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INTOLERANCE OF UNCERTAINTY AND MULTIDIMENSIONAL PERFECTIONISM IN INDIVIDUALS WITH OCD: THE MEDIATING ROLE OF SELF-COMPASSION

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Abstract

This study aims to investigate the interaction between Intolerance of Uncertainty (IU), Multidimensional Perfectionism (MP), and the mediating influence of self-compassion among individuals with obsessive-compulsive disorder (OCD). A sample of 150 diagnosed OCD patients aged between 25 and 40 underwent assessments using the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) (Goodman et al., 1989), Intolerance of Uncertainty Test (short form) (IUS-12) (Carleton et al., 2007), the Almost Perfect Scale-Revised (APSR) (Slaney et al., 2018), and the Self-Compassion Scale (short form) (SCS-SF) (Neff et al., 2011). The findings reveal that Intolerance of Uncertainty exhibits a significant positive correlation with maladaptive perfectionism (r = .17, p < .05) and obsessive-compulsive disorder (r = .20, p < .05), and a significant negative correlation with adaptive perfectionism (r = -.27, r < .01) and self-compassion (r = -.16, r < .05). Intolerance of Uncertainty emerges as a significant negative predictor of adaptive perfectionism (r = -.27, r < .01) and a significant positive predictor of maladaptive perfectionism (r = -.27, r < .01) and a significant positive predictor of maladaptive perfectionism (r = -.27, r < .05). Moreover, the study indicates that self-compassion plays a mediating role in the relationship between Intolerance of Uncertainty and maladaptive perfectionism.

Keywords: Intolerance of Uncertainty, Multidimensional Perfectionism, Self-Compassion, Obsessive -Compulsive Disorder, Mediation analysis.

Introduction

Obsessive Compulsive Disorder (OCD) stands as a persistent and incapacitating mental health condition affecting millions of individuals globally (Talbot, 2021). Contrary to the common misconception associating it solely with activities like hand-washing or excessive cleaning, OCD is a multifaceted disorder exhibiting diverse manifestations (Fradkin, et al., 2020). It is characterized by the recurrence of intrusive and distressing thoughts, images, or impulses (obsessions), accompanied by repetitive behaviors or mental acts intended to alleviate the anxiety arising from these obsessions (compulsions) (Abramowitz, & Jacoby, 2014). The etiology of OCD is intricate and multifaceted, involving various cognitive, biological, dispositional and emotional factors that are proposed as contributors to the persistence of the disorder (Treasure, et al., 2020). The current study focuses on the role of dispositional factors, such as intolerance of uncertainty, perfectionism and self-compassion, in sustaining OCD.

Intolerance of Uncertainty (IU) has emerged as a noteworthy concept in recent years, recognized as a significant diagnostic factor cutting across anxiety, obsessive-compulsive, and depressive disorders. IU pertains to an individual's inclination to perceive the possibility of a negative event as unacceptable and threatening, irrespective of its actual likelihood (Carleton, Sharpe, & Asmundson, 2007). Intolerance of uncertainty encompasses a system of convictions regarding the significance of certainty, the capability to navigate unpredictable changes, and the aptitude to operate proficiently in ambiguous circumstances (Obsessive Compulsive Cognition Group, 1997). Consequently, individuals struggling with uncertainty intolerance may maintain the conviction that they lack the competence to adeptly handle threatening situations, leading to emotional, cognitive, and behavioral manifestations of discomfort. Research has established associations between IU and various forms of psychopathology, including anxiety and depression (Birrell, et al., 2011). While existing studies have explored the connection between IU and psychopathology, there has been relatively limited focus on its contribution to common maladaptive behaviors such as obsessions, procrastination, etc. Nonetheless, recent research highlights the association of IU with symptoms of obsessivecompulsive disorder (OCD). IU is also associated with OCD symptoms, such as checking, counting, and washing behaviors. Individuals with OCD may engage in these compulsive behaviors as a way to reduce their uncertainty and gain a sense of control over their environment (Fergus & Wu, 2010).

Perfectionism emerges as a prevalent concern among college students seeking counseling services, as highlighted in previous research (Richard et al., 2015). This phenomenon encompasses the pursuit of flawlessness, a fear of imperfection, and the perception of errors as personal failures. It represents a personality trait characterized by the establishment of elevated standards for oneself and others, often resulting in excessive self-criticism and severe self-judgment when these self-imposed, unrealistic standards are not met. Traditional conceptualizations of perfectionism depict it as a persistent, compulsive urge to attain unachievable objectives (Locicero & Ashby, 2000). According to Serdar et al. (2021), certain facets of perfectionism can be constructive, fostering excellence and the pursuit of significant goals. Nonetheless, in its adverse manifestation, perfectionism entails an obsessive pursuit of unattainable objectives, leading to continual striving and self-critique. This type of maladaptive perfectionism has been linked to mental health conditions such as depression, anxiety, and obsessive-compulsive disorder (Richard et al., 2015). Multiple researches have exhibited a relationship between maladaptive perfectionism and OCD like symptoms even in individuals who are not clinically diagnosed with OCD (Paul, et al, 2012). Existent literature also shows that maladaptive perfectionism and IU both predict the onset of OCD symptoms (Williams et al., 2020).

Self-compassion comprises three essential components that dynamically interact with each other. Firstly, self-kindness entails adopting a compassionate and understanding approach toward one's own failures and sufferings, employing a gentle and supportive inner dialogue instead of engaging in critical self-judgment. Secondly, common humanity involves acknowledging that failure is an

inherent aspect of the human experience, and challenging circumstances are not unique to the individual. Thirdly, mindfulness encompasses attaining a balanced awareness of one's pain and suffering, steering clear of both suppression and exaggeration. Embracing self-compassion entails being understanding and caring towards oneself when encountering suffering, failure, or feelings of inadequacy, as opposed to adopting a harsh or critical self-evaluation. Research indicates that self-compassion is linked to enhanced mental health and overall well-being, and exhibits a negative association with psychopathology (Garbade et al., 2015). Conversely, individuals lacking self-compassion tend to subject themselves to harsh judgment, leading to a sense of isolation (Neff, 2003). Previous research literature has uncovered a negative relationship between self-compassion and anxiety, which is a main symptom of OCD (Wetterneck et al. 2013). In another study, Azzam (2021), found that self-compassion is connected to lower levels of OCD symptoms and better well-being in a sample of individuals with OCD (Kaufman et al., 2016).

Examination of the current body of literature has revealed an inverse association between self-compassion and anxiety, a prevalent emotion in both obsessive-compulsive disorder (OCD) and perfectionism, a characteristic belief often found in individuals with OCD (Neff et al., 2003). Intolerance of uncertainty and perfectionism are significant cognitive mechanisms implicated in the perpetuation of mental health issues, particularly obsessive-compulsive disorder. Conversely, self-compassion serves as a protective factor, acting as a buffer and diminishing the occurrence of psychopathology such as OCD (Murtagh, 2018).

Furthermore, engaging in research on Obsessive Compulsive Disorder (OCD) in Pakistan holds the potential to enhance awareness and comprehension of the disorder within the local community, thereby fostering improved access to care for individuals grappling with OCD in the country. This study also seeks to deepen our understanding of the intricate interplay between self-compassion, intolerance of uncertainty, and maladaptive perfectionism in patients with obsessive-compulsive disorder. By promoting self-compassion, individuals may cultivate greater acceptance of life's inevitable fluctuations and develop more effective coping mechanisms for challenging emotions and experiences. This, in turn, can mitigate intolerance of uncertainty by fostering a sense of grounding and resilience in the face of life's adversities. Moreover, fostering self-compassion involves recognizing that both suffering and imperfections are inherent aspects of the universal human experience, thereby contributing to a reduction in the perfectionistic inclination to harshly judge oneself and others. The promotion of self-compassion holds the potential to attenuate the adverse impact of intolerance of uncertainty and perfectionistic tendencies on overall well-being and psychopathology.

Hypotheses:

- H1. There would be a relationship among Intolerance of uncertainty, Multidimensional perfectionism, self-compassion and OCD symptoms.
- H2. Intolerance of uncertainty predicts multidimensional perfectionism in individuals with OCD.
- H2(a). IU would negatively predict Adaptive perfectionism.
- H2(b). IU would positively predict Maladaptive perfectionism and Severity of OCD symptoms.
- H3. Self-compassion would mediate the relationship between intolerance of uncertainty and maladaptive perfectionism.

Method

Participants and procedure

The study included participants who had received a diagnosis of OCD with active symptoms for a minimum of six months, and their ages ranged from 25 to 40, with a prerequisite of at least an intermediate educational level. A total of one hundred and fifty OCD patients from various hospitals in Lahore were recruited. The research commenced following approval of the synopsis by the

graduate program coordinator and the advanced board of research studies at UCP. Data collection took place in collaboration with several hospitals in Lahore, with due permission obtained from the respective hospital authorities. All ethical considerations pertaining to research involving human participants were diligently observed.

Measures

Demographic data

Self-created demographic questionnaires were utilized in which age, gender, education, occupation, marital status, socioeconomic status, family system, diagnosis duration, duration of treatment, and any comorbid physical or psychological problem was asked from the Individual with obsessive-compulsive disorder.

The Yale-Brown Obsessive Compulsive Scale (Y-BOCS)

The Yale-Brown Obsessive Compulsive Scale (Y-BOCS) is a commonly used tool in research and clinical practice for evaluating the severity of the obsessive- compulsive disorder (OCD) and monitoring treatment progress. The scale was created by Goodman et al. (1989) and has two sections: one for evaluating obsessions (questions 1-5) and one for evaluating compulsions (questions 6-10). Participants rate each item on a 5-point scale, with 0 indicating no symptoms and 4 indicating extreme symptoms. The Y-BOCS exhibits strong internal consistency, as demonstrated by its alpha coefficients of 0.70 for the overall scale, 0.78 for the obsession section, and 0.53 for the compulsion section.

The Intolerance of Uncertainty Scale-Short Form (IUS-12)

The Intolerance of Uncertainty Scale (IUS) rates how sensitive a person is to ambiguity, uncertainty, and the future. (Carleton et al., 2007) developed the scale. The scale, known as the IUS-12, is shortened to 12 items, each of which is assessed on a Likert scale from 1 (not at all representative of me) to 5. (entirely characteristic of me). It has a high alpha coefficient of 0.85 and a high internal consistency.

Almost Perfect Scale-Revised (APS-R)

The Almost Perfect Scale is frequently used to categorize people as either healthy or unhealthy perfectionists. It is a tool developed by (Slaney, et al., 2001). It has 23 items total and is categorized into three subscales: High Standards, Order, and Discrepancy. The High Standards subscale consists of 7 items that assess an individual's performance standards, the Order subscale has 4 items that measure the need for structure and organization in an individual's life, and the Discrepancy subscale has 12 items that assess the degree of distress experienced when performance does not meet one's standards. A 7-point Likert scale, ranging from 1 (strongly disagree) to 7, is used in the questionnaire (strongly agree). With alpha coefficients for the High Standards and Discrepancy subscales of 0.92 and 0.87, respectively, it has high reliability.

Self-Compassion Scale- Short Form (SCS- SF)

The Self-Compassion Scale - Short Form (SCS-SF) is a test used to measure an adult's level of self-compassion., or the ability to show kindness and understanding towards oneself in times of hardship or failure. Neff (2011) created this 12-item self-report questionnaire using a 5-point Likert scale with a range of 1 (rarely) to 5. (Almost always). With a Cronbach's alpha of 0.86, the SCS-SF has demonstrated strong internal consistency.

Procedure

The study commenced subsequent to obtaining approval for the research synopsis from both the graduate program coordinator and the advanced board of research studies at UCP. Data collection was conducted in collaboration with several hospitals in Lahore, following due permission from the

respective hospital authorities. Utilizing the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), The Intolerance of Uncertainty Scale (Short Form) (IUS-12), Almost Perfect Scale-Revised (APS-R), and Self-Compassion Scale – Short Form (SCS-SF), pertinent information was systematically gathered. Participants were approached personally, and after securing their informed consent, the questionnaires were administered, with each participant dedicating approximately 15 minutes to complete the provided questionnaires. Stringent adherence to ethical considerations governing research involving human participants was observed throughout the study. Following data collection, a meticulous review of all questionnaires was conducted to identify and address any missing data. Questionnaires with 50% or more missing values were excluded from the dataset, while the remaining completed questionnaires underwent scoring and were subjected to further comprehensive analysis.

Results

SPSS version 22 was used to analyze data and finalize results. Descriptive statistics, including frequency, mean, and percentages, were used to analyze demographic data. Pearson Product Correlation was used to assess the relationship between variables. Regression analysis was employed to examine prediction, and mediation analysis (PROCESS) was utilized to examine the role of self-compassion.

The descriptive analysis indicates that the dataset comprised of 60% women and 40% men. Among the participants, a greater proportion belonged to the individuals living in nuclear family system (f=104, 69.3%) compared to the joint family system (f=46, 30.7%). Married individuals constituted a larger portion (f=89, 59.3%) in comparison to unmarried individuals (f=61, 40.7%). The distribution across age groups revealed that participants in the 25-32 age range were more predominant (f=113, 75.3%) than those in the 33-40 age range (f=37, 24.7%). Regarding the duration of mental difficulties, participants experiencing challenges for 11-18 months accounted for 22.7% (f=34), while those facing difficulties for 6-10 months constituted 77.3% (f=116) of the sample. Concerning the treatment period for mental difficulties, participants undergoing treatment for 1-6 months represented 54% (f=89), while those receiving treatment for 7-12 months comprised 46% (f=61) of the sample.

Table 1 Frequency and Percentage of Demographics Properties of Participants (N=150)

Demographic Variables	F	%
Gender		
Female	90	60.0
Male	60	40.0
Family System		
Nuclear	104	69.3
Joint	46	30.7
Marital Status		
Married	89	59.3
Unmarried	61	40.7
Age		
25-32	113	75.3
33-40	37	24.7
Periods of Mental Difficulties		
6-10 months	116	77.3
11-18 months	34	22.7
Periods of Treatment		
1-6 months	89	54
7-12 months	61	46

The correlation matrix was generated using Pearson Product Movement Correlation to examine the bivariate relationship between intolerance of uncertainty, multidimensional perfectionism, self-compassion, and OCD. Results indicate that intolerance of uncertainty has a significant positive correlation with maladaptive perfectionism (r = .17, p < .05) and obsessive-compulsive disorder (r = .20, p < .05) and a significant negative correlation with adaptive perfectionism (r = -.27, p < .01) and with self-compassion (r = -.16, p < .05). Adaptive perfectionism has a significant negative correlation with self-compassion (r = -.26, p < .01) and significant positive correlation with self-compassion (r = -.21, p < .01) and significant positive correlation with OCD (r = .18, p < .01). Self-compassion has a significant negative correlation with OCD (r = .18, p < .01). Self-compassion has a significant negative correlation with OCD (r = .18, p < .01). Self-compassion has a significant negative correlation with OCD (r = .18, p < .01).

Table 2 Correlation Matrix for all Study Variables (N=150)

Table 2 Corretation 1	viaii ix j	or an sina	y variabies	(N-150)	
Variables	1	2	3	4	5
Intolerance of Uncertainty		27**	.17*	16 [*]	.20*
Adaptive Perfectionism			34**	.16*	26*
Maladaptive Perfectionism				21**	.18**
Self-Compassion					19*
Obsessive Compulsive Disorder					

**p<.01, *p<.05

Table 3 Linear Regression Analysis showing IU as predictor of Adaptive Perfectionism in OCD

Patients (N-150)

			I anems $(IV-I)$	50)		
Predictor	R^2	ΔR^2	R^2 Change	В	β	t
Constant				56.16		_
IU	.074	.068	.074	46	27***	-3.44

Note. IU= Intolerance of Uncertainty, ***p<.001

Result of regression analysis reveals that that intolerance of uncertainty is a significant negative predictor of adaptive perfectionism ($\beta = -.46$, p < .001). The value of R² indicate that intolerance of uncertainty explains a 7% variance in adaptive perfectionism.

Table 4 Linear Regression Analysis showing IU as predictor of Maladaptive Perfectionism in OCD

Patients (N-150)

			I anems $(IV = I)$	30)		
Predictor	R^2	ΔR^2	R^2 Change	B	β	t
Constant				48.64		_
IU	.030	.024	.030	.191	$.174^{*}$	2.15

Note. IU= Intolerance of Uncertainty, *p<.05

The results of table 4.4 (b) indicates intolerance of uncertainty is a significant positive predictor of maladaptive perfectionism ($\beta = .174$, p < .05). The .030 value of R^2 indicate that intolerance of uncertainty explains a 3% variance in maladaptive perfectionism.

Table 5 Role of Self-Compassion as Mediator between Intolerance of Uncertainty and Maladantive Perfectionism (N-150)

Predictors variables	Outcome variables	В	p	95%CI	
			•	LL	UL
Total Effect IU Direct Effect	Maladaptive Perfectionism	.19	<.05	.01	.36
IU	Self-Compassion	21	<.05	43	00

Self-Compassion	Maladaptive Perfectionism	.15	<.05	28	02
Indirect Effect	_				
IU	Maladaptive Perfectionism Through Self-Compassion	.15	<.05	28	02

Note. IU= Intolerance of Uncertainty; B= Unstandardized Coefficient; CI= Confidence Interval; LL= Lower Limit; UL= Upper Limit **p<.01*p<.05

Table 5 indicated the direct and indirect effect of intolerance of uncertainty and self-compassion on maladaptive perfectionism while exploring the mediating role of self-compassion. The direct effect reveals intolerance of uncertainty as a significant positive predictor of maladaptive perfectionism, the direct path between self-compassion and maladaptive perfectionism was also significant. Furthermore, the indirect effect was also significant when self-compassion was introduced as a mediator, showing self-compassion as a partial mediator of the relationship between IU and maladaptive perfectionism. The final emerged model is given below.

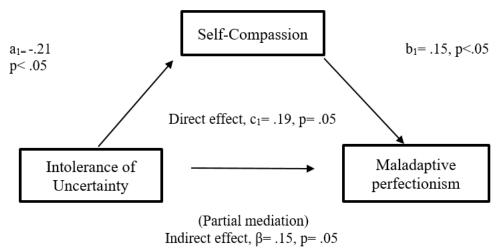


Figure 1 The emerged model of Mediating Role of Self Compassion between Intolerance of Uncertainty and Maladaptive Perfectionism

Discussion

The present study investigated the relationship between intolerance of uncertainty, multidimensional perfectionism, and self-compassion in OCD patients. The discussion begins with the findings of each hypothesis and it concludes with a summary of possible directions for future research. Person correlation and regression analysis were used to assess the relationship and prediction of study variables. To explore the mediating role of self- compassion mediation analysis (PROCESS) was done. The 1st hypothesis of the study was to investigate the relationship between intolerance of uncertainty, multidimensional perfectionism, and self-compassion in OCD patients. Results indicated that intolerance of uncertainty and maladaptive perfectionism has a significant positive relationship with obsessive-compulsive disorder and a significant negative correlation with adaptive perfectionism and self-compassion. Self- compassion has a significant negative correlation with OCD.

These findings are associated with previous literature as research conducted worldwide has empirically demonstrated a relationship between these variables. Patients with Obsessive Compulsive Disorder (OCD) frequently express high IU, a desire for more clarity before making decisions, and indecisiveness (Carleton, 2012). Additionally, Perfectionism has a significant influence on obsessive thoughts, compulsive actions, and obsessive-compulsive disorder. The emergence of perfectionistic thought was seen by many early theorists and researchers as a strategy for avoiding a painful emotional experience or result of OCD (Pinto, et al., 2017). Another

element of perfectionism, known as maladaptive perfectionism, was also highlighted by Egan, & Shafran, (2017) who found that maladaptive perfectionism exacerbates the symptoms of OCD. Maladaptive perfectionism was also identified as an OCD maintenance factor. Another study by Wu and Cortesi (2009) showed that perfectionism can predict the severity of OCD symptoms related to compulsions like checking, washing, and arranging. Another study has also found that perfectionism can predict the severity of OCD symptoms (Reuther et al., 2013).

The second hypothesis stated that IU will positively predict maladaptive perfectionism in OCD patients, and negatively predict adaptive perfectionism. Results using Linear Regression Analysis showed IU as significant positive predictor of maladaptive perfectionism and significant negative predictor of adaptive perfectionism. The results are also corroborated by existent literature where IU has been found as a positive predictor of maladaptive perfectionism in OCD patients (Taylor et al., 2010).

The results of mediation analysis found that self-compassion plays a mediating role between maladaptive perfectionism and intolerance of uncertainty. Earlier studies have also found similar results (Mantzios et al., 2015). Furthermore, research also shows that self-compassion is associated with more positive and less negative, or irrational thinking (Arimitsu & Hofmann, 2015). Being able to practice self-compassion is a valuable and concrete skill that can help individuals with OCD to cope better with daily challenges. People with OCD tend to be hard on themselves and the emotional distress caused by their compulsions may be reduced by providing them with tools to respond to everyday difficulties with self-love and empathy. Self-compassion can ultimately have a transformative impact on the life of OCD sufferers.

Study limitations and Implication

Several limitations may impact the present study. Firstly, the use of non-probability sampling constitutes a limitation that could restrict the generalizability of the findings to other populations. Employing alternative statistical approaches, such as structural equation modeling (SEM) software like AMOS, might enhance the robustness of future research. The study's constrained sample, derived from a specific region or treatment environment, raises concerns about the transferability of the findings to broader populations. To address this, further research is essential to assess the generalizability of the results across diverse settings and populations. Additionally, the exclusive inclusion of educated individuals in the data collection process imposes limitations on the external validity of the current findings, rendering them less applicable or reliable for individuals residing in rural areas or lacking formal education. Lastly, the reliance on self-reported measures introduces the potential for social desirability bias, posing a risk to the accuracy of the findings.

The prospective implications of this study contribute to a more profound comprehension of the cognitive factors, namely intolerance of uncertainty and multidimensional perfectionism, associated with obsessive-compulsive disorder (OCD). The findings suggest a positive correlation between these factors and the severity of OCD symptoms, emphasizing the importance of early intervention in the treatment process to prevent the escalation of OCD symptoms. Moreover, the results propose that self-compassion plays a mediating role in the relationship between intolerance of uncertainty and maladaptive perfectionism. This indicates that promoting self-compassion could be an effective strategy to mitigate the adverse impact of intolerance of uncertainty and maladaptive perfectionism on individuals with OCD. Beyond its relevance to OCD, these findings have potential implications for self-help and self-improvement. Individuals not diagnosed with OCD but experiencing high levels of intolerance of uncertainty or maladaptive perfectionism may reduce the intensity or occurrence of their symptoms by enhancing self-compassion and addressing these cognitive factors independently. Lastly, the study underscores the importance for clinicians to adopt a comprehensive and multidimensional approach in OCD treatment. Recognizing that OCD affects not only thoughts and behaviors but also emotions, cognition, and personality highlights the significance of addressing all these facets for a more favorable treatment outcome.

Conclusion:

The study's findings reveal that individuals with OCD commonly harbor beliefs such as the "need for certainty" and the "inability to function acceptably in uncertain situations," contributing to their struggle in tolerating uncertainty. The presence of maladaptive perfectionism, characterized by unrealistic standards, self-criticism, and a preoccupation with mistakes or flaws, is strongly linked to the severity of OCD symptoms. Individuals with maladaptive perfectionism may face challenges in confronting and rationalizing their intrusive thoughts during treatment. Addressing both intolerance of uncertainty and maladaptive perfectionism in OCD interventions is recommended for more effective outcomes. Furthermore, the research underscores the importance of self-compassion in the context of OCD. Improved self-compassion is associated with a reduction in maladaptive perfectionism, and it plays a crucial role in overall mental well-being. Self-compassion is positively correlated with happiness, optimism, and positive emotions, while exhibiting a negative association with OCD symptoms. Specifically, for individuals with OCD experiencing feelings of moral failure or shame related to their thoughts, practicing self-compassion can be particularly beneficial.

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