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EDITORIAL

A Bridge Across Time: 150 Years Since the Birth of Psychology as a Science

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The year 2024 marked the 150th anniversary of the founding of the first experimental psychology laboratory in Leipzig in 1879 by Wilhelm Wundt, widely recognized as the moment psychology emerged as a science. While 150 years ago, the names of the first "psychologists" were known among the elite scholars of the time, today the field of psychology boasts the highest employment growth rate compared to other occupations in the United States (Clay, 2014). In Romania, the number of certified practicing psychologists now exceeds 33,000. Despite the crisis Romanian psychology faced during the final decade of the communist regime, nearly 100 years after its inception in the country (Gruber, 1893), we now see unprecedented competition for admissions to psychology faculties. Meanwhile, across the Atlantic, approximately 6–6.5% of students choose psychology as their major, making it the most popular discipline within the fields of science and engineering.

From the early years of empirical psychological research, numerous schools of thought have emerged, some of which continue to evolve, aimed at further expanding the dense core of this science. Zagaria and Lombardi (2024) argued that scientific psychology is a non-paradigmatic or pre-paradigmatic discipline, given the insularity of its subfields and the lack of collaboration between them. They also highlighted the independent model presented by non-English papers, which differs from other sources and may provide insights into what happens on the "periphery" of psychology. For instance, these papers indicate that psychoanalysis still makes a vibrant contribution.

In the early years of our activity, we were trying to agree on the object of study in psychology, which was described by different authors as: behavior (Watson), internal psychic life (Wundt), consciousness (Angell and Mead), the unconscious (Freud), instinctive animal behaviors (Lorenz), the evolution of the child's intelligent conduct (Piaget), the role of reactions and conditioned reflexes (Pavlov), operant behaviors (Skinner). In our attempt to locate the psyche at the level of the human brain, the branches and sub-branches of psychology have now become so diverse that they can no longer claim convergence in their approach.

A quarter of a century ago, analyzing the trend of psychology in those decades Robins et al., (1999) concluded that: a) research in psychoanalysis has been largely overlooked by mainstream scientific psychology in recent decades; b) behavioral psychology has diminished in prominence, making way for the rise of cognitive psychology in the 1970s; c) cognitive psychology has maintained a consistent upward trend and remains the most influential school of thought; d) neuroscience has experienced only a modest increase in visibility within mainstream psychology, even though its growth in broader contexts has been substantial. Neuroscience could be the most influential trend in psychology, in a context where trends exhibit less linearity than previously assumed, while cognitivism remains a prominent trend (Zagaria, & Lombardi, 2024).

This year, alarming public policies are impacting people's mental health, yet psychologists are responding by combating misinformation (Lin, & Chen, 2024; Roozenbeek &

Van der Linden, 2024) and promoting diversity, equity, and inclusion, despite growing backlash against racial equity efforts (APA, 2024; Forestieri et al., 2024). Emerging trends in research priorities include the high turnover rate among personnel (Zambrano-Chumo & Guevara, 2024), political attacks on academic freedom, and teachers burnout (An & Tao, 2024). At the same time, psychologists are focusing on digitalizing psychotherapy services (Wu et al., 2024) to play a significant role in supporting underserved communities and addressing employees' real needs by measuring meaning, sensitivity, security, purpose, and well-being in the workplace. Psychologists are also seeking solutions to combat substance use and addiction (Krentzman et al., 2024). A current direction in applied psychology is in the field of school psychology, driven by the increasing stress factors in schools, with a significant effort to train and employ more mental health professionals in educational settings. Furthermore, psychology is advancing brain health and the aging process by developing new interventions to help prevent, identify, and manage cognitive decline (APA, 2024; Furnham, 2024).

Psychologists collaborate with other professions to address major social issues. In recent years, research has increasingly focused on the mental health of children and adolescents, exploring the root causes of their difficulties and potential solutions. As a result, new investments are directed toward mental health applications for youth and platforms that integrate coaching with artificial intelligence. Psychologists remain at the forefront of suicide prevention (Bryan, 2021).

More psychologists are integrating big data techniques into their research and leveraging recent discoveries about the biological foundations of human behavior (Chen & Wojcik, 2016). These advancements help uncover new ways to improve people's lives in response to the growing demand for psychological expertise. Psychologists are also extending their influence through social platforms, working to reduce social polarization, combating mental health stigma, and speaking out against gun violence to enhance public safety. Both companies and policymakers increasingly seek psychologists' expertise in finding solutions to mitigate climate change and adapt to a warming world (Jost et al., 2022). Psychologists also play crucial roles in areas such as nutritional health, sports psychology, non-pharmacological treatments for chronic pain, and defending vulnerable populations. Applied psychology is on the rise, contributing to a healthier society. The growing interest in addressing social factors undermining health has led to psychological interventions improving various aspects of life, from educational performance and traffic safety to designing user-friendly products. Businesses are particularly interested in psychologists' ability to transform workplaces and address the costs of unhealthy work environments (Shields, 2020).

Psychology is more popular than ever, partly due to its commitment to open science and the increasing representation of women in the psychological workforce. However, women, despite outnumbering men, remain underrepresented in top positions and face wage disparities (APA, 2017). Efforts are ongoing to encourage their representation in key leadership roles.

From a visionary perspective, psychologists are exploring how new technologies can streamline or amplify their efforts, leading initiatives to integrate behavioral insights into the creation and use of generative artificial intelligence tools. This demonstrates the diversity and complexity of contemporary psychology while underscoring the challenges of integrating the varied theories and methodologies developed over the years within the field.

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STUDIA DOCTORALIA
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The Contribution of Trust and Anxiety in Health Care

During the CoViD-19 Pandemic

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ABSTRACT

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This research aims to extend the knowledge about trust and state anxiety in the relationship between patients and medical professionals, by focusing on the specific situation of medical treatments. This study aims to see if patients' trust in the resort, medical staff and treatment plays a role in decreasing state anxiety. Methods. Patients enrolled in the resort's treatment base (N = 798) after the signing of an informed consent, they were asked about their state and trait anxiety, resilience, general trust (GTR) and fear of CoViD-19 (FCO) during the pandemic restrictions. State anxiety and FCO were measured longitudinally, more exactly on the first day, middle period and at the end of the treatment, whilst GTR, resilience and trait anxiety were measured only in the first day of the process. Results. The results show a significant decrease in state anxiety influenced by GTR and FCO and trait anxiety too. Resilience played a factoring role, but the result is not significant. Conclusions. The results of this study show that the state anxiety of patients with high trust in physicians decreases during the treatment. Since these results are especially robust, they can inform future research and medical practice. Therefore, is important to acknowledge that the integration of psychological components in patients' treatment is unquestionably necessary.

Keywords: state anxiety, trust, medical treatment, coronavirus, resilience

1. INTRODUCTION

The Contribution of Trust and Anxiety in Health Care During the CoViD-19 Pandemic

Balneotherapy treatments (BT), recognized as medical interventions, utilize natural elements like mineral waters and mud thermal therapy, finding widespread application in European countries, Turkey, Japan, and Israel for managing various diseases (Bender *et al.*, 2002). Often synonymous with spa therapy (Falagas *et al.*, 2009), BT is a prescribed medical treatment supervised by physicians and resort doctors. Recent studies highlight their efficacy in addressing conditions such as obesity, metabolic syndrome, cognitive function, and psychological well-being, contributing to the growing recognition of their therapeutic benefits within the medical field (Dubois, 2010; Hanh *et al.*, 2012).

The importance of trust in the health care field in terms of relationships has long been acknowledged (Mechanic, 1996). According to Pellegrino and Thomasma (1993), trust is essential in treatment relationships. Illness, invasive treatment, or a high level of pain can provide remarkable strength or resilience (Zaner, 1991).

Trust is an essential component of any relationship, especially one between doctors and patients. Trust can be defined as a bilateral relationship concept in which a person responds voluntarily to certain motivations, positive expectations, and outcomes on how the person being trusted will react in the future with a degree of vulnerability (Gilson, 2006).

The general relevance of trust to these issues is that when people discuss their experiences with and within health systems, they frequently mention trust. This last point explains why most trust definitions combine expectations about the other's ability or competence with expectations about their value orientation, i.e. their ethics, integrity, and motives (Ammeter *et al.*, 2004). Trusting attitudes are directed as much toward motivations and intentions as they are toward outcomes (Hall *et al.*, 2001, p. 615). To demonstrate care for the client's interests and thus be trustworthy, organisations must provide an environment that allows the development of various sets of mutual trusting relationships (Tendler, 1997). At the level of a health care system, the complexity increases because it includes a variety of organisations that must collaborate as well as multiple sets of individuals working within different organisations.

It is important to observe the psychological path of the patient included in ill treatments in order to have a record of the entire state of health, both physical and psychological (Rapolienė *et al.*, 2020). Most have focused on the expansion of chronic pain during medical cure, disease and treatment, taking into account anxiety, depression, well-being and quality of life (QoL; Carroll *et al.*, 2004; Lempp *et al.*, 2011; Sąlyga *et al.*, 2008).

Medical rehabilitation represents an intervention focused on human functioning, aiming at an effect of maximizing the physical, mental, social and economic functioning of people diagnosed with a medical condition (Martez *et al.*, 2014). It should also be mentioned that among the medical benefits is the reduction of the pain sensation, which is not entirely satisfactory since the psychological aspects are not included and provided for in the treatment schemes of balneology (Bender *et al.*, 2014; Magni *et al.*, 1993).

Our study aims to follow the patient's progress during the medical cure and how the patient relates to the treatment (trust in treatment, trust in medical staff and trust in the result of the treatment), to social challenges (resilience and FCO) and those on an individual level (state and trait anxiety).

There is a gap in the topic outlined in the literature, regarding the role of psychological indicators such as anxiety, resilience, trust and pain perception, in the medical rehabilitation treatment of certain rheumatological, cardiovascular, and pulmonary conditions (Özkuk *et al.*, 2018).

In other words, the assessment of psychological indicators is a primary element in the treatment in order to be able to moderate it with fast and efficient specialist help (Frank *et al.*, 2000). The result of medical rehabilitation includes multiple exogenous and endogenous factors (anxiety, trust, resilience) making the patient vulnerable (Reid-Arndt *et al.*, 2015, pp. 69-106).

Among the comorbidities found in patients diagnosed with a rheumatological condition, there is depression (Woo, 2010) and anxiety (Fioravanti *et al.*, 2018). Patients who have had a stroke report that between 20% and 70% experience depression and between 10% and 25%, anxiety (Carson *et al.*, 2010; Starksein & Manes, 2000). Mental health problems in patients diagnosed with RA are predisposed to a decrease in vitality and social functioning, obviously, to the expansion of chronic pain (Woolf *et al.*, 2012). Moreover, sleep disturbances, poor mood, and increased levels of anxiety are among other comorbidities (Gettings, 2010). Also, a lack of interest and low motivation to maintain daily tasks, social interactions, and even concerns about relaxation are affected (Kats & Yelin, 2001).

Since the interest predominates in the field of disease identification and recovery with the help of allopathic treatments, the identification and treatment of psychological problems are avoided in advance (Fioravanti *et al.*, 2017, Antonelli & Donelli, 2018).

Resilience is related to overall health. Resilience is defined as a positive adaptation or the ability to maintain mental health despite adversity (Wald *et al.*, 2006). Increased resilience corresponds to a higher level of improvement in overall condition. Resilience is not a constant variable that can be improved with treatment (De Goede *et al.*, 2012).

Anxiety plays an important associated role in exacerbating pain perception (Woo, 2010) and is also a factor in recovery. Specifically, it potentiates cognitive and behavioural disorganization. Low control of anxious states may impair the perception of future dangers over time and at the same time may cause a number of imminent medical conditions (Woo *et al.*, 2010). As we encounter a prevalence of anxiety symptoms among the global population; specifically, patients with medical illnesses show a doubling of them compared to those without a diagnosis (McWilliams *et al.*, 2003).

The experience of nociception is felt in different ways by the body. The sum of multiple ascending and descending pathways, both facilitatory and inhibitory, causes the sensation of pain (Aguera-Ortiz *et al.*, 2011; Merskey & Bogduk, 1994). At the same time, pain is subjective, and entirely the person's own experience is influenced by circumstances and various (broad) psychological factors (Lumley *et al.*, 2011; Melzack & Casey, 1968). There are dual models, both functional and evolutionary, that define emotion (pain) as having the potential to facilitate awareness, guide, and maintain adaptive behaviour (Nesse & Ellsmorth, 2009).

Stress plays the role of a primary factor that contributes to the QoL of everyone (Sąlyga, 2008). A high level of stress, improperly managed, can transform the flow of emotions, health status and implicitly general well-being in a disadvantageous sense (Kudielka & Wust, 2010).

There is a significantly reduced number of studies examining the relationship between pain and anxiety, depression and resilience in medical treatments (Gebhart & Sengupta, 1995). A meta-analysis includes all studies on the topic mentioned above, but the number is small (Clark-Kennedy *et al.*, 2021).

At the end of 2019, the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) appeared in China (Huang *et al.*, 2020). The impact of the new virus (coronavirus disease - COVID-19) was devastating in most places in the world (Bainv *et al.*, 2020), causing a huge number of deaths and infections with the new virus.

The impact of COVID-19 pandemic has affected the entire globe population of the globe, modifying interests, priorities, and habits and leading to many activities being delayed or neglected. Due to the impact on the medical system and prioritizing all resources for the patients with COVID-19, BT was very much affected by the pandemic. Many psychological burdens have emerged such as anxiety, depression, fear, reduced QoL and many others (Rotter *et al.*, 2021; Bäuerle *et al.*, 2020). In addition, the biopsychosocial system underwent a series of changes in terms of anxiety, and depression, registering up to the highest scores (Goldman, 2020). A high rate of psychological stress has been identified in Europe (Brodeur *et al.*, 2021).

Moreover, the SARS-CoV-2 pandemic has triggered an increase in anxiety symptoms among the population, leading to several mental health problems (MHQ). For example, problems are identified in areas such as eating disorders, sleep behaviour and long-term anxiety (Savage *et al.*, 2020). At the same time, problems just mentioned can have a visible result, but at the same time, there is a willingness to access public health institutions for the treatment of these medical conditions, high due the conditions of the pandemic (Xiaon *et al.*, 2020).

In the last 2 years, during the pandemic, the treatment in medical clinics showed variations in the work load; some were even closed (Maccarone & Masiero, 2021). Interest in some medical conditions has also decreased (Kardeş, 2021; Esen-Salman *et al.*, 2021; Rokhmah *et al.*, 2020). In other words, the priorities were focused on protecting against the imminent danger of infection with the SARS-CoV-2 virus.

Numerous authors have focused on the relationship between disability and medical conditions, pain, depression, well-being, and anxiety (states). The problem is that after 2010, a very small number of studies were published in this field, mental health.

Therefore, this study aims to see if patients' trust in the resort, medical staff and treatment plays a role in decreasing state anxiety. Also, FCO could moderate the reduction of state anxiety.

2. MATERIALS AND METHODS

The present study, called "TRATACO", was carried out in a medical resort from March 2021 until October 2021. The non-experimental study followed, as described in the first part, on the one hand, the resilience factoring state anxiety in this context, and on the other hand, trait anxiety in relation to state anxiety in the last stage of the process, mediated by FCO and GTR.

Participants

The participants (N = 798; 57% female gender) aged 18-89 years (category 18-25 = 2,4 %; category 50-57 = 27,9 %; category 82-89 = 1,3 %) were involved in the present research conducted in a medical setting during March and October 2021 (Table 1).

Table 1

Descriptives data of participants regarding age and gender

	Total number	of participants
Demographic data	*n*	*%*
Age		
18-25	19	2.4
50-57	223	27.9
82-89	10	1.3
Gender		
Female	455	57
Male	343	43

The longitudinal type is given by the number of measurements, one at the beginning of the medical treatment, then in the middle and the last one at the end of the treatment, in order to see fluctuations in anxiety and FCO in this medical context. The sample formed is of conventional type; there is no selection procedure at this level.

Upon arrival at the resort, patients will be directed to the reception of the treatment base to be scheduled for the cure and also to complete the informed consent form of the study. All 798 patients were included in the study based on the criteria stated above, i.e. their registration in the resort's databases and the presence of a minimum of one medical condition followed (osteoarthrits, asthma, COPD, chronic rhinopharyngitis etc.).

Ethical statement

Ethical clearance for this study was granted through the University of Bucharest Research Ethics Committee, approval number 27 of February 28.

Procedure

Patients enrolled in the resort's treatment base and in the study met all inclusion criteria for the research.

The longitudinal nature is evident from the multitude of measurements applied (in the form of pen and sheet questionnaires) during the treatment such as: (a) the first stage was completed by the patients on the first day of treatment, prior to the start of treatment, in order to accurately observe the level of anxiety as a state, but also the FCO, we also wanted to measure, from the beginning, the level of self-confidence, the level of confidence towards procedures, resilient behaviour in stressful situations; b) the second stage of the study was completed at the mid-point of the treatment period, with subjects being asked to complete items belonging to the state anxiety and FCO instruments; c) finally, at the end of the treatment, we measured the level of state anxiety and FCO. Also, the assessment was made during the year 2021, but we estimate that the prevalence of CoViD-19-related anxiety was an overarching problem and was not a confounding variable.

Measures

The State and Trait Anxiety Inventory 2.0 Form Y (STAI 2.0; Spielberger, 1983) contains two subscales - state anxiety and trait anxiety - that are each compressed into 20 items, for a total of 40 items. The STAI - Y 2.0 instrument sought to measure the variable "anxiety" using the 20 items, with participants scoring on a Likert scale from 1 - *"Not at all"* to 4 - *"Very much"*. The reliability coefficient for state anxiety (α = .91) and for trait anxiety were good (α = .90).

The Connor - Davidson Resilience 2 (CD-RISC-2; Connor & Davidson, 2003) is a 2-item instrument measuring the

concept of resilience and is a narrow form of the main scale with high consistency. Participants responded on a Likert scale from 0 - *"Not true at all"* to 4 - *"True most of the time"*. Scores range from 0 points - indicating a lack of adaptability to stressful situations - to 8 points - indicating a high level of resilience and adaptive behaviour. The total score for the present study appeared to be reliable (α = .83).

General Trust (GTR) is a self-constructed, multifaceted instrument measuring concepts of trust in procedures, trust in the treatment setting, trust in health care providers, and trust in self. The purpose of introducing this instrument into the present research was to measure, along with the other instruments, the patient's overall trust and perception of what is around them, obviously under the aegis of both the medical and pandemic context. Participants rated each item on a Likert scale from 1 - *"Not at all confident"* to 5 - *"Absolutely confident"*, with the total ranging from 20 to 50 points. The total score displayed acceptable internal consistency (α = .89).

The Fear of Covid-19 Scale (FCV-19 S; Ahorsu et al., 2020) was used with the aim of measuring specific FCO and the physiological-level implications created by the coronavirus pandemic. Patients responded to items rating it on a Likert scale from 1 - *"Strongly disagree",* to 5 - *"Strongly agree"*, In relation to the anxiety instrument, it measured a specific fear and/or anxiety, facilitating the process of embedding patients' reporting of pandemic events and the dangerousness of SARS-CoV-2 infection. For FCO, the internal consistency was good (α = .91).

Statistical analyses

Path analysis was conducted using the lavaan package (Rosseel, 2012) of the R software (R Core Team, 2017).

As mentioned above, the present study investigates an exploratory model of state anxiety, GTR and resilience during the medical treatment through the COVID-19 pandemic. More specifically, using resilience as a covariate tested the mediation effect of GTR and FCO on the relationship between trait anxiety and state anxiety.

3. RESULTS

Table 2 illustrates the relationships between constructs used in our study. Specifically, GTR has a strong correlation with resilience (*r* = 0.449, *p* < .001), wich indicate, that resilience tend to decrease instead general trust increases. Furthermore, GTR displays correlations with trait anxiety (*r* = -0.502, *p* < .001), fear of CoViD-19 (*r* = - 0.158, *p* < .001) and stait anxiety (*r* = -0.539, *p* < .001). In these instances, an argumentation in general trust coincides with an reduction in the aforementioned constructs.

Table 2
Pearson Correlations Between Demografic and Psychological Variables

		Trait Anxiety	Resilience	General Trust	Fear of CoViD-19
Resilience	Pearson's *r*	-0.499***	-		
	p-value	< .001	-		
General Trust	Pearson's *r*	-0.502***	0.449***	-	
	p-value	< .001	< .001	-	
Fear of CoViD-19	Pearson's *r*	0.257***	-0.269***	-0.158***	-
	p-value	< .001	< .001	< .001	-
State Anxiety	Pearson's *r*	0.728***	-0.521***	-0.539***	0.382***
	p-value	< .001	< .001	< .001	< .001

Note. *p < .05, **p < .01, ***p < .001

Path Analysis
The model of state anxiety was performed. Overall, the fit indices suggested that the model has a good fit (*CFI* = .91, *RMSEA* = .11, *SRMR* = .06). Also, the model explained approximately 60% of the variation of state anxiety during the

care treatment conditions. The paths from trait anxiety to GTR (B = -0.45, p < .001), respectively, to FCO (B = 0.14, p < .001), are significant (Figure 1).

Figure 1
Analysis Plot of General Linear Model between Factors and Outcome
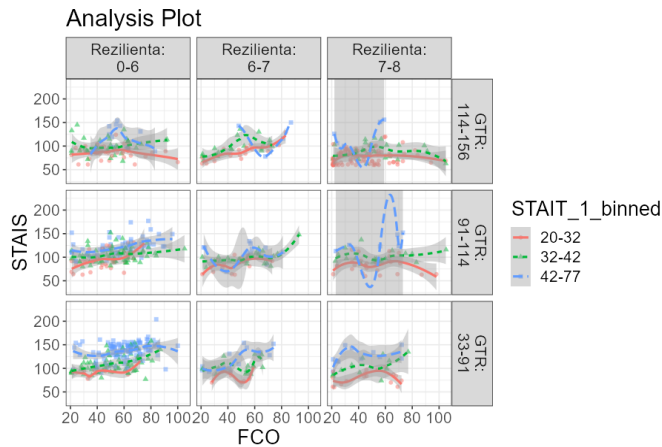
Note. The General Linear Model of factors such as fear of CoViD-19 (FCO), trait anxiety (STAIT), resilience and general trust (GTR) on state anxiety (STAIS)

The covariate variable, resilience (B = -0.60, p < .197), has no effect on state anxiety. Both GTR has a significant effect on state anxiety (B = -0.31, p < .001), and FCO (B = 0.35, p < .001) does explain the variance of the criterion variable (Figure 2). Moreover, is clear that the GTR has a factor effect on state anxiety. Trust tends to increase, whilst the state anxiety is decreasing during the treatment (Figure 2).

However, the indirect effect of trait anxiety on the variance of state anxiety during the care treatment via the GTR is significant (B = 0.14, p < .001) and via FCO is significant (B = .05, p < .001) (Figure 3). Also, the direct effect between trait

Table 3
Multiple Linear Regression of Predictors for State Anxiety

Variables		Variables	Size Effect
General Trust	←	Trait Anxiety 1	-.456***
Fear of CoViD	←	Trait Anxiety 1	.141***
State Anxiety	←	General Trust	-.319***
State Anxiety	←	Fear of CoViD	.351***
State Anxiety	←	Trait Anxiety 1	.443***
State Anxiety	←	Resilience	-.600***
Indirect effect 1			.146***
Indirect effect 2			.050***
Total effect			-.404***

Note. *p < .05, **p < .01, ***p < .001

anxiety and state anxiety is significant (B = .44, p < .001; Table 3).

Figure 2
Association Between General Trust and State Anxiety
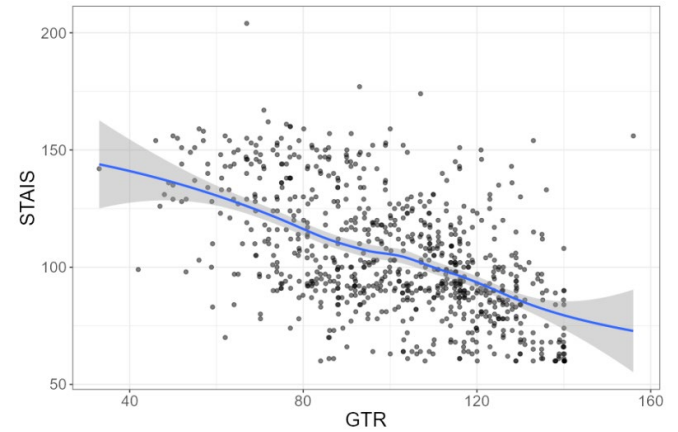
Note. State anxiety (STAIS) significant decrease when general trust (GTR) is increasing

Figure 3
Association Between State Anxiety and Fear of CoViD-19
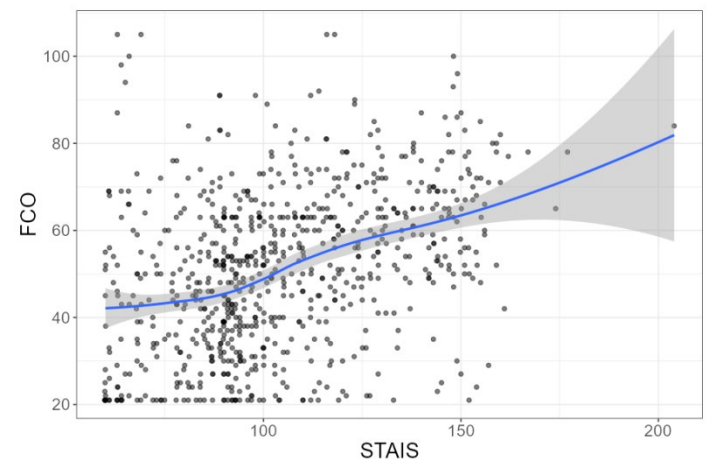
4. DISCUSSIONS

In this paper, we tested the interaction between GTR and anxiety during medical cure. Also involved were resilience, and FCO as factors, respectively, mediator for state anxiety variation.

Our purpose was to assess the anxiety in the medical context of patients and the role of GTR in it. So, GTR was divided into trust in the doctor, the treatment, the resort, and the medical context. These played a mediator role in the variation of state anxiety (from the beginning of treatment until the end of it).

The results showed that the relationship is significant, which translates into the fact that, at the beginning of the medical act, the patients had some concerns regarding the future. Nevertheless, during BT, there is an attitudinal and perceptual change regarding trust in medical acts and their related elements. As a result of said elements, the state anxiety showed a significant decrease (Alenazi et al., 2020; Rossi et al., 2021).

Trust is essential for a successful medical practice (Jneid et al., 2018; Pearson & Raeke, 2000). In recent decades, advances in medicine have been paradoxically coupled with a decline in trust in physicians (Gupta et al., 2020). However, trust in physicians is a more important variable than explaining medical procedures (Pearson & Raeke, 2000) and is closely related to medication adherence in chronic diseases (Du et al., 2020). In chronic diseases, the long duration of treatment administration, years or even decades, requires building strong psychological bridges between physician and patient (Ong et al., 1995). Trust in the doctor and in the procedures and continuity of treatment despite possible relapses seem to be vital factors for long-term survival, in addition to the medical procedures themselves (Petrocchi et al., 2019; Safran et al., 1998). Also, the impact of the diagnosis is difficult for an individual to express (Wu et al., 2015; see Figure 4).

Figure 4

Flexplot for Association Between State Anxiety and General Trust Grouped by Age Categories
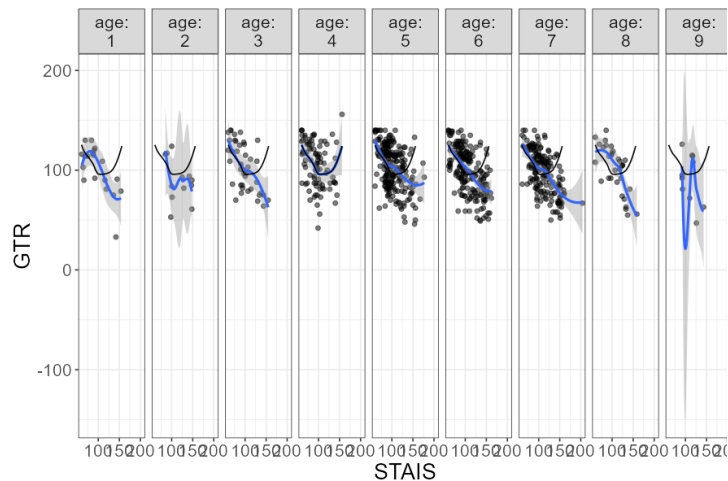
Note. The interaction of state anxiety (STAIS) and general trust (GTR) by each category of age. Patients between 50 yo. and 70 yo. (categories 5, 6 and 7) they have a higher level of anxiety, whilst trust is low

There are a few studies on the action of the factors mentioned above in spa treatments. The beneficial effects of BT are based on both medical and psychological factors and result in improved health and mental well-being (Rapolienė et al., 2020).

In the case of spa treatments, several peculiarities are highlighted. As with hospital treatments, it involves leaving home and undergoing treatment in a new location. Patients' uncertainty about medical staff, location and treatment is highlighted in the literature (Kortte & Wegener, 2004).

Anxiety needs to be measured. Following medical and diagnostic investigations, specific anxieties are underlined among patients (Fioravanti et al., 2018). At the same time, the presence of a condition generates specific symptoms such as pain, migraines, semi-paralysis etc. The manifestation of anxiety states at an anticipatory level is common once they are enrolled in treatment. A close link between these manifestations is also the location of the resort, the medical staff, the doctors and the diagnosis (Frank et al., 1987). Thus, anxiety is codependent on trust (Stein & Stein, 2008), and in the case of spa patients, a relationship with doctors and medical staff based on confidentiality is necessary (Petrocchi et al., 2019).

The benefits of spa treatment are observable for a minimum of 3 months and up to 6, even 12 months after completion (Baroni et al., 2012; Becker et al., 2009). Symptoms directly targeted by the effects of the procedures include coughing, musculoskeletal pain, and hypertension (Nasermoaddeli & Kagamimori, 2005; Stier-Jarmer et al., 2015). Psychological benefits also include improved QoL (Oláh et al., 2011), decreased perceived anxiety and increased self-confidence (Fioravanti et al., 2011). External and/or social factors are mainly well-being enhancers. A high level of confidence leads to the minimization of anxiety, especially concerning the environment and context (Fioravanti et al., 2018). Specifically, it is the fear of interacting with people who might be sick or infected with SARS-CoV-2 (Calbi et al., 2021). Moreover, frequent contact with unknown people is a catalyst for anxiety (Stein & Stein, 2008). During treatment, the level of anxiety from the beginning until the end of treatment is continuously decreasing. This leads to patients becoming more resilient in their relationships with doctors, nurses, spa procedures and the environment (De Goede et al., 2012). Trust in one's powers is related to an increase in resilient behaviours (Kruger, 1996). However, resilience in itself does not play a major role in the treatment.

In our study, resilience played a factoring role in anxiety state, but the results remain statistically insignificant. The explanation is that resilience is a behaviour based on social support (Carpenter and Brock, 2004), and in balneology, individual factors and the doctor-patient relationship are relevant

(Frank *et al.*, 2000). Moreover, resilience encompasses those social and individual behaviours that enable people to overcome a particular obstacle (Holling, 2004). In our case, the most important element in the balneological context is trust towards the doctor, the course of treatment, the nurses and the environment (Frank *et al.*, 2000). As previously mentioned, a high level of patient trust is correlated with low anxiety in our results (Zwingmann *et al.*, 2017).

Resilience is related to a low level of distress (Brunkhorst, 2002). Also, the role of resilience is not quite observable in this relationship. The human capacity to adapt to everyday situations is determined by a series of events and is part of the process of implementing protective resources (Curtis *et al.* 2000). In addition, it is involved in situations perceived as risky, dangerous, threatening to the person, directing the whole attitudinal system towards their removal (Marshall and Marshall, 2007). Elements such as improvement of the medical condition, habituation to the environment, and relating to the resort staff were associated with a low level of anxiety. This may be related to a high level of trust.

Furthermore, the final aim of our study included the FCO as a mediator between trait anxiety and state anxiety. Fear is directly related to trust, and in our research, it had a significant effect in decreasing anxiety during treatment. Fear and anxiety were associated with elements outside the patient's psycho-individual system, such as medical context, the unknown, contact with sick people, contact with new people, dealing with doctors and uncertainty about the course of treatment. Also, experiencing severe pain may be associated with anxiety (Gettings, 2010), anticipatory worry (Woo, 2010) or a decrease in QoL (Gutenbrunner *et al.*, 2010).

The SARS-CoV-2 pandemic, caused by the spread of the coronavirus (Huang *et al.*, 2020), has had a significant effect on exacerbating anxious dispositions such as fear or chronic whole-body tension (Rotărescu *et al.* 2020). Anxiety, measured longitudinally, showed a variation during severe restrictions in the spring of 2020 (Rotărescu *et al.*, 2020). The previous events (fluctuation in the number of infections among people) had effects on balneological patients at the perceptual, attitudinal and relational levels (Rotter & Schmitz, 2021).

Conclusions and Limits

To summarise, regardless of whether the patient is in a balneological, hospital, or a nursing home setting, there are a number of psychological factors that influence his perception of his future treatment, the recovery process, and response to balneoclimatic treatment. These include fear of SARS-CoV-2, anxiety about the environment, trust in medical personnel, and faith in one's own abilities (divided into trust in the doctor, trust in the treatment, trust in the resort and trust in the medical context). Furthermore, the resilience discovered in the relationship between general trust and anxiety demonstrates that it is not always manifested, as the balneological context has several peculiarities and differences from typical social contexts.

The limitations of this study are the following: a) the type of sampling chosen, convenience or conventional, based on exclusion and inclusion criteria, is not representative of the general population to which it is reported (David, 2006); b) the health status of patients at the end of treatment, from a medical point of view, was not taken into account, leading to a narrowing of the results; c) the longitudinal design brings with it high costs, a high drop-out rate (Carauna *et al.*, 2015) and d) the cultural background of the patients. I recommend for future research in this field, taking into account, in addition to what has been mentioned above, the psychological component of the medical staff (involvement in work, perception of the patient and his illness, social relationships, etc.).

Declaration of Interest statement

No potential conflict of interest was reported by the author(s).

Informed consent statement

Informed consent was obtained from all participants involved in the study.

Declaration of Ethical Approval

a) Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and was approved by an Institutional Review Board/Ethics committee. See details under Methods.

b) The study received an exemption from an Institutional Review Board/Ethics committee; See details under Methods.

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Histrionic Traits in Mothers and their Influence on Children's Personality and Emotional Reactions

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ABSTRACT

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This study investigates maternal histrionic traits and their influence on children's personality and emotional reactions. The research conducted a sample of 209 participants of whom 81.8% are female and 18.2% male. They were recruited online by filling in a questionnaire, the answers being anonymous. Results from statistical analysis indicated that adults who perceived their mother as having histrionic traits had high scores of psychopathy and narcissism and showed emotional regulation difficulties: non-acceptance of emotional responses, difficulties with impulse control and difficulties engaging in goal-directed behaviors. The significant findings of this study highlight the importance of understanding the dynamics in families in which the mother exhibits histrionic traits and their impact on the children. Hence, further research is needed paving the way for more informed interventions and support systems.

Keywords: histrionic traits, mother-child relationshi, personality, emotional regulation difficulties

1. INTRODUCTION

Histrionic personality structure

Histrionic personality disorder exhibits a consistent pattern of seeking attention and displaying exaggerated emotional responses (French et al., 2024). Individuals with histrionic traits feel major discomfort when they are not the center of attention and engage in theatrical behaviors to attract

attention (American Psychiatric Association, 2013). Initially, they impress with enthusiasm and flirtatiousness, but these qualities quickly become unappreciated due to the constant need to be in the spotlight. Their behavior is often inappropriate with seductive tendencies, manifesting in all types of relationships (American Psychiatric Association, 2013). Their emotions tend to be shallow and volatile, with rapid changes. These individuals pay excessive attention to their physical appearance, constantly seeking validation and reacting negatively to criticism (French et al., 2024). Their verbal communication is meant to impress, but often lacks substance. They are also characterized by a dramatic and theatrical style, often putting others around them in embarrassing situations (Sperry, 2016). Their expression of emotions appear superficial, with rapid shifts from one emotion to another. They have high suggestibility, are easily influenced by others and often overestimate the intimacy of their relationships (Ferguson et al., 2014)

Emotional strategies

Emotional reactions can manifest themselves through different systems and can vary in intensity and duration in different individuals (Shapero et al., 2015). To find out an individual's capacity for emotional regulation and individual differences in the use of emotion regulation strategies, we use reappraisal and suppression (Gross & John, 2003). Reappraisal involves reframing the meaning of a situation to modify its emotional impact, whereas suppression involves inhibiting the outward expression of one's emotions (Gross & John, 2003). In the process, difficulties in emotional regulation may also occur. The individual's emotional regulation difficulties capture challenges on several dimensions: (a) recognizing and understanding emotions; (b) accepting emotions; (c) the ability to maintain goal focus and resist impulsive actions during negative emotional states; and (d) the availability of perceived effective strategies for emotion regulation (Gratz & Roemer, 2004). In the first dimension, difficulties in recognizing and understanding emotions can affect how a person interacts with others and how they handle emotional situations. For example, a lack of skills in these areas can lead to difficulties in communication, interpersonal relationships and conflict resolution (Gratz & Roemer, 2004). In the second dimension, difficulties in accepting emotions can occur when someone tries to suppress or ignore emotions that are considered unpleasant, such as sadness, anger or fear (Gratz & Roemer, 2004). In the third dimension, difficulties in maintaining focus on goals and resisting impulsive actions during negative emotional states can lead to problems in managing tasks and personal relationships

during intense emotional states. This can lead to negative consequences such as the accumulation of emotional tension and chronic stress (Gratz & Roemer, 2004).The last dimension aims to assess the adaptive application of appropriate strategies for regulating emotional responses to different situations (Gratz & Roemer, 2004).

Maternal histrionic traits and children's personality

When histrionic traits are present in mothers, they can influence various aspects of their children's personality development through both genetic and environmental mechanisms. First of all, personality traits have a heritable component. The results of a twin investigation using structured interviews in a clinical cohort indicate considerable heritability estimates for borderline, histrionic and narcissistic personality disorders of 69%, 63% and 77% respectively (Reichborn-Kjennerud, 2010). No perceptible shared environmental influences or sex effects were observed (Reichborn-Kjennerud, 2010). This implies that, in many cases, children may inherit certain predispositions towards personality traits from their parents, especially their mothers. Thus, as early as adolescence, they may be predisposed to have a constant need for attention, sexually inappropriate behavior, egocentrism, and a tendency to believe that relationships are more intimate than they really are.

Beyond genetics, children's personality development is strongly influenced by their environment, in particular early interactions with their caregivers. In this context, mothers are their primary caregivers and play a crucial role in raising children. Growing up in an environment marked by emotional intensity and a strong emphasis on appearances and validation can shape children's perceptions of themselves and their relationships (American Psychiatric Association, 2013). They may learn to prioritize seeking attention and validation from others, which can lead to fluctuations in self-esteem. Self-esteem plays a critical role in shaping personality processes (Robins et al., 2001). Children's beliefs about themselves impact their behavior in specific situations, the goals they pursue in life, their emotional responses to life events and relationships, and their strategies for adapting to and coping with new environments (Robins et al, 2001). If a mother exhibits histrionic traits, such as dramatic behavior, her children may internalize these behaviors and incorporate them into their own personality (American Psychiatric Association, 2013).

In addition to genetic and environmental factors, parenting style is also relevant. The way in which mothers parent their children has an impact on self-efficacy, self-esteem,

and identity development, all of which are related to personality traits (Brown & Iyengar, 2008). Mothers with histrionic traits may exhibit an authoritarian parenting style as they have a fundamental lack of empathy and their basic motivation is to gain total control over their children using manipulative and dramatic tactics (Sperry, 2016). This might create an unstable environment for the child, affecting their ability to develop secure attachments and a stable sense of self (Coie & Dodge, 1998), leading to emotional instability, neurotic behaviors, and feelings of inadequacy and worthlessness. For instance, the focus on external validation, common in histrionic behavior, can impair the development of intrinsic motivation, fostering traits like low conscientiousness or an overreliance on external affirmation in childrens personality (Harwood et al., 2008). Moreover, the emphasis on external validation, characteristic of histrionic behavior, can impair the development of intrinsic motivation and foster resignation in the face of challenges, promoting traits such as low conscientiousness or an excessive reliance on external affirmation in the child's personality (Harwood et al., 2008). Additionally, the experience of being raised by controlling mothers who are unable to emotionally connect provides little space for the child to develop their own identity or goals and to learn empathetic behaviors (Kochanska et al., 2009; Tajmirriyahi et al., 2021).

Moreover, mother's need for attention could lead to either enmeshment or neglect, depending on how her emotional needs interact with the child's behavior. Children subjected to enmeshment may internalize a heightened sense of responsibility for others emotions, potentially leading to traits like low agreeableness or heightened anxiety (Maccoby & Martin, 1983) or dark triad traits (Tajmirriyahi et al., 2021). On the other hand, neglect due to the mother's self-focus might contribute to difficulties in trust, manifesting as narcissistic or psychopathic tendencies in adulthood (Sperry, 2016). Overall, the influence of a histrionic parenting style extends beyond childhood, shaping the adult child's personality through disruptions in emotional stability, self-worth, and interpersonal functioning.

Maternal histrionic traits and children's emotional reactions

From an early age, infants demonstrate the ability to regulate their emotions (Braet et al., 2014). In the initial stages of development, the responsibility for the infant's emotional regulation gradually shifts from the primary caregiver (the mother in most cases) to the caregiver-child dyad and, eventually, to the infant him/herself (Enlow et al., 2011). A history of responsive caregiving in infancy, evidenced by a secure attachment bond, correlates with more adaptive self-regulatory abilities and better stress management in later development (Kochanska et al., 2009; Oosterman et al., 2010).

Because early emotion regulation difficulties tend to persist into later developmental stages, disruptions in emotional regulation in the first year of life can have significant and long-lasting effects on child functioning (Eisenberg et al, 2010). Specifically, children who use ineffective emotion regulation strategies often experience peer rejection (Kim & Cicchetti, 2010), symptoms of depression (Silk et al., 2003), anxiety (Carthy et al., 2010; Hannesdóttir & Ollendick, 2007), and behavior problems (Zeman et al., 2002).

Thus, mothers with histrionic traits, who exhibit high energy, autonomic reactivity, and emotional reactivity (Sperry, 2016), have the potential to have a significant negative impact on their child's emotional regulation. They may exhibit high reactivity, lacking the ability to self-soothe when faced with moderately stimulating situations, having strong feelings of fear and caution (Sperry, 2016). This emotional dysregulation may play a role in promoting maladaptive behavioral tendencies, potentially exposing children to risks associated with internalizing and/or externalizing problems (Cole et al., 1994). In addition, mothers with histrionic traits exhibit impulsive behavior without regard for consequences, seeking immediate gratification and manipulative behavior to control others or get what they want (Cole et al., 1994). In addition, studies involving children aged 7 to 12 years showed that these dominant negative emotions exhibited by mothers were inversely associated with their child's ability to cope with stress (Valiente et al., 2004). Therefore, we can infer that mothers with histrionic traits, who exhibit excessive emotionality and attention-seeking, impulsivity and manipulative behaviors, have the potential to have a significant negative impact on children's emotional reactions and regulation, through the difficulties children experience in recognizing, understanding and accepting their own emotions.

The present study

The aim of this research is to identify specific aspects of histrionic traits in mothers and assess how these characteristics influence various emotional and personality dimensions of their adult children. The research will involve the use of quantitative methods to provide a detailed understanding of this dynamic and its implications for children's psychological and developmental outcomes.

H1: *We expect mother's histrionism to predict high openness to experience, extraversion, and neuroticism in adult children.*

H2: *We expect mother's histrionism to predict low conscientiousness and agreeableness in adult children.*

H3: *We expect mother's histrionism to predict high narcissism, machiavellianism and psychopathy in adult children.*

2. METHOD

Participants and procedure

The sample included in this study comprised a total of 209 participants of which 81.8% were female and 18.2% were male. In terms of background, 86.1% were from urban and 13.9% from rural areas. The mean age of the respondents was M=34.16 and standard deviation SD=13.91. The sample distribution on the educational level of the participants shows that 40.2% have high school as their last educational level, 1.9% have post-secondary education, 31.1% have undergraduate studies, 23% have master's studies and 3.8% have doctoral studies. Participants were recruited online by completing an anonymous questionnaire. Inclusion criteria were (a) age 18 years or older, (b) willingness to provide informed consent.

Instruments

Brief Histrionic Personality Personality Scale (BHPS; Ferguson & Negy, 2014) - A 36-item scale designed to assess symptoms of histrionic personality disorder according to DSM-5 criteria. Participants responded by relating to their mothers and how they observed them. An example of item is "Mom likes to be the center of attention". Participants will be asked to rate the frequency and intensity of each symptom on a Likert scale from 1 = never true to 4 = always true. The internal consistency coefficient on the group of participants was α = .84.

The Big Five Inventory (BFI; John et al., 1991) - A 44-item assessment instrument designed to assess an individual's characteristics within the Big Five personality dimensions. An example of item is "I am a sociable person who likes to go out". Participants will be asked to rate their level of agreement with each item on a Likert scale from 1 = strongly disagree to 5 = strongly agree. The coefficient of internal consistency obtained on the group of participants was for the scale targeting extraversion α = .79, the scale targeting agreeableness α = .72, the scale targeting conscientiousness α = .80, the scale targeting neuroticism α = .76 and the scale targeting openness to experiences α = .84.

H4: *We expect mother's histrionism to predict high reappraisal and suppression in adult children.*

H5: *We expect mother's histrionism to predict high non-acceptance of emotional responses, difficulties engaging in goal-directed behaviors, difficulties with impulse control, lack of emotional awareness, limited access to emotion regulation strategies and lack of emotional clarity in adult children.*

The Short Dark Triad (SD-3; Jones & Paulhus, 2013) - A 27-item assessment instrument that captures subclinical versions of narcissism, machiavellianism and psychopathy. An example of item is "It is not wise to reveal your secrets". Participants will be asked to rate their level of agreement with each item on a Likert scale from 1 = strongly disagree to 5 = strongly agree. The internal consistency coefficient for the group of participants was α = .78 for the machiavellianism scale, α = .68 for the narcissism scale, and α = .68 for the psychopathy scale.

Emotion Regulation Questionnaire (ERQ; Gross, 2003) - A 10-item scale designed to assess individuals' propensity to manage their emotions by two distinct methods: (1) cognitive reappraisal and (2) expressive Suppression. An example of item is "I keep my emotions to myself". Participants will be asked to rate their level of agreement with each item on a Likert scale from 1 = strongly disagree to 5 = strongly agree. The internal consistency coefficient α = .73 for the cognitive reappraisal scale α = .73 and α = .79 for the expressive suppression scale α = .79.

Difficulties in Emotion Regulation Scale-Short Form (DERS-SF; Gouveia et al., 2022) - A scale consisting of 18 items used to identify problems with emotional regulation in adults: failure to accept emotional responses, difficulties engaging in goal-directed behaviors, difficulties with impulse control, lack of emotional awareness, limited access to emotion regulation strategies, lack of emotional clarity. An example of item is "When I am angry, I lose control". Participants will be asked to rate their level of agreement with each item on a Likert scale from 1 = strongly disagree to 5 = strongly agree. The resulting internal consistency coefficient on the group of participants was for the strategy-targeting scale α = .78, the non-acceptance-targeting scale α = .81, the impulse-targeting scale α = .91, the goal-targeting scale α = .90, the awareness-targeting scale α = .55 and the clarity-targeting scale α = .89.

Design and data analysis

The study used a cross-sectional design to examine the relationship between maternal histrionic traits and children's personality, as well as the relationship between maternal histrionic traits and children's emotional reactions. All data were collected at a single time point.

Pearson correlation analysis was used to assess descriptive statistics and correlations between the research variables. Linear regression analysis was used to test the relationship between predictor and criterion, i.e. mother's histrionic traits on children's personality and emotional reactions. Statistical analyses were performed in the IBM.SPSS.24 statistical analysis program (IBM Corp, 2016).

3. RESULTS

Table 1 shows the distribution shape indicators, Skewness and Kurtosis.

Table 2 shows the means and standard deviations for the research variables, as well as the indicators referring to the shape of the distribution. The correlations between the research variables are also reported. A statistically significant positive

association was observed between maternal histrionism and psychopathy (r = .40, p<.01). A statistically significant positive association was observed between maternal histrionism and narcissism (r = .18, p<.05). A statistically significant negative association was observed between maternal histrionism and agreeableness (r = -.23, p<.01). A statistically significant negative association was observed between maternal histrionism and conscientiousness (r = -.23, p<.01).

Table 1

Descriptive statistics, distribution shape indices

Variable	Skewness	Kurtosis
1.Extraversion	.13	-.56
2.Agreeableness	-.38	-.08
3.Conscientiousness	-.35	-.21
4.Neuroticism	.04	-.22
5.Openness to experience	-.37	.11
6.Machiavellianism	.28	.22
7.Narcissism	-.12	-.59
8.Psychopathy	.75	-.14
9.Mother histrionism	1.20	2.21
10.Reevaluation	.02	-.03
11.Suppression	-.61	1.07
12.Strategies	.30	-.77
13.Non-acceptance	.42	-.85
14.Impulses	.40	-.80
15.Goals	-.47	-.63
16.Awareness	.46	-.39
17.Clarity	.47	-.72

Table 2

Descriptive statistics and Pearson correlations between histrionism and adult child personality

Variable	1	2	3	4	5	6	7	8	M(SD)
1.Mother histrionism	-								65.71(12.24)
2.Extraversion	-.07	-							25.81(5.53)
3.Agreeableness	-.23**	.41**							34.42(5.12)
4.Conscientiousness	-.23**	.35**	.40**						34.19(6.13)
5.Neuroticism	.12	-.37**	-.37**	-.38**					22.50(6.33)
6.Openness to experience	.09	.21**	.25**	.08	-.16*				36.62(6.31)
7.Machiavellianism	.10	-.20**	-.24**	-.08	.10	-.07			19.11(5.04)
8.Narcissism	.18*	.33**	.02	.19**	-.23**	.28**	.36**		24.56(5.47)
9.Psychopathy	.40**	-.15*	-.48**	-.32**	.28**	.01	.44**	.28**	15.65(5.22)

* p < .05; ** p < .01

Table 3 shows the means and standard deviations for the research variables, as well as the indicators referring to the shape of the distribution. The correlations between the research variables are also reported. A statistically significant positive association was observed between maternal histrionism and failure to accept emotional responses (r = .26, p<.01). A statistically significant positive association was observed between maternal histrionism and difficulties with impulse control (r = .19, p<.01). A statistically significant positive association was observed between maternal histrionism and difficulties engaging in goal-directed behaviors (r = .18, p<.05). A statistically significant negative association was observed between maternal histrionism and limited access to emotion regulation strategies (r = -.18, p<.05).

Table 3

Descriptive statistics and Pearson correlations between histrionism and adult children's emotional regulation strategies

Variable	1	2	3	4	5	6	7	8	M(SD)
1.Mother histrionism	-								65.71(12.24)
2.Reevaluation	-.11	-							18.89(4.11)
3.Suppression	-.12	.55**							13.89(2.87)
4.Strategies	-.18*	.07	-.14*						7.86(3.19)
5.Non-acceptance	.26**	.20**	.01	.62**					7.27(3.30)
6.Impulses	.19**	.02	-.15*	.61**	.53**				7.36(3.38)
7.Goals	.18*	-.02	-.07	.65**	.44**	.59**			10.21(3.43)
8.Awareness	.01	.02	-.20**	-.04	.07	-.04	-.09		5.95(2.11)
9.Clarity	.09	.21**	-.08	.50**	.49**	.38**	.38**	.14*	7.41(3.46)

* p < .05; ** p < .01

Table 4 shows the results of the linear regression analysis. Histrionism was entered as a predictor for agreeableness. With respect to the prediction of agreeableness, the model is statistically significant F(1, 207)=11.63, p<.01, predicting 5% of the variance. Therefore, agreeableness is statistically significantly negatively predicted by histrionism (β= -.23, p<.01). Histrionism was entered as a predictor for conscientiousness. With respect to the prediction of conscientiousness, the model is statistically significant F(1, 207)=12.06, p<.01, predicting 6% of the variance. Therefore, conscientiousness is statistically significantly negatively negatively predicted by histrionism (β= -.24, p<.01). Histrionism was entered as a predictor for narcissism. With respect to the prediction of narcissism, the model is statistically significant F(1, 207)=6.583, p<.05, predicting 3% of the variance. Therefore, narcissism is statistically predicted by histrionism (β= .18, p<.05). Histrionism was entered as a predictor for psychopathy. With respect to the prediction of psychopathy, the model is statistically significant F(1, 207)=39.92, p<.01, predicting 16% of the variance. Therefore, psychopathy is statistically predicted by histrionism (β= .40, p<.01).

Table 4

Linear regression results between histrionism and adult children's personality traits and emotional regulation strategies

Independent variable	Dependent variable	β	R²
Mother histrionism	Agreeableness	-.23**	.05
	Conscientiousness	-.24**	.06
	Narcissism	.18*	.03
	Psychopathy	.40**	.16
	Non-acceptance	.26**	.07
	Impulses	.19**	.04
	Goals	.18*	.03

* p < .05; ** p < .01

Histrionism was entered as a predictor for non-acceptance of emotional responses. Regarding the prediction of non-acceptance of emotional responses, the model is statistically significant F(1, 207)=15.22, p<.01, predicting 7% of the variance. Therefore, non-acceptance of emotional responses is statistically predicted by histrionism (β= .26,

p<.01). Histrionism was entered as a predictor for impulse control difficulties. With respect to the prediction of impulse control difficulties, the model is statistically significant F(1, 207)=7.582, p<.01, predicting 4% of the variance. Therefore, impulse control difficulties are statistically predicted by histrionism (β= .19, p<.01). Histrionism was entered as a

4. DISCUSSIONS

The current research investigated the influence of histrionic traits in mothers on the personality development and emotional reactions of their children. Thus, it aimed to identify the specific characteristics associated with histrionic traits in mothers and how these behaviors may affect children by modeling exaggerated emotional behaviors and influencing the formation of different aspects of their personality. The study started from the hypothesis that although previous research has summarized the traits of a person with histrionic personality disorder, very little of it has focused on the link between histrionic traits in mothers and their influence on children's personality and emotional reactions.

Because mothers with histrionic traits display a lack of emotional stability and emotional depth. The child grows up in an atmosphere of emotional instability, which leads to difficulties in developing a sense of security and self-confidence (Laulik et al., 2013). These difficulties may foster the emergence of narcissistic traits, such as the need for constant validation and lack of empathy. Mothers with histrionic traits also grant the child an apparent trustworthiness that is accompanied by a hidden, disrespectful motivation aimed at forcibly obtaining the desired care and affection from the child (Sperry, 2016). Constant exposure to such behaviors teaches the child that manipulation and deception are acceptable ways to interact with others. As a result, the hypotheses that there is a significantly positive relationship between maternal histrionics and the adult child's psychopathy and narcissism are accepted.

Regarding emotional regulation difficulties, a relationship between maternal histrionic traits and emotional regulation difficulties has been observed. Mothers with histrionic traits, characterized by high energy and emotional reactivity (Sperry, 2016), can negatively affect the child's emotional regulation through the unstable emotional atmosphere created, lack of consistency in discipline, and lack of adequate emotional support. Mothers' emotional unpredictability and unavailability can cause confusion and anxiety in children, impairing their ability to control their own impulses and leading to maladaptive behaviors and difficulty in assuming goal-directed behaviors

predictor for difficulties engaging in goal-directed behaviors. Regarding the prediction of difficulties in engaging in goal-directed behaviors, the model is statistically significant F(1, 207)=6.615, p<.01, predicting 3% of the variance. Therefore, difficulties engaging in goal-directed behaviors are statistically predicted by histrionism (β= .18, p<.01).
(Cole et al., 1994). Therefore, the hypotheses that there is a significantly positive relationship between maternal histrionic traits and nonacceptance of emotional responses, impulse control difficulties, and difficulties engaging in goal-directed behaviors in the adult child are accepted.

The findings of our study fit very well with other research. According to Kochanska et al. (1997) mothers' personality traits were significantly associated with their power-based and less nurturant parenting orientations and with important consequences for children's development. Maternal negative emotionality has been linked to harmful consequences for children, such as anxiety, anger, deviance, behavior problems, and insecure attachment (Kochanska, 1997). Mothers with high levels of negative emotionality, associated with excessive self-focus, may hinder their ability to engage in responsive parenting (Dix, 1991), consequently affecting emotional development in children. Furthermore, in contrast to the previous findings of Xing et al. (2018), where children's neuroticism, extraversion, and openness to experience were directly related to maternal traits, Prinzie et al. (2004), similar to our study, showed a negative association between maternal traits and their children's agreeableness and conscientiousness. Children with low conscientiousness scores who experienced authoritative maternal behaviour exhibited increased levels of externalizing behaviour: aggressiveness towards others, rule-breaking behaviors, impulsivity, hyperactivity (Prinzie et al., 2004).

Theoretical and practical implications

The present study contributes to a new and deeper understanding of how maternal histrionic traits can shape the psychological functioning of adult children in terms of personality and emotional reactions. By investigating the role of maternal traits within a theoretical framework of personality development, the study provides a sound theoretical basis for understanding the mechanisms underlying the observed effects. The present study also provides essential information for professionals in the field in developing appropriate psychoeducational and counseling programs to support children from families with parents who display histrionic traits, emphasizing the importance of identifying and addressing

maternal histrionic traits in interventions aimed at promoting healthy child psychological development and harmonious parent-child relationships.

Limitations

Establishing a causal relationship between maternal histrionic traits and children's personality and emotional reactions is difficult. The mere observation of a correlation does not indicate causality, as various factors such as genetic predisposition, environmental influences and parenting may influence outcomes. Also, socioeconomic status and the difference between the number of female (81.8%) and male (18.2%) participants could influence the relationships, limiting the generalizability of the findings to adult children.

Future directions

To address these limitations and to bridge the scientific gap, it is essential to engage in interdisciplinary collaboration, use sound research methodologies and continue studies on this topic, understanding more precisely the complex interactions between parental characteristics and child development. It is also recommended to form a sample of participants equally distributed in terms of gender in order to remove any uncertainty about the veracity of the responses.

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Learning how to Learn may Help Children Have a Better Self-Perception

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ABSTRACT

The present study aims to investigate the differences in primary school students' perception of teachers' teaching methods, as well as their self-perception, as a result of their participation in a teaching program based on the principles of learning how to learn program. A number of 68 primary school students, aged between 7 and 9, M = 8.12, SD = .47, of which 38 were boys and 30 were girls, participated in the study. Initially, teachers attended a professional training course to acquire these techniques and strategies. After completing the course, the teachers applied the acquired knowledge with students during three school modules, respectively from January to June 2024. At the beginning and at the end of this period, the students were tested in terms of self-perception but also the extent to which their teachers adopt constructive learning strategies in the classroom (L2L specific). The results showed that teachers' teaching strategies, perceived by the students, improved significantly from the pretest to the posttest, as well as students' self-perception in the areas of school competence, social competence, athletic competence, conduct and self-esteem. Possible relationships between teachers' teaching strategies and approaches to learning on the one hand and students' self-perception on the other were discussed.

Keywords: learning how to learn, self-perception, primary school

1. INTRODUCTION

Self-perception

Self-perception is a psychological construct that reflects the judgment of people about their own abilities to mobilize resources in order to achieve a particular goal. These perceived competencies constitute indicators of the self, especially in childhood, when children make judgments about themselves based on the abilities they believe they possess (Harter, 1988, 2012). Harter (2012) proposes a concept of the self in terms of attributes and characteristics that individuals recognize and verbalize, which change as they mature and experience more successes and failures.

From this perspective, self-perception constitutes an important parameter that helps to understand the development of self-concept in childhood. This self-judgment is a mediator for children's success because when they experience success in the actions they undertake, they tend to perceive themselves as more competent and more motivated to continue and persevere, which generates an uninterrupted cycle of action and engagement with the purpose of improving performance. This circle can strengthen the development of other psychological constructs, such as autonomy, self-confidence or self-esteem. Moreover, a sense of competence enhances children's intrinsic motivation to engage in challenging activities, to persist in schoolwork, and to become good at what they do. On the other hand, when children have negative perceptions of their competence, they tend to avoid challenges and protect themselves from situations that may cause embarrassment by avoiding actions in which they cannot perform (Harter, 1990a,b).

There are a number of factors that determine the development and strengthening of self-perception. Among the external factors are parents, teachers, close friends and colleagues, they contribute to building the self-evaluation mechanism. This mechanism determines the construction of the self-concept and depends on the value and importance that children attribute to external agents. Internal factors include the child's developmental stage, motivational orientations, affective reactions to the results obtained, and persistence in difficult situations. Younger children (2 – 4 years) tend to have less realistic perceptions and often overestimate their abilities. In general, they have insufficient experience to make appropriate judgments and fail to distinguish between what they want to be (idealized self-concept) and what they really are (real self). They base their judgments of their own abilities on their success in

performing certain tasks or on feedback received from adults (Amorose et al., 2005; Weiss & Amorose, 2005).

As children get older, they begin to develop a system of performance criteria that can be used in a variety of circumstances. They begin to prioritize comparison with their peers to enhance self-evaluation and tend to make much more realistic judgments about their performance in different domains (Amorose et al., 2005; Harter, 2012). Children's perceptions are affected by various external variables, and childhood experiences are culturally influenced. Children of the same age may have different cognitive abilities, which affect how they judge their own abilities. For example, there are studies that show that there are gender differences in terms of the perception of competences or age differences (Nobre et al., 2015; Valentini, 2002; Villwock & Valentini, 2007).

Understanding the concept of self-perceived competence and how self-judgment changes in childhood, as well as identifying the factors associated with this concept, is an important step in supporting the healthy development of children. Understanding this construct can guide parents, teachers, or other professionals in developing educational or parenting strategies to help children build an accurate and positive self-image in different areas of life. Educating adults can provide children with learning experiences that enhance children's self-determination and enjoyment of achievement, thereby allowing realistic perceptions of their own competencies.

Around the age of 8-10, children describe their competences based on comparisons of their own abilities with those of others, this mechanism becoming very relevant for self-evaluation. This social comparison that previously served only to adapt behavior now has the purpose of contributing to the construction of self-perception. Thus, the opinions and values of those around (especially significant people) are internalized by the child to a greater or lesser degree, they guide the children's options, the choices they make and the development itself.

External agents, especially peers, provide parameters that are built into the structure of the self-evaluation mechanism, maintained by feedback from these agents about children's performance in certain tasks or experiences (Harter, 2012). This mechanism influences the development of self-concept and depends on the value and importance that children attribute to external agents and the characteristics of the context in which the child actively participates.

Children in the primary school acquire the ability to associate sets of representations and to understand that they

can be good in some areas and less good in others. This age-specific acquisition allows children to make more realistic and possibly more negative judgments about their attributes compared to earlier ages. Because at this age children's abilities develop significantly, they will understand that they can have both positive and negative attributes, thus being able to make more accurate and realistic judgments. Also, the use of social comparison for self-evaluation becomes more mature and implicitly more competent. At the same time, the ability to differentiate between actual and desired self-perception, to understand what people think about them and to put oneself in the place of others also contribute to a clearer self-perception (Harter, 1990, 2012).

Another characteristic of 8-10-year-old children is that they are able to distinguish between the concept of competence (the ability to successfully complete a task) and the concept of effort (the energy required to achieve mastery), to establish relationships between their perceptions and the difficulty of the task and of adjusting one's self-perceptions according to lived experiences (Harter, 1990, 2012).

Self-perception and learning

The self-perception of primary school students develops mainly within the school because school represents the place where most experiences take place, numerous factors such as success or failure intervene, social relationships or social roles are built, all of which influence the formation of self-concept (Galindo-Dominguez, 2019). How students learn, how learning experiences are produced, and teachers' teaching strategies can make a major contribution to the development of students' self-concept. The development of scholastic skills goes hand in hand with the development of self-image, as children become increasingly aware of the success or failure they experience in the classroom (Calsyn & Kenny, 1997).

Student achievement can facilitate the construction of a positive self-perception. In support of this idea, Aunola et al. (2002) showed that first graders with high reading skills report higher self-perceptions, while those with lower reading skills are at risk of developing a negative self-perception. In the same way, students who in primary grades have high school results, also report a higher self-concept. We can assume that the implementation of programs that help children learn how to learn can lead to an increase in their learning performance, but also to a positive self-perception, as children witness their own school progress and actively engage in learning.

The ability to "learn how to learn" is grounded in metacognition, or the understanding and control of one's own cognitive processes. Studies have shown that when young learners are taught to use strategies like self-questioning, summarizing, and goal setting, they gain confidence in their learning processes and become more effective learners (Paris & Winograd, 1990). These skills are particularly useful in primary education, where students are still developing foundational skills in literacy and numeracy. Teaching students metacognitive strategies early helps build the foundation for skills that will benefit them throughout their academic journey and beyond.

Incorporating metacognitive instruction can also help reduce anxiety around learning, especially in students with learning disabilities or attention disorders. Metacognitive techniques such as self-monitoring, self-questioning, and regulating attention help these students feel more in control and capable of managing their learning, making the overall classroom experience more equitable and inclusive (Torgesen et al., 2001).

Learning how to learn means looking for effective ways to retain information and integrate it into the system of knowledge already held, to persevere in learning and to find the best strategies for organizing knowledge, using personal cognitive abilities to the highest possible level. Every student has the ability to develop and use insights to improve how they approach learning. Learnimg how to learn is not a fixed trait, but rather a skill that develops and improves over time. By understanding how learning occurs and applying effective learning strategies, the process of acquiring and understanding knowledge becomes easier.

For a student to learn, he must first know how to learn, and then he must build a positive mindset so that he can face the barriers and obstacles encountered and become persistent in learning. It is important that students learn how to learn from the first years of school in order to cope with the increasing demands of schoolwork, but also to learn effectively and acquire the skills, abilities and capabilities needed in personal, school and professional life .

Dr. Terrence Sejnowski (Francis Crick Professor at The Salk Institute for Biological Studies) and dr. Barbara Oakley (University of California, San Diego) suggests that one of the most appropriate methods of effective learning must include the following elements: shifting attention from the diffuse mode to the focused mode, dividing the contents to be learned (chunking), summarizing, recalling and verification.

1. Diffuse and focused mode. During the learning process, students have moments of focused attention and moments of unfocused (diffuse) attention. These moments must

be speculated to the maximum. In both classroom and independent learning, it is advisable that students alternate between the two modes of attention and allocate time for them to take place in accordance with their level of development and the contents to be learned. The most important rule is that the students should be drawn into the focused mode, in which they can actually assimilate information, and then into the diffuse mode to take a break. These breaks must be regular, having the role of "sedimenting" the accumulated information and preventing boredom or fatigue.

2. Chunking. Concepts to be learned must be broken down into smaller concepts so that the knowledge gained builds up like pieces of a puzzle. The student must be informed about the overall picture of the subject being taught and about the modules or chapters of which it is made up.

3. Summarising. In order to fix the information, time should be allocated for extracting the main ideas from the contents taught. Often there is what is called the illusion of learning, more precisely the student's feeling that he has understood and can use the information, but in reality he has very little knowledge in that area. In order for the information to settle deeply, the summarizing process is necessary, during which the key elements of the contents are extracted and possibly noted down.

4. Recalling. It is recommended that students are given time to reflect on what they have learned and recap main ideas. Thus, information will be transferred from short-term memory to long-term memory. Recalling in other contexts can also contribute to deeper learning, thereby transferring the learned concept to another domain and "liberating" it from the context in which it was learned.

5. Testing. It is recommended to check students with mini-tests often enough so that they stay connected with the information and can refresh it, thus solidifying the learning. The purpose of testing or verification is to ensure that the information has been successfully acquired and can be used in the long term.

Based on the principle of switching attention from focused mode to diffuse mode, students benefit from special teaching methods, paying special attention to attention span. First, the teacher immerses the students in the content of the lesson and tries to keep their attention focused by conveying interesting information accompanied by images or videos. As much as possible, external stimuli should be reduced (noises, movements, parallel activities). When the teacher notices that the students' attention is waning, he suggests a break for them

to reflect on what they have learned and to play a game or do a relaxation exercise.

Based on the principle of chunking, the teacher divides the main topics into smaller subtopics and divides them into chunks that are easy for students to approach. At the end of each module, students are asked to provide real-life examples related to the information conveyed in the lesson. Discussions are encouraged, even adversarial ones, the main idea being that students digest the new information and find its applicability in their life context. After the teacher is sure that most of the students are participating in these debates, he will move on to the next module.

Based on the principle of summarizing, after teaching a module, the teacher will ask the students to extract the main ideas, possibly writing them down in notebooks or underlining them with colored pencils. Again there will be discussions between the students and the teacher on the topic of formulating these main ideas. The teacher can propose short games to facilitate the memorization of the main ideas of the lesson or ask the students to compose a rhythmic song in which they use the ideas.

Based on the principle of recalling, the teacher can ask the students to form small groups in which to debate the contents taught, to make drawings that explain these contents, but also their connection with the previous contents of the respective subject. The children can choose a spokesperson for the group, who will present the conclusions they have reached and associate them with the conclusions of the other groups of students. In addition, they can introduce newly learned concepts into other areas of interest, make connections with other disciplines or areas of everyday life.

Based on the principle of verification, the teacher provides feedback to students, possibly asking students to provide feedback to each other based on previously established criteria. Where appropriate, the teacher intervenes to maintain a warm and equal atmosphere where each child is listened to. The techniques and strategies specific to these five principles are applied concurrently, depending on the specifics of the subject, but frequently enough that children acquire learning skills that will be useful to them in the future. In this way, children will learn to think critically, to reflect on what they have learned, to choose what is essential from the lessons taught and to make their learning more efficient. It is possible that through these strategies, students will no longer perceive learning as a tiring act, but as a pleasant and interesting activity that will not only broaden their horizons, but also increase their enjoyment of school. Moreover, by approaching such methods, the feeling of

belonging to the group will be improved, the children being permanently connected within the activities, each of them having roles not only in the act of learning, but also in the act of teaching.

Thus, it is possible for them to understand that they are active participants in the act of teaching-learning, which has the potential to increase their self-confidence and therefore self-perception. They will have the opportunity to demonstrate their skills in a non-conflictual and non-judgmental environment, which is likely to lead to building a positive and healthy self-perception.

The present study

In the present study, teachers implemented a program called L2L to teach children how to learn by adopting a range of techniques and strategies to facilitate learning. Initially, teachers attended a professional training course to acquire these techniques and strategies. After completing the course, the

2. METHOD

Participants

A number of 68 primary school students, aged between 7 and 9, M = 8.12, SD = .47, of which 38 were boys and 30 were girls, participated in the study. Sampling was a convenience one. Each teacher asked students and parents for their consent to participate in this study, but out of a total of 288 students, only 68 gave their consent (24%). All 288 students benefited from the L2L program, which was implemented during three school modules in several primary classes in three schools. However, participating in the study consisted of completing some questionnaires regarding the teachers' teaching style and the children's self-perception. In the present study, only the responses of students whose parents agreed to complete these questionnaires were analyzed.

Design and procedure

The L2L program took place between January and June 2024. In January, the initial testing of the children took place (pretest), the implementation of the program (teaching based on L2L principles) took place over three school modules (January 8 - February 23, 2024; March 4 – April 26, 2024; May 8 – June 19, 2024), and at the end of June the final test (posttest) took place.

The L2L program aimed to implement some principles to help students learn how to learn, namely: 1. The principle of focused mode and the diffuse mode - the students switch their

teachers applied the acquired knowledge in their classes of students during three school modules, respectively from January to June 2024. At the beginning and at the end of this period, the students were tested in terms of self-perception but also the extent to which their teachers adopt constructive learning strategies in the classroom (L2L specific).

Taking into account the links between learning and self-perception, we aim to verify whether after the implementation of the L2L program students notice an improvement in teachers' practices regarding teaching according to L2L principles, but also whether significant changes have occurred in students' self-perception. The following hypotheses were thus established:

H1. *Students' perception of teachers' teaching methods will improve after their participation in the L2L program*.

H2. *Students' self-perception will improve after their participation in the L2L program*.

attention from the focused mode to the diffuse (unfocused) mode, teachers finding the appropriate means to attract their attention (for example, using multiple ways of materials presentation: auditory, visual), after the first ten minutes of teaching, stopping and signaling to the students an external element that would distract them from the taught contents, after five minutes of teaching break, resuming the teaching of the contents, ensuring that each student is ready to focus again; 2. The principle of chunking - at the beginning of the lesson, the teacher presents an overview of the content to be learned and establishes the future objectives, topics or modules that will pe taught. The children will have the big picture and will better understand the steps they have to take along time. They will receive small pieces of information which will be easier to deal to. Also, every lesson should start with teacher ensuring that students have knowledge of previous lessons so that the new information is attached to the already known information, providing concrete examples about the contents/concepts taught; 3. The principle of summarizing - after teaching a fragment of the content to be learned, the teacher invites the students to extract and wite down the main idea or the key words or a short composition of the main ideas extracted from the whole lesson. Teachers provide students opportunities to practice or talk about the contents learned immediately after they have been taught, relating the main ideas of the lesson in other contexts where appropriate (e.g. discussions about rain in the Language and Communication class, but also in the Natural Sciences class); 4. The principle of recalling – after teaching a

new lesson, the teacher spend a few minutes to recall the previous lessons, ensuring that each student actively participates in the lesson by asking short questions about the concepts taught. He will help students to recall the main ideas of the lesson every, ensuring that each student has understood the new concepts taught, to take the newly taught concept and transfer it to another domain (eg commutativity of addition in math with commutativity of players on a sports field); 5. The principle of verification – testing students weekly to check their level of knowledge of the contents taught that week, providing real-life examples and inviting them to associate them with the contents taught, inviting students to bring real-life examples and discuss them, encouraging students to work in small groups (Harter, 2012) and cooperate in order to explain the new concepts, providing constructive feedback after each answer.

The study has a quasi-experimental design with two measurements, pretest and posttest. The data were organized and analyzed using Jamovi (The jamovi project, 2022).

Instruments

Children's perception of teaching methods according to L2L principles was measured with the L2L Questionnaire for Students, developed by us especially for this study. The instrument comprises 15 items relating to the techniques and strategies adopted by teachers to teach students how to learn in the classroom, three items for each of the five principles.

3. RESULTS

Descriptive statistics

Answers are given on a five-point Likert scale, where 1 – not at all or very rarely, 2 – rarely, 3 – appropriate, 4 – often, 5 – very often or always. Examples of items: "Our teacher finds solutions to attract the students' attention (for example, shows boards or videos in class)", "Our teacher, at the beginning of the lesson, presents the subject of the lesson to the students", "Our teacher repeats the main ideas of the lesson also in other classes, where they fit (for example, he tells us about the rain in the Language and Communication class, but also in the Natural Sciences class)". Scores can range from 3 to 15 for each principle, with higher scores indicating greater use of L2L principles.

Self-perception was measured with the Self-Perception Profile for Children (Harter, 2012). The instrument includes 36 items, six for each of the six dimensions of self-perception, namely school competence, social competence, athletic competence, physical appearance, conduct and global self-esteem. Responses are given on a four-point Likert scale from 1 to 4, with participants first asked to select the "category" they identify with and then the degree of identification. Example item: "Some children behave very nicely, while other children do not behave very nicely." The child first chooses the category with which they identify (those who behave nicely or those who do not behave nicely), then determines the extent to which they identify (much like me or moderately like me). Scores can range from 6 to 24 for each dimension, with high scores reflecting a high level of that competency.

Means, standard deviation, Cronbach Alpha coefficients, skewness and kurtosis for analyzed variables are presented in Table 1 (pretest) and Table 2 (posttest). The correlations among analyzed variables are presented in Table 3 (pretest) and Table 4 (posttest).

Table 1
Means, standard deviations, Cronbach Alpha coefficients, skewness, kurtosis pretest

	M	SD	α	Skewness	Kurtosis
PMCDpre	13.72	1.13	.68	-1.21	1.61
PDCIpre	10.97	1.75	.65	-.91	2.83
PSUMpre	10.12	1.87	,70	.34	.72
PRECpre	13.32	1.67	,62	-1.17	1.96
PVERpre	11.87	3.02	.71	-.76	-.23
COSCpre	19.53	2.67	.81	-.42	-.30
COSOpre	17.82	2.84	.84	-.76	.40
COATpre	17.57	3.40	.87	-.30	-.19
ASFIpre	20.41	3.43	.87	-.75	-.31
CONDpre	18.68	2.58	.78	-.20	.33
STSIpre	21.18	2.93	.76	-1.08	.68

Note: PMCDpre – principle of switching attention from focused to diffuse mode pretest, PDCIpre – principle of chunking pretest, PSUMpre – principle of summarizing pretest, PRECpre – principle of recalling pretest, PVERpre – principle of verification pretest, COSCpre – school competence pretest, COSOpre – social competence pretest, COATpre – athletic competence pretest, ASFIpre – physical appearance pretest, CONDpre – conduct pretest, STSIpre –self-esteem pretest

Table 2
Means, standard deviations, Cronbach Alpha coefficients, skewness, kurtosis posttest

	M	SD	α	Skewness	Kurtosis
PMCDpost	14.06	.84	.64	-1.03	1.76
PDCIpost	12.35	1.16	.66	.16	-.33
PSUMpost	12.51	1.03	.65	.09	-.07
PRECpost	13.81	1.08	.71	-.77	.75
PVERpost	13.15	1.68	.70	-.49	-.71
COSCpost	20.88	1.96	.82	.03	-1.20
COSOpost	19.74	1.64	.82	-.55	.59
COATpost	17.94	2.99	.86	.03	-.74
ASFIpost	20.44	3.21	.87	-.79	.11
CONDpost	19.78	2.14	.79	.14	-.52
STSIpost	21.59	2.27	.76	-.77	.30

Note: PMCDpost – principle of switching attention from focused to diffuse mode posttest, PDCIpost – principle of chunking posttest, PSUMpost – principle of summarizing posttest, PRECpost – principle of rrecalling posttest, PVERpost – principle of verification posttest, COSCpost – school competence posttest, COSOpost – social competence posttest, COATpost – athletic competence posttest, ASFIpost – physical appearance posttest, CONDpost – conduct posttest, STSIpost – self-esteem posttest

Table 3
The correlations among variables pretest

	1	2	3	4	5	6	7	8	9	10	11
PMCDpre	1										
PDCIpre	.17	1									
PSUMpre	.02	-.14	1								
PRECpre	.24*	.07	.08	1							
PVERpre	-.15	.21	.09	-.28*	1						
COSCpre	.24*	.07	-.06	.27*	-.32**	1					
COSOpre	.25*	.08	-.01	.33**	-.19	.51**	1				
COATpre	.18	.09	-.09	.18	-.23	.55**	.32**	1			
ASFIpre	.25*	.14	.13	.10	-.11	.55**	.38**	.29*	1		
CONDpre	.19	.14	.06	.16	.10	.31**	.28*	.26*	.36**	1	
STSIpre	.11	.17	.03	.22	-.06	.47**	.52**	.29*	.60**	.32**	1

Note: **. p < .01. *. p < .05
1. PMCDpre – principle of switching attention from focused to diffuse mode pretest, 2. PDCIpre – principle of chunking pretest, 3. PSUMpre – principle of summarizing pretest, 4. PRECpre – principle of recalling pretest, 5. PVERpre – principle of verification pretest, 6. COSCpre – school competence pretest, 7. COSOpre – social competence pretest, 8. COATpre – athletic competence pretest, 9. ASFIpre – physical appearance pretest, 10. CONDpre – conduct pretest, 11. STSIpre –self-esteem pretest

Table 4
The correlations among variables posttest

	1	2	3	4	5	6	7	8	9	10	11
PMCDpost	1										
PDCIpost	.24*	1									
PSUMpost	.10	.20	1								
PRECpost	.31*	.11	.08	1							
PVERpost	-.03	.03	.11	-.12	1						
COSCpost	.24*	.12	-.07	.12	-.11	1					
COSOpost	-.01	.07	-.12	.14	-.05	.22	1				
COATpost	.16	.22	-.05	.00	-.09	.43**	.05	1			
ASFIpost	.14	.27*	.00	-.03	.07	.41**	.21	.22	1		
CONDpost	.16	.21	-.03	-.04	.01	.26*	-.01	.19	.31*	1	
STSIpost	.04	.16	.07	.12	.01	.39**	.34**	.31*	.47**	.16	1

Note: **. p < .01. *. p < .05
1. PMCDpost – principle of switching attention from focused to diffuse mode posttest, 2. PDCIpost – principle of chunking posttest, 3. PSUMpost – principle of summarizing posttest, 4. PRECpost – principle of recalling posttest, 5. PVERpost – principle of verification posttest, 6. COSCpost – school competence posttest, 7. COSOpost – social competence posttest, 8. COATpost – athletic competence posttest, 9. ASFIpost – physical appearance posttest, 10. CONDpost – conduct posttest, 11. STSIpost – self-esteem posttest

Hypotheses testing

H1. *Students' perception of teachers' teaching methods will improve after their participation in the L2L program.*

To test this hypothesis, a paired samples t-test was performed.

Table 5

Mean scores pretest and posttest for students' perception of teachers' teaching methods

	N	M	SD	SE
PMCDpre	68	13.72	1.13	.14
PMCDpost	68	14.06	.84	.10
PDCIpre	68	10.97	1.75	.21
PDCIpost	68	12.35	1.16	.14
PSUMpre	68	10.12	1.87	.23
PSUMpost	68	12.51	1.03	.12
PRECpre	68	13.32	1.67	.20
PRECpost	68	13.81	1.08	.13
PVERpre	68	11.87	3.02	.37
PVERpost	68	13.15	1.68	.20

Note: PMCDpre – principle of switching attention from focused to diffuse mode pretest, PDCIpre – principle of chunking pretest, PSUMpre – principle of summarizing pretest, PRECpre – principle of recalling pretest, PVERpre – principle of verification pretest, PMCDpost – principle of switching attention from focused to diffuse mode posttest, PDCIpost – principle of chunking posttest, PSUMpost – principle of summarizing posttest, PRECpost – principle of recalling posttest, PVERpost – principle of verification posttest

Table 6

Paired sample t-test for students' perception of teachers' teaching methods

		t	df	p	MD	SE	CI95% Lower	CI95% Upper	d
PMCDpre	PMCDpost	-3.74	67.00	.001	-.34	.09	-.52	-.16	-.45
PDCIpre	PDCIpost	-7.57	67.00	.001	-1.38	.18	-1.75	-1.02	-.92
PSUMpre	PSUMpost	-15.55	67.00	.001	-2.40	.15	-2.70	-2.09	-1.89
PRECpre	PRECpost	-3.78	67.00	.001	-.49	.13	-.74	-.23	-.46
PVERpre	PVERpost	-4.92	67.00	.001	-1.28	.26	-1.80	-.76	-.60

Note: PMCDpre – principle of switching attention from focused to diffuse mode pretest, PDCIpre – principle of chunking pretest, PSUMpre – principle of summarizing pretest, PRECpre – principle of recalling pretest, PVERpre – principle of verification pretest, PMCDpost – principle of switching attention from focused to diffuse mode posttest, PDCIpost – principle of chunking posttest, PSUMpost – principle of summarizing posttest, PRECpost – principle of recalling posttest, PVERpost – principle of verification posttest

There are significant differences in all dimensions of L2L principles as perceived by students before and after participating in the L2L program. Thus, for the principle of switching attention from focused to diffuse mode, the pretest score was M = 13.72, SD = 1.13 compared to the posttest M = 14.06, SD = .84, the difference being significant, t(67) = -3.74, DM = -.34, CI95%(-.52, -.16), p < .01, the effect size being d = -.45. For the principle of chunking, the pretest score was M = 10.97, SD = 1.75 compared to the posttest M = 12.35, SD = 1.16, the difference being significant, t(67) = -7.57, DM = -1.38, CI95%(- 1.75, -1.02), p < .01, the effect size being d = -.92. For

the principle of summarization, the pretest score was M = 10.12, SD = 1.87 compared to the posttest M = 12.51, SD = 1.03, the difference being significant, t(67) = -15.55, DM = -2.40, CI95%(-2.70, - 2.09), p < .01, the effect size being d = -1.89. For the principle of recalling, the pretest score was M = 13.32, SD = 1.67 compared to the posttest M = 13.81, SD = 1.08, the difference being significant, t(67) = -3.78, DM = -.49, CI95%(-.74 , -.23), p < .01, the effect size being d = -.46. For the principle of verification, the pretest score was M = 11.87, SD = 3.02 compared to the posttest M = 13.15, SD = 1.68, the difference

being significant, t(67) = -4.92, DM = -1.28, CI95%(-1.80, - .76), p < .01, the effect size being d = -.60.

H2. *Students' self-perception will improve after their participation in the L2L program.*

To test this hypothesis, a paired samples t-test was performed.

Table 7
Mean scores pretest and posttest for students' self-perception

	N	M	SD	SE
COSCpre	68	19.53	2.67	.32
COSCpost	68	20.88	1.96	.24
COSOpre	68	17.82	2.84	.34
COSOpost	68	19.74	1.64	.20
COATpre	68	17.57	3.40	.41
COATpost	68	17.94	2.99	.36
ASFIpre	68	20.41	3.43	.42
ASFIpost	68	20.44	3.21	.39
CONDpre	68	18.68	2.58	.31
CONDpost	68	19.78	2.14	.26
STSIpre	68	21.18	2.93	.35
STSIpost	68	21.59	2.27	.27

Note: COSCpre – school competence pretest, COSOpre – social competence pretest, COATpre – athletic competence pretest, ASFIpre – physical appearance pretest, CONDpre – conduct pretest, STSIpre –self-esteem pretest, COSCpost – school competence posttest, COSOpost – social competence posttest, COATpost – athletic competence posttest, ASFIpost – physical appearance posttest, CONDpost – conduct posttest, STSIpost – self-esteem posttest

Table 8
Paired sample t-test for students' self-perception

		t	df	p	MD	SE	CI95% Lower	CI95% Upper	d
COSCpre	COSCpost	-7.90	67.00	.001	-1.35	.17	-1.69	-1.01	-.96
COSOpre	COSOpost	-7.51	67.00	.001	-1.91	.25	-2.42	-1.40	-.91
COATpre	COATpost	-3.26	67.00	.01	-.37	.11	-.59	-.14	-.40
ASFIpre	ASFIpost	-.30	67.00	.77	-.03	.10	-.23	.17	-.04
CONDpre	CONDpost	-5.74	67.00	.001	-1.10	.19	-1.49	-.72	-.70
STSIpre	STSIpost	-3.02	67.00	.01	-.41	.14	-.68	-.14	-.37

Note: COSCpre – school competence pretest, COSOpre – social competence pretest, COATpre – athletic competence pretest, ASFIpre – physical appearance pretest, CONDpre – conduct pretest, STSIpre –self-esteem pretest, COSCpost – school competence posttest, COSOpost – social competence posttest, COATpost – athletic competence posttest, ASFIpost – physical appearance posttest, CONDpost – conduct posttest, STSIpost – self-esteem posttest

There are significant differences in most of teh students' self-perception dimensions before and after participating in the L2L program. Thus, for school competence, the pretest score was M = 19.53, SD = 2.67 compared to the posttest M = 20.88, SD = 1.96, the difference being significant, t(67) = -7.90, DM = -1.35, CI95%(-1.69 , -1.01), p < .01, the effect size being d = -.96. For social competence, the pretest score was M = 17.82, SD = 2.84 compared to the posttest M = 19.74, SD = 1.64, the difference being significant, t(67) = -7.51, DM = -1.91, CI95%(-2.42, - 1.40), p < .01, the effect size being

d = -.91. For athletic competence, the pretest score was M = 17.57, SD = 3.40 compared to the posttest M = 17.94, SD = 2.99, the difference being significant, t(67) = -3.26, DM = -.37, CI95%(-.59 , -.14), p < .05, the effect size being d = -.40. For physical appearance, the pretest score was M = 20.41, SD = 3.43 compared to the posttest M = 20.44, SD = 3.21, the difference being significant, t(67) = -.30, DM = -.03, CI95%(- .23, .17), p = .77, the effect size being d = -.04. For conduct, the pretest score was M = 18.68, SD = 2.58 compared to the posttest M = 19.78, SD = 2.14, the difference being significant,

t(67) = -5.74, DM = -1.10, CI95%(-1.49, -. 72), p < .01, the effect size being d = -.70. For self-esteem, the pretest score was M = 21.18, SD = 2.93 compared to the posttest M = 21.59, SD = 2.27, the difference being significant, t(67) = -3.02, DM = -.41, CI95%(-. 68, -.14), p < .05, the effect size being d = -.37.

4. DISCUSSIONS

The results show not only that the students notice the improvement in the quality of teaching and the teacher's style of approaching lessons and classroom learning activities, but also an increase in self-perception as a result of students' participation in the L2L program.

In terms of implementation of L2L principles, students perceive significant changes in teachers' teaching style associated with all five principles. Teachers help them to a greater extent to alternate focused mode with diffuse mode during teaching activities, add additional visual elements, help students to extract the main ideas from learned concepts, play games to strenghten the assimilation of new information, and check the level of knowledge acquired by students with a higher frequency.

In terms of self-perception, excepting physical appearance, all perceived competences have improved following students' participation in L2L program. The results can be attributed to the fact that teachers adopt strategies that empower students, give them some control in the teaching-learning process, are more concerned with their learning needs, and use multiple ways of presentation of lesson contents. All these techniques and strategies contribute to increasing students' understanding and clarifying issues related to learning how to learn, which can increase their confidence in their own abilities. Thus, the important role of the relationship with the teacher and the climate created in the classroom, as well as the teaching methods and strategies, evaluation and feedback practices, were emphasized. During the L2L program, teachers managed to create an atmosphere that removed individual competition and negative social comparison, emphasizing team competition and comparing students' results with their previous results, thus individual progress. Students were given the opportunity to experience success regardless of their ability level and to have accomplishments that bring them personal satisfaction, which contributes to increased self-perception (Bong & Skaalvik, 2003). In addition to creating a climate of harmony and collaboration in the students' class, the teachers tried to focus on the students' learning needs, adapting the tasks and activities so as to cover these needs and match the students' zone of proximal development. Through the techniques applied to teach children how to learn, teachers have therefore also contributed to improving the perception of students' competences in many areas.

When students are encouraged to explore the environment, to contribute to teaching activities, work in teams, analyze new concepts and relate them to everyday life activities, receive and give feedback, they feel more competent not only in the school, but also in other areas of life. They gain self-confidence and the courage to research, find out, ask questions and demand answers in order to solve problems. All these actions can contribute to building a healthy self-perception, to better school adaptation and implicitly to achieving higher school performance.

Research by Hattie (2009) demonstrated that metacognitive strategies are among the most effective approaches for improving student achievement. By teaching primary school students techniques for planning, monitoring, and reviewing their work, educators can encourage a deeper level of engagement with learning material. When students learn how to plan and reflect, they develop a greater sense of control and confidence in their ability to succeed, which has a positive effect on academic performance and motivation.

Learning how to learn fosters self-regulation, which is a key predictor of academic success and personal development. Self-regulated learners set goals, monitor their progress, and adjust their strategies as needed (Zimmerman, 2002). Teaching self-regulation early in primary school prepares students to take responsibility for their learning and helps them become independent, proactive learners.

In a rapidly changing world, the ability to learn independently and adapt to new challenges is essential. Teaching LHTL strategies in primary school lays the groundwork for lifelong learning by equipping students with skills that they will use throughout their lives. Research has shown that individuals who practice metacognitive skills are better able to adapt to new situations, solve complex problems, and navigate a variety of learning environments (Brown, 1987). Dignath and Büttner (2008) conducted a meta-analysis on the impact of metacognitive training on primary school students and found that LHTL instruction had lasting effects, improving not only academic performance but also students' adaptability and

resilience in different learning situations. When students learn how to manage their own learning, they are better prepared for future educational and professional experiences, making LHTL a valuable component of primary education.

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The Mediating Role of Gender Stereotypes in the Relationship between Psychological Flexibility and Discrimination

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ABSTRACT

The aim of the present study is to analyze the relationships between psychological flexibility and discrimination, as well as the role of gender stereotypes within this relationship. The study was attended by 151 people aged between 18 and 49, M = 27.02, AS = 9.98, of which 56 men (37%) and 81 women (54%) and 14 people with different gender identity (9%). The instruments used were the Beliefs about Women Scale (BAWS) (Belk & Snell, 1986), the Agreeableness [A] Facets, Flexibility [A:Flex]) (Goldberg et al., 2006) and for analyzing the discrimination, a scale was developed, targeting four facets: sexism towards women, sexism towards men, homophobia and racism. The scale was developed in order to measure the specific cultural context of discrimination. The results show that psychological flexibility is a strong predictor for discrimination, presenting negative associations with sexism towards women, sexism towards men and racism, but not with homophobia. Gender stereotypes did not mediate the relationship between psychological flexibility and discrimination, with no semnificative effect on the relationship. The practical implications of the study were discussed, in terms of developing educational and social settings for improving psychological flexibility in order to decrease the attitudes of prejudice and to promote equality, diversity acceptance and interpersonal relationships based on tolerance.

Keywords: psychological flexibility, gender stereotypes, forms of discrimination

1. INTRODUCTION

This paper aims to explore the mediating role of gender stereotypes in the relationship between psychological flexibility and discrimination. Specifically, it examines how high or low levels of psychological flexibility relate to pro- or anti-diversity attitudes, and to what extent gender stereotypes contribute to the formation of negative prejudicial views.

Understanding the factors that lead to discriminatory attitudes can have critical implications for mitigating their negative effects, both on those targeted and on those exhibiting discrimination. By fostering greater cognitive flexibility, individuals can develop better adaptation strategies for challenging life situations and cultivate the resilience needed for personal growth and social change (Doorley et al., 2020).

In today's society, flexibility has become a valuable and essential trait, particularly in the context of navigating new and changing situations, as people need to develop adaptive responses (Vylobkova & Heintz, 2023). These economic, political, and social changes affect both personal and professional spheres, requiring individuals to respond effectively. This study will examine the extent to which an individual's cognitive processing style, conceptualized as psychological flexibility, influences their response to social changes, such as advances in gender equality and support for minority rights.

There is a need for an in-depth study of the factors that lead to discriminatory attitudes. Specifically, it is important to investigate which personality, cognitive, or emotional factors create a predisposition towards judgmental and intolerant attitudes. Additionally, the focus is on understanding the type of cognitive processing that occurs and individual differences in psychological flexibility to determine the causes of either acceptance or the risk of exclusion and violence.

The research aims to answer the question of how low levels of flexibility may lead to intolerance and rejection, and how high levels may promote acceptance and openness. To date, the relationship between these three variables has not been thoroughly explored in research, despite a significant body of studies examining the connection between cognitive flexibility and political attitudes, such as liberalism and prosocial behavior, as well as the impact of political attitudes on diversity acceptance and the role of gender stereotypes in shaping cognitive style.

In the existing literature, research has been conducted on political attitudes and cognitive style. Therefore, the objective of this study is to fill this gap by highlighting psychological flexibility as a predictor of discrimination.

Psychological Flexibility

The current state of knowledge lacks a common perspective on the definition of psychological flexibility, with several viewpoints proposed in research (Vylobkova & Heintz, 2023). To analyze the role of flexibility in the development of discriminatory attitudes, it is essential to examine the existing perspectives on this construct across multiple studies. Various conceptualizations have been proposed, exploring the term from both a cognitive perspective, as a thinking and reality-processing style, and as a dispositional trait. Recent efforts have been made to integrate these perspectives into a generally accepted definition (Zhang et al., 2020). This has been studied in the realms of social, political, cognitive, and personality research.

The present study aims to explore how psychological flexibility manifests in social behavior by observing its effect on multiple discrimination, using self-assessment questionnaires to provide an integrative approach to flexibility from the perspective of personality psychology.

Flexibility, facet of agreeableness, refers to the ability to adapt to new situations and an individual's way of coping with change. A person's reactions, especially in social settings, reveal their adaptability to new or unpredictable situations (Ashton et al., 2014). Agreeableness, as a dimension of the HEXACO model, involves caring, prosocial, and people-oriented attitudes and behaviors (Ashton et al., 2014). High scores indicate a tendency to forgive others, show empathy, offer help, make compromises, and cooperate, alongside strong emotional control and a high willingness to adapt one's behavior depending on the situation. In contrast, low levels predict stubborn behaviors and a predisposition for conflict (Ashton et al., 2014).

Over time, flexibility has become an essential trait in an individual's optimal development, given the constant changes in society (Ananiadoui et al., 2009; Lavy, 2020). Whether in career choices or personal life, flexibility provides the opportunity to be open to unexpected events and to adapt to the discomfort they may cause (Peiró, 2019). Vylobkova and Heintz (2023) propose researching psychological flexibility as a component of personality, focusing on its conceptualization as the ability to develop adaptive cognitions when faced with difficult feelings or emotions. This involves the capacity to experience a certain degree of discomfort that comes with encountering new information, which may contradict previously held beliefs. By

increasing psychological flexibility, people develop the resilience needed to cope with challenges in various areas of life. On the other hand, inflexibility can be associated with a heightened need for order, manifesting as high control and rigidity or a need for stability, often caused by excessive exposure to change (Vylobkova & Heintz, 2023).

Discrimination

Over time, discrimination in all its forms (e.g., racial, based on gender identity, disabilities, sexual orientation) has had significant negative effects on the quality of life of individuals from targeted groups (Hester et al., 2020). Belonging to a specific gender, sexual, or romantic identity, or to a particular ethnicity, are significant factors in the development of discriminatory attitudes both from outside and within the targeted communities. Discrimination often occurs intersectionally, as a reaction to multiple combined identities, which together increase the risk of vulnerability (Hester et al., 2020).

The term "multiple" or "intersectional discrimination" refers to the combination of multiple vulnerable identities that are at risk of being treated unfairly (Cea D'Ancona & Valles Martínez, 2021). Thus, when a person belongs to several groups simultaneously, each with a high likelihood of experiencing discrimination, they are at increased risk for multiple discrimination. For example, in the case of Black women, the risk of discrimination is higher, and the scale of this phenomenon requires a perspective that integrates both racism and sexism without treating them separately, as they often occur concurrently (Cea D'Ancona & Valles Martínez, 2021). In these cases, both "additive" discrimination, introduced by Beal (1970), and the concept of "multiple jeopardy," introduced by King (1988), which explains the perpetuation of inequality, are present.

Sexist attitudes towards women

Although most research has focused on understanding and predicting sexist behaviors, there is a need to conceptualize their effects on women (Croft et al., 2021). Regarding discrimination against women, it manifests in several forms of sexism: hostile, benevolent, and ambivalent sexism. The theory of ambivalent sexism highlights how the interdependence between men and women and power differentials are sustained by two ideologies: hostile sexism and benevolent sexism (Bareket & Fiske, 2023).

Numerous studies have indicated that the manifestation of hostile behavior occurs in both public spaces (workplace) and private settings (intimate relationships) with the objective of protecting the privileged social status and dominance of men (Fisher & Hammond, 2019). Women are less engaged in leadership positions as a consequence of these roles being more often associated with traits typically held by men, such as a desire for power and ambition (Feenstra et al., 2023).

Sexist attitudes towards men

Sexism is present in men's personal lives through the effects that masculinity standards impose on them, limiting their ability to express vulnerability (Croft & Block, 2015). The American Psychological Association has even proposed a set of best practices, based on 40 years of research, asserting that traditional gender standards have harmful psychological effects on boys and men (Pappas, 2019). These studies indicate a series of alarming data: in the United States, men are more likely than women to die by suicide, and their life expectancy is five years shorter (Pappas, 2019). The reasons behind these statistics are diverse; however, numerous studies suggest that the emotional rigidity promoted as a necessary standard of masculinity plays a significant role in reducing help-seeking behaviors, thereby affecting connections with others and leading to isolation (Croft et al., 2021).

Homophobia

The minority stress theory, developed by Meyer (1995), emphasizes that the mental health and quality of life of LGBTQ+ individuals are affected by stressors in the social environment (Mills-Koonce et al., 2018). These minority identities lead to a specific form of stress generated at multiple levels, including institutional discrimination in the form of lack of equal rights and interpersonal discrimination, such as fear of victimization, rejection, or aggression.

In recent years, significant changes have occurred in the acceptance of the LGBTQ+ community in the workplace, evidenced by development programs indicating employees' willingness to become informed. However, serious forms of discrimination still exist in the workplace, such as the low rate of hiring individuals with non-heterosexual identities, or distal discrimination manifested through microaggressions and harassment, presented in subtle or direct ways (Maji et al., 2024).

Racism

Social exclusion and various forms of discrimination remain a significant issue for Roma individuals, the largest ethnic community in Europe, who continue to face these challenges (Guerrero et al., 2024). In the labor market, several studies show that the number of employed Roma individuals is increasing only in specific sectors, primarily concerning physical tasks (Aisa & Larramona, 2014). These aspects may result from a lack of professional qualifications due to low participation in the educational system, as well as discrimination from employers or colleagues. There is a pressing need to study and deepen the understanding of the impact of racism on the mental and physical health of the Roma community to implement appropriate measures in creating safe and accessible spaces that aid in their integration.

Relationships between Psychological Flexibility and Discrimination

At this stage of the research, the relationship between psychological flexibility and the development of discriminatory attitudes has not been addressed. The literature reveals significant correlations between intolerance toward diversity and conservatism (Beyer, 2020), between conservatism and low psychological flexibility (Zmigrod et al., 2020), and between dehumanization and outgroup bias (Borinca et al., 2023).

Research on the factors associated with discrimination began after World War II, a period during which studies highlighted the importance of examining the relationship between extreme right totalitarian regimes and cognitive biases to understand the foundations of prejudice-related actions and attitudes (Beyer, 2020). The notion that certain personality traits may lead individuals to adhere to ideological doctrines resulting in extreme discrimination was proposed by Hoffer (1951).

Given the extent of the discrimination phenomenon since the early 20th century, researchers have sought to uncover the cognitive foundations of extreme political orientations. Early studies on the factors leading to extremist political attitudes focused on measuring perception, stimulus processing, and cognition (Van Heil et al., 2016). Numerous investigations have centered on exploring the cognitive basis of right-wing politics to find associations between the two. If a direct link were found between a specific cognitive style and a political orientation, then that mode of processing reality could potentially be challenged through scientific studies (Zmigrod et al., 2020).

In psychological research on political orientations, the rigidity hypothesis of right-wing ideology has been frequently tested in various studies. First introduced by Tetlock et al. (1984), this hypothesis posits that conservative orientation is based on cognitive and motivational rigidity. It refers to the motivation of individuals who adopt a conservative political stance stemming from a need to simplify reality in order to create a sense of control and order (Costello et al., 2021).

Liberalism and conservatism are the two political orientations studied in relation to tolerance or intolerance toward minorities and diversity (Zmigrod et al., 2020). These orientations influence perceptions of society and diversity, exhibiting differences in cognitive style. For example, conservatism, particularly in the U.S., is associated with the avoidance of uncertainty caused by information that contradicts existing knowledge (Jost et al., 2003), thus becoming a predictor of inequality and resistance to social change. Conservatism rejects novelty and diversity, upholding traditional values, while liberalism promotes analytical thinking that breaks phenomena down into parts (Talhelm et al., 2015). Research by Hodson and Dhont (2017) supports the idea that conservative perspectives on social issues, such as support for abortion or LGBTQ+ rights, correlate with high levels of racial discrimination and homophobia.

Social psychologists are developing models to study cognitive styles. It has been observed that the tendency toward authoritarianism is more frequently found among individuals who perceive their environment as unpredictable and difficult to understand (Jost et al., 2003; Van Hiel et al., 2004). These individuals simplify reality to create a sense of control. Thus, the concept of "Need for Cognitive Closure" has been introduced, showing significant correlations with conservative ideology (Cornelis & Van Hiel, 2006). This concept aids in understanding the thought processes of those with this political attitude and in exploring their motivations. Prejudices and stereotypes can also arise from spontaneous cognitive processing, influencing social perception. In this processing, social categorization occurs automatically, which can lead to biases (Sassenberg et al., 2021).

In a 2020 study, Beyer investigated the relationship between conservatism and negative stereotypes toward various social groups, measuring these attitudes among undergraduate students in the United States. Participants completed questionnaires assessing conservatism, social dominance orientation, belief in a just world, religiosity, sexism, and prejudicial attitudes toward 15 social groups. One hypothesis, that conservatives would exhibit negative stereotypes at higher rates than liberals, was supported by the data. Conservatism was associated with negativity toward racial and religious

minorities, while liberalism correlated with negative stereotypes toward more powerful groups, such as Caucasians and Christians.

To gain a deeper understanding of discrimination, studies that explore the phenomenon of dehumanization and its associated factors are essential. Dehumanization refers to the denial of human traits to others, leading to a group being perceived as less human than others (Borinca et al., 2023). Consequently, certain groups are seen as more akin to animals or objects. This extreme process has strong negative effects on those considered nonconformists. Dehumanization is based on perceived differences, and in addition to empathy and social norms, cognitive processes mediate the relationship between group bias and dehumanization (Borinca et al., 2023).

Therefore, at this stage of the research, no direct links have been established between an individual's psychological flexibility and their tendency toward discrimination, indicating the need for future studies to explore this relationship for a clearer understanding. Considering the discussions above, one of the proposed research directions will be to examine the relationship between psychological flexibility and discrimination, leading to the formulation of the following hypothesis:

H1: *Psychological flexibility is significantly negatively associated with discrimination*.

Gender Stereotypes

Gender stereotypes are formed from the expectations related to the common traits and behaviors of members of a social group (Ellemers, 2018). These gender roles represent organized thoughts about the behaviors attributed to women and men (Eagly et al., 2020). They help construct an overall picture of reality, influencing individuals' attitudes and behaviors to conform to traditional gender norms (Smith et al., 2021).

Gender classification arises when an individual exhibits traits associated with a perceived social role more frequently than a person of the opposite sex (Eagly et al., 2020; Eagly & Karau, 2002). For example, kindness is seen as a common trait among women, rather than as an individual characteristic. This polarization explains behavioral differences by attributing motivations to gender, leading to the exaggeration of differences between women and men and to the perception of gender as a distinctive component (Ellemers, 2018). This belief underestimates variations within groups. The need to understand the social environment is based on quick information from those we interact with (Krieglmeyer & Sherman, 2012). Information associated with a specific category becomes stereotypes (Contreras et al., 2012). If the evaluation of a group or an individual from that group is negative, negative prejudice is formed, and the stereotype is considered validated, as the traits of the individual align with the stereotypical ones (Gilmour, 2015).

Looking at the history of gender stereotypes, a picture of today's perceived differences emerges. Historical changes reflect the division of labor, with traditional roles assigned to women and men: women were responsible for child-rearing and household care, while men provided food through hunting or work (Wood & Eagly, 2002). These traits continue to be encouraged (Rudman & Glick, 2001), shaping assumptions about each gender's performance in various contexts (Eagly et al., 2000; Eagly & Wood, 2012). As a result, women developed traits such as care and empathy, while men developed ambition and aggressiveness. Women's primary responsibility for raising children limited their professional opportunities, allowing men to advance from roles as hunters to those of leaders or employers (Eagly & Wood, 2012).

In contemporary society, the modernization of production methods and the decreasing need for physical strength have gradually altered gender roles. In the past, men had an economic advantage due to physical labor, which provided income and social status (Alesina et al., 2013), and this event gave value to other traits and behaviors (Schmader, 2002). Industrialization reduced the importance of physical strength, allowing women to access more jobs and advance in education (Schneider & Bos, 2019). However, in post-industrial societies, a gender imbalance persists: about 60% of lawyers, doctors, programmers, and engineers are men, while women make up over 80% of nurses, teachers, and librarians (Hegeswich et al., 2010). This disparity continues to reinforce traditional gender roles, partly explained by women's greater responsibility for child care and domestic work, which hinders career advancement (Yavorsky et al., 2015).

In essence, gender stereotypes create expectations for individuals to adhere to certain roles and develop characteristics in line with them, which limits their personal and professional growth.Industrialization reduced the importance of physical strength, allowing women to access more jobs and advance in education (Schneider & Bos, 2019). However, in post-industrial societies, a gender imbalance persists: about 60% of lawyers, doctors, programmers, and engineers are men, while women make up over 80% of nurses, teachers, and librarians (Hegeswich et al., 2010). This disparity continues to reinforce traditional gender roles, partly explained by women's greater responsibility for child care and domestic work, which hinders career advancement (Yavorsky et al., 2015).

The Role of Gender Stereotypes in the Relationship Between Psychological Flexibility and Discrimination

Stereotypes simplify reality schematically, reducing the time required for information processing. Several theoretical models suggest that stereotypes serve the purpose of enabling fast processing, which requires less cognitive effort. Therefore, it is expected that a processing style based on psychological flexibility would reduce the acceptance of stereotypes as valid. People often seek to simplify their reality by using stereotypes. The theory of an information filtering model posits that a person is more inclined to accept information consistent with schemas developed through memory rather than information inconsistent with these schemas, leading to a simplified reality, especially when cognitive resources are low (Tao & Chen, 2017). Stereotypes act as filters of reality, which individuals use to represent the external world and differentiate consistent information over time from new information. Information consistent with pre-existing beliefs is easier to process than new information, increasing the likelihood of using stereotypes instead of processing new information. New and different information requires more cognitive processing resources (Bodenhausen, 2006; Sherman et al., 2000).

The application of stereotypes is often unconscious and difficult to inhibit, especially in older adults due to reduced cognitive flexibility. Older adults tend to rely on stereotypes and past experiences to process information, making them more prone to negative biases (Radvansky et al., 2010; Hunzaker, 2014). Studies show that individuals between 60 and 80 years old are more inclined to draw stereotype-based conclusions than younger individuals (Radvansky et al., 2010). Heuristic strategies can amplify the phenomenon of over-categorization, leading to group-related stereotypes. Generalizing traits across an entire group of people is a stereotyping phenomenon that leads to erroneous impressions. In a 2021 study, Sassenberg et al. aimed to investigate the potential of flexible thinking styles to reduce stereotypes and negative biases. They conducted several experiments to explore how activating a creative mindset could reduce the spontaneous formation of stereotypes. The mindset was conceptualized as being composed of cognitive processes involving the selection and application of mental operations to make decisions (Sassenberg et al., 2021).

Thus, it can be observed that stereotypes play a role in shaping broad perceptions of certain groups, which are often invalid

Given the above, the study aims to measure the role of gender stereotypes in the relationship between psychological flexibility and discrimination, thus formulating the following hypothesis:

H2: *Gender stereotypes mediate the relationship between psychological flexibility and discrimination*.

2. METHOD

Participants and Procedure

A total of 151 individuals aged between 18 and 49 years (M = 27.02, SD = 9.98) participated in this study, including 56 men (37%), 81 women (54%), and 14 others (9%). In terms of background, 54 participants were from rural areas (36%), and 97 were from urban areas (64%). Regarding occupation, 80 were students (53%), 57 were employed (38%), and the remaining had other occupations. For 74 participants (49%), the highest level of education completed was high school, 6 had post-secondary education (4%), 51 had a university degree (34%), and 20 participants had completed a master's degree (13%).

Inclusion Criteria: Participants had to be Romanian citizens aged 18 or older. The sampling method used was convenience sampling. Out of the 200 people invited to participate, only 151 agreed to complete the study (75%). Preliminary information was provided via email, and no incentives were offered to participants. The questionnaire was administered online using Google Forms. Participants were informed about the estimated response time (5-10 minutes) and given clear instructions on how to answer the items.

Ethical research conditions regarding data processing, interpretation, and data security were fulfilled. The data was initially organized in encrypted Excel tables accessible only to the study's author. No names or other identifying information were requested to maintain participant anonymity.

The sample size determined using GPower analysis was 107 participants, providing a power of .95, with an effect size of 0.15 and a significance level of .05. However, the final study included 151 participants.

Instruments

The data collection method used in this study was a questionnaire.

Sociodemographic variables were collected through a list of questions regarding age, gender, background, education level, and professional status.

Psychological flexibility was measured using the Agreeableness [A] Facets, Flexibility [A:Flex] scale (Goldberg et al., 2006). The instrument consists of 10 items and measures psychological flexibility, a facet of agreeableness and a component of the HEXACO model (HEXACO Personality Inventory). Responses were given on a five-point Likert scale, where 1 = very little, 2 = somewhat, 3 = neutral, 4 = considerably, 5 = very much. Scores were obtained by summing the points for each item.

Gender stereotypes were measured using the Beliefs About Women Scale (BAWS)(Belk & Snell, 1986). The instrument includes 75 items, but for time considerations, 10 items relevant to the study were selected to assess attitudes.

Discrimination was measured with a self-developed questionnaire containing four subscales to investigate the dimensions of sexism toward women, sexism toward men, homophobia, and racism. Each scale consisted of five items. Responses were measured using a five-point Likert scale: 1 = strongly disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, 5 = strongly agree. Scores were calculated by summing the points for each item. A literature review of these four dimensions was conducted, and the items were adapted for the cultural context. In the absence of questionnaires examining racism toward Roma people, five items were created to reflect culturally and socially adopted attitudes. Examples of items include: "I do not take women's equality efforts seriously; they already have enough rights," "I believe it is a man's duty to earn more than his partner," "I believe homosexuality is a disease," "I believe Roma people are more violent than the rest of the population."

Research Design

This study employs a cross-sectional, descriptive, correlational design.

3. RESULTS

To organize the data and test the hypotheses, the statistical analysis programs IBM SPSS 24 (IBM Corp, 2016) and the medmod module from Jamovi (The jamovi project, 2024) were used.

Descriptive Statistics

The mean scores, standard deviations, internal consistency coefficients, and correlations between variables are presented in Table 1.

Table 1
Mean Scores, Standard Deviations, Internal Consistency Coefficients, and Correlations Between Variables

	M	AS	α	ST	FL	SXF	SXB	HOM	RAS
GS	22.28	7.27	.79	1					
PF	33.86	6.69	.78	-.05	1				
SXW	6.95	3.08	.78	.66**	-.21*	1			
SXM	7.81	3.52	.73	.69**	-.21*	.71**	1		
HOM	8.17	4.51	.91	.60**	-.07	.51**	.76**	1	
RAS	7.38	3.37	.84	.59**	-.18*	.66**	.66**	.64**	1

Note: **. $p < .01$, *. $p < .05$
GS = Gender Stereotypes, PF = Psychological Flexibility, SXW = Sexism Towards Women, SXM = Sexism Towards Men, HOM = Homophobia, RAS = Racism

The results show that participants scored low on gender stereotypes (M = 22.28, SD = 7.27) and relatively high on psychological flexibility (M = 33.86, SD = 6.69). Scores for sexism towards women (M = 6.95, SD = 3.08), sexism towards men (M = 7.81, SD = 3.52), homophobia (M = 8.17, SD = 4.51), and racism (M = 7.38, SD = 3.37) were all low.

There were significant correlations between gender stereotypes and sexism towards women (r = .66, p < .01), sexism towards men (r = .69, p < .01), homophobia (r = .60, p < .01), and racism (r = .59, p < .01). Additionally, psychological flexibility negatively correlated with sexism towards women (r =

-.21, p < .05), sexism towards men (r = -.21, p < .05), and racism (r = -.18, p < .05), but not with homophobia (r = -.07, p > .05). The skewness and kurtosis values fall within the range of (-3, 3), indicating a normal distribution of the data. There were no missing cases or data exclusions in any of the statistical analyses.

Hypotheses testing

H1: *Psychological flexibility is significantly negatively associated with discrimination*.

H1.a: *Psychological flexibility is significantly negatively associated with sexism toward women*.

H1.b: *Psychological flexibility is significantly negatively associated with sexism toward men*.

H1.c: *Psychological flexibility is significantly negatively associated with homophobia*.

H1.d: *Psychological flexibility is significantly negatively associated with racism*.

To test this hypothesis, four simple linear regression analyses were conducted, using psychological flexibility as the predictor variable and sexism towards women, sexism towards men, homophobia, and racism as the dependent variables, respectively.

Table 2
The simple linear regression analysis for psychological flexibility as a predictor of sexism toward women

Model	B	SE	β	t	p
PF	-.10	.04	-.21	-2.57	.01

Note: R^2 = .04, PF = Psychological Flexibility

Psychological flexibility accounts for 4% of the variance in sexism toward women, with the regression equation being statistically significant, $F(1,149) = 6.61$, $p < .05$. A significant negative association was found between psychological flexibility and sexism toward women, β = -.21, p < .01.

Table 3
Simple linear regression analysis for psychological flexibility as a predictor of sexism toward men

Model	B	SE	β	t	p
PF	-.10	.04	-.21	-2.57	.01

Note: R^2 = .04, PF = Psychological Flexibility

Psychological flexibility accounts for 4% of the variation in sexism toward men, with the regression equation being statistically significant, $F(1,149) = 6.76$, $p < .05$. Psychological flexibility is significantly and negatively associated with sexism toward men, β = -.21, p < .01.

Table 4
Simple linear regression analysis for psychological flexibility as a predictor of homophobia

Model	B	SE	β	t	p
PF	-.05	.06	-.07	-.91	.36

Note: R^2 = .01, PF = Psychological Flexibility

It was observed that psychological flexibility accounts for only 1% of the variation in homophobia, with the regression equation being statistically insignificant, $F(1,149) = 0.83$, $p = .36$. Psychological flexibility is not significantly associated with homophobia, β = -0.07, p = .36.

Table 5
Simple linear regression analysis for psychological flexibility as a predictor of racism

Model	B	SE	β	t	p
PF	-.09	.04	-.18	-2.21	.03

Note: R^2 = .03, PF = Psychological Flexibility

Psychological flexibility explains 3% of the variation in racism, and the regression equation is statistically significant, $F(1,149) = 4.90$, $p < .05$. There is a significant negative association between psychological flexibility and racism, β = -.18, p < .05. Based on this result, we can conclude that hypothesis H1 is largely supported by the data.

H2. *Gender stereotypes mediate the relationship between psychological flexibility and discrimination*.

H2a. *Gender stereotypes mediate the relationship between psychological flexibility and sexism toward women*.

H2b. *Gender stereotypes mediate the relationship between psychological flexibility and sexism toward men*.

H2c. *Gender stereotypes mediate the relationship between psychological flexibility and homophobia*.

H2d. *Gender stereotypes mediate the relationship between psychological flexibility and racism*.

To test this hypothesis, four mediation analyses were conducted, using psychological flexibility as the predictor, gender stereotypes as the mediating variable, and sexism toward women, sexism toward men, homophobia, and racism as the dependent variables, respectively (Tables 6, 7, 8, 9).

Table 6

Mediation estimation for gender stereotypes in the relationship between psychological flexibility and sexism toward women

Effect	Label	Estimate	SE	95% CI Min.	95% CI Max.	Z	p	% Mediation
Indirect	a × b	-.01	.02	-.06	.03	-.57	.57	14.80
Direct	c	-.08	.03	-.13	-.03	-.96	.03	85.20
Total	c + a × b	-.10	.04	-.17	-.02	-.59	.01	100.00

Table 7

Mediation estimation for gender stereotypes in the relationship between psychological flexibility and sexism toward men

Effect	Label	Estimate	SE	95% CI Min.	95% CI Max.	Z	p	% Mediation
Indirect	a × b	-.02	.03	-.07	.04	-.57	.57	15.26
Direct	c	-.09	.03	-.15	-.03	-3.08	.02	84.74
Total	c + a × b	-.11	.04	-.19	-.03	-2.62	.09	100.00

Table 8

Mediation estimation for gender stereotypes in the relationship between psychological flexibility and homophobia

Effect	Label	Estimate	SE	95% CI Min.	95% CI Max.	Z	p	% Mediation
Indirect	a × b	-.02	.03	-.08	.05	-.57	.57	37.45
Direct	c	-.03	.04	-.12	.05	-.71	.50	62.55
Total	c + a × b	-.05	.05	-.16	.06	-.92	.40	100.00

Tabele 9

Estimation of mediation for gender stereotypes in the relationship between psychological flexibility and racism

Effect	Label	Estimate	SE	95% CI Min.	95% CI Max.	Z	p	% Mediation
Indirect	a × b	-.01	.02	-.06	.03	-.57	.57	15.28
Direct	c	-.08	.03	-.14	-.01	-.34	.02	84.72
Total	c + a × b	-.09	.04	-.17	-.01	-.23	.03	100.00

The results show that gender stereotypes do not mediate the relationship between psychological flexibility and sexism toward women, with the indirect effect being b = -.01, 95% CI(-.06, .03), Z = -.57, p = .57, gender stereotypes do not mediate the relationship between psychological flexibility and sexism toward men, with the indirect effect being b = -.02, 95% CI(-.07, .04), Z = -.57, p = .57, gender stereotypes do not mediate the relationship between psychological flexibility and homophobia, with the indirect effect being b = -.02, CI95% (-.08, .05), Z = -.57, p = .57, gender stereotypes do not mediate the relationship between psychological flexibility and racism, with the indirect effect being b = -.01, CI 95% (-.06, .03), Z = -.57, p = .57. Considering this result, we can conclude that hypothesis H2 is not supported by the analyzed data.

5. DISCUSSIONS

The present research aimed to measure the relationship between discrimination attitudes (sexism toward women, sexism toward men, homophobia, and racism) and psychological flexibility, as well as the role of gender stereotypes in this relationship.

Descriptive statistical procedures revealed that participants' scores on gender stereotypes were relatively low, indicating that respondents do not tend to rely on gender roles in their interactions with others. This may be due to advancements in gender equality and the integration of both women and men into diverse fields. Regarding psychological flexibility, participants scored relatively high, reflecting a strong ability to adapt in new situations and effective functioning on both personal and interpersonal levels. These results could be attributed to the age of the participants, as predominantly younger individuals completed the questionnaire.

Specific dimensions of discrimination were measured through various specific attitudes to capture the forms of prejudice adopted by participants. Sexist attitudes toward both women and men were present to a lesser extent, with relatively low scores. Scores on sexism toward men were higher compared to those on sexism toward women, which may indicate an expectation for men to adhere to traditional gender roles. These findings can be explained by research from Croft et al. (2015) and Eagly et al. (2020), which suggest that gender stereotypes regarding women are no longer as strongly adopted, given that women are now involved in numerous fields. However, gender stereotypes concerning men have remained less changed. The scores for homophobia and racism were low, suggesting tolerance and acceptance of diversity.

Furthermore, significant positive correlations were observed between gender stereotypes and sexism toward women and men, indicating that individuals with pre-established mental images of gender may also adopt sexist attitudes. Additionally, significant correlations were found between gender stereotypes and homophobia and racism, indicating a tendency to hold prejudiced attitudes when gender stereotypes are present. These stereotypes may act to filter reality and perceive individuals based on how they fit into traditional roles.

Psychological flexibility shows significant negative correlations with sexism toward women, sexism toward men, and attitudes of racism, but not with homophobia. The latter dimension may represent an attitude adopted by participants for various reasons, different from a lack of cognitive flexibility. It may correlate with other aspects of the participants'

personalities; however, flexibility does not indicate a lower presence of homophobic attitudes. Nonetheless, the correlations do not support a causal relationship. Determining this would require more thorough research.

The current study highlighted the predictive role that psychological flexibility can have in shaping prejudice attitudes. The hypothesis that psychological flexibility is significantly negatively associated with discrimination is largely supported by the data.

The first hypothesis examined the extent to which psychological flexibility is significantly negatively associated with discrimination by analyzing four distinct facets: sexism toward women, sexism toward men, homophobia, and racism. The present study revealed the predictive role of psychological flexibility in shaping prejudice attitudes, with the hypothesis that psychological flexibility is significantly negatively associated with discrimination being largely supported by the data.

Analyzing the facets of discrimination revealed that psychological flexibility is significantly negatively associated with sexism toward women. These connections were also investigated in the study by Davis et al. (2021), where flexibility was inverted to see how it might relate to sexism and racism. The results indicated a small negative correlation between psychological inflexibility and helping behaviors in sexual assault situations. Thus, individuals with low levels of flexibility are less likely to assist in sexist situations, tolerating such behaviors. Psychological inflexibility negatively correlated with intervention behaviors in cases of sexual assault, and flexibility showed a low negative correlation with intervening in situations of sexual assault against women (Davis et al., 2021). The statistical results further indicated that psychological flexibility is significantly negatively associated with sexism toward men. In line with the current findings, other studies have supported a connection between sexism and psychological flexibility (Davis et al., 2021). Ambivalent sexism was evaluated, which dictates traditional gender roles and has negative repercussions for both women and men. Although research has not focused on sexism toward men, other variables, such as conservatism, have been shown to play an important role in upholding traditional gender roles that, in some cases, may limit the emotional and social development of men (Croft et al., 2021). Conservative individuals are more likely to negatively judge those who do not conform to gender roles (Prusaczyk & Hodson, 2020) and to adopt prejudiced attitudes toward others to fulfill their epistemic need for certainty and order (Crawford & Brandt, 2020).

Psychological flexibility is not significantly associated with homophobia. This may be explained by the fact that

homophobia can be a culturally accepted attitude, and even cognitively flexible individuals may be influenced to adopt it. Additionally, both education level and personal experiences may impact this dimension, as well as the small sample size.

Regarding racism, it has been significantly negatively associated with psychological flexibility. Similar results have been found in other studies. The findings of the study conducted by Van Hiel et al. (2004) support that a high need for certainty creates a predisposition toward authoritarianism, leading to conservative attitudes and racism. Two mediating variables, right-wing authoritarianism and social dominance orientation, were also included. Similar to cognitive inflexibility, the need for structure has been associated with the need to simplify reality, a predisposition to use heuristic strategies, and reduced effort in processing new information, ultimately leading to prejudices (Van Hiel et al., 2004). The effects of the need for structure manifest significantly in racism and conservatism through authoritarianism.

The second hypothesis, which posited that gender stereotypes mediate the relationship between psychological flexibility and discrimination, was not supported by the data. Thus, while there is a connection between the level of psychological flexibility and discrimination, this effect is not mediated by the presence of gender stereotypes. These findings indicate that gender stereotypes can be present without leading to discriminatory attitudes.

It is observed that gender stereotypes do not mediate the relationship between psychological flexibility and sexism toward women or men. These results are consistent with the existing literature. For instance, a study conducted by Krieglmeyer and Sherman (2012) suggests that individuals are more likely to adopt negative stereotypes to form an impression of those they interact with when time pressure is present or cognitive resources are low. The existence or invocation of stereotypes does not always lead to the creation of negative prejudices, especially when they are not considered to be true.

It is noted that gender stereotypes do not mediate the relationship between psychological flexibility and homophobia. In this case, it may be helpful to review the existing literature, as stereotypes about the LGBTQ community shape homophobia, rather than gender stereotypes. For example, in a 2016 study, Mole emphasizes that in Poland, due to far-right ideology and conspiracy theories based on stereotypes, there is pronounced discrimination. Homosexuality is viewed as a threat to traditional values, leading to a lack of rights for the LGBTQ community.

Furthermore, it is observed that gender stereotypes do not mediate the relationship between psychological flexibility and racism. Although gender stereotypes do not act as an intermediary factor between flexibility and discrimination, studies highlight that other types of stereotypes can lead to complex forms of racism. For example, in cases of violence against Black men, the stereotypes influencing their accusations are racial, suggesting that criminality is perceived to be higher among them (Thiem et al., 2019). Thus, racism is linked to specific racial stereotypes.

These results highlight that gender stereotypes can exist at the individual level, but their mere presence does not indicate a tendency towards reduced psychological flexibility and, implicitly, towards discrimination. Over time, the social roles into which individuals are placed change, and as a result, they no longer have such extensive negative repercussions, as they are far too simplistic methods for evaluating another person. A significant role in diminishing gender stereotypes is attributed to gender equality movements, which promote the idea that women are capable in multiple fields (Croft et al., 2021).

Therefore, while it has been shown that gender stereotypes do not mediate the relationship between psychological flexibility and discrimination, the second hypothesis is supported by the data and may have useful implications for combating prejudice.

Practical implications of the study

Considering the analyzed data, the present study can be useful in various contexts, both theoretical and practical. Based on the findings, recommendations can be developed for future interventions and programs aimed at enhancing psychological flexibility to combat prejudiced attitudes.

Often, stereotypes and biases remain ingrained in individuals' minds due to a lack of information about others. In this case, an approach that promotes contact between members of one group and those perceived as fundamentally different may be beneficial. By getting to know individuals who are perceived as different, people can form a better perspective on their personalities, emotions, and abilities, leading to a process of individualization. This positive impact will increase the likelihood of future interactions and thus foster equality among members.

Additionally, programs targeting inclusion and diversity in the workplace can be adopted. Through specialized training aimed at accepting minority communities, employees can become aware of their own biases and prejudices, making them

more inclined to change. This can create a pleasant and inclusive organizational climate.

Furthermore, a type of intervention focused on increasing psychological flexibility is proposed by Acceptance and Commitment Therapy (ACT). This therapy emphasizes developing the ability to adapt in new and unfamiliar contexts by promoting resilience. The therapeutic model aims to reduce psychological inflexibility by decreasing cognitive fusion, which leads to experiential avoidance (Ciarrochi et al., 2010). This way of thinking can also promote prosocial behaviors. These suggestions have the potential to foster an adaptive attitude and promote acceptance and tolerance behaviors.

Limitations and future directions for research

The present study succeeds in providing a new perspective in the field of research on attitudes of discrimination and prejudice, combining variables that have not been studied together before by examining the relationship between psychological flexibility and discrimination, as well as the impact of gender stereotypes on this relationship. Therefore, there are also limitations that deserve consideration for evaluating the implications of the study and for future research directions.

The constructs analyzed in the study were based on self-report measures, which can affect the accuracy of responses due to possible social desirability bias and a lack of understanding or awareness of one's own behaviors or attitudes being evaluated. Given that the current questionnaire measures attitudes related to social issues such as gender stereotypes and discrimination, it is expected that participants may have lower self-disclosure due to the desire not to present behaviors seen as undesirable or morally incorrect.

Another important limitation of the research is the measurement of psychological flexibility, as there is no consensus in psychological research regarding the definition of the term, which has been analyzed in multiple domains in different ways. Previous studies have examined the term from a cognitive perspective, through practical tasks focusing on attention and observation. In the current study, the term is analyzed from the personality perspective, as part of the HEXACO model (Ashton et al., 2014), and it is important to consider the narrow implications of the construct concerning its role in shaping social attitudes. There is a need to study the construct through a variety of methods that integrate multiple research domains.

Another limitation is the small number of participants. Furthermore, a large portion of the participants are students and employed individuals, primarily young. Thus, it remains to be explored to what extent gender stereotypes and flexibility relate to discrimination when analyzing responses from older individuals. As a result, future studies will use larger samples, encompassing greater diversity regarding participants' living environments, occupations, and personal characteristics.

Additionally, given that the study's design is cross-sectional and correlational, causal relationships between the investigated variables cannot be established. Based on the obtained results, it cannot be definitively stated that discrimination can be explained or caused by an individual's level of psychological flexibility, or whether gender stereotypes impact the current relationship. For a detailed analysis of the components of the complex phenomenon of discrimination, longitudinal studies are recommended, as prolonged monitoring of changes in psychological flexibility and their implications is needed.

Moreover, the questionnaire for measuring the facets of discrimination is a new one that has not been validated in other studies, which may influence the quality of the instrument and, consequently, the responses received. Further studies are needed to measure the construct within multiple samples.

Another limitation is that other variables influencing discrimination attitudes, apart from psychological flexibility and gender stereotypes, were not studied. A useful direction could be researching additional social, cultural, and personality factors. Gender stereotypes did not mediate the relationship between flexibility and discrimination. Thus, future studies can investigate other mediating variables to account for more factors.

Therefore, future research in this area will be able to provide an improved perspective on the tested variables, outlining a clearer picture of psychological flexibility, discrimination, and gender stereotypes.

Conclusions

The aim of this study was to investigate the multiple facets of discrimination and the variables that may be responsible for its existence. Therefore, psychological flexibility was analyzed as a predictor of attitudes towards sexism against women, sexism against men, racism, and homophobia, with gender stereotypes serving as a mediating variable in the relationship between flexibility and the facets of discrimination. The results indicated that psychological flexibility is a significant predictor of discrimination, correlating with sexism towards both women and men, as well as racism, but not with homophobia, indicating a need for more detailed research on this approach. Gender stereotypes did not mediate the relationship between

flexibility and the facets of discrimination, highlighting that they do not play a significant role in the adoption of prejudiced behaviors, with other factors being responsible and requiring further investigation. The first hypothesis clarifies the importance of psychological flexibility in continuing acceptance studies. Based on this finding, programs aimed at enhancing psychological flexibility can be developed. Considering the significant negative consequences of discrimination on the mental health of individuals from minority groups, it is crucial to discover as many components of personality that lead to prejudiced behaviors as possible. This can facilitate the

identification and application of complex intervention programs that promote prosocial attitudes.

Despite its limitations, this study represents a first step toward integrating multiple research topics (cognitive flexibility, gender stereotypes, and attitudes towards discrimination) by uniting various fields such as social psychology and personality psychology. The current research has provided a new perspective for understanding the relationship between psychological flexibility and discrimination, mediated by gender stereotypes. It is anticipated that these results will stimulate further research in the field.

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The Moderating Role of Childhood Experiences in the Relationship between Personality Traits and Social Anxiety

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ABSTRACT

This study aims at investigating the relationship between childhood experiences, social anxiety, and personality factors. The sample consisted of 121 participants aged between 18 and 71 years (M = 28.54, SD = 13.12). Of these, 78.5% (N = 95) are female, and 20.7% (N = 25) male, one person identified as genderfluid, also 51.2% (N = 62) come from the urban area and 48.8% (N = 59) from the rural area. Following the analysis of the statistical data, it was observed that positive relationships with the family significantly influence the levels of social anxiety in the different age categories, and agreeableness moderates the relationship between positive relationships with the family in the age range of 5-12 years and performance anxiety. In conclusion, analysis of these results may bring a deeper understanding of the interactions between positive family relationships, social anxiety/performance anxiety, and other influencing factors, contributing to the development of more effective and personalized interventions in the treatment of social anxiety.

Keywords: childhood experiences, social anxiety, openness, conscientiousness, extraversion, agreeableness, neuroticism

1. INTRODUCTION

The study emphasizes the importance of studying the relationship between childhood experiences, social anxiety and personality factors, with the goal of better understanding the development of social anxiety disorders. Negative childhood experiences and attachment styles can influence the onset of social anxiety, and certain personality traits, such as neuroticism, can increase vulnerability. The study of these links can support the development of early interventions and prevention strategies to improve the quality of life of those affected, while contributing to the development of more effective mental health policies.

Childhood experiences

Childhood experiences, divided into positive and negative, significantly influence later development and well-being in adulthood (Yancura & Aldwin, 2009). They shape brain health and development (Bethell et al., 2019) and contribute to adult psychological states, although research on the combined effect of adverse (ACE) and positive experiences (PCE) remains limited (Hou et al., 2022). Negative experiences, such as parental abuse or loss, have lasting consequences on mental health (Andryszewska & Rybakowski, 2016), increasing the risk of depression and risky behaviors (Daines et al., 2021). Conversely, positive experiences such as social support and secure relationships protect against anxiety and depression (Wang et al., 2021) and may counteract the negative effects of adverse experiences (Hou et al., 2022). Studies show that these experiences foster prosocial development and prevent antisocial behaviors (Kosterman et al., 2011). To support harmonious development, intervention programs must work with families, promoting secure attachment and healthy routines (Crandall et al., 2019). Thus, it is essential to recognize the impact of both positive and negative experiences on psychological health, focusing not only on risk factors, but also on protective factors, to support resilience and long-term well-being.

Exposure to adverse childhood experiences can lead to distinct functional and structural brain changes in adults with major depressive disorder or chronic pain, compared to those without such experiences (Antoniou et al., 2023). Childhood adversity and positive childhood experiences are somewhat independent of each other; many individuals experiencing both, and the presence of one does not exclude the other. PCEs more commonly predict better outcomes on their own, independent of childhood adversity, rather than interacting with or moderating the effects of adversity on those outcomes (Han et al., 2023). Adverse childhood experiences are linked to negative health and developmental consequences across the short, medium, and long term, with their impact potentially being cumulative, particularly during critical periods of sensitivity and developmental plasticity. These effects can be further exacerbated by global challenges such as climate change, conflict, and population displacement (Bhutta et al., 2023).

Most studies show that parental ACEs can influence children's outcomes either directly or indirectly, often through pathways such as maternal mental health challenges or factors related to parenting (Zhang et al., 2023).

Social anxiety

Anxiety is defined as a feeling of fear in the face of possible negative future outcomes, with sources of threat that can be real or imagined (Schlenker & Leary, 1982, apud Lesse, 1970). This frequently occurs in situations involving interpersonal evaluations, such as public speaking or social gatherings, and can persist even in the absence of other people, often being associated with fear of negative judgment (Leary & Kowalski, 1997). Can progress to social anxiety disorder (SAD) when it significantly affects daily functioning (Morrison & Heimberg, 2013). People with social anxiety tend to interpret social interactions as dangerous and consequently avoid them, which can exacerbate loneliness and self-esteem problems (Fung et al., 2017). Social anxiety includes both concerns about performance in social contexts and fears about criticism or mistakes (Schlenker & Leary, 1982).

Performance anxiety, a subtype of social anxiety, manifests itself in specific situations such as public speaking, exams or artistic performances, where individuals fear making mistakes in front of others (Cox & Kenardy, 1993; Kantor-Martynuska & Domaradzka, 2018). This anxiety involves physical (shaking, sweating), cognitive (negative thoughts), behavioral (avoidance of situations), and psychological (critical self-evaluation) reactions (Ely, 1991). Although performance anxiety is considered a social phobia, it is currently classified as a transient reaction to a specific stimulus, but it has the potential to become chronic under certain conditions (Kantor-Martynuska & Domaradzka, 2018). Studies show that the most common type is the fear of public speaking, which affects both artistic performances and professional activities, where the fear of negative evaluation is predominant (Lazarus & Abramovitz, 2004).

Personality factors

Personality is an essential concept in the study of human behavior, and the study of individual differences is a central topic in psychology. Although there is no universally accepted definition, personality can be understood as a set of traits that influence individual behaviors, manifesting in unique ways in various situations (Tavajoh & Yaqubi, 2019). Raymond B. Cattell made significant contributions to personality taxonomy using empirical methods, examining the terms used to describe traits (Goldberg, 1990). An influential model in this field is the "Big Five" factor theory, adopted in the 1980s and 1990s, which includes openness, conscientiousness, extraversion, agreeableness, and neuroticism (Ashton et al., 2009). Each dimension has specific features: neuroticism is related to anxiety and insecurity, agreeableness to cooperation and compliance, conscientiousness to responsibility and organization, openness to creativity and curiosity, and extraversion to sociability and energy (Milfont & Sibley, 2012).

Longitudinal studies, such as that of Cobb-Clark & Schurer (2012), show that personality traits are relatively stable over the long term, although they can be influenced by factors such as age, education or income. In conclusion, personality represents distinct patterns of thinking and behavior, making each individual unique (Tavajoh & Yaqubi, 2019).

The relationship between childhood experiences, social anxiety, and personality factors

The link between maltreatment, household dysfunction, and depressive symptoms are significantly mediat by neuroticism. Additionally, the relationship between poor parent-child bonding and depressive symptoms are significantly influenced by neuroticism, conscientiousness, and extraversion (Li et al, 2023). Moderation analyses indicated that childhood maltreatment reduces the stability of conscientiousness and emotional stability, while also leading to lower average levels of extraversion, conscientiousness, and emotional stability. The effects of maltreatment on some of these traits appeared to be more pronounced during adolescence and tended to decrease in young adulthood, suggesting that individuals who experience maltreatment may demonstrate some resilience as they age. However, the impact of maltreatment persisted into adulthood for certain traits, potentially explaining the long-term negative effects of childhood caregiver-related trauma on overall well-being and quality of life (Cohen, 2023). A significant positive relationship is found between childhood maltreatment and social anxiety, social anxiety is more strongly associated with emotional maltreatment compared to physical or sexual maltreatment. Similarly, emotional abuse is more strongly linked to social anxiety than physical or sexual abuse, but no significant differences were observed in the impact of physical maltreatment versus sexual maltreatment on social anxiety (Liu et al., 2023). Endorsing adverse childhood experiences is strongly and positively associated with symptoms of anxiety, depression, and suicidality. Parallel mediation analyses reveal that social support, negative affect, and life satisfaction statistically mediated the link between ACEs and psychopathological outcomes in adulthood (Kobrinsky, & Siedlecki, 2023).

There are studies that have reported relationships between the total score of childhood negative experiences and the personality traits of extraversion, agreeableness, conscientiousness, and openness. In contrast, there is a significant positive correlation between the total score of negative childhood experiences and neuroticism.. It can be concluded that nearly half of the study sample experienced moderate negative childhood experiences, and approximately half exhibited traits of neuroticism (Saleh et al., 2023).

There is a significant link between negative childhood experiences and social anxiety, although the mechanisms of this relationship are not yet fully understood. Studies suggest that a sense of security plays an essential role in this connection (Meng et al., 2021). For example, Eikenaes et al. (2015) found that childhood neglect is more commonly associated with avoidant personality disorder than with social phobia. Abbasi-Asl et al. (2016) identified personality traits such as neuroticism that are correlated with social anxiety, and childhood trauma is associated with Type D personality and symptoms of anxiety and depression (Demirci et al., 2016). Also, childhood psychological abuse can contribute to social anxiety through neuroticism and lack of positive coping (Liu et al., 2021).

Rambau et al. (2018) showed that negative childhood experiences are related to avoidant personality and social anxiety, and these effects are mediated by affective bonds, while childhood trauma can affect behaviors and emotional regulation (Bruijnen et al., 2019). The studies of Öztürk and Mutlu (2010) and Kuo et al. (2011) pointed out a significant association between childhood trauma and symptoms of social anxiety and depression, particularly in adults with social anxiety disorder.

Halldorsson et al. (2023) found that children with social anxiety disorder are highly concerned with the perceptions of others and have frequent negative and self-critical thoughts. Memories of being teased in childhood have also been linked to social anxiety and the fear of gelotophobia (Edwards et al.,

2010), and Binelli et al. (2012) identified a significant correlation between negative childhood events and social anxiety, with a greater impact on females. Thus, childhood experiences play an important role in the development of social anxiety, and women appear to be more vulnerable to this impact than men.

The present study

The main objective of the study was to explore the relationship between childhood events and social anxiety by identifying moderators among personality dimensions. In this regard, the following hypotheses were formulated:

2. METHOD

Participants and procedure

The study sample was made through a convenience sampling method, including people from Romania, especially students, who completed a Google questionnaire distributed online, and participation was voluntary. 121 people between the ages of 18 and 71 participated (M = 28.54, SD = 13.12). Of these, 78.5% (95) were female, 20.7% (25) male, and one person identified as genderfluid. Regarding the place of origin, 51.2% (62) were from the urban environment, and 48.8% (59) from the rural environment. Regarding education, 68.6% (83) of the participants completed high school studies, 21.5% (26) undergraduate studies, 9.1% (11) master's studies and 0.8% (1) doctoral studies.

This paper uses quantitative research to examine the relationships between adverse childhood experiences and social anxiety, also investigating the role of personality factors in moderating this interaction. The questionnaires were applied online through Google Forms, being distributed on social networks such as Facebook and WhatsApp. Participation was voluntary, and the inclusion criterion was 18 years of age. Before completing the questionnaires, the participants were asked for their informed consent according to the legal regulations on the protection of personal data. The data collected was used for academic purposes only.

Statistical analysis was performed using SPSS 24, including data centralization, calculation of subscale scores for each questionnaire, and classification of adverse experiences according to participant age. Social anxiety was divided into social anxiety and performance anxiety subscales, and personality factors were assessed separately. Hypothesis testing was performed by Pearson correlation, multiple regression and moderation analysis using the PROCESS extension (Hayes, 2018).

H1: *Positive relationships with family statistically significantly correlates with levels of social anxiety in different age groups.*

H2: *Positive relationships with family statistically significantly correlates with levels of performance anxiety in different age groups.*

H3: *Agreeableness moderates the relationship between positive family relationships in the 5-12 age range and performance anxiety.*

Instruments

International Personality Item Pool (IPIP). To assess personality dimensions (Goldberg et al, 2006), scales that were translated and adapted for the Romanian population were used (Iliescu et al., 2015). Openness scale: This consists of 10 items rated on a 5-point Likert scale, measuring a person's affinity for the creative structures of the world. Cronbach's alpha coefficient indicated good internal consistency (α = .74). Neuroticism scale: Consisting of 10 items, this questionnaire assesses emotional stability and the tendency to be calm or not. Internal consistency was high (α=.86). Conscientiousness scale: With 10 items, this questionnaire measures the level of staying on task and ordering. The Cronbach alpha coefficient showed high internal consistency (α = .86). Agreeableness scale: Also consisting of 10 items, it assesses the preference to avoid conflicts and to please others. Internal consistency was α = .73. Extraversion scale: It measures a person's tendency to prefer socializing and exposure in social environments, with a high internal consistency coefficient (α = .86).

Liebowitz Social Anxiety Scale (LSAS). A 24 item questionnaire assessing social interaction anxiety and performance anxiety. The LSAS was designed with the following features: (1) it includes a wide range of items that are challenging for individuals with social phobia; (2) it distinguishes between performance and social anxiety components through separate subscales; (3) it provides distinct ratings for fear or anxiety and avoidance; and (4) all patients receive four subratings: performance fear or anxiety, performance avoidance, social fear or anxiety, and social avoidance (Liebowitz, 1987). The internal consistency is very high (α = .95), and on the subscales, social interaction anxiety had α = .93 and performance anxiety α = .91.

Childhood Experiences Questionnaire (CES). Childhood experiences from ages 0 to 19 were assessed retrospectively using the Childhood Experiences Scale (Aldwin

et al., 1998). Designed for use with the general population, the CES collects individuals' recollections of 46 childhood events and experiences categorized by the age ranges of 0–5 years, 5–12 years, and 13–19 years. The Negative Events and Discipline subscales of the CES are designed to capture adverse experiences. Drawing on the work of Werner and Smith (2001), the CES also includes questions about positive experiences, such as close relationships with parents and other adults, forms of parental praise, and general perceptions of the respondent's character. Additionally, it addresses childhood accomplishments. This questionnaire measures positive and negative childhood experiences. The Cronbach alpha coefficient was α = .72 (0-5 years), α = .79 (5-12 years) and α = .74 (13-19 years).

Each questionnaire was assessed for internal consistency, and the results suggest good or very good reliability for most of them.

Study design and objective

The design is non-experimental, therefore, no causal conclusions can be drawn on the relationships elaborated and investigated in the present study.

In this study the objective is to examine and understand the association between childhood experiences, level of social anxiety and personality factors. Thus, by achieving this objective, the study will contribute to a deeper understanding of the complex relationship between childhood experiences, social anxiety and personality factors, providing relevant information for the development of intervention and support strategies in the field of mental health.

3. RESULTS

Descriptive statistics

In order to observe the characteristics of the variables measured on the relevant sample, a series of descriptive analyzes were performed on the mean, standard deviation,

skewness and kurtosis indicators. It is observed from Table 1 that all study variables exhibit desirable psychometric characteristics of a normal distribution. Before testing the statistical hypotheses, a series of correlation matrices was performed in order to better observe and understand the associations between the facets of the three measured constructs. Only those associations that are statistically significant will be commented.

Tab1e 1
Table of descriptive statistics

	M	SD	Skewness	Kurtosis
Social Anxiety	2.34	.835	-.00	-.66
Performance Anxiety	3.04	.923	-.17	-.53
Extraversion	3.09	.838	.09	-.12
Agreeableness	4.11	.55	-.69	.25
Conscientiousness	3.47	.84	-.05	-.57
Neuroticism	2.83	.85	-.03	-.08
Openness	3.80	.63	-.49	.11
Positive relationships 0-5 years	3.37	.61	-.21	-.02
Positive relationships 5-12 years	3.52	.62	-.51	.07
Positive relationships 13-19 years	3.46	.61	-.16	-.32

For the facets of social anxiety, it was observed that the subscales social anxiety and performance anxiety are strongly positively associated (r = .66, p < .001, r2 = .45). Regarding the personality facets, a significant association of extraversion with conscientiousness (r = .17, p < .050, r2 = .03) and neuroticism (r = -.46, p < .001, r2 = .45). Agreeableness is significantly associated with conscientiousness (r =.36, p < .001, r2 = .13).

Conscientiousness with neuroticism (r = -.46, p < .001, r2 = .23) and openness to experience with neuroticism (r = .21, p < .050, r2 = .04). The assessment of positive relationships with parents across age groups shows strong correlations. Between 0-5 years and 5-12 years there is a statistically significant and strong correlation (r = -.76, p < .001, r2 = .60), this is also valid for 0-5

years and 13-19 years (r = -.59, p < .001, r2 = .35) and for 5-12 years with 13-19 years (r = -.74, p < .001, r2 = .58).

Hypotheses testing

A series of linear regressions were performed between positive family relationships and social anxiety across all three age categories to test the validity of the first hypothesis (Table 2). First, between positive relationships between 0-5 years and social anxiety β = -.25 t = -2.81 p < .001. The regression being statistically significant F(1,119) = 7.92 p < .001 with an R^2 = .06 which means that the positive relationships between 0-5 years explain 6% of the total variance of social anxiety. The second, between positive relationships between 5-12 years and social anxiety β = -.22 t = -2.46 p < .001. The regression being

statistically significant F(1,119) = 6.08 p < .001 with an R^2 = .04 which means that positive relationships between 5-12 years explain 4% of the total variance of social anxiety. The third, between positive relationships between 13-19 years and social anxiety β = -.21 t = -2.37 p < .050. The regression being statistically significant F(1, 119) = 5.63 p < .001 with an R2 = .04 which means that positive relationships between 13-19 years explain 4% of the total variance of social anxiety. All these aspects can be observed in Table 2.

Therefore, we conclude that our data support the hypothesis that positive family relationships statistically significantly influence levels of social anxiety in different age categories according to statistical data.

Table 2
Linear regression coefficients

Variable	B	95% CI	β^a	t	P
Positive relationships 0-5 years	-.38**	[-.57; -.10]	.34**	-2.81	.000
Positive relationships 5-12 years	-.29**	[-.53; -.05]	-.36**	-2.46	.000
Positive relationships 13-19 years	-.29*	[-.53; -.04]	-.21*	-2.37	.001

The results support the hypothesis than „Positive relationships with family statistically significantly influence levels of social anxiety in different age groups."

To test the validity of the second hypothesis, a series of linear regressions were also conducted between positive family relationships and performance anxiety across all three age categories (Table 3). First, between positive relationships between 0-5 years and performance anxiety β = -.27, t = -3.06 p < .001. The regression being statistically significant F(1,119) = 9.36 p < .001 with an R^2 = .07 which means that the positive relationships between 0-5 years explain 7% of the total variance of performance anxiety. The second, between positive relationships between 5-12 years and performance anxiety β =

-.21, t = -2.46 p < .01. The regression being statistically significant F(1,119) = 5.88 p < .001 with an R^2 = .04 which means that the positive relationships between 5-12 years explain 4% of the total variance of performance anxiety. The third, between positive relationships between 13-19 years and performance anxiety β = -.21, t = -2.35 p < .05. The regression being statistically significant F(1,119) = 5.53 p < .01 with an R^2 = .04 which means that the positive relationships between 13-19 years explain 4% of the total variance of performance anxiety.

Following the statistical data, we conclude that the hypothesis according to which positive relationships with the family statistically significantly influence the levels of performance anxiety in the different age categories is supported by the statistical data.

Table 3
Linear regression coefficients

Variable	B	95% CI	β^a	t	P
Positive relationships 0-5 years	-.40**	[-.66; -.14]	-.27**	-3.06	.000
Positive relationships 5-12 years	-.32*	[-.58; -.05]	-.21**	-2.42	.000
Positive relationships 13-19 years	-.31*	[-.58; -.06]	-.21*	-2.35	.001

Furthermore, the second hypothesis is also supported by the results, indicating that positive relationships with family statistically significantly influence levels of performance anxiety in different age groups.

A series of personality factor moderations were conducted between positive family relationships across the three age stages and social anxiety (Table 4). Neither relationship was found to be statistically significant. Mmoderation analyzes were carried out in the three age categories of personality factors in the relationship with performance anxiety and the relationship with the family. Only one relationship was significant, namely that between Positive Relationships 5-12 years and Agreeableness.

Table 4

Moderation table of personality factors between the relationship, positive relationships in the age period 5-12 years and performance anxiety

	B	SE	Z	P
Positive relationships 5-12 years	.10	.10	-1.02	.302
Extraversion	.08	.08	-7.76	< .001
Positive relationships 5-12 ani �֎Extraversion	.11	.11	-.50	.619
Positive relationships 5-12 years	.12	.12	-2.03	.044
Agreeableness	.14	.14	-1.64	.101
Positive relationships 5-12 years �֎ Agreeableness	.25	.25	-2.13	.033
Positive relationships 5-12 years	.12	.12	-2.02	.047
Conscientiousness	.09	.09	-2.07	.036
Positive relationships 5-12 years �֎ Conscientiousness	.14	.14	-.53	.596
Positive relationships 5-12 years	.11	.11	-1.19	.235
Neuroticism	.08	.08	7.15	< .001
Positive relationships 5-12 years �֎ Neuroticism	.12	.12	.74	.454
Positive relationships 5-12 years	.13	.13	-2.39	.012
Openness	.13	.13	-.02	.973
Positive relationships 5-12 years ✖ Openness	.22	.22	-.00	.992

A moderation analysis was carried out for the moderating role of agreeableness between positive relationships with family in the age range of 5-12 years and performance anxiety ΔR^2 = .06 which shows a statistically significant effect $F(1, 118)$ = 8.32; p < .05 effect that is more pronounced at a standard deviation in minus βa = -.03; p >.05 without having a significant effect, but this effect decreases even more at a standard deviation above the mean βa = -.55; p < .001 and is statistically significant (Table 4). The only significant moderating relationship being the one mentioned above.

Following these analyses, we conclude that the hypothesis according to which agreeableness moderates the relationship between positive relationships with family in the age range 5-12 years and performance anxiety is supported by statistical data.

Table 5

The moderating effect at differentlevels of agreeableness on the relationship between relationships with family in the age period 5-12 years and performance anxiety being the dependent variable

	B	SE	Z	p
Average	-.26	.13	-1.99	.042
Low (-1SD)	-.03	.19	-.16	.867
High (+1SD)	-.55	.18	-2.93	.002

So, in the relationship between childhood experiences between the ages of 5-12 (predictor) and performance anxiety (dependent variable), we noticed that agreeableness has a moderating role, this being the only relationship among all 30 possible combinations which was statistically significant.

4. DISCUSSIONS

Research on the link between childhood experiences, social anxiety and personality traits highlights how early factors can influence an individual's psychological state. Studies show that negative experiences (such as trauma or abuse) increase the risk of social anxiety in adulthood, while a supportive family environment can protect against it. Cognitive and emotional factors also play a central role in determining the negative perceptions and physical reactions associated with anxiety. Also, personality traits such as avoidance or negative self-perception can amplify social anxiety, suggesting a complex interaction between personality and childhood experiences. Research findings indicate that positive family relationships reduce social and performance anxiety, but other factors, such as social influences and life experiences, also contribute to this phenomenon.

Studies show that agreeableness can influence the impact of family relationships on anxiety, but not always in a positive way. Thus, a holistic approach is needed in the assessment and treatment of anxiety, given the diversity of factors involved. This paves the way for more personalized and effective interventions in the management of social and performance anxiety.

Conclusion

The present study investigated the relationship between childhood experiences, social anxiety, and personality traits. Results showed that positive family relationships significantly reduce social and performance anxiety at various ages. Also, agreeableness moderates this influence especially in children between 5-12 years. The conclusion emphasizes the importance of this area of research, contributing to the identification of risk and protective factors, the understanding of psychological mechanisms, and the development of more effective interventions for the prevention and treatment of social anxiety.

Limitations and further research. The study has several important limitations. The childhood experiences questionnaire used is adapted from another research (Yancura & Aldwin, 2009) and has not been validated on the Romanian population, which may affect the accuracy of the results. The small sample may introduce variability and uncontrolled external influences, reducing the statistical power and reliability of the conclusions. Also, being a non-experimental design, causal relationships cannot be established. To improve the research, it is necessary to validate the instrument on the local population and replicate the study on a larger sample.

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