The Role of Socially Prescribed Perfectionism in Mediating the Effect of Early Maladaptive Schemas on Clinical Anxiety Symptomatology among University Students

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Abstract

The current study examined the relationship between Early Maladaptive Schemas (EMSs), Socially Prescribed Perfectionism (SPP), and clinical anxiety symptomatology, along with exploring the mediating role of SPP in the relationship between EMSs and clinical anxiety symptoms. The sample is composed of 279 university students with clinical levels of anxiety, whose ages range from 18-25. Participants completed three questionnaires: Young Schema Questionnaire-short form, Hewitt Multidimensional Perfectionism Scale, and Depression Anxiety Stress Scale. Results indicated significant positive correlations among EMSs, SPP, and anxiety symptoms. The Schematic domain of excessive standards and impaired autonomy were found to have the highest correlation with anxiety symptomatology. Additionally, the schematic domain of excessive responsibility also had the highest correlation with SPP. However, there was no mediation effect of SPP in the relationship between the overall EMSs and anxiety symptomatology. However, a mediation effect of SPP was found between the impaired limits schematic domain and anxiety symptoms. A thorough discussion and recommendations of the findings were provided.

Keywords: Socially Prescribed Perfectionism, Early Maladaptive Schemas, Anxiety Symptomatology, University Students.

Introduction

Anxiety disorders are considered to be the most prevalent mental health disorders, where the estimates show that around 4% of the general population suffers from anxiety disorders (World Health Organization, 2023). Among the various vulnerable populations to anxiety disorders, university students appear to be one of the most highly impacted population groups. Indeed, the transition phase from high school to university has been described as one full of new responsibilities that burden university students. This new phase is usually characterized by facing the new duties of emerging into adulthood, which is full of stressors related to finance, family, and career, that contribute to students experiencing high levels of anxiety (Asif et al., 2020).

Indeed, this is reflected in literature, where there is a mounting concern about the rapidly growing rates of anxiety among college students. It was found that the overall incidence rate of anxiety has been progressively increasing over the years among college students (Lee et al., 2021). In a recent review, it was discovered that approximately one in every 3 university students suffer from anxiety, which is around 32 % of university students (Tan et al., 2023). This is considered a striking difference in comparison with the estimated percentage of anxiety disorders found in the general population, which is 4% of the general population (World Health Organization, 2023). Given these alarming statistics of the increasing rate of anxiety symptomatology among university students, they specifically seem to be a vulnerable population for anxiety disorders in comparison with the general population. As a result, the current study will focus on university students specifically and the possible underlying mechanism for their unique anxiety experience.

Also, the critical need to address the increasing rates of anxiety in colleges is amplified given the severe harmful implications of anxiety on students. Anxiety symptomatology has been found to

negatively impact students' academic performance, quality of sleep, social life, and overall mental health status and even predict later psychopathology (Asif et al., 2020). Therefore, it is critical in the current study to understand the underlying mechanisms of anxiety disorder in university students specifically to tailor effective treatments and interventions, as their experiences seem to be more amplified -almost ninefold higher- and different from the general population.

One of the potential variables that underlie anxiety disorders and psychopathology is perfectionism. It has been found that along with the increase in anxiety among university students, tendencies for perfectionism have also been shown to be an increasing trend in today's highly competitive world. One meta-analysis demonstrates a linear increase over the last 20 years in perfectionistic tendencies among university students (Curran & Hill, 2019).

This emphasizes the increasing strain of striving for perfection that burdens the younger generation in university compared with their older peers. This rise in perfectionistic tendencies has also been hypothesized to be a potential explanation for a significant portion of the rise in psychopathology and specifically in the increase of anxiety levels among university students (Curran & Hill, 2019). More specifically, one dimension of perfectionism has consistently shown a strong association with psychopathology, which is socially prescribed perfectionism (SPP). This dimension revolves around the conviction that people demand exceedingly high standards of oneself, and it has shown a robust association with anxiety (Flett et al., 2022).

Additionally, in the process of understanding perfectionism and its negative impact on anxiety levels, cognitive theorists have also focused on the role of schemas in developing such perfectionistic tendencies. More specifically, cognitive approaches emphasize the contribution of early maladaptive schemas (EMSs) that are formed early in life in shaping an individual's perfectionistic tendencies.

Numerous research has indeed found a strong relationship between EMSs and perfectionistic tendencies (Azhari, 2017; Moghadam et al. 2021). Also, EMSs were proven to have a significant contribution in the development and durability of anxiety symptomatology (Azhar, 2017).

Therefore, this research aims to understand the complex mechanisms under which SPP, and EMSs affect anxiety symptomatology in university students. Hence, the current study intends to investigate the correlation among EMSs, SPP, and anxiety symptomatology in university students. Along with exploring the possible mediating effect of socially prescribed perfectionism on the relationship between EMSs and anxiety symptomatology.

Accordingly, the current study poses the following research questions: What is the relationship between EMSs and anxiety symptomatology? What is the relationship between the EMSs and SPP? What is the relationship between SPP and anxiety symptomatology? What is the mediating effect of SPP on the relationship between EMSs and anxiety symptomatology?

Theoretical Conceptualization

Early Maladaptive Schemas

Understanding schemas has been given special attention in the field of cognitive psychology. Generally, schemas have been defined as a mental shortcut that aids people in understanding, interpreting, and responding to external information (Young et al., 2003, p.6). Interestingly, Young has expanded the literature in understanding the nature of schemas, especially those leading to psychopathology, and he named them ‘early maladaptive schemas’(EMSs). Young defined EMSs as broad everlasting templates that involve cognitive, emotional, memories, and even bodily sensations, which are hypothesized to be conceived out of disadvantageous early experiences and have an enduring pathological impact on the individual's life (Young et al., 2003, p.7).

Furthermore, Young classified the schemas into 18 maladaptive schemas falling under four main schematic domains (Bach et al., 2018). These four main schematic domains are impaired autonomy/performance, excessive responsibility/standards, disconnection/ rejection, and impaired limits. Individuals with the disconnection/rejection schema have difficulty forming secure attachments with people and their needs revolve around stability, belonging, safety, and nurturing (Bach et al., 2018). They also believe that such needs will not be met. In contrast, impaired autonomy/performance schema revolves around the belief about one's inability to function solely and competently (Bach et al., 2018). This includes believing in one's inadequacy and inability to handle given duties.

Conversely, the impaired limits schematic domain revolves around problematic beliefs about one's internal limits and discipline (Bach et al., 2018). This often leads to difficulty respecting others and abiding by one's commitments/responsibilities. Lastly, the schematic domain of excessive responsibility and standards mainly revolves around meeting high internalized standards (Bach et al., 2018). This includes pressuring oneself to meet unrealistic high standards while having an attitude of intolerance and punitiveness towards imperfections.

Socially Prescribed Perfectionism

In the past decade, research has been directed toward understanding perfectionism as a construct. Perfectionism is hypothesized to be a multidimensional personality construct that often contributes to the etiology and maintenance of mental health difficulties (Maricuțoiu et al., 2020). It has also been hypothesized to be a common core vulnerability to various mental health disorders. Thus, it has been considered a transdiagnostic process across different clinical disorders (Egan et al., 2012).

To capture the distinct facets of perfectionism, different theoretical models have tried to categorize and explain the nature of

each of them. Consequently, this leads to having a pool of diverse facets explained differently by each theoretical model, leading to complexity in understanding the multidimensional nature of perfectionism (Stairs et al., 2011). Nevertheless, all those various facets have been shown to fall under a consistent two-factor model structure by factor analysis studies: adaptive perfectionism (AP) and maladaptive perfectionism (MP) (Stoeber et al., 2020).

Consequently, Stoeber et al., (2020), have developed their two-factor model of perfectionism. They differentiate between 2 main dimensions of perfectionistic tendencies: one that is named maladaptive perfectionism or perfectionistic concerns which is usually linked to mental health disorders and psychopathology. The other type is called adaptive perfectionism or perfectionistic strivings, and it has not always yielded consistent association with mental health difficulties and psychopathology. Thus, this organization now serves as a compass in guiding one's understanding of the different facets of perfectionism explained by the numerous theories on perfectionism.

Out of all the different theories explaining the various facets of perfectionism, the most prominent is based on the conceptualization of Hewitt and Flett's (Hewitt & Flett, 1991). To clarify, Hewitt and Flett (2002) explain perfectionism through three main facets: self-oriented perfectionism (SOP), other-oriented perfectionism (OOP), and socially prescribed perfectionism (SPP). SOP is hypothesized to refer to the elevated expectations that one enforces on oneself. In contrast, OOP refers to the high standards that one expects from other people, and finally SOP refers to the conviction that other people demand unrealistically high expectations.

Through the two-factor model, SOP belongs to adaptive perfectionism, but SPP belongs to maladaptive perfectionism. However, OOP was dismissed from the model as it focuses on perfectionistic tendencies directed towards other people and moves away from the model of understanding perfectionistic tendencies

inside the individual (Stoeber & Francis, 2018, p.8). Therefore, the theoretical model of Hewitt and Flett will be adopted in the current study, focusing on the socially prescribed dimension since it is the dimension closely related to psychopathology.

Anxiety Symptomatology

Anxiety symptomatology includes excessive worrying, feelings of nervousness, apprehension, physiological arousal, irritability, restlessness, easily fatigued, and difficulty concentrating (Adwas et al., 2019). Furthermore, these anxiety symptoms fall under different categories of anxiety disorders (Nowak et al., 2023). Indeed, anxiety disorders are a huge umbrella that contains numerous types such as separation anxiety, generalized anxiety disorder (GAD), specific phobia, and social anxiety disorder (SAD).

Various models have tried to explain the complex mechanism of anxiety, the most prominent theory is the cognitive model of anxiety. According to Clark & Beck (2010), this model explains anxiety through two main processes: primary and secondary appraisal (p.32). Primary appraisals of individuals suffering from anxiety usually center around overestimating the significance of the harm or the threat that one experiences. The secondary appraisal of anxious individuals usually revolves around the inability of the individual to cope with such a threat. Thus, both the perceived belief in the severity of the possible harm and one's helplessness in dealing with it can shape anxiety experience.

Literature Review

EMSs and Anxiety Symptomatology

Literature has established a strong association between EMSs and anxiety symptomatology. For instance, a recent meta-analysis study has examined the correlation between EMSs and anxiety in adolescents (Tariq et al., 2021). Results from 15 different research studies indicated a strong correlation between anxiety and EMSs. Additionally, the disconnection/rejection schematic domain along

with the impaired autonomy domain were found to have the highest correlation with anxiety. Interestingly, it was also found that the schematic domain of impaired limits was the least correlated domain with anxiety symptoms. Another longitudinal study has shown that EMSs can predict the changes in the level of anxiety over long periods and often lead to stability of the anxiety levels over time (Calvete et al., 2014).

Additionally, this robust relationship between EMSs and anxiety has been proven among various populations. For instance, all the domains of EMSs were found to have a direct effect on the level of anxiety of new mothers (Molnár et al., 2018). Similarly, EMSs were found to be significantly higher in pregnant women with pregnancy anxiety than those not suffering from anxiety (Atadokht et al., 2019). On the other hand, among university students, it was found that schemas of impaired autonomy and disconnection significantly predicted anxiety symptomatology (Zadahmad & Torkan, 2016). Similarly, Ghaderi et al., (2022), found that the schematic domains of impaired autonomy and rejection/disconnection are associated with the conception of social anxiety.

In addition to that, throughout the literature, a strong association was found among the various forms of anxiety and EMSs. For instance, the findings of Mairet et al., (2014) demonstrated that people who scored higher on SAD were more inclined to have higher ratings on schemas related to rejection and disconnection than individuals with lower levels of social anxiety. Similarly, Bintas-Zorer & Dirik (2023) discovered a high correlation between university students' social anxiety and every schematic domain of the EMSs except for the impaired limits domain.

Therefore, based on the findings of the literature, it can be deduced that EMSs are positively correlated with anxiety symptomatology, with the highest correlation found among the schematic domains of disconnection and impaired autonomy. While the least correlation is found among the schematic domain of

impaired limits. Also, it can be suggested that schemas of disconnection and impaired autonomy are vulnerability indicators of anxiety symptoms. However, criticism should be directed; as most of the research in this area have used an old factor structure of the EMSs, considering them to be composed of 5 domains and not 4 as it has been revised by the developers of the scale (Bach et al., 2018). Thus, the current study will examine such a link using the updated version of the factor structure of the EMSs and it hypothesizes a positive correlation between EMSs and anxiety symptomatology.

H1: There is a positive correlation between EMSs and anxiety symptomatology.

EMSs and SPP

There is a scarcity of studies examining the relationship between EMSs and perfectionism. Also, many of the studies in literature did not specify the exact corrections between perfectionism and each schematic domain. To exemplify, Azhari (2017) found a significant high association between perfectionism and EMSs among high school students. However, they did not specify the exact corrections between perfectionism and each schematic domain.

Similarly, Moghadam et al. (2021) have also investigated the correlation between SPP and EMSs. It was also found a significant positive correlation between the total schematic domains of the EMSs and SPP among cosmetic surgery applicants. However, the details of the correlation between the schematic domains and socially prescribed perfectionism were not identified. Likewise, Alibakhshi & Solgi (2022) found a positive correlation between all the main schematic domains of EMSs and perfectionism.

Indeed, literature has asserted the correlation between MP and EMSs. For example, Boone et al. (2012) discovered that MP was positively correlated with all schematic domains except impaired limits. Also, Amirpour (2014), found a significantly high correlation between maladaptive perfectionism and EMSs. The results of the t-

test showed that people having MP are more inclined to score higher on EMSs than non-perfectionists.

Additionally, Toroslu & Çırakoğlu (2022) have found that maladaptive perfectionism was significantly positively correlated with all schematic domains of the EMSs. The highest correlations were found among the schematic domains of unrelenting standards and the least correlated schematic domain was impaired limits. Thus, it can be deduced from the literature that EMSs are positively correlated with SPP.

Based on the findings of the literature, it can be deduced that EMSs are positively correlated with SPP, with the highest correlation among the schemas of unrelenting standards, while the least correlated schematic domain is impaired limits. However, these results may seem inconclusive as it is apparent that the link between EMSs and perfectionism, specifically SPP, is under-researched. Also, most of the studies have not used the updated 4 factor structure version of the EMSs, which might affect the results. Thus, the current study will examine this correlation, using the most updated factor structure and it hypothesizes a positive correlation between EMSs and SPP.

H2: There is a positive correlation between EMSs and SPP.

SPP and Anxiety Symptomatology

Perfectionism has been found to have a robust association with anxiety symptomatology throughout literature. To exemplify, in a study conducted by Ahmed & Cerkez (2022), a strong significant correlation was found between anxiety symptomatology and perfectionism among 980 undergraduates. Also, Barlow et al. (2023) disclosed that perfectionism significantly predicted anxiety, and stress in a community sample of 268 participants.

Additionally, in a case study by Pineda-Espejel et al. (2020), it was found that all 6 gymnastics in the case study experienced high levels of anxiety upon visualizing their competition. However,

higher levels of anxiety were found among those who experienced the pressure of perfectionism from coaches and their parents. Similarly, Wang et al. (2022), also discovered that perfectionism predicted not only anxiety symptoms but also the perceived stress among 425 college students.

More specifically, it is also crucial to recognize that literature has asserted the link between anxiety symptomatology and socially prescribed perfectionism -that falls under the category of maladaptive perfectionism-. To exemplify, Cox & Chen (2014), have found that SPP directly affects the social anxiety symptoms and rumination after social interactions in university students. Similarly, SPP was found to be significantly positively associated with anxiety symptomatology in a sample of 449 undergraduates (Smith et al., 2017).

In addition to that, it has also been found that SPP was significantly positively correlated with social anxiety, depressive symptoms, and rumination (Nepon et al., 2011). Contrastingly, Gutierrez et al., (2022) concentrated on the relationship between MP - measured by the FHMP scale- and anxiety symptomatology. Maladaptive perfectionism was found to increase anxiety symptoms in a sample of 230 fibromyalgia patients.

Interestingly, Kozlowska & Kuty-Pachecka (2023), have differentiated between adaptive and maladaptive perfectionists. It was found that individuals with high levels of MP were more prone to anxiety symptomatology in comparison with the adaptive ones. Similar to those results, Lamarre & Marcotte (2021) have also found that MP was associated with anxiety symptoms. They discovered that maladaptive perfectionism remained associated with anxiety even after adjusting for adaptive perfectionism.

Likewise, Karababa (2020) has found that MP was also positively associated with anxiety ($r=0.66$, $p<.001$), and hope was found to moderate such a relationship. More importantly, it should also be noted that MP was found to predict the diagnosis of GAD and

pathological worry (Handley et al., 2014), along with predicting the severity level of anxiety (Xiong et al., 2024). Therefore, relying on the results of the literature, there seems to be a strong correlation between SPP and anxiety. Not only this, but also there seems to be a robust association among the three research variables. Thus, the current study hypothesizes a positive correlation between SPP and anxiety symptomatology and a mediation effect of SPP on the relationship between EMSs and anxiety symptomatology.

H3: There is a positive correlation between SPP and anxiety symptomatology.

H4: There is a mediation effect of SPP on the relationship between EMSs and anxiety symptomatology.

Methodology

Research Design

The current study used a descriptive correlational design to investigate the intertwined relationships among the research variables and their subtypes. This specific research design was used to examine the nature and strength of the relationships among the research variables without any manipulation, aid in making predictions of the possible influence of one variable on the other and provide an opportunity for potential interventions to be taken as needed.

Sample

Firstly, a pilot sample composed of 347 university students from the British University in Egypt were given the questionnaires. Their age (M=20.4, SD=1.4) ranges from 18-26 years. They included 25.9% male participants and 74.06 % female participants. The participants of the pilot sample ranged in their education level from first year at university to fifth year as follows: 36.3% first year, 15.6% second year, 22.5% third year, 19.3% fourth year, and finally 6.3% fifth year.

Then, an exclusion criterion was chosen to exclude all participants with normal levels of anxiety and include only those with clinical concerning levels. DASS 21 uses a cut off score of 8 to differentiate between normal and clinical levels of anxiety (Brumby et al., 2011). Thus, a cut-off score of 8 was used to exclude all participants below the score of 8.

After applying the exclusion criteria, the number of students in the study sample was 279 students. Their age (M=20.09, SD=1.4) ranges from 18-25 years. They included 22.9% male participants and 77.06 % female participants. The participants of the pilot sample ranged in their education level from first year at university to fifth year at university as follows: 40.1% first year, 14.6% second year, 22.2% third year, 18.2% fourth year, and finally 4.6% fifth year.

The university students were invited through an invitation email for participation in the research study at the university's psychology laboratory. The students were given the consent form and the assessments in an online form at the laboratory, which were completed within 30 minutes. All ethical guidelines have been taken into account throughout the whole process. Also, the ethical approval of the ethical committee at the university has been obtained.

Data Collection Tools

Young Schema Questionnaire short form (YSQ-S3)

In the current study, the Young Schema Questionnaire short form (YSQ-S3) was used to measure the EMSs. The YSQ-S3 was developed by Young & Brown (2005), and it comprises 90 self-report statements that measure the different schematic domains. Respondents are required to assess their consensus with each statement on a scale from one to six, where one means "completely untrue of me" and 6 means "Describes me perfectly". The scale's 90 items measure 18 subdomains of EMSs that fall under four main schematic domains (Bach et al., 2018; Aloi et al., 2020).

According to Back et.al (2018), these four schematic domains and the subdomains are as follows: a) impaired limits (approval-seeking, insufficient self-control, entitlement), b) excessive responsibility and standards (self-sacrifice, punitiveness, unrelenting standards), c) impaired autonomy (failure to achieve, abandonment/instability, incompetence, undeveloped self, subjugation/ invalidation, Vulnerability to harm), d) disconnection (emotional inhibition, pessimism, defectiveness, social alienation, emotional deprivation, mistrust/abuse).

This latest short version has been proved to be the more practical and ideal choice for assessing EMSs since it has been established to have comparable psychometric power to the longer version. (Bach et al., 2017; Thimm, 2022; Yalcin et al., 2023). Prominent findings have confirmed the reliability and validity of the questionnaire (Kriston et al., 2013; Calvete et al., 2013), and its psychometric properties have been adapted and confirmed in more than seven languages and cultures. In the current study, the reliability of the YSQ scale was as follows: the disconnection domain (α = .85), impaired autonomy (α = .82), impaired limits (α = .63), and excessive responsibility and standards (α = .69).

Hewitt Multidimensional Perfectionism Scale (HMPS)

The Hewitt Multidimensional Perfectionism Scale (HMPS) is a 45-item self-report scale, established by Hewitt & Flett, (1991) to assess 3 distinct facets of perfectionism. That is other-oriented perfectionism (OOP), self-oriented perfectionism (SOP), and socially prescribed perfectionism (SPP). It is composed of 45 self-report statements: 15 items measuring each facet of perfectionism to give a total score for each subscale. Respondents are expected to answer all items on a Likert scale of 7 points, and higher scores demonstrate more perfectionistic tendencies in each domain.

All three subscales proved to be highly valid and reliable. The coefficient alphas were .89, .79 and .86 for SOP, OOP and SPP respectively. Additionally, through principal component factor

analysis, the scale has proven its valid factor structure (Hewitt et al., 1991). Similarly, previous literature has confirmed the psychometric power of the scale (Mansur- Alves et al., 2023; De Cuyper et al., 2014). In the current study, the SPP subscale was only used, and its reliability was reported to be (α = .75).

Depression Anxiety Stress Scales- Short Form (DASS-21)

The depression anxiety stress scale short form (DASS-21) is a 21-item self-report scale that contains three subscales, assessing depression (measuring dysphoric mood, hopelessness, and anhedonia), anxiety (measuring arousal states, subjective experiences of anxious feelings), and stress (measuring general tension, nervous arousal, agitation, overreactions to stress) symptoms (Ahmed et al., 2022). It was developed by Lovibond & Lovibond (1996), to assess the central symptoms of depression and anxiety while providing the maximum possible discrimination between them, which has been proven to be difficult with other scales.

Respondents are asked to assess the applicability of each statement during the past week. Participants are also informed to rate their scores on a scale from 0 to 3; 0 means ‘never’ and 3 means ‘almost always’. DASS 21 is the short version of the original DASS 42 item version. Throughout the literature, it has been advised to use the shorter version (Ahmed et al., 2022). The short form has proved to have comparable psychometric qualities to the longer form, with a more robust factor structure and fewer interactor correlations. As a result, the shorter form was chosen in the current research.

The psychometric properties of this assessment tool, including its reliability and validity, have been well established through numerous studies. The reliability of the three subscales and the factor structure of the scale have been well established (Lan et al., 2020; Lee et al., 2019; Makara-Studzińska et al., 2022). In the current study, the anxiety subscale was only used and showed adequate reliability (α = .80).

Results

The data was analyzed using the software JASP 0.19.0 and SPSS version 26. Overall, there are significant positive correlations among socially prescribed perfectionism, anxiety symptomatology, and total EMSs as shown in the tables below.

Table 1

Sociodemographic Characteristics of the Sample

Characteristics	N	%	M	SD	Skewness	Min.	Max.
Gender							
Female	215	77.06	____	____	____	____	____
Male	64	22.93	____	____	____	____	____
Year of study							
Year 1	112	40.14	____	____	____	____	____
Year2	41	14.69	____	____	____	____	____
Year3	62	22.22	____	____	____	____	____
Year4	51	18.28	____	____	____	____	____
Year5	13	4.65	____	____	____	____	____
Age	____	____	20.09	1.46	0.47	18	25

Note. N = 279

Table 2

Descriptives Statistics for the Variables of the Study

Variables	Mode	Median	Mean	S.D	Skewness	Min	Max
Total-EMSs	315.19	312	310.97	61.8	0.16	150	468
Anxiety	13.55	18	19.10	7.48	0.48	8	36
Disconnection	80.14	83	84.38	22.68	0.08	32	134
Impaired autonomy	93.58	96	97.49	23.95	0.17	33	162
Impaired limits	49.91	53	53.26	11.35	0.25	29	86
Excessive responsibility	73.45	75	75.83	15.13	0.27	39	119
Social perf	54.05	53	52.06	10.10	0.007	24	81

Table 3

Correlations of the Study Variables

Variables	1	2	3
Total-EMSs	_____		
Social-perf	.45***	_____	
Anxiety	.52***	.24***	_____

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 4

Correlations of the Study Variables

Variables	1	2	3	4	5	6
Disconnection	_____					
Impaired autonomy	.72***	_____				
Impaired limits	.44***	.51***	_____			
Excessive responsibility	.61***	.68***	.45***	_____		
social-perf	.40***	.35***	.31***	.46***	_____	
Anxiety	.42***	.49***	.22***	.55***	.24***	_____

$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Regarding the correlation between EMSs and anxiety symptomatology, there is a positive correlation between the total of the EMSs and anxiety symptomatology r (279) =.52, p < .001 (table 3). Also, all 4 domains of the EMSs were significantly correlated with the anxiety symptomatology (table 4). The highest correlation was found with excessive responsibility and standards r (279) =.55, p < .001, followed by the impaired autonomy domain r (279) =.49, p < .001. Also, the least correlated domain was the impaired limits r (279) =.22, p < .001. Thus, the first hypothesis of the research study is accepted.

Additionally, a significant positive correlation exists between the total of the EMSs and SPP r (279) =.45, p < .001 (table 3). Not only this but also a significant positive correlation was found between SPP and each of the domains of EMSs (table 4). For the domains of the EMSs, the highest significant positive correlations were found

among the excessive responsibility and standards domain r (279) =.46, p<.001, and the disconnection domain r (279) =.40, p < .001. Consequently, the second hypothesis of the current study is also accepted.

Regarding the correlation between SPP and anxiety symptomatology, a significant positive correlation is found r (279) =.24, p < .001 (table 3). Therefore, the third hypothesis of the study is accepted.

Table 5

Total effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
Total YSQ	→	Anxiety	0.063	0.006	10.269	< .001	0.051	0.075

Table 6

Direct effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
TotalYSQ	→	Anxiety	0.063	0.007	9.100	< .001	0.050	0.077

Table 7

Indirect effects								
							95% confidence interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
Total YSQ →	Social Perf →	Anxiety	2.311×10^{-4}	0.003	0.073	0.942	-0.006	0.006

Through the mediation analysis, it was found that the total effect of EMSs on anxiety through SPP was significant as shown in table 5 (β = .063, 95% CI [.051, .075], z = 10.269, p < .001). Also, the direct effect of EMSs on anxiety was significant, as shown in table 6, (β = .063, 95% CI [.050, .077], z = 9.100, p < .001). However, the indirect effect of EMSs on anxiety through the mediating effect of SPP was not significant (table 7), ($\beta = 2.311 \times 10^{-4}$, 95% CI [-.006, .006], z = 0.073, p = 0.942). Therefore, the last hypothesis of the study that hypothesizes the mediation effect is rejected.

Table 8

Total effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
Total YSQ	→	Anxiety	0.148	0.038	3.857	<.001	0.073	0.224

Table 9

Direct effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
Impaired Limits	→	anxiety	0.109	0.040	2.742	0.006	0.031	0.187

Table 10

Indirect effects								
								95% confidence interval
			Estimate	Std. Error	z-value	P	Lower	Upper
Impaired limits →	Social Perf →	Anxiety	0.039	0.014	2.744	0.006	0.011	0.067

The mediation effect of SPP was also tested among the different dimensions of EMSs. Regarding the impaired limits schematic domain, it was found that the total effect of impaired limits on anxiety through SPP was significant as shown in table 8 (β = .148, 95% CI [.073, .224], z = 3.857, p < .001). Also, the direct effect of impaired limits domain on anxiety was significant, as shown in table 9, (β = .109, 95% CI [.031, .187], z = 2.74, p < .006). Interestingly, the indirect effect of impaired limits on anxiety through the

mediating effect of SPP was also significant (table 10), (β = .039, 95% CI [.011, .067], z = 2.744, p < 0.006). However, no mediation effect of SPP was found between all the other schematic dimensions and anxiety symptomatology (see appendix A).

Discussion

The current study investigated the relationship between EMSs, SPP, and anxiety symptomatology among college students, along with exploring the possible mediating effect of SPP on the relationship between EMSs and anxiety symptomatology. The results indicated significant positive correlations among all the research variables and suggested no mediation effect of SPP on the relationship between the total score of EMSs and anxiety.

However, a mediation effect of SPP was found in the relationship between the impaired limits schematic domain and anxiety symptomatology. Nevertheless, the findings of the significant correlations of the study should be taken tentatively, since those results might be due to the relatively large sample size and might not reflect real strong positive relationships among the variables.

Also, all the main domains of the EMSs were found to be significantly positively correlated with anxiety symptomatology. These results are consistent with all the various research in the field supporting the robust link between EMSs and anxiety symptomatology (Calvete et al., 2014; Tariq et al., 2021). Therefore, the study's first hypothesis hypothesizing a positive correlation between EMSs and anxiety symptomology was accepted.

Additionally, the findings suggest that the schematic domain of excessive standards/responsibility is the highest in its correlation with anxiety symptoms, followed by the impaired autonomy domain. This indicates that schemas revolving around perfectionism, following rigid rules, and beliefs about one's sense of incompetence and the exaggerated perceived dangers of the world seem to be the most critical with anxiety symptoms.

Importantly, it should be noted that the notion that excessive responsibility is the highest schematic domain correlated with anxiety is in contrast with the existing literature (Ghaderi et al., 2022; Zadahmad & Torkan, 2016). This can be understood considering the outdated structure of the YSQ factors that the studies in literature have used. Indeed, most of the literature has used the old 5-factor model, however, the current study used the revised updated 4-factor model as recommended by the developers of the questionnaire. Thus, this is considered one of the strengths of the current study, and more research using the updated factor structure of the YSQ is recommended to obtain more accurate results of the specific domains underlying anxiety symptoms.

On the other hand, the impaired autonomy-anxiety link is consistent with the literature and the cognitive model of anxiety, where the exaggerated perceived danger of the threatening stimuli and the perceived helplessness of the individual are essential components in explaining the mental processes underlying anxiety (Tariq et al., 2021). However, the findings add to the cognitive model the importance of the schemas revolving around perfectionistic tendencies (excessive standards domain) as an important underlying cognitive mechanism of anxiety, which supports the literature that perfectionism is a core vulnerability factor of anxiety (Egan et al., 2012).

Thus, based on the findings, it seems that the most critical schema underlying university students' anxiety symptoms are the high internalized standards that pressure the students towards achieving unrealistically high goals along with having a punitive attitude towards mistakes/ failures. This seems to be the core of the anxiety symptoms that might then be connected to Beck's proposed schemas of one's incompetence (equivalent to Young's impaired autonomy schematic domain). Therefore, considering such findings might enrich the understanding of cognitive processes underlying anxiety in university students.

In addition, the findings indicate a significant positive correlation between EMSs and SPP as supported by the literature (Alibakhshi & Solgi, 2022; Moghadam et al., 2021). Therefore, the study's second hypothesis was also accepted, which suggested a positive correlation between EMSs and SPP. It was found that the schematic domain of excessive responsibility and standards was the highest in its correlation with SPP, which is consistent with previous findings (Toroslu & Çırakoğlu, 2022) and fills the gap in the literature in this under-researched area. This is also consistent with Young's conceptualization of the excessive responsibility and standards domain, where this schematic domain revolves around meeting high internalized standards, and usually, families of such individuals are hypothesized to be perfectionistic (Bach et al., 2018).

Interestingly, the findings suggest that the schematic domain of excessive standards and responsibility seems to be the core vulnerability factor for both anxiety and SPP. This highlights the importance of such a schematic domain and its relationship with the young adulthood stage of university students. Findings from the literature assert that the transition phase of emerging into adulthood is full of stressors and new responsibilities of becoming independent adults (Asif et al., 2020). Thus, it seems reasonable that it can trigger excessive responsibility/ standards schematic domain specifically in this age group.

This also relates to the highly competitive environment of the new university and career phase and the nature of today's highly industrialized world. In addition, the schematic domain of excessive responsibilities/ standards seems to relate to the phenomenon of social comparisons that is common for this specific age group who are immersed in technology that eases the comparisons and perfectionistic strivings (Samra et al., 2022). This makes young adulthood especially a critical developmental stage where young adults become burdened with high-performance standards.

Also, SPP was found to be significantly positively correlated with anxiety symptomatology. Thus, the third study's hypothesis examining the association between those variables was also confirmed. Indeed, these results are consistent with the findings of previous research studies as well, where this association was found to be a strong positive significant one among different research samples (Ahmed & Cerkez, 2022; Gutierrez et al., 2022; Nepon et al., 2011; Pineda-Espejel et al., 2020).

In contrast, the current study found no mediation effect of SPP on the relationship between total EMSs and anxiety. Similarly, no mediation effect of SPP was found between the schematic domains of disconnection, impaired autonomy, and excessive responsibility with anxiety symptoms. This could be due to the strength of the direct relationship between the overall score of EMSs and such domains with the anxiety symptoms and thus no mediation is needed in such a case (Zadahmad & Torkan, 2016). Consequently, the last hypothesis of the research study was rejected which assumed the mediation effect of the SPP on the relationship between EMSs and anxiety.

However, SPP was found to mediate the relationship between impaired limits and anxiety. This can be due to the notion that the impaired limits schematic domain was found to have the least correlation with anxiety compared with the other schematic domains. Thus, the relatively weaker relationship between the impaired limits domain and anxiety might have allowed the mediation effect of the SPP (Tariq et al., 2021). This finding suggests that individuals lacking internal disciplined limits in keeping long-term commitments and expressing their behavioral/ emotional inclinations appropriately might then develop SPP tendencies to cope with their inadequacies, which might then lead to anxiety symptoms.

Based on the results of the current study, it is recommended that cognitive-based treatments and various college interventions focus

on tackling and challenging the dysfunctional beliefs surrounding excessive standards and impaired autonomy schematic domains, due to their strong association with anxiety. Skills training programs that focus on practical coping skills in dealing with anxiety are also recommended to increase confidence in one's ability to deal with any perceived stressful situations.

Also, university-based interventions are recommended to focus on developing a compassionate stance towards tolerating mistakes, accepting one's flaws, and not meeting perfectionistic standards. It is also crucial to spread awareness of the maladaptive effect of social comparisons and perfection on mental health and not romanticize sacrificing oneself for accomplishments. Psychoeducation on the differentiation between striving for excellence and perfectionism is also crucial for this age group. In addition, workshops on effective emotion regulation and committing to long-term plans would also aid in combating students' impaired limits and dysfunctional beliefs that might then lead to perfectionism and anxiety.

While this study provides interesting findings and recommendations on the intertwined complex relationship among the research variables, it is crucial to consider its limitations. This includes the research's relatively small sample size and its correlational design. Future research is recommended to test the findings on a larger sample size of participants from diverse backgrounds. Additionally, it is also recommended to use longitudinal research studies to explore the long-term impact of EMSs and perfectionism on the anxiety levels of students. Finally, future research should examine such findings using the updated 4-factor structure of the YSQ which has proven to be the best fit for the EMSs to specify the accurate schematic domains underlying anxiety symptoms.

Appendix A

Table 11

Total effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
disconnection	→	Anxiety	0.141	0.018	7.908	<.001	0.106	0.176

Table 12

Direct effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
disconnection	→	anxiety	0.109	0.040	2.742	0.006	0.031	0.187

Table 13

Indirect effects								
								95% confidence interval
			Estimate	Std. Error	z-value	P	Lower	Upper
disconnection	→ Social Perf →	Anxiety	0.011	0.008	1.360	0.17	-0.005	0.027

Table 14

Total effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
Impaired autonomy	→	anxiety	0.153	0.016	9.41	<.001	0.121	0.185

Table 15

Direct effects								
							95% Confidence Interval	
			Estimate		Std. Error	z-value	P	Lower	Upper
Impaired autonomy	→	anxiety	0.14	5	0.017	8.336	<.001	0.031	0.187

Table 16

Indirect effects								
								95% confidence interval
			Estimate	Std. Error	z-value	P	Lower	Upper
Impaired autonomy →	Social Perf →	Anxiety	0.009	0.006	1.39	0.16	-0.004	0.067

Table 17

Total effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
Excess Responsibility	→	anxiety	0.273	0.025	11.05	<.001	0.224	0.321

Table 18

Direct effects								
							95% Confidence Interval	
			Estimate	Std. Error	z-value	P	Lower	Upper
Excess responsibility	→	anxiety	0.276	0.028	9.932	<.001	0.222	0.331

Table 19

Indirect effects								
								95% confidence interval
			Estimate	Std. Error	z-value	P	Lower	Upper
Excess responsibility →	Social Perf →	Anxiety	-0.004	0.013	-0.29	0.77	-0.029	0.022

References

Adwas, A. A., Jbireal, J. M., & Azab, A. E. (2019). Anxiety: Insights into signs, symptoms, etiology, pathophysiology, and treatment. *East African Scholars Journal of Medical Sciences*, *2*(10), 580–591.

Ahmed, O., Faisal, R. A., Alim, S. M. A. H. M., Sharker, T., & Hiramoni, F. A. (2022). The psychometric properties of the Depression Anxiety Stress Scale-21 (DASS-21) Bangla version. *Acta Psychologica*, *223*, 103509. https://doi.org/10.1016/j.actpsy.2022.103509

Ahmed, S. A., & Cerkez, Y. (2022). The effectiveness of the digital environment and perfectionism on anxiety and depression in the light of the COVID-19 pandemic in northern Iraq. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.804071

Alibakhshi, Z., & Solgi, Z. (2022). Structural equation modeling relationship between symptoms of social anxiety disorder based on early maladaptive schemas, anxiety sensitivity components, and perfectionism in adolescents . *International Journal of Behavioral Sciences*, *16*(1), 9–16.

https://doi.org/10.30491/IJBS.2022.306568.1658

Aloi, M., Rania, M., Sacco, R., Basile, B., & Segura-Garcia, C. (2020). The Young Schema Questionnaire Short Form 3 (YSQ-S3): does the new four-domains model show the best fit? *Anales de Psicología*, *36*(2), 254–261.

https://doi.org/10.6018/analesps.343461

Amirpour, B. (2014). Predictive role of early maladaptive schemas in neurotic perfectionism in middle-school female students from Kangavar. *International Journal of School Health*, *1*(1). https://doi.org/10.17795/intjsh-19854

Asif, S., Muddassar, A., Shahzad, T. Z., Raouf, M., & Pervaiz, T. (2020). Frequency of depression, anxiety and stress among

university students. *Pakistan Journal of Medical Sciences*, *36*(5), 971–976. https://doi.org/10.12669/pjms.36.5.1873

Atadokht, A., Daryadel, S. J., Samadifard, H. R., Kelarde, S. M., & Heidarirad, H. (2020). Comparing brain-behavioral systems, early maladaptive schemas, and preservative thinking in women with and without pregnancy anxiety in the health center of Ardabil province, Iran. *Chronic Diseases Journal*, *8*(1), 1–7. https://doi.org/10.22122/cdj.v0i0.501

Azhari, M. S. (2017). Early maladaptive schemas and academic procrastination in students: The mediating role of perfectionism. *International Journal of Psychological Studies*, *9*(4), 76. https://doi.org/10.5539/ijps.v9n4p76

Bach, B., Lockwood, G., & Young, J. E. (2018). A new look at the schema therapy model: Organization and role of early maladaptive schemas. *Cognitive Behaviour Therapy*, *47*(4), 328–349. https://doi.org/10.1080/16506073.2017.1410566

Bach, B., Simonsen, E., Christoffersen, P., & Kriston, L. (2017). The Young Schema Questionnaire 3 Short Form (YSQ-S3). *European Journal of Psychological Assessment*, *33*(2), 134–143. https://doi.org/10.1027/1015-5759/a000272

Barlow, I. U., Lee, E., & Saling, L. (2023). Orthorexia nervosa versus healthy orthorexia: Anxiety, perfectionism, and mindfulness as risk and preventative factors of distress. *European Eating Disorders Review*, *32*(1), 130–147.

https://doi.org/10.1002/erv.3032

Bintas-Zorer, P., & Dirik, G. (2023). Social anxiety from an attachment theory perspective: The mediating role of early maladaptive schema domains and rejection sensitivity. *Journal of Evidence-Based Psychotherapies*, *23*(2), 25–47.

https://doi.org/10.24193/jebp.2023.2.9

Boone, L., Braet, C., Vandereycken, W., & Claes, L. (2012). Are maladaptive schema domains and perfectionism related to body image concerns in eating disorder patients? *European Eating Disorders Review*, *21*(1), 45–51.

https://doi.org/10.1002/erv.2175

Brumby, S., Chandrasekara, A., McCoombe, S., Torres, S., Kremer, P., & Lewandowski, P. (2011). Reducing psychological distress and obesity in australian farmers by promoting physical activity. *BMC Public Health*, *11*(1). https://doi.org/10.1186/1471-2458-11-362

Calvete, E., Orue, I., & González-Diez, Z. (2013). An Examination of the Structure and Stability of Early Maladaptive Schemas by Means of the Young Schema Questionnaire-3. *European Journal of Psychological Assessment*, *29*(4), 283–290.

https://doi.org/10.1027/1015-5759/a000158

Calvete, E., Orue, I., & Hankin, B. L. (2014). A longitudinal test of the vulnerability-stress model with early maladaptive schemas for depressive and social anxiety symptoms in adolescents. *Journal of Psychopathology and Behavioral Assessment*, *37*(1), 85–99. https://doi.org/10.1007/s10862-014-9438-x

Clark, D. A., & Beck, A. T. (2010). *Cognitive therapy of anxiety disorders: Science and practice*. Guilford Press.

Cox, S. L., & Chen, J. (2014). Perfectionism: a contributor to social anxiety and its cognitive processes. *Australian Journal of Psychology*, *67*(4), 231–240. https://doi.org/10.1111/ajpy.12079

Curran, T., & Hill, A. P. (2019). Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016. *Psychological Bulletin*, *145*(4), 410–429. https://doi.org/10.1037/bul0000138

Darvish, N., & Taklavi, S. (2023). The role of early maladaptive schemas and emotional knowledge in predicting employees'

illness anxiety. *International Journal of Behavior Studies in Organizations*, *9*, 23–35.

https://doi.org/10.32038/jbso.2023.09.03

De Cuyper, K., Claes, L., Hermans, D., Pieters, G., & Smits, D. (2014). Psychometric properties of the multidimensional perfectionism scale of Hewitt in a dutch-speaking sample: Associations with the big five personality traits. *Journal of Personality Assessment*, *97*(2), 182–190.

https://doi.org/10.1080/00223891.2014.963591

Egan, S. J., Wade, T. D., & Shafran, R. (2012). The transdiagnostic process of perfectionism. *Institutional Repository of the National University of Distance Education (National University of Distance Education)*, *17*(3), 279–294.

Flett, G. L., Hewitt, P. L., Nepon, T., Sherry, S. B., & Smith, M. (2022). The destructiveness and public health significance of socially prescribed perfectionism: A review, analysis, and conceptual extension. *Clinical Psychology Review*, *93*, 102130. https://doi.org/10.1016/j.cpr.2022.102130

Ghaderi, B., Yazdanbakhsh, K., & Karami, J. (2022). Development and evaluation of social anxiety based on metacognitive beliefs and early maladaptive schemas mediating by cognitive strategies of emotion regulation in adolescent girls. *The Journal of Psychological Science*, *21*(109), 123–144.

https://doi.org/10.52547/jps.21.109.123

Gutierrez, L., Velasco, L., Blanco, S., Catala, P., Pastor-Mira, M. Á., & Peñacoba, C. (2022). Perfectionism, maladaptive beliefs and anxiety in women with fibromyalgia. an explanatory model from the conflict of goals. *Personality and Individual Differences*, *184*, 111165. https://doi.org/10.1016/j.paid.2021.111165

Handley, A. K., Egan, S. J., Kane, R. T., & Rees, C. S. (2014). The relationships between perfectionism, pathological worry and

generalised anxiety disorder. *BMC Psychiatry*, *14*(1). https://doi.org/10.1186/1471-244x-14-98

Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*(3), 456–470. https://doi.org/10.1037/0022-3514.60.3.456

Hewitt, P. L., Flett, G. L., Turnbull-Donovan, W., & Mikail, S. F. (1991). The multidimensional perfectionism scale: Reliability, validity, and psychometric properties in psychiatric samples. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *3*(3), 464–468. https://doi.org/10.1037/1040-3590.3.3.464

Karababa, A. (2020). The moderating role of hope in the relationship between maladaptive perfectionism and anxiety among early adolescents. *The Journal of Genetic Psychology*, *181*(2-3), 159–170. https://doi.org/10.1080/00221325.2020.1745745

Kozlowska, M., & Kuty-Pachecka, M. (2022). When perfectionists adopt health behaviors: Perfectionism and self-efficacy as determinants of health behavior, anxiety and depression. *Current Issues in Personality Psychology*.

https://doi.org/10.5114/cipp/156145

Kriston, L., Schäfer, J., Jacob, G. A., Härter, M., & Hölzel, L. P. (2013). Reliability and Validity of the German Version of the Young Schema Questionnaire – Short Form 3 (YSQ-S3). *European Journal of Psychological Assessment*, *29*(3), 205–212. https://doi.org/10.1027/1015-5759/a000143

Lamarre, C., & Marcotte, D. (2021). Anxiety and dimensions of perfectionism in first year college students: The mediating role of mindfulness. *European Review of Applied Psychology*, *71*(6), 100633. https://doi.org/10.1016/j.erap.2021.100633

Lan, H. T. Q., Long, N. T., & Hanh, N. V. (2020). Validation of depression, anxiety and stress scales (DASS-21): Immediate psychological responses of students in the e-learning environment. *International Journal of Higher Education*, *9*(5), 125. https://doi.org/10.5430/ijhe.v9n5p125

Lee, E.-H., Moon, S. H., Cho, M. S., Park, E. S., Kim, S. Y., Han, J. S., & Cheio, J. H. (2019). The 21-item and 12-item versions of the depression anxiety stress scales: Psychometric evaluation in a Korean population. *Asian Nursing Research*, *13*(1), 30–37. https://doi.org/10.1016/j.anr.2018.11.006

Lee, J., Jeong, H. J., & Kim, S. (2021). Stress, anxiety, and depression among undergraduate students during the COVID-19 pandemic and their use of mental health services. *Innovative Higher Education*, *46*(5). https://doi.org/10.1007/s10755-021-09552-y

Mairet, K., Boag, S., & Warburton, W. (2014). How important is temperament? The relationship between coping styles, early maladaptive schemas and social anxiety. *International Journal of Psychology and Psychological Therapy*, *14*(2), 171–190.

Makara-Studzińska, M., Tyburski, E., Załuski, M., Adamczyk, K., Mesterhazy, J., & Mesterhazy, A. (2022). Confirmatory factor analysis of three versions of the depression anxiety stress scale (DASS-42, DASS-21, and DASS-12) in Polish Adults. *Frontiers in Psychiatry*, *12*. https://doi.org/10.3389/fpsyt.2021.770532

Mansur- Alves, M., Muniz, M., Marín, J., & Geovani Garcia Zeferino. (2023). Psychometric properties of the hewitt and flett multidimensional perfectionism scale in brazilian adults. *Psicologia: Teoria E Pesquisa*, *39*(spe). https://doi.org/10.1590/0102.3772e39nspe09.en

Maricuțoiu, L. P., Măgurean, S., & Tulbure, B. T. (2020). Perfectionism in a transdiagnostic context. *European Journal of Psychological Assessment*, *36*(4), 573–583.

https://doi.org/10.1027/1015-5759/a000541

Moghadam, F., Ebrahimi Moghadam, H., & Jahangir, P. (2021). The relationship between perfectionism, early maladaptive schemas, attachment styles, and body image concern by the mediating role of self-esteem in cosmetic surgery applicants. *Journal of Client-Centered Nursing Care*, *7*(1), 27–42.

https://doi.org/10.32598/jccnc.7.1.351.1

Molnár, J., Kósa, K., Fekete, Z., & Münnich, Á. (2018). Postpartum anxiety and intrapsychic vulnerability reflected by early maladaptive schemas. *European Journal of Mental Health*, *13*(1), 70–81. https://doi.org/10.5708/ejmh.13.2018.1.6

Nepon, T., Flett, G. L., Hewitt, P. L., & Molnar, D. S. (2011). Perfectionism, negative social feedback, and interpersonal rumination in depression and social anxiety. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, *43*(4), 297–308.

https://doi.org/10.1037/a0025032

Nowak, J., Nikendei, C., Rollmann, I., Orth, M., Friederich, H., & Kindermann, D. (2023). Characterization of different types of anxiety disorders in relation to structural integration of personality and adverse and protective childhood experiences in psychotherapy outpatients – a cross-sectional study. *BMC Psychiatry*, *23*(1). https://doi.org/10.1186/s12888-023-04988-2

Pineda-Espejel, A., Trejo, M., Terán, L., Cutti, L., & Galarraga, E. (2022). Physiological and anxiety responses to socially prescribed perfectionism for gymnastic competition: Case study. *Science of Gymnastics Journal*, *12*(2), 147–161. https://doi.org/10.52165/sgj.12.2.147-161

Samra, A., Warburton, W. A., & Collins, A. M. (2022). Social comparisons: A potential mechanism linking problematic social media use with depression. *Journal of Behavioral Addictions*, *11*(2), 607–614. https://doi.org/10.1556/2006.2022.00023

Smith, M. M., Saklofske, D. H., Yan, G., & Sherry, S. B. (2017). Does perfectionism predict depression, anxiety, stress, and life satisfaction after controlling for neuroticism? *Journal of Individual Differences*, *38*(2), 63–70.

https://doi.org/10.1027/1614-0001/a000223

Stairs, A. M., Smith, G. T., Zapolski, T. C. B., Combs, J. L., & Settles, R. E. (2011). Clarifying the construct of perfectionism. *Assessment*, *19*(2), 146–166.

https://doi.org/10.1177/1073191111411663

Stoeber, J., & Francis, T. (2018). *The psychology of perfectionism : Theory, research, applications*. Taylor and Francis.

Stoeber, J., Madigan, D. J., & Gonidis, L. (2020). Perfectionism is adaptive and maladaptive, but what's the combined effect? *Personality and Individual Differences*, *161*, 109846. https://doi.org/10.1016/j.paid.2020.109846

Tan, G., Soh, X., Hartanto, A., Goh, A., & Majeed, N. (2023). Prevalence of anxiety in college and university students: An umbrella review. *Journal of Affective Disorders Reports*, *14*, 100658. https://doi.org/10.1016/j.jadr.2023.100658

Tariq, A., Quayle, E., Lawrie, S. M., Reid, C., & Chan, S. W. Y. (2021). Relationship between early maladaptive schemas and anxiety in adolescence and Young adulthood: A systematic review and meta-analysis. *Journal of Affective Disorders*, *295*, 1462–1473. https://doi.org/10.1016/j.jad.2021.09.031

Thimm, J. C. (2022). The higher-order structure of early maladaptive schemas: A meta-analytical approach. *Frontiers in Psychiatry*, *13*. https://doi.org/10.3389/fpsyt.2022.1053927

Toroslu, B., & Çırakoğlu, O. C. (2022). Do perfectionism and intolerance of uncertainty mediate the relationship between early maladaptive schemas and relationship and partner related obsessive–compulsive symptoms? *Current Psychology*. https://doi.org/10.1007/s12144-022-03050-w

Wang, Y., Chen, J., Zhang, Z., Lin, Z., Sun, Y., Wang, N., Wang, J., & Luo, F. (2022). The relationship between perfectionism and social anxiety: A moderated mediation model. *International Journal of Environmental Research and Public Health*, *19*(19). https://doi.org/10.3390/ijerph191912934

World Health Organization. (2023). *Anxiety disorders*. World Health Organization; World Health Organization.

https://www.who.int/news-room/fact-sheets/detail/anxiety-disorders

Xiong, Z., Liu, C., Song, M., & Ma, X. (2024). The relationship between maladaptive perfectionism and anxiety in first-year undergraduate students: A moderated mediation model. *Behavioral Sciences*, *14*(8), 628.

https://doi.org/10.3390/bs14080628

Yalcin, O., Marais, I., Lee, C. W., & Correia, H. (2023). The YSQ-R: Predictive Validity and Comparison to the Short and Long Form Young Schema Questionnaire. *International Journal of Environmental Research and Public Health*, *20*(3), 1778. https://doi.org/10.3390/ijerph20031778

Young, J. E., & Brown, G. (2005). *Young schema questionnaire-short form; version 3 (YSQ-S3, YSQ). [Database record]*. APA PsycTests. https://doi.org/10.1037/t67023-000

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. Guilford.

Zadahmad, M., & Torkan, H. (2016). Investigation of the multiple relationships between early maladaptive schemas and coping styles with anxiety. *International Journal of Educational and Psychological Researches*, *2*(1), 49.

https://doi.org/10.4103/2395-2296.174791