can also provide a sense of control or release of emotional tension associated with distress. When faced with stressful situations or negative emotions, smokers may

find that smoking gives them a break, a way to relax and redirect their attention to something else. Therefore, nicotine addiction can be seen as a way to cope with emotional distress by means of a temporary separation from unpleasant emotions.

It is especially important to note that quitting smoking can bring significant benefits to your mental and emotional health. Although quitting nicotine addiction can be challenging for those with emotional distress, there are resources and support available to help them cope with this addiction and develop healthy strategies for managing negative emotions. Behavioral therapy and pharmacotherapy can be useful tools in this direction, providing personalized approaches and appropriate support for smoking cessation and effective management of emotional distress.

It should also be noted that rituals and habits associated with smoking may play a significant role in the relationship between nicotine addiction and emotional distress. People experiencing emotional distress may turn to smoking as a way to cope and regulate negative emotions. Smoking can be seen as a mechanism for regulating emotional state and providing a sense of control and release of emotional tension.

A multitude of research endeavors have examined the prevalence of psychological distress as a broad construct within populations of smokers. Notably, Dube et al. (2009) conducted an analysis of data derived from 172,938 adults participating in the 2007 Behavioral Risk Factor Surveillance System. Their findings indicated that individuals who currently smoke or have quit smoking exhibit elevated levels of psychological distress in comparison to those who have never engaged in smoking.

The present study aims to investigate the role of psychological distress in the various symptoms of nicotine addiction, which in turn contribute to the increase in cigarette consumption. Our main concern is to develop a deeper understanding of the mechanism by which psychological distress influences nicotine addiction. The findings of the study contribute to the literature on the impact of different symptoms of nicotine dependence on the relationship between psychological distress and smoking behavior, as well as on the role of individual factors in the context of nicotine dependence. The data obtained support the thesis that psychological distress acts as a trigger for symptoms of nicotine dependence, contributing to an increase in the general desire to smoke, the manifestation of withdrawal symptoms shortly after smoking, and the development of rigid smoking patterns, all of which indicate a decrease of nicotine tolerance.

Hypothesis 3: It is hypothesized that there is a significant difference between female and male gender in nicotine addiction.

Test Statistics^a

	Nicotine addiction
Mann-Whitney U	94,000
Wilcoxon W	559,000
Z	-5,313
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: Gen

The table above shows that there is a significant difference at significance level =0.000 in terms of nicotine addiction in male and female participants in that males are more addicted to nicotine (mean=7.10) compared to women (mean=3.80).

Previous research has provided evidence of gender differences in smoking habits. They indicate that men start smoking at an earlier age, consume more cigarettes per day and inhale smoke more deeply than women. According to our findings, women appear to consume a similar number of cigarettes, but with a lower nicotine content, and show lower plasma nicotine levels compared to men. To compensate for this nicotine deficit, women have to adopt a more intense smoking behavior, characterized by the consumption of a larger amount of smoke, which can lead to a decrease in the concentration of nicotine in the body. This difference is particularly evident in heavy smokers, who in general can be considered to have a more pronounced physical dependence on nicotine itself (Zeman et al., 2002).

In terms of smoking prevalence, it is higher among men than among women globally, although this gap is closing in the United States. Data indicate that women show a more sensitive response to nicotine cues and stress, which may partly contribute to a greater predisposition to relapse, especially in the context of stress, and to a lower effectiveness of nicotine replacement strategies compared with men (Zakiniæiz & Potenza, 2018).

According to the World Tobacco Atlas published by the World Health Organization (WHO) in 2002, about 35% of men in developed countries and 50% of men in developing countries use tobacco products, which translates globally into about 1 billion male tobacco users. When we look at gender differences in smoking prevalence in various countries, we see significant discrepancies. In many countries, the smoking rate for men is more than 10 times higher than for women (Africa, Middle East, Asia). However, there are a few countries, such as New Zealand, Norway and Sweden, where smoking rates among women are comparable to those observed among men (Mackay & Eriksen, 2006).

Conclusions

There are a significant number of studies that have addressed various aspects of nicotine addiction, but only a limited number of these have focused on directly analyzing the relationship between anxiety and emotional distress in the context of nicotine addiction. The findings of this research align with previous results presented in the specialized literature.

The main objective of this study was to investigate the nature of the relationship between the variables anxiety, emotional distress and nicotine addiction. The conclusions obtained in this research approach validated the formulated hypotheses, demonstrating that anxiety and emotional distress are two factors that significantly contribute to the intensification of nicotine addiction. This influence extends to many aspects of an individual's life, both personal and professional. The importance of these findings is obvious, especially since anxiety and emotional distress can begin early in life, but can be ameliorated through psychological therapy. This observation is particularly relevant, given that adolescents and adults frequently face stressful situations in contemporary society.

Another element of crucial importance in this research is the participant sample, composed of 60 subjects, 30 male and 30 female, aged between 18 and 65 years. This aspect underlines the

fact that regardless of gender or age, anxiety and emotional distress have a significant impact in increasing nicotine addiction.

All the hypotheses formulated in this research were confirmed, thus indicating a significant and positive relationship between anxiety and nicotine addiction, a significant and positive relationship between emotional distress and nicotine addiction, as well as the tendency of the male sex to be more prone to a more pronounced dependence compared to the female sex.

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