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Structural relationships between levels of perfectionism and obsessive-compulsive disorder symptoms: The mediating role of cognitive styles

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Abstract--The current research aims to determine the structural relationships between the levels of perfectionism and the symptoms of obsessive-compulsive disorder with the mediation of cognitive styles. The statistical population of the present study consisted of University of Tabriz students; 360 were selected using a combination of purposeful and convenience sampling, and they completed online the Maudsley Obsessive-Compulsive Inventory (MOCI), Positive and negative perfectionism, and Felder-Soloman Index of Learning Styles. A reflective cognitive style was found to mediate the relationship between positive perfectionism levels and obsessive-compulsive disorder symptoms. Additionally, perfectionism levels can predict the symptoms of obsessive-compulsive disorder; reflective cognitive style can predict the symptoms of obsessive-compulsive disorder, and perfectionism levels can predict reflective cognitive style. Consequently, the levels of perfectionism and reflective cognitive style predict the symptoms of obsessive-compulsive disorder, and any intervention in this sector should consider the interactive effects of these variables.

Keywords---*Obsessive-compulsive disorder, Positive perfectionism, Negative perfectionism, Cognitive style.*

Introduction

Obsessive-compulsive disorder (OCD) imposes many economic, emotional, and social burdens on sufferers, their families, and society, and by creating a pervasive condition, sufferers experience repeated relapses (Jones et al., 2018). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) classifies this disorder as having obsessional or compulsive features (American Psychiatric Association, 2013). OCD sufferers frequently have unsettling ideas, feelings, or impulses that make them anxious and are inconsistent with their personalities. Unwanted and intrusive thoughts are common phenomena in the thinking process and are noticed in healthy persons and people with obsessions (Rachman & De Silva, 1978; Salkowski & Harrison, 1984).

Obsessions include obsessive thoughts (such as fear of harming others), mental images (physical defects), urges (tendency to say rude words in an official situation), or impulses (fear of pushing someone into an oncoming train) can be reversible, repetitive and threatening (Feng et al., 2016). Obsessions vary in extent and kind from person to person and involve strict order, fear of contamination, checking, anger, potential injuries, insulting sacred things, and sexual concerns, and this variability has made treatment of this disorder difficult (AY & Erbay, 2018).

The studies demonstrate that obsessions and compulsions are linked with dysfunctional cognitions. Dysfunctional cognition significantly predicts OCD, according to research by Hezel & McNally (2016). In addition, Albert et al. (2015) revealed that dysfunctional cognition (particularly obsessive beliefs) is necessary for OCD sufferers. Other studies have discovered that dysfunctional cognition has a direct impact on OCD (Baptista, Magna, McKay & Del-Porto, 2011; Viar, Bilaky, Armstrong & Quatuoji, 2011; Novara, Pasters, Shisi, Sica, Saneria & McKay, 2011; Taylor, Abramowitz, McKay, Calamari Saston, Kyciest, Wilhelm & Cacoim, 2011).

Neuropsychological research on obsessive-compulsive disorder has revealed that patients exhibit statistically significant executive process deficits compared to healthy individuals. The phrase executive functions, which is closely tied to the health of the frontal lobe (Kuelz, Hohagen, & Voderholzer, 2004), refers to the processes necessary for conscious control of a person's thoughts, emotions, and behaviors. They play a crucial part in the everyday management of people and enable an individual to respond effectively to external stimuli and adapt to his surroundings.

In understanding obsessive-compulsive disorder, however, personality factors, particularly perfectionism, have been proposed. Perfectionism, or the propensity for someone to have extremely high expectations for themselves, is a critical factor in mental disorders (Rice & Stuart, 2010). Perfectionism is a significant element in the development and duration of mental diseases (Egan, Wade & Shafran, 2011). In the last decade, this notion has caught the interest of several scholars, each of whom has characterized it from a unique perspective. However, most academics concur that high-performance criteria constitute the foundation of perfectionism (Denollet, 2010).

Perfectionism consists of positive and negative levels (Walan, 2013). Perfectionism is a person's continual drive to establish ideal, unachievable standards and attempt to meet them (Mackinnon & Sherry, 2012; Smith, Saklofske, Yan & Sherry, 2016). Perfectionism is considered neurotic, destructive, and dysfunctional by theorists such as Horney (1950), Ellis (1992), Holender (1978), Frost et al. (1993), and Flett & Hewitt (1991). Hamachek (1978) and Adler (1927) emphasize positive and normal roles for sections of perfectionism structures and focus on the positive and adaptive elements of perfectionism and its constructive influence on personality structure.

In addition, Rice and Doblo (2002) feel that perfectionism may be categorized into two types: positive and negative. Negative perfectionists make simple errors like having a lot of self-doubt and self-criticism, which are risk factors for anxiety, depression, low self-esteem, and internal shame. Good perfectionism correlates with high personal standards, positive performance, and positive adaption (Abdollahzadeh et al., 2005). Although perfectionism has been considered a positive aspect of succeeding adaptation (Hamachek, 1987), it is viewed as a widespread suffering style (Flett & Hewitt, 1989). Perfectionism is a personality structure related to stress and its negative effects, according to another description (Zureck, Altstotter-Gleich, Gerstenberg & Schmitt, 2015).

According to research findings, positive perfectionism enhances positive feelings and decreases psychological stress, but negative perfectionism is always connected with negative emotions and decreased psychological well-being (Mackinnon & Sherry, 2012; Smith, Saklofske & Sherry, 2016). On the other side, perfectionism is the intense or obsessive need to be flawless in everything, and those who possess positive perfectionism experience success in their professional and positive life. Negative perfectionism, on the other hand, is associated with high levels of emotional weariness in work and life (Kanten & Yesiltas, 2015). The perfectionist disposition causes particular forms of thought obsessions (such as questioning whether something has been done correctly) and observed behaviors (such as washing until one feels "enough is enough"), according to cognitive theories of obsessive-compulsive disorder (Antony, Purdon, Huta & Swinson, 1998). High personal standards, stringent performance requirements, and the pursuit of excellence are all associated with perfectionism (Cakici, 2013; Stoeber Harris & Moon, 2007). Maladaptive perfectionism is characterized by anxiety about making errors, uncertainty about actions, dread of others' evaluations of oneself, fear of others' rejection, and dissonance between expectations and outcomes (Stoeber & Otto, 2006). Because perfectionists use all-or-nothing thinking when evaluating their performance, they believe that success only comes from meeting a high standard and that performance is faultless only when it does so (Stumpt & Parker, 2000).

In clinical sample research, perfectionism with more certainty has a high correlation with symmetry obsessions (Wheaton, Abramowitz, Berman, Riemann, & Hale, 2010), ordering symptoms (Calleo, Hart, Björgvinsson & Stanley, 2010; Stairs, Smith, Zapolski, Combs, & Settles, 2012), and checking behaviors (Hafezi, Bakhtiarpour, and Ahmad Fakhreddin, 2008).

In a research titled "Relationship between perfectionism and obsessive-compulsive disorder with self-regulation processes as moderators," Sarafranz et al. (2020) discovered that perfectionism and self-control are predictors of OCD. In a study titled "Relationship between models of perfectionism and procrastination," Allison (2020) found that the adaptive model of procrastination had limited ties with healthy perfectionism, but bad procrastination was consistently linked to unhealthy perfectionism.

Some researchers have highlighted the importance of more basic variables, such as cognitive styles, in understanding cognitive difficulties in OCD patients. Davey's (2004) research demonstrated that cognitive style is related to OCD and decreased psychological well-being. Cognitive style is a factor between a person's performance and problem-solving approach (Kozhevnikov, 2007). It is a person's preferred and habitual method of seeing, organizing, and representing information (Riding, 2002), as well as the psychological framework that displays the person's cognition and physical foundation. Nevertheless, individuals frequently lack proper awareness of their style, kind, and function. Cognitive style influences how individuals acquire and process information and perceive and interpret ideas and experiences. People's thoughts, decisions, and responses to the things that happen in their personal and social lives also impact them. Additionally, cognitive style acts spontaneously and automatically in response to information, stimuli, and situations (Asadzadeh, 2013).

People frequently misunderstand the kind and purpose of their cognitive style. Cognitive style influences how an individual process the events and experiences of his personal and social life, makes decisions and responds. Additionally, cognitive style responds spontaneously and autonomously to information, stimuli, and situations (Cassidy, 2004). In addition, Witkin Donald, Philip, and Oltman (1979) state that cognitive style, as a process variable, influences the kind of skills, cognitive reconstruction skills, and interpersonal skills. Witkin et al. define cognitive styles as a person's approaches to various situations.

According to researchers' findings, cognitive style is a personality trait connected to the dimensions of perfectionism, which is also a personality trait, according to the findings of researchers, and studies on cognitive styles may provide insight into perfectionism and the distinction of its aspects (Burns & Fedewa, 2005). The results of Burns and Fedewa's (2005) research on the association between perfectionism and cognitive styles indicate that those prone to negative perfectionism are poor thinkers and employ inconsistent stress coping strategies. Positive perfectionists, on the other hand, actively address problems and are conscientious. Nevertheless, these people may express their behavioral and emotional responses; as predicted, they lack creativity and free thought.

Kagan identified the impulsive-reflective style or conceptual tempo as one of the cognitive styles (1966). Perceptual speed is "the level at which a person reacts to the different responses that can be offered for a problem in a condition where these answers are available simultaneously." While impulsive place a premium on responding quickly, it is crucial to remember that their initial response is usually the best one that could be given. In cognitive tasks such as problem-solving, reflective and impulsive individuals appear to utilize distinct strategies. Finding a

solution to an issue needs various cognitive skills, including information interpretation, planning, memory capacity, outcome control, and attempting to alter results (Cassidy, 2004). Impulsive people's rapid responses and numerous errors indicate that they do not examine all elements while addressing an issue, whereas reflective people's slow response and perfect responses demonstrate their exact and complete approach to problem-solving (Kagan, 1965). According to these considerations, persons with reflective and impulsive cognitive styles may have distinct cognitive processes. In this aspect, Cameron's (1984) research shows that reflective behavior is more strategic than impulsive behavior. Impulsive people frequently develop more ineffective solutions than successful ones, and even when they do, they seldom implement them. In problem-solving and information processing, persons with OCD have a reflective style and respond slowly to difficulties; their response latency time is long and demonstrates a sort of inhibition brought on by the dread of making a mistake. Regarding problem-solving and information processing, some research indicates that people with OCD have a reflective approach and respond slowly to challenges (Boisseau, Thompson-Brenner, Caldwell-Harris, Pratt, Farchione & Barlow, 2012). In other words, those with OCD attempt to provide complete, exact, and right responses to issues by considering all relevant factors. On the other hand, the classification of cognitive styles mentions broad and analytical methods. These two types of processing are connected to the speed of information classification and impulsive-reflective cognitive styles.

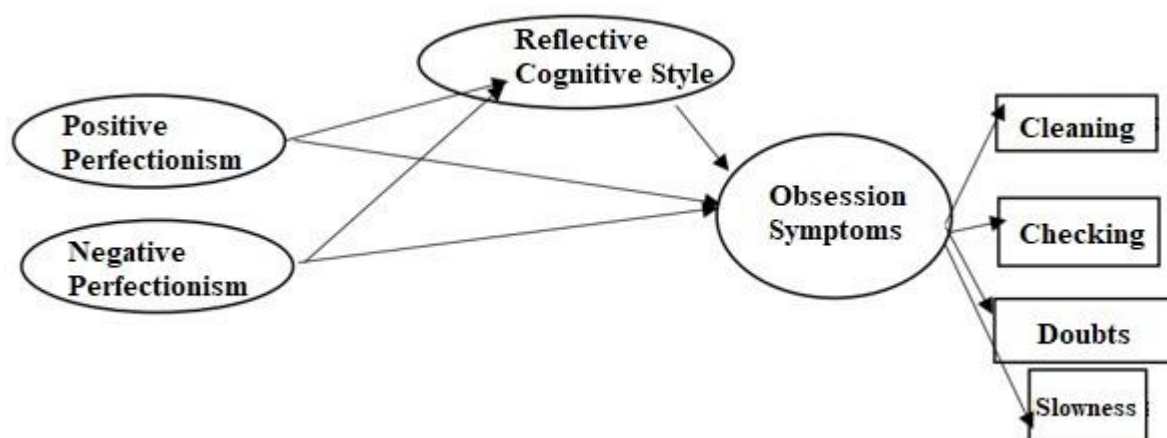
Cognitive processing that is aware, laborious, and under conscious control is connected to analytical processing. A more automated and less restricted state is linked with the processing. The processing properties of reflection make it more effective than impulsive in most activities, including non-analytical tasks (Cassidy, 2004). Additionally, reflective behavior is more productive and patient in circumstances with time constraints (Cheng, 2002). Therefore, persons with OCD approach problems logically and perform more effectively and patiently when there is no time constraint. The confirmation of this finding, however, raises the question of whether or not OCD sufferers function in a reflective-analytical manner in terms of cognitive style.

In numerous personal and interpersonal situations, the pathological study is crucial given the degree of harm caused by an obsessive-compulsive disorder, which is the fourth most prevalent mental condition (Clark, 2004).

In addition, the majority of study undertaken on perfectionism examines the repercussions of perfectionism, how to limit the damage it does, the influential variables in its genesis, and its link to style. Cognitive aspects have not been considered. Therefore, there is a need to investigate the link between perfectionism levels and stylistics. No research was discovered that studied the association between the degrees of perfectionism and reflective-impulsive cognitive style alone, much alone their relationship to OCD symptoms, based on a review of domestic and international literature. Burns and Fedewa (2005) studied other cognitive styles in their investigation. On the other hand, according to a study, perfectionists have inconsistent cognitive and coping methods connected with stressful life events. For instance, they seek unattainable objectives and exacerbate the consequences of stressful situations (Flett & Hewitt, 2002;

Dunkley & Blankstein, 2000). Therefore, it might be helpful to understand the traits of perfectionism and be conscious of how it affects one's life.

Through the mediation of reflective cognitive style, the link between degrees of perfectionism and indicators of obsession will be examined in this study. This study's primary objective is to analyze the links between variables, using perfectionism levels as independent factors, obsessive signals as dependent variables, and reflective stylistics as mediating variables. What is the link between perfectionism levels and the symptoms of obsession? What intermediate variables exist between these two? Can a trait such as reflective cognitive style be regarded as a mediator of perfectionism levels and obsessional tendencies? The diagram below illustrates the links between study variables:



Research Methods

According to the data collection method, the current study was descriptive-correlational, which is a fundamental type. The students of Tabriz University were selected using convenience sampling and the purposive method, and the sample size was 360 people.

Measuring Tools

Maudsley Obsessive-Compulsive Inventory (MOCI)

Hadgson & Rachman (1977) created this questionnaire to study the nature and severity of obsessional problems. It consists of 30 two-choice (yes/no) items. Four subscales comprise this questionnaire's four primary components: cleaning, checking, slowness, and doubts. These subtests have made the Maudsley test an effective instrument for measuring improvements in specific symptoms and have made it especially useful for evaluating therapies directed at practical obsessive-compulsive disorders. Dadfar (1997) reported its total coefficient as 0.84, its convergent validity with the Yale-Brown obsessive-compulsive scale as 0.87, and Stektee reported its test-retest reliability as 0.87.

Positive and Negative Perfectionism Scale

In 1995, Terry-Short et al. developed a scale to assess perfectionism on both a positive and negative level. This measure consists of 40 items, 20 of which evaluate positive perfectionism and 20 of which evaluate negative perfectionism, with responses ranging from Strongly agree to Strongly disagree on a 5-point Likert scale.

Felder-Soloman Index of Learning Styles

This questionnaire consists of 44 questions with no cultural dependencies and eight learning styles, including active-reflective learning style questions. Each question provides two possible responses: one about active style and the other about reflective style. Van Zwanenberg et al. (2000) conducted the Felder-Soloman Index of Learning Styles on 284 English students to determine its validity and reliability. The active and reflective aspects each have an alpha value of 0.51 when used to assess the internal consistency of the questionnaire items for this learning component.

Findings

It is demonstrated in this section how the data is disseminated in the study variables utilizing the central and dispersion indices, particularly the mean and standard deviation. On the other hand, the path analysis approach was used to offer the theoretical model fit and responses to the study questions. In this regard, the path analysis assumptions such as the interval assumption of the measurement scale of the studied variables, the normality of the distribution of the studied variables using the Kolmogorov-Smirnov one-sample non-parametric test, the multiple co-collinearity of predictor variables using the multiple co-collinearity (VIF) and (Tolerance) indices, and the assumption of independence of error sources using the Durbin-Watson index were investigated. Table 1 contains the results:

Table 1 - Central indices and dispersion of variables, multiple collinearity indices, and Durbin-Watson index

	Obsession	Checking	Cleaning	Slowness	Doubts	Positive perfectionism	Negative perfectionism	Reflective cognitive style
Mean	20.97	5.31	6.56	4.52	4.56	120.31	81.06	4.20
Standard deviation	3.68	1.89	2.36	1.70	1.70	37.23	37.79	2.22
Kurtosis	0.02	-0.94	-0.97	-0.93	-0.77	-0.91	-0.83	-0.75
Skewness	-0.28	0.10	-0.03	-0.02	-0.02	0.37	0.016	0.675

VIF	-	-	-	-		1.03	1.04	1.12
Tolerance	-	-	-	-		0.96	0.96	0.89
Durbin-Watson	1.89							

The data in Table 1 demonstrate:

a) The analyzed variables have appropriate dispersion based on the average derived scores. b) The analyzed variables have a normal distribution according to skewness and kurtosis values. c) This study has achieved the expected multicollinearity of predictor factors. Since the VIF values of the variables are at the ideal level (less than 2) and the Tolerance values are likewise at the optimal level, the variables are optimal (close to 1). d) The assumption of independence of error sources among the variables investigated in this study has been verified because the calculated Durbin-Watson index (1.89) is within the ideal range (1.5-2.5). This method was chosen since it fulfilled all the requirements for multivariate regression analysis (path analysis) to provide answers to the study questions. The correlation matrix of the researched variables was computed and displayed as shown in Table 2.

Table 2 - Correlation matrix of variables

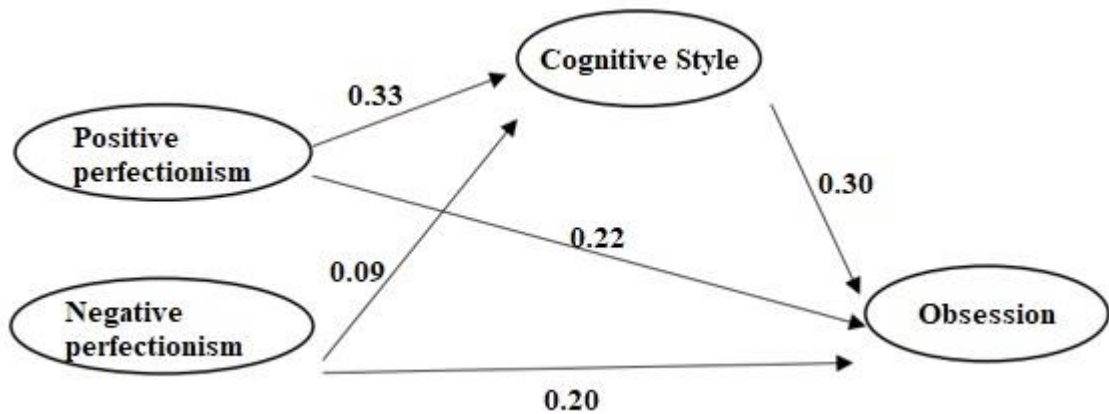
Variables	1	2	3	4	5	6	7	8
Obsession	1							
Checking	**0.47	1						
Cleaning	**0.55	**0.33	1					
Slowness	**0.41	*0.21	*0.19	1				
Doubts	**0.47	0.18	*0.23	**0.29	1			
Positive perfectionism	**0.31	*0.26	**0.28	**0.31	*0.26	1		
Negative perfectionism	**0.29	*0.26	**0.28	**0.30	*0.24	**0.44	1	
Reflective cognitive style	**0.31	**0.28	**0.31	**0.32	*0.27	**0.39	*0.14	1

P≤0.01 and P≤0.05

The data in Table 2 demonstrate:

A positive and significant correlation exists between positive and negative perfectionism and obsessive symptoms. Reflective cognitive style has a significant relationship with both negative and positive perfectionism and a significant relationship with positive and negative obsessive symptoms.

Because of the significance of the relationships between the variables under study, the path analysis method—as shown in model (1)—was employed to explore the causal relationships between the variables and determine the mediating function of the reflective cognitive style:



Causal Path Model (1) - Causal relationships between perfectionism and obsessive-compulsive symptoms through reflective style

RMSEA	χ^2	Df	X^2/df	P	GFI	AGFI	CFI	NFI	IFI
0.03	102	34	3	0.0001	0.90	0.91	0.92	0.93	0.91

Causal Path Model (1) demonstrates:

The measured model has a good fit with the assumed model. All the fit indexes, including Root Mean Square Error of Approximation (RMSEA), are at the optimal level (less than 0.05), and the X^2/df ratio is at the optimal level (less than 5). On the other hand, the Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), and Incremental Fit Index (IFI) was found in the optimal level (greater than 0.90). Therefore, the reflective cognitive style can meaningfully mediate the relationship between perfectionism and obsessive symptoms. In order to determine the direct and indirect effects of perfectionism on obsessive symptoms, the effect size and the corresponding test (T) were used as described in Table 3:

Table 3 - A summary of perfectionism's direct and indirect effects on obsessive symptoms

Independent Variable	Mediator Variable	Dependent Variable	Bootstrap Range		p-value	t-test	Significance level
			Up	Below			
Positive perfectionism	Reflective cognitive style	Obsession symptoms	0.15	0.08	0.10	2.82	0.02
Negative perfectionism	Reflective cognitive style	Obsession symptoms	0.08	0.009	0.03	0.96	0.16

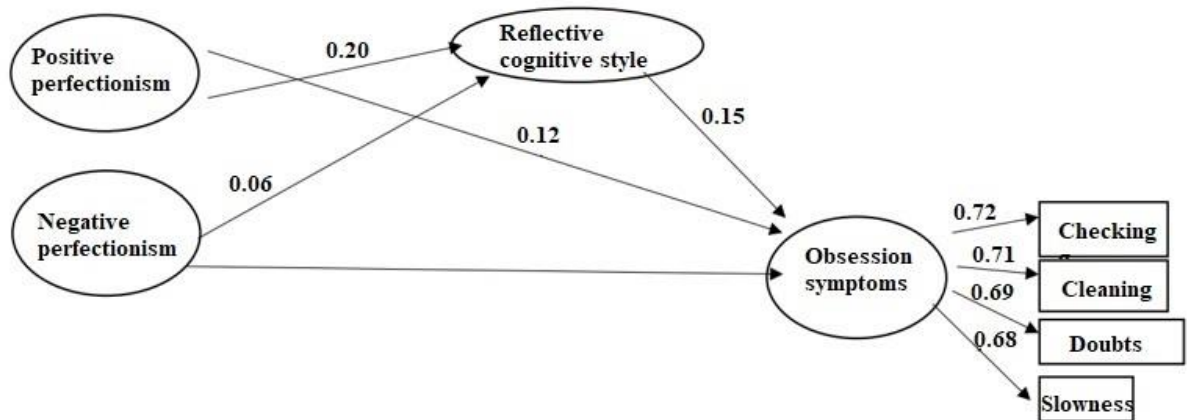
Positive perfectionism	-	Reflective cognitive style	0.36	0.28	0.32	5.39	0.001
Negative perfectionism	-	Reflective cognitive style	0.14	0.05	0.09	2.78	0.03
Reflective cognitive style	-	Obsession symptoms	0.35	0.26	0.30	5.18	0.001
Positive perfectionism	-	Obsession symptoms	0.26	0.18	0.22	4.65	0.001
Negative perfectionism	-	Obsession symptoms	0.24	0.16	0.20	4.11	0.001

$P \leq 0.05$

The data in Table 3 demonstrate:

a) Positive perfectionism due to reflective cognitive style can explain 10% of the changes in obsessive symptoms in a positive and meaningful way because the calculated t (-2.82) is significant at the $P \leq 0.05$ level. b) Negative perfectionism due to reflective cognitive style can explain 3% of the changes in obsessive symptoms, but this effect is insignificant at the $P \leq 0.05$ level. c) Positive perfectionism can (0.32%) explain the changes in reflective cognitive style in a meaningful and positive way because the calculated t (5.39) is significant at the $P \leq 0.05$ level. d) Negative perfectionism can explain (9%) of reflective cognitive style changes in a meaningful and positive way because the calculated t (2.78) is significant at the $P \leq 0.05$ level. e) Reflective cognitive style can positively and meaningfully explain (30%) of the changes in obsessional symptoms because the calculated t (5.18) is significant at the $P \leq 0.05$ level. f) Positive perfectionism can positively and significantly explain (22 percent) of the changes in obsession symptoms because the calculated t (4.65) is significant at the $P \leq 0.05$ level. g) Negative perfectionism can positively and meaningfully explain (20%) of the changes in obsessional symptoms because the calculated t (4.11) is significant at the $P \leq 0.05$ level.

According to the structural relationships model (2), structural equation modeling was employed to study the relationships between perfectionism and obsessive symptoms through the reflective cognitive style:



Structural model (2) - Causal-structural relationships between perfectionism and obsessive-compulsive symptoms through reflective cognitive style

RMSEA	χ^2	Df	χ^2/df	P	GFI	AGFI	CFI	NFI	IFI
0.05	310	62	5	0.0001	0.90	0.88	0.90	0.89	0.89

The contents of the model of causal-structural relation (2) demonstrate:

The measured model has a relatively good fit with the theoretical model because the most important indicators of the model fit are relatively in the optimal range so that the value of Root Mean Square Error of Approximation (RMSEA) is in the optimal range (equal to and smaller than 0.05). The value of the χ^2/df ratio is also at the optimal level (equal to and less than 5), and the Goodness of Fit Index (GFI) and Comparative Fit Index (CFI) is at the optimal level (equal to and greater than 0.90). Other fit indices, including AGFI, NFI, and IFI, are relatively favorable (greater than 0.85). Therefore, the reflective cognitive style can meaningfully mediate the relationship between perfectionism and obsessional symptoms as a structural relationship. Bootstrap and t-test methods were used to determine the direct and indirect relationships of variables as described in Table 5:

Independent Variable	Mediator Variable	Dependent Variable	Bootstrap Range		p-value	t-test	Significance level
			Up	Below			
Positive perfectionism	Reflective cognitive style	Obsession symptoms	0.10	0.01	0.03	2.21	0.01
Negative perfectionism	Reflective cognitive style	Obsession symptoms	0.03	0.001	0.01	0.80	NS
Positive perfectionism	-	Obsession symptoms	0.17	0.10	0.12	3.18	0.001
Negative perfectionism	-	Obsession symptoms	0.29	0.20	0.25	4.52	0.001
Reflective	-	Obsession	0.21	0.11	0.15	3.35	0.001

cognitive style		symptoms					
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$P \leq 0.05$

According to Table 4, reflective cognitive style can positively and meaningfully explain the relationship between positive perfectionism and obsessional symptoms by 3% per standard unit because the t (2.21) is significant at the $P \leq 0.05$ level. In addition, the reflective cognitive style does not significantly mediate the relationship between negative perfectionism and obsessive-compulsive symptoms.

Conclusion and Discussion

This study was done to evaluate the relationship between levels of perfectionism and OCD symptoms through the mediation of cognitive styles. The first finding of this study demonstrated that a reflective cognitive style might mitigate the association between positive perfectionism and OCD symptoms. This result is consistent with Lucy, Burness, and Costa's (1997) discovery that individuals with obsessive-compulsive disorder exhibit cognitive deficiencies. Consistent with Antony et al. (1998) 's research, which shows that a perfectionist personality leads to particular academic obsessions and practical activities, this finding demonstrates that a perfectionist personality is associated with such traits. It is also consistent with the findings of Bouyssou et al. (2012), who found that patients with OCD have a reflective approach to problem-solving and information processing and respond slowly to issues.

In understanding the indirect relationship between positive perfectionism and symptoms of obsessive-compulsive disorder and reflective cognitive style, perfectionism is associated with errors because perfectionists believe that things should be flawless and may be slow to begin work (Ellis and Ellis, 1979). On the other hand, having a reflective cognitive style makes people hesitant to judge, so they thoroughly consider the information before deciding on a trustworthy response. Consequently, a person with a reflective cognitive style is inclined to pay close attention and contemplate several options (Block et al., 1974; Messer, 1975). A person who spends excessive time on a subject is wasting time and exhibiting indications of obsession. The initial response of reflective individuals must be the correct answer (Cassidy, 2004).

On the one hand, these individuals are characterized by perfectionism, defined by setting exacting standards and focusing on failure and oversimplification. On the other hand, the reflective cognitive style, which entails a meticulous investigation of details for them, displays the indicators of obsession. Negative perfectionism is characterized by high standards, self-doubt, and self-criticism. When confronted with challenging circumstances, these individuals do not make quick decisions but instead employ a high level of criteria to solve the problem using the reflective method. By focusing on negative aspects, these individuals demonstrate frequent hesitation when making decisions, eventually leading to the appearance and intensification of obsessive symptoms. The need for psychological help has been acknowledged, and this is the same problem.

This conclusion may explain that cognitive styles control people's perspectives on events and ideas. They influence how a person thinks, makes decisions, and responds to life's events (Riding, 1997). Impulsive-reflective cognitive style, often known as conceptual speed, refers to a distinction in the rate at which individuals make decisions in uncertain circumstances. In general, it may be classified into two types: the impulsive type, characterized by a relatively high mistake rate and rapid decision-making following a brief assessment of several options. Another is to thoroughly evaluate every possibility before a person reacts, spend time doing so, and have comparatively high accuracy. This kind is the reflective type (Shilan, 2010). According to Lifei (1998), reflective and impulsive learning styles are two human personality traits and a pair of cognitive learning styles. The reflective-impulsive cognitive style is most closely associated with problem-solving. The impulsive style is interested in acting quickly and without thought, whereas the reflective style prefers to pay attention and consider potential answers (Block et al., 1974; Messer, 1975).

People with positive perfectionism take constructive initiatives toward optimal achievement. If they have a reflective cognitive style, a closer analysis of the specifics will drive them to advance, which is commendable in scientific topics and is not a disorder. Because throughout a person's life, incompatibility and other people's complaints about the person never cease, and what is visible is the adoration and contentment of others about the person, as well as the individual's great self-satisfaction. In other words, as stated by Hewitt et al. (2008), positive perfectionism is improvement-oriented and based on this, it can be argued that obsession in this instance takes the shape of careful precision and individual advancement.

Positive and negative perfectionism might explain the variations in preoccupation symptoms, according to an additional conclusion of the study. This finding is in line with Anthony et al. (1998) 's research, which demonstrated that a perfectionist mentality leads to consistent forms of practical and intellectual obsessions. In addition, this finding is consistent with Sarafraz et al. (2020), who discovered that perfectionism and self-control predict OCD.

Negative perfectionism is connected to the symptoms of ~~the~~ obsessive-compulsive disorder because it locks people in a difficult task from which they suffer, preventing them from making progress but also causing them to stop. Consequently, it will cause compatibility issues and be related to negative outcomes. In the perspective of Rice and Doblo (2002), a person with negative perfectionism makes common mistakes and exhibits high levels of self-doubt and self-criticism. These characteristics indicate psychological problems such as anxiety, sadness, internal shame, and low self-esteem. Horney (1950), Ellis (1992), Holender (1978), Frost et al. (1993), and Flett & Hewitt (1991), among others, view perfectionism as a neurotic, destructive, and dysfunctional trait.

As one of the study's limitations, it was done solely on Tabriz students; therefore, caution should be given when extrapolating the findings to other segments of society. The use of self-report techniques in this study is another limitation. It is advised that this research be conducted in more cities and social strata. Although self-assessment techniques are prevalent and frequently utilized in this field of

study, they have limitations. Therefore, it is advised that alternative methods, such as interviews, be used to measure variables in a subsequent study. It is recommended to look at the different varieties of this disorder individually, given the intensity and variety of obsessive-compulsive disorders.

Given the opposite function of positive perfectionism in the symptoms of obsessive-compulsive disorder, it is recommended that psychologists stress this element of perfectionism and transfer negative perfectionism to the positive side. Those responsible for education should arrange seminars and courses on this topic and take additional precautions to avoid the emergence of this disorder.

Moreover, it is preferable to change negative perfectionism to positive in these people by taking into account their cognitive style because of the mediating function of reflective cognitive style in the link between positive perfectionism and symptoms of obsessive-compulsive disorders. Understanding the psychological processes involved in obsessive-compulsive disorder is a significant step because knowing these processes allows the predisposing factors of obsessive-compulsive disorder to be identified to some extent and valuable measures for prevention and treatment of this disorder to be done.

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