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Development of the Interpretation Bias Questionnaire for Obsessive-Compulsive Personality Disorder and Its Psychometric Properties

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A B S T R A C T

Objective: The present study aimed to develop the Interpretation Bias Questionnaire for Obsessive-Compulsive Personality Disorder and to determine its psychometric properties among university students.

Methods and Materials: This research was conducted within the positivist paradigm using a quantitative approach through exploratory and confirmatory factor analyses. The target population comprised students from Gonbad Kavous University, from whom 310 individuals (184 women and 126 men) were selected using stratified random sampling from October to December 2024. To assess the variables, three questionnaires were used: the Obsessive-Compulsive Personality Disorder Questionnaire (OCPDQ), the Interpretation Bias Questionnaire for Obsessive-Compulsive Personality Disorder (OCPDIB), and the Flourishing Scale (FS) for psychological well-being.

Findings: Based on exploratory factor analysis conducted using SPSS-26, the 30 questionnaire items were categorized into six components, with Cronbach's alpha coefficients ranging from 0.70 to 0.86. Additionally, the results of confirmatory factor analysis using AMOS-24 indicated adequate and appropriate reliability of the questionnaire's constructs.

Conclusion: Therefore, given that this questionnaire is a reliable and valid instrument, it can be utilized by specialists to assess interpretation biases in individuals with obsessive-compulsive personality disorder.

Keywords: *Obsessive-Compulsive Personality Disorder, Interpretation Bias, Scale*

1. Introduction

Personality traits can be defined as broad patterns of thoughts, feelings, and behaviors (Mayer & Bryan, 2024). Longitudinal studies indicate that personality traits, particularly in early adulthood, can change toward greater maturity (Bleidorn et al., 2022). Therefore, assessing and modifying problematic personality traits is of significant importance (Tajii, 2018).

A personality disorder is a persistent pattern of inner experience and behavior that markedly deviates from cultural expectations. This pattern manifests in two or more areas, including cognition, affectivity, interpersonal functioning, and impulse control. It is pervasive and

inflexible across a broad range of personal and social situations (American Psychiatric Association, 2013). One of the most prevalent personality disorders is obsessive-compulsive personality disorder (OCPD) (Atroszko et al., 2020). The prevalence of OCPD in the general population ranges from 1% to 1.7%, reaching up to 6.5% in outpatient populations, and in some clinical studies, up to 26% (Clemente et al., 2022).

OCPD is characterized by eight personality traits: preoccupation with details, perfectionism, excessive commitment to work and productivity, extreme conscientiousness, difficulty discarding worthless objects, reluctance to delegate tasks, frugality, and rigidity (Diedrich & Voderholzer, 2015).

Research has focused on the relationship between personality and cognition as two key concepts in understanding individual differences (Stieger et al., 2021). Personality traits play a crucial role in individuals' self-assessment of their lives, thereby influencing their cognition (Anglim & O'Connor, 2019). Some studies have demonstrated that OCPD is associated with cognitive deficits (Edwards et al., 2023; Gray, 2024; Heintz, 2024).

In examining the role of cognition in OCPD, Beck's theory is noteworthy (Beck & Haigh, 2014). According to Beck's model, the situation itself does not determine an individual's cognitive state; rather, their interpretation and evaluation of the situation influence their emotional, behavioral, and physiological responses, potentially leading to dysfunction in these domains (Woud, 2022).

Cognitive biases are distorted and selective information processing mechanisms that affect behavioral, emotional, physiological, memory, and cognitive responses. These biases have been studied in three domains: attention, interpretation, and memory (Bogie et al., 2020) and are recognized as maintaining factors in psychological disorders (Grol et al., 2018).

Additionally, some studies have identified maladaptive cognitions as predisposing factors for OCPD. These include an excessive need for strict standards (Edwards et al., 2023), distrust of others, emotional inhibition, failure to achieve relentless standards, and extreme self-control, all of which contribute to OCPD traits (Shariatzadeh et al., 2015). Gray (2024) reported that in 8.1% of studies, dysfunctional cognitive beliefs were proposed as the underlying mechanism of OCPD, emphasizing beliefs regarding the necessity of perfectionism, details, and organization as more influential than other factors (Gray, 2024).

Additional cognitive factors linked to OCPD pathology include fear of disapproval (Nordahl & Stiles, 2000), excessive morality (Azimpour et al., 2019), denial of the future and threat anticipation (Kanehisa et al., 2017), intolerance of ambiguity (Wheaton & Ward, 2020), and experiential avoidance (i.e., inability to tolerate unpleasant thoughts and emotions) (Wheaton & Pinto, 2017). Feelings of incompleteness (i.e., the perception that actions and intentions are never fully accomplished) have also been recognized as a cognitive factor associated with the disorder (Lee & Wu, 2019). Cognitive and behavioral inflexibility is observed in several psychological disorders, including OCPD. Heintz (2024) stated that impaired cognitive processes lead to inflexible traits (Heintz, 2024).

Given the role of cognition in OCPD, identifying maladaptive cognitions associated with this disorder through appropriate assessment tools is essential. Although some questionnaires assess obsessive traits and symptoms, they do not comprehensively address all aspects of OCPD. For example, the Leyton Obsessional Inventory (LOI) developed by Cooper (1970) does not specifically target all facets of OCPD and overlaps significantly with obsessive-compulsive disorder (OCD) symptoms. Similarly, the Obsessive Beliefs Questionnaire (OBQ) is a self-report measure designed to assess cognitive phenomena related to OCD and was developed by the Obsessive-Compulsive Cognitions Working Group (2001). The OBQ consists of six subgroups assessing key cognitive domains of OCD, including responsibility for harm, threat appraisal, perfectionism, need for certainty, thought importance and control, and harm prevention (Hemade et al., 2024).

Clerkin and Teachman (2011) designed a list of ambiguous scenarios based on themes such as difficulty with ambiguity, thought control, thought importance, responsibility, and perfectionism to identify and modify interpretation biases in individuals with obsessive traits (Clerkin & Teachman, 2011). Ansell et al. (2008) conducted confirmatory factor analysis using an eight-dimensional model for OCPD and found that a multifactorial model provided a significantly better fit than a unidimensional model. The standardized factor loadings were as follows: perfectionism (0.81), attention to detail (0.81), work addiction (0.56), difficulty discarding unnecessary objects (0.55), reluctance to delegate tasks (0.82), excessive morality (0.81), rigidity (0.63), and frugality (0.46), all of which reflected themes of intrapersonal and interpersonal control (Ansell et al., 2008).

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Grilo et al. (2004) suggested that although each of the eight OCPD criteria has predictive utility, three criteria—preoccupation with details, rigidity, and reluctance to delegate tasks—are the strongest predictors of OCPD diagnosis in a two-year follow-up interview (Grilo et al., 2004). Additionally, the Obsessive-Compulsive Personality Disorder Questionnaire, developed by Martukovich, was designed to assess OCPD traits using 80 items, evaluating preoccupation with details, perfectionism, work centrality, rigid moral principles, hoarding, reluctance to delegate tasks, frugality, and stubbornness. Principal component analysis revealed three fundamental factors in this questionnaire: "perfectionism," "rigid control," and "organized hoarding" (Martukovich, 2010).

A review of the literature indicates that while instruments exist to assess maladaptive cognitions in OCD, there is a lack of such tools specifically for OCPD. Existing instruments primarily focus on symptoms rather than underlying cognitive biases. Given the high prevalence of OCPD, the significance of interpretation biases in daily life and social information processing among individuals with OCPD, and the absence of a suitable instrument, the present study aimed to develop a tool for identifying interpretation biases in OCPD. Despite its high prevalence and substantial social burden, this disorder has received limited research attention.

Thus, this study seeks to validate an interpretation bias questionnaire for OCPD. The questionnaire items were derived from a qualitative study on interpretation biases in individuals with OCPD and will be tested and analyzed within a sample group for psychometric validation. Accordingly, the primary research question is: What are the interpretation biases and their dimensions in OCPD based on exploratory and confirmatory factor analysis?

2. Methods and Materials

2.1. Study Design and Participants

The present study is an applied research study conducted within the positivist paradigm using a quantitative approach to perform exploratory and confirmatory factor analyses. The study population consisted of students from Gonbad Kavous University. A total of 310 individuals were selected using stratified proportional random sampling based on gender (male and female) and social strata (faculties) from October to December 2024. Participants were selected from three faculties: the Faculty of Literature and Humanities, the Faculty of Agriculture and Natural Resources, and the Faculty of Engineering and Technology. The sample size of 310 (184 women and 126 men) was determined based on the proportion of students in each faculty.

Selecting an appropriate sample size is essential to reducing error in exploratory factor analysis. According to a review study, a suitable sample size for exploratory factor analysis ranges from 50 to 400 participants (Osborne & Costello, 2019). The inclusion criteria for the study were being an enrolled student at Gonbad Kavous University, belonging to the selected research cluster, and having no history of hospitalization for physical or psychological illnesses. Exclusion criteria included incomplete questionnaire responses and random answering, as determined by incorrect responses to two redundant questions in the questionnaire.

To ensure ethical considerations, confidentiality of information was maintained, and participants had the right to voluntarily participate or withdraw from the study at any stage. The questionnaires were distributed among the selected participants, and the data were collected for analysis. This questionnaire was derived from a qualitative research study using the phenomenological method to identify interpretation biases in individuals with obsessive-compulsive personality disorder (OCPD) as part of the author's doctoral dissertation. The analysis of interview transcripts yielded 473 initial codes, which were categorized into 50 themes, six subcategories, three secondary categories, and one main category. The 50 extracted codes were converted into questionnaire items.

2.2. Measures

2.2.1. Obsessive-Compulsive Personality Disorder Questionnaire (OCPDQ)

This questionnaire, developed by Martukovich, consists of 80 items and assesses eight criteria of OCPD: preoccupation with details, perfectionism, excessive devotion to work, conscientiousness, hoarding, reluctance to delegate tasks, frugality, and rigidity. It is scored on a true-false scale. In Martukovich's study, this questionnaire demonstrated high reliability, with a Cronbach's alpha of 0.82, and a cutoff score of 40.1 was reported (Martukovich, 2010). The reliability coefficient of this questionnaire in a preliminary Iranian sample was found to be 0.89, indicating good reliability (Montazeri et al., 2013). Additionally, in a study by Karimpour, Farahani, and Khanipour (2021), the mean severity score of OCPD symptoms was reported as 54.62, with a Cronbach's alpha of 0.91 (Karimpour et al., 2021).

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2.2.2. *Psychological Well-Being Questionnaire*

This eight-item scale was developed by Diener et al. (2010) and is scored on a 7-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (7). The total score ranges from 8 to 56, with higher scores indicating greater psychological well-being (Diener, Wirtz, & Tov, 2010). Cronbach's alpha for this questionnaire was reported as 0.87 in Diener et al.'s study (2010) and 0.82 in a study (Moradi Siah Afshadi et al., 2015). In the present study, the Cronbach's alpha for this scale was 0.81.

2.2.3. *Interpretation Bias Questionnaire for Obsessive-Compulsive Personality Disorder (OCPDIB)*

This questionnaire was developed based on 50 initial codes obtained from 22 semi-structured interviews with individuals diagnosed with OCPD in a qualitative study as part of Mahmoudzadeh et al.'s doctoral dissertation (2024). The extracted codes were converted into questionnaire items assessing interpretation biases related to OCPD. The questionnaire was validated through exploratory factor analysis with a sample of 310 participants. Scoring for this scale was based on a 5-point Likert scale, ranging from "strongly agree" (5) to "strongly disagree" (1). Higher scores indicate a greater degree of interpretation bias. The validity and reliability of the questionnaire were assessed using exploratory and confirmatory factor analyses, and concurrent validity was evaluated with the OCPD questionnaire. Based on exploratory factor analysis conducted in the present study, the 30 questionnaire items were categorized into six components: (1) bias regarding social interactions, (2) bias regarding personal characteristics of others, (3) bias regarding occupational and academic conditions, (4) bias regarding one's living conditions, (5) bias regarding the future of the world, and (6) bias regarding the current state of the world. The Cronbach's alpha coefficients for these components were 0.82, 0.78, 0.74, 0.86, 0.75, and 0.70, respectively. Other reliability and validity indices were examined through confirmatory factor analysis.

2.3. *Data Analysis*

Following data collection, descriptive statistics and exploratory factor analysis were conducted using SPSS-26, while confirmatory factor analysis was performed using AMOS-24. To address the research question regarding the factorial structure of interpretation biases in OCPD, principal component analysis with varimax rotation was used for exploratory factor analysis. To address the second research question, which aimed to confirm the factors identified in exploratory factor analysis, the maximum likelihood estimation method was employed in confirmatory factor analysis. Univariate outliers were examined using box plots, which revealed no extreme values. Multivariate outliers were assessed using Mahalanobis distance, and no significant outliers were detected. Therefore, no data points were found to be outside the acceptable range that could affect the results. To establish validity, face validity was assessed by reviewing the clarity and correctness of the questionnaire items with researchers from the present study and three psychology students. Content validity was evaluated through content validity index (CVI) and content validity ratio (CVR) based on the opinions of 12 experts. Confirmatory factor analysis was conducted to verify the factors identified in exploratory factor analysis, and convergent and divergent validity indices were examined. The results of these analyses are reported in the findings section.

3. Findings and Results

The descriptive and demographic data obtained from the study are presented in Table 1.

Table 1

Demographic Characteristics of the Sample

Gender	Count	Percentage	
Female	184	59.4%	
Male	126	40.6%	
Education Level	Count	Percentage	
Undergraduate	180	58.06%	
Master's	91	29.35%	
Doctoral	39	12.58%	
Age	Mean ± SD	Minimum	Maximum
	24.5 ± 4.71	20	42

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The results in Table 1 indicate that 59.4% (184 participants) of the respondents were female, while 40.6% (126 participants) were male. Regarding educational level, 58.06% (180 participants) were undergraduate students, 29.35% (91 participants) were master's students, and 12.58% (39 participants) were doctoral students. The mean age of the participants was 24.5 years with a standard deviation of 4.71, with the youngest participant being 20 years old and the oldest being 42 years old.

To examine the questionnaire, the 50 primary concepts extracted from the qualitative phase were converted into 50 questionnaire items related to interpretation bias. Each item was rated on a 5-point Likert scale, ranging from "strongly agree" (5) to "strongly disagree" (1).

Initially, face validity was confirmed by evaluating the font, spelling, punctuation, and other formatting aspects by the researchers and three psychology students. For content validity, the content validity index (CVI) and content validity ratio (CVR) were assessed by 12 experts. In the CVI assessment, items were evaluated based on their simplicity, clarity, and relevance to interpretation biases in obsessive-compulsive personality disorder (OCPD). In the CVR assessment, items were reviewed to determine their usefulness for inclusion in the questionnaire.

CVI scores for simplicity, clarity, and relevance were compared against a cutoff point of 0.79. Items scoring below this threshold were revised based on expert opinions. In the CVR assessment, given the involvement of 12 experts, items scoring below the threshold of 0.56 were considered non-essential and were removed. As a result, 20 items were eliminated, leaving 30 refined items for further analysis.

These 30 items were then subjected to exploratory factor analysis to identify appropriate items and categorize them into relevant factors. Sample adequacy was assessed using the Kaiser-Meyer-Olkin (KMO) index, yielding a value of 0.94, indicating a high degree of sampling adequacy. Additionally, Bartlett's test of sphericity was significant at $p < 0.001$, confirming that the dataset met the assumption of sphericity and was suitable for factor analysis.

The factor structure of the developed instrument was analyzed using exploratory factor analysis with the principal components method and varimax rotation. Six factors were extracted. Table 2 presents the extracted components, eigenvalues, and the percentage of explained and cumulative variance.

Table 2

Eigenvalues and Explained Variance of the Factors

Factors	Eigenvalue	Explained Variance (%)	Cumulative Variance (%)
1	7.70	25.6	25.6
2	2.51	8.38	34.05
3	2.09	6.99	41.05
4	1.46	4.88	45.9
5	1.22	4.07	50.01
6	1.02	3.42	53.4

As shown in Table 2, six factors with eigenvalues greater than 1 were extracted, collectively explaining 53.4% of the variance in interpretation bias. To determine the appropriate number of factors, a scree plot analysis was conducted. The factors with steep slopes were considered primary factors, while those aligned parallel to the x-axis were excluded. The scree plot confirmed the presence of a maximum of six factors in the Interpretation Bias Questionnaire for OCPD.

To allocate items to their respective factors, only items with a factor loading greater than 0.40 were retained in each factor. Each item was assigned to the factor for which it had the highest factor loading relative to the other factors. Table 3 presents the factor loadings of the retained items after varimax rotation.

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Table 3

Factor Loadings of the Retained Items After Varimax Rotation

Factors / Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
3	0.750					
1	0.729					
13	0.712					
11	0.710					
12	0.709					
7	0.709					
10	0.708					
6	0.704					
8	0.688					
5	0.683					
9	0.671					
4	0.670					
2	0.666					
15		0.686				
16		0.682				
14		0.659				
18		0.654				
17		0.646				
19		0.615				
21			0.691			
30			0.678			
23			0.515	0.385		
26			0.499	0.405		
27				0.727		
24				0.711		
28					0.857	
25				0.379	0.594	
29			0.389		0.440	
22			0.333			-0.659
20	0.402					0.512

Based on the varimax rotation results in Table 3, 13 items with factor loadings above 0.40 were assigned to Factor 1 (Bias Regarding Personal Characteristics of Others). Six items with factor loadings above 0.40 were categorized under Factor 2 (Bias Regarding Social Interactions). Four items with factor loadings above 0.40 were assigned to Factor 3 (Bias Regarding Occupational and Academic Conditions), and four items were assigned to Factor 4 (Bias Regarding One's Living Conditions), with two items removed due to factor loadings below 0.40.

Additionally, three items were classified under Factor 5 (Bias Regarding the Future of the World), and two items were categorized under Factor 6 (Bias Regarding the Current State of the World).

To assess the reliability of the constructs, three criteria were calculated: the reliability of each item, the composite reliability of each construct, and the average variance extracted (AVE). A factor loading of 0.40 or higher for each item in confirmatory factor analysis at the $p < 0.01$ level indicates a well-defined construct.

Each of the six remaining subscales, along with their corresponding items, descriptive statistics, Cronbach's alpha coefficients, and correlations between each item and the total score of the subscale, are presented in Table 4.

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Table 4

Descriptive Statistics, Correlations, and Cronbach's Alpha

Subscale	Number of Items	Item Number	Mean	SD	Correlation with Total Score	Correlation with Subscale Score	Cronbach's Alpha
Bias Regarding Personal Characteristics of Others	13	3	3.35	1.53	0.661	0.744	0.821
		1	3.38	1.56	0.678	0.735	
		13	3.37	1.57	0.659	0.718	
		11	3.24	1.58	0.651	0.738	
		12	3.33	1.54	0.649	0.718	
		7	3.31	1.58	0.680	0.729	
		10	3.39	1.56	0.658	0.712	
		6	3.39	1.53	0.647	0.711	
		8	3.38	1.53	0.653	0.709	
		5	3.47	1.49	0.658	0.709	
		9	3.31	1.55	0.656	0.702	
		4	3.44	1.58	0.623	0.696	
		2	3.38	1.56	0.621	0.681	
Bias Regarding Social Interactions	6	15	3.33	1.52	0.542	0.725	0.783
		16	3.42	1.51	0.499	0.703	
		14	3.34	1.54	0.518	0.708	
		18	3.41	1.49	0.484	0.696	
		17	3.55	1.47	0.451	0.667	
		19	3.20	1.55	0.459	0.659	
Bias Regarding Occupational and Academic Conditions	4	21	2.10	0.81	0.340	0.632	0.747
		30	2.20	0.79	0.369	0.630	
		23	2.09	0.84	0.461	0.662	
		26	2.18	0.86	*0.398*	0.679	
Bias Regarding One's Living Conditions	2	27	2.42	0.81	0.806	0.793	0.862
		24	2.24	0.85	0.601	0.819	
Bias Regarding the Future of the World	3	28	2.41	0.84	0.365	0.684	0.759
		25	1.99	0.93	0.398	0.724	
		29	2.28	0.88	0.421	0.671	
Bias Regarding the Current State of the World	2	22	2.13	0.93	0.312	0.509	0.701
		20	3.65	1.46	0.613	0.838	

Table 4 reports the mean and standard deviation for each item. The Cronbach's alpha values for the factors range from 0.70 to 0.86, with the lowest reliability observed in Bias Regarding the Current State of the World and the highest in Bias Regarding Personal Characteristics of Others. The correlation of all items within each factor with the overall interpretation bias score and the corresponding factor score was statistically significant at the $p < 0.01$ level.

Skewness and kurtosis values for all items ranged between -3 and 3 and -10 and 10, respectively, indicating a normal distribution of the items.

To assess convergent and divergent validity of the Interpretation Bias Questionnaire for OCPD, the correlation of the total score of interpretation bias with the Obsessive-Compulsive Personality Disorder Questionnaire and the Psychological Well-Being Questionnaire was examined. The results are presented in Table 5.

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Table 5

Correlation Between Interpretation Bias, OCPD Symptoms, and Psychological Well-Being

Variable	1	2	3
1. Interpretation Bias Questionnaire for OCPD	1	0.62	-0.55
2. Obsessive-Compulsive Personality Disorder Questionnaire		1	-0.47
3. Psychological Well-Being Questionnaire			1

The results in Table 5 demonstrate acceptable convergent and divergent validity for the Interpretation Bias Questionnaire for OCPD. The strong positive correlation ($r = 0.62$, $p < 0.01$) with the OCPD questionnaire supports the measure's convergent validity, indicating that it effectively assesses constructs related to OCPD. Conversely, the negative correlation ($r = -0.55$, $p < 0.01$) with the Psychological Well-Being Questionnaire supports divergent validity, as individuals with higher interpretation biases tend to report lower psychological well-being.

To assess construct validity, in addition to exploratory factor analysis, confirmatory factor analysis (CFA) was conducted using AMOS-24 on the data obtained in this study. The factor loadings and significance levels of the items in the confirmatory factor analysis and model fit indices are presented in **Error! Reference source not found.**.

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Factor Loadings of Items in Each Component in Confirmatory Factor Analysis

Subscale	Number of Items	Item Number	Factor Loading	Significance (p-value)	Average Variance Extracted (AVE)	Composite Reliability (CR)
Bias Regarding Personal Characteristics of Others	13	3	0.68	0.001	0.72	0.88
		1	0.59	0.001		
		13	0.71	0.001		
		11	0.64	0.001		
		12	0.50	0.001		
		7	0.49	0.001		
		10	0.66	0.001		
		6	0.73	0.001		
		8	0.54	0.001		
		5	0.62	0.001		
		9	0.75	0.001		
		4	0.63	0.001		
		2	0.75	0.001		
Bias Regarding Social Interactions	6	15	0.88	0.001	0.82	0.71
		16	0.46	0.001		
		14	0.59	0.001		
		18	0.69	0.001		
		17	0.70	0.001		
		19	0.83	0.001		
Bias Regarding Occupational and Academic Conditions	4	21	0.69	0.001	0.77	0.63
		30	0.53	0.001		
		23	0.79	0.001		
		26	0.91	0.001		
Bias Regarding One's Living Conditions	2	27	0.84	0.001	0.70	0.51
		24	0.65	0.001		
Bias Regarding the Future of the World	3	28	0.55	0.001	0.74	0.55
		25	0.44	0.001		
		29	0.61	0.001		
Bias Regarding the Current State of the World	2	22	0.67	0.001	0.71	0.58
		20	0.52	0.001		

Model Fit Indices for the Six-Factor Confirmatory Factor Analysis Model

Fit Index	CMIN/DF	RMSEA	CFI	GFI	PCLOSE	SRMR
Obtained Values	2.19	0.07	0.95	0.93	0.18	0.07

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Based on the fit indices reported in **Error! Reference source not found.**, the model demonstrated a good fit to the data, indicating that the obtained model is consistent with the population. The CMIN/DF value of 2.19 falls within the acceptable range, and the RMSEA value of 0.07 suggests an adequate model fit. Additionally, the CFI (0.95) and GFI (0.93) values confirm that the model adequately explains the variance in the data. Therefore, the results support the validity of the six-factor model for measuring interpretation bias in individuals with obsessive-compulsive personality disorder (OCPD).

4. Discussion and Conclusion

The present study aimed to develop the Interpretation Bias Questionnaire for Obsessive-Compulsive Personality Disorder (OCPD) and determine its psychometric properties among university students. Based on the findings, this questionnaire was found to be valid and reliable across six factors.

Face and content validity were assessed, and expert modifications were incorporated into the initial version. Exploratory factor analysis confirmed the construct validity of the questionnaire, and confirmatory factor analysis validated the 30-item model. Model fit indices further confirmed that the hypothesized structure was a good fit for the data, thereby supporting the research hypothesis.

In this study, six factors were identified and confirmed. Bias regarding social interactions includes themes such as the importance of others' opinions and evaluations, difficulty in new situations, the necessity of maintaining distance from others, avoiding self-disclosure, prioritizing work over social interactions, and the need to control others. Bias regarding personal characteristics of others includes perceptions of others as irresponsible, intrusive, dismissive, lacking understanding, unfairly judgmental, demanding, self-serving, comfort-seeking, untrustworthy, exploitative, short-sighted, disorganized, and preoccupied with trivial matters. Bias regarding occupational and academic conditions includes the necessity of flawless performance, devaluing achievements, perceiving tasks as complex and varied, and emphasizing relentless effort. Bias regarding one's living conditions includes a high likelihood of failure in life and the perception of current life conditions as stressful. Bias regarding the future of the world includes themes of an ambiguous and unpredictable future, uncontrollable future events, and an undesirable outlook on the future. Bias regarding the current state of the world includes themes of an unjust and meaningless world.

Cronbach's alpha values for these factors were 0.82, 0.78, 0.74, 0.86, 0.75, and 0.70, respectively, demonstrating good internal consistency.

These findings align with previous research on bias regarding occupational and academic conditions, which suggests that individuals with OCPD devalue their achievements and insist on flawless performance. This is consistent with studies indicating that individuals with OCPD are perfectionists with unrealistically high standards and highly self-critical evaluations (Besharat et al., 2019). Additionally, high levels of perfectionism and personal standards have been reported in individuals with OCPD (Redden et al., 2023).

Furthermore, the current study's findings regarding excessive self-criticism in work and the necessity of relentless effort can be explained by previous research indicating that individuals with OCPD experience highly rigid and controlling inflexibility, which makes relaxation difficult and unstructured time unbearable (Besharat et al., 2019).

Individuals with OCPD struggle emotionally when responding to environmental changes, making uncertainty and unpredictable events particularly distressing (Wheaton & Ward, 2020). These individuals also report higher levels of current anxiety (Redden et al., 2023), which explains their perception of current life conditions as stressful. The high prevalence of social anxiety in individuals with OCPD (Redden et al., 2023) further explains their difficulty in new social situations and the perceived necessity of maintaining distance from others.

Two distinct subtypes of OCPD have been identified based on behavioral, cognitive, emotional, and interpersonal profiles. The hostile subtype tends to be verbally aggressive, perfectionistic toward both themselves and others, struggles with emotion regulation, has difficulty accepting emotions,

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and experiences frequent interpersonal conflicts. The anxious or "agreeable" subtype is characterized by self-criticism, worry, low mood, high anxiety, and submissiveness (Grant et al., 2020). These findings support the biases regarding social interactions, such as the importance of others' opinions, maintaining distance from others, and avoiding self-disclosure.

According to Steenkamp et al. (2015), individuals with OCPD have difficulty regulating emotions, particularly in accepting and clarifying emotions and developing effective emotional regulation strategies (Steenkamp et al., 2015). Due to intense emotional experiences, heightened negative emotions, and poor emotional processing, these individuals often struggle (Bender, 2021). Emotional dysregulation frequently results from failure to meet rigid and unrealistic standards, either by oneself or others (Ansell et al., 2008; Ansell et al., 2010), which supports biases regarding personal characteristics of others.

Difficulty coping with uncertainty may lead individuals with OCPD to overcontrol their environment, either by reluctance to delegate tasks or excessive perfectionism (Bender, 2021). This explains the study's findings regarding the perception of tasks as complex and varied, as well as the necessity of managing others.

Intolerance of uncertainty is defined as the inability to accept that negative events may occur without a definitive way to predict them (Carleton et al., 2007). Individuals with high intolerance of uncertainty attempt to avoid ambiguity and interpret uncertain situations as more negative and threatening than predictable situations (Carleton et al., 2012). This finding supports the biases regarding the world, wherein individuals with OCPD perceive the future as undesirable, uncontrollable, meaningless, and chaotic.

The high prevalence of OCPD and the significance of interpretation biases in daily life and social information processing among affected individuals motivated this study to develop a tool for identifying interpretation biases in OCPD. Future research should focus on interventions targeting these biases, which our research team is currently developing.

5. Limitations & Suggestions

One limitation of this study was the lack of access to a sufficiently large clinical sample, as the research was conducted on a non-clinical group (university students). Future studies should replicate this questionnaire in larger clinical samples to strengthen its validity and applicability.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. To uphold ethical principles, participants were informed about the study's objectives, and their identities were protected by not requiring personal information such as names. Participation was voluntary, and individuals had the right to withdraw at any time. The present study is derived from the first author's doctoral dissertation in psychology at the Persian Gulf University and was approved under the ethics code IR.BPUMS.REC.2024.093.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contributed to this article.

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