



Original Article

Psychometric properties of the Persian version of the Dependent Personality Questionnaire

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Abstract

Introduction: Despite its significant effects on an individual's functioning, Dependent Personality Disorder (DPD) has received comparatively less attention among personality disorders. This highlights the need for additional studies on DPD and the development of reliable assessment tools to measure this disorder. This study assessed the psychometric properties of the Persian version of the Dependent Personality Questionnaire, a self-reported measure designed to assess dependent personality traits.

Materials and Methods: The sample for this research comprised 206 students from the University of Bojnord-Iran during the academic year 2020-2021. Participants were recruited using convenience sampling and completed the Dependent Personality Questionnaire and the Dependent Personality Scale of the Millon Clinical Multiaxial Inventory-III. The exploratory and confirmatory factor analyses were employed to examine the factor structure of the questionnaire, while concurrent validity and internal consistency reliability were also assessed.

Results: The exploratory factor analysis indicated a two-factor structure for the DPQ: "lack of self-reliance" and "fear of loneliness." The confirmatory factor analysis confirmed the factor structure obtained from the exploratory factor analysis. Concurrent validity analysis further supported the questionnaire's validity ($r = 0.60$, $P \leq 0.01$). Additionally, the results provided evidence for the internal consistency reliability of the questionnaire ($\alpha = 0.67$, mean inter-item correlation = 0.20).

Conclusion: Based on the results, the Persian version of the Dependent Personality Questionnaire demonstrates acceptable psychometric properties.

Keywords: Dependent personality disorder, Factor analysis, Psychometrics

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Introduction

Dependent Personality Disorder (DPD) was first introduced as a diagnostic category in the 3rd edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) (1). The criteria for this disorder were subsequently refined in later editions of the DSM (2-3). In the most recent version, DSM-5 TR, DPD is characterized by a pervasive and excessive need for caretaking, resulting in submissive and

clingy behavior, and fear of separation. The prevalence of this disorder is estimated 0.5%-0.6% (4), with a higher occurrence in women than men (4-6).

Research indicates that DPD often co-occurs with various axis-one disorders. Studies have found a significant association between DPD and obsessive-compulsive disorder, panic disorder, separation anxiety, agoraphobia, social anxiety, depression, anorexia nervosa,

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and alcohol and substance addiction (7-11). Individuals with DPD also tend to exhibit high levels of alexithymia (12) and anxiety (13). Furthermore, research on benzodiazepine addiction suggests that patients with dependent characteristics or dependent personality disorder are more prone to developing dependence on benzodiazepines and experiencing withdrawal symptoms upon cessation of these drugs (14).

Patients diagnosed with a dependent personality disorder often display reduced motivation for personal change and tend to shift a significant portion of the treatment responsibility to the therapist (12). Evidence shows that these patients engage in behaviors that are harmful to both themselves and others (3). Suicidal ideation and behaviors are more closely associated with DPD than depression, other mental disorders, and demographic variables. Also, self-harm/self-injury behaviors are common among individuals with DPD (3,9). Moreover, dependency is related to physical, sexual, and emotional abuse (3,9,15). Research findings indicate that individuals with DPD have a higher likelihood of experiencing spousal abuse compared to those without personality disorders or other personality disorders (16). Studies also demonstrate a link between DPD symptoms and engaging in unprotected and impulsive sexual behavior. The difficulties in establishing boundaries and resisting persuasion due to a strong desire to maintain relationships, extreme adaptability, agreeableness, and suggestibility make individuals with DPD more vulnerable to abuse and involvement in risky sexual relationships (3,9,12). These patients tend to score high on neuroticism and agreeableness and low on openness (17). According to the alternative DSM-5 model for personality disorders, it has been shown that DPD is most strongly related to anxiousness, submissiveness, and separation insecurity (18,19).

However, dependency is not always associated with submissiveness, and it can lead to active—even aggressive—behavior when significant relationships are threatened (3,5). Men with DPD are likelier to engage in abusive behaviors (9). Dependent men exhibit higher rates of domestic violence when their romantic relationships are at risk. The fear of abandonment partially explains the connection between dependency and domestic violence in men (3). A meta-analysis investigating the

relationship between dependency and child abuse found that dependent parents more commit to child abuse than non-dependent parents (20).

Despite its significant impact on functioning, DPD has received less attention in research (9,21-24), emphasizing the need for further studies in this area. Consequently, there is a need for reliable assessment tools to measure this disorder. The Dependent Personality Questionnaire (DPQ) is the first self-report instrument developed specifically for assessing DPD. Therefore, this study aimed to develop and evaluate the validity and reliability of the Persian version of the DPQ.

Materials and Methods

The statistical population consisted of students from the University of Bojnord in the 2020-2021 academic year ($N \approx 4000$). At first, we examined the factor structure of the questionnaire through exploratory factor analysis, followed by confirmatory factor analysis to validate the obtained structure. According to Brown (25), it is recommended to cross-validate the structural model obtained from exploratory factor analysis by applying exploratory and confirmatory factor analyses on independent samples. Therefore, separate sample sizes were calculated for each analysis. For the exploratory factor analysis, a sample size of 80 (at least) was determined based on the recommendation of Polit and Beck (26), who suggest having 5 to 10 samples for each item.

Similarly, for the confirmatory factor analysis, a sample size of 80 individuals was determined following the recommendation of Bentler and Chou (27), who also recommended 5 to 10 samples for each parameter. Eventually, 206 individuals were included in the study using the convenience sampling method. The inclusion criteria were being a student and being within the age range of 18-35. The exclusion criteria included having disabilities that prevented individuals from responding to the questionnaires (such as blindness or severe visual impairment). Of the total samples, 103 individuals were randomly assigned to the exploratory factor analysis study, while the remaining 103 were allocated to the confirmatory factor analysis study.

To prepare the Persian version of the DPQ, the author first translated the questionnaire into Persian. Subsequently, the Persian-translated

version was back-translated into English by a translator who had yet to see the original questionnaire (back-translation). The back-translation version was then sent to and approved by one of the developers of the questionnaire (Tyrer).

The questionnaires were administered online by sharing links with student groups on social media. The electronic form of the questionnaires included an introduction providing information about the research and its objectives. The exploratory and confirmatory factor analyses were applied to assess the factor structure. In addition to the factor analysis method, concurrent validity was assessed by calculating the correlation between the DPQ scores and the MCMI-III dependent personality scale scores. The reliability was evaluated using internal consistency reliability. To examine concurrent validity and reliability, data from the entire sample of 206 students were analyzed. SPSS-22 and AMOS-22 were utilized for exploratory and confirmatory factor analyses, respectively.

This study followed ethical guidelines for psychologists and counselors (Psychology and Counseling Organization of Iran). All cases participated voluntarily and signed the informed consent. The questionnaires were completed anonymously, ensuring participant confidentiality.

Research instruments

A) Dependent Personality Questionnaire (DPQ): The DPQ is an eight-item self-report questionnaire developed by Tyrer et al. (13) for assessing dependent personality disorder. Each item is scored on a four-point scale ranging from 0 (no, not at all) to 3 (yes, definitely), with four items requiring reverse scoring.

In a study comparing two clinical samples, one consisting of individuals with dependent personality disorder and the other including individuals with other psychiatric diagnoses (including other personality disorders) but without dependent personality traits (matched for age and sex), the DPQ exhibited a sensitivity, specificity, and predicted positive accuracy and predicted negative accuracy of 87.5%. These findings indicate that the DPQ effectively discriminates individuals with dependent personality disorder from other psychiatric patients (14). Moreover, the scores of this questionnaire demonstrated good stability in repeated evaluations over 12

months. Given its concise nature as an 8-item instrument that can be quickly administered and scored, the DPQ holds significant value for the efficient and cost-effective assessment of dependent personality disorder (14,28).

B) Millon Clinical Multiaxial Inventory-III (MCMI-III)-Dependent Personality Scale: The MCMI was initially introduced by Theodore Millon in 1977 and underwent revisions in 1987 (MCMI-II) and 1994 (MCMI-III). This inventory serves as a self-assessment measure for evaluating personality and emotional adjustment. The MCMI-III comprises 175 true-false items and consists of 28 scales, including 14 scales assessing personality disorders (Schizoid, Avoidant, Depressive, Dependent, Histrionic, Narcissistic, Antisocial, Sadistic, Compulsive, Passive-Aggressive, Masochistic, Schizotypal, Borderline, and Paranoid), and ten scales assessing clinical syndromes of axis I. The remaining four scales serve as validity scales. The previous studies have confirmed the reliability and validity of this inventory. In Iran, the psychometric adequacy of the MCMI-III has been examined and confirmed by Sharifi (29). The Dependent Personality Scale, consisting of 16 items, was employed in the present study. The scale demonstrated a Cronbach's alpha and test-retest reliability of 0.92 in the study conducted by Sharifi (29). Additionally, the negative and positive predictive values were found to be 0.63 and 0.97, respectively.

Results

The total sample consisted of 206 participants, including 118 (57.3%) females and 88 (42.7%) males. The mean age of the participants was 21.51 ± 1.96 years. Among the participants, 185 (89.8%) were undergraduate students, and 21 (10.2%) were graduate students. There were no significant differences between the two groups of 103 cases in terms of age ($t = -0.16, P = 0.80$), gender ($\chi^2 = 1.27, P = 0.26$), and mean DPQ scores ($t = 0.94, P = 0.30$).

The exploratory factor analysis using the principal component analysis method with Oblimin rotation was conducted to examine the factor structure and construct validity. The statistical indicators were suitable for factor analysis (KMO = 0.74, χ^2 Bartlett = 133.127, $P < 0.001$, $df = 28$). The results of exploratory factor analysis showed a two-factor solution for the DPQ (Table 1).

Table 1. The principal component analysis of the Persian version of DPQ using Oblimin rotation

Items	Factor 1	Factor 2
6. I am a self-confident person	0.83	
5. I am good at making decisions	0.81	
8. When things go wrong in my life it takes me a long time to get back to normal	0.56	
3. I tend to give in to other people	0.54	
1. I am an independent person	0.43	
7. I rely a lot on my family and friends		0.89
4. I do not like being on my own		0.57
2. I prefer coping with problems on my own		0.53
eigenvalue	2.75	1.16
Total variance explained	34.34	14.52

*Reverse-scored items

Table 1 represents the results of factor loadings for all the DPQ items, which were found to be acceptable (≥ 0.32) (30). The correlation between the two factors obtained was 0.33, indicating the appropriateness of the Oblimin rotation. Factor 1, named "lack of self-reliance," consists of items 1, 3, 5, 6, and 8, while Factor 2, named "fear of loneliness," comprises items 2, 4, and 7. The two derived factors explained 48.86% of the total variance.

To confirm the validity of the structure obtained from exploratory factor analysis, confirmatory factor analysis was performed on a separate sample. Before conducting confirmatory factor analysis, assumptions such as univariate and multivariate normality,

absence of outliers, and no missing data were checked and confirmed. Figure 1 presents the diagram of the confirmatory factor analysis for the two-factor structure of the DPQ Persian version, and Table 2 provides the goodness of fit indices for this structure.

In this study, relative Chi-square (χ^2/df ratio), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), and Adjusted Goodness of Fit Index (AGFI) were used to assess the fitness of the DPQ structure. The observed values of these indices indicate that the two-factor model obtained from exploratory factor analysis has a good fit.

Table 2. The goodness of fit indices of DPQ structure

	Observed values	Acceptable values
Relative χ^2	1.18	5> (31) 2> (30)
RMSEA	0.043	0.06> (32)
CFI	0.96	0.95≤ (32)
GFI	0.95	0.90≤ (33)
AGFI	0.91	0.90≤ (33)

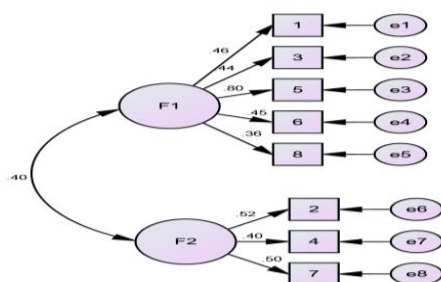


Figure1. Confirmatory factor analysis diagram of the Persian version of DPQ

The correlation between the Persian version of the DPQ and the MCMI-III dependent personality scale was calculated to assess concurrent validity.

According to the results shown in Table 3, the total score of the DPQ and its subscales demonstrated a significant positive correlation with the dependent personality scale of the MCMI-III.

Table 3. DPQ reliability and its correlation with the dependent personality scale of MCMI-III

	Cronbach's alpha	Mean inter-items correlation	Pearson correlations with the dependent personality scale of MCMI-III
DPQ total score	0.67	0.20	0.60**
Factor 1 (lack of self-reliance)	0.68	0.29	0.58**
Factor 2 (fear of loneliness)	0.46	0.22	0.35**

** $P \leq 0.01$

Table 3 indicates that Cronbach's alphas for the total score and subscale scores of the DPQ are below the acceptable threshold ($\alpha = 0.70$). This may be attributed to the small number of items in the questionnaire, particularly the subscales. To address this, Cox and Ferguson's (34) recommendation was followed to assess reliability in such cases. The mean inter-item correlation, which is independent of the questionnaire length, was calculated. The results demonstrated that the mean inter-item correlation for the questionnaire and both subscales fall within the acceptable range of 0.20 to 0.40, indicating good reliability and internal consistency (34).

Discussion

This study assessed the psychometric properties of the DPQ Persian version, a brief self-report measure for the specific assessment of dependent personality disorder. The DPQ provides a simple and efficient screening tool for this disorder. The exploratory factor analysis revealed two subscales in the Persian version of the DPQ: "lack of self-reliance" and "fear of loneliness." Confirmatory factor analysis further confirmed the obtained factor structure. The correlation between DPQ scores and MCMI-III-dependent personality scale scores supported the concurrent validity of the DPQ. Additionally, the questionnaire demonstrated satisfactory internal consistency reliability.

The literature recommends a combination of self-report measures and subsequent clinical assessment by experts for assessing DPD (9). While instruments requiring expert evaluation offer greater reliability and validity, they demand more time for each individual, making them impractical or unfeasible in certain situations. Furthermore, individuals with DPD often possess higher levels of self-awareness and insight than those with other personality disorders, resulting in more accurate self-reporting (3,9). Therefore, the availability of a

self-report assessment tool that enables quick and specific evaluation of DPD for researchers and clinical professionals proves highly advantageous.

The DPQ was developed as a short screening measure and self-assessment questionnaire to identify patients with dependent personality disorder, based on the definition provided in ICD-10 and the dependent personality disorder section of the Personality Assessment Program (PAS) (28). Tyrer et al. (14) conducted a study on the original version of the DPQ to investigate its ability to differentiate between individuals diagnosed with dependent personality disorder and those with other psychiatric diagnoses, including other personality disorders but lacking dependent personality characteristics. The findings indicated that the questionnaire effectively distinguishes patients with personality disorders from other psychiatric patients. The study examined the sensitivity, specificity, predicted positive accuracy, and predicted negative accuracy of questionnaire, revealing good performance with the accuracy rate of 87.5%. However, this study primarily focused on the practical value in clinical settings and did not explore its factor structure (32). A study on the French version reported a Youden index of 74 for a cutoff score of 13, along with sensitivity, specificity, and positive predictive values of 84%, 90%, and 91.3%, respectively (36).

Studies related to dependent personality disorder research consistently demonstrate its strong association with significant dysfunction, underscoring the importance of accurate diagnosis for informed clinical decisions (3). The disorder exhibits high comorbidity with other conditions, such as depression, anxiety disorders, obsessive-compulsive disorder, alcohol and substance addiction (7-9), as well as correlation with mental health problems like alexithymia (12), self-harm (suicidal ideation and behavior, self-harm/self-injury) (3,9),

spousal abuse (16), domestic violence in men (3), victimization by a spouse in women (3), child abuse (20), and engaging in high-risk sexual behavior (3,9,12). These factors emphasize the criticality of accurate diagnosis. In clinical settings, patients with dependent personality disorder are particularly vulnerable to dependence on benzodiazepines and other treatments, including psychotherapy (14,37). Thus, having a measure that facilitates quick and accurate screening of DPD proves crucial for identifying this disorder in clinical settings and provides a foundation for research and investigation. This study has some limitations. First, the sample consisted of students, warranting caution when generalizing the results to other populations. Additionally, due to the non-clinical nature of the sample, it was not possible to calculate the sensitivity,

specificity, and diagnostic accuracy of the questionnaire. Future research should therefore examine the questionnaire in both the general population and clinical samples to address these limitations.

Conclusion

In conclusion, the Persian version of the DPQ exhibited good internal consistency reliability, construct validity, and concurrent validity. This version comprises two subscales: "lack of self-reliance" and "fear of loneliness."

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References

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 3rd ed. Washington, DC.: American Psychiatric Association; 1980.
2. Chen Y, Nettles ME, Chen SW. Rethinking dependent personality disorder: Comparing different human relatedness in cultural contexts. *J Nerv Ment Dis* 2009; 197(11): 793-800.
3. Bornstein RF. Illuminating a neglected clinical issue: Societal costs of interpersonal dependency and dependent personality disorder. *J Clin Psychol* 2012; 68(7): 766-81.
4. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC.: American Psychiatric Association; 2022.
5. Bornstein RF, Natoli AP. Dependent personalities. In: Feinstein RE. (editor). *Personality disorders*. New York: Oxford University; 2022: 565-87.
6. Turner BJ, Prud'homme J, Legg N. Environmental and sociocultural influences on personality disorders. In: Lejuez CW, Gratz KL. (editors). *The Cambridge handbook of personality disorders*. Cambridge: Cambridge University; 2020: 50-64.
7. Ng HM. Comorbidity of dependent personality disorder and anxiety disorders: A meta-analytic review. *Clin Psychol (New York)* 2005; 12(4): 395-406.
8. Mroczkowski MM, Goes FS, Riddle MA, Grados MA, Bienvenu OJ, Greenberg BD, et al. Dependent personality, separation anxiety disorder and other anxiety disorders in OCD. *Personal Mental Health* 2016; 10(1): 22-28.
9. Disney KL. Dependent personality disorder: A critical review. *Clin Psychol Rev* 2013; 33(8): 1184-96.
10. Heintz HL, Freedberg AL, Harper DG. Dependent Personality in Depressed Older Adults: A Case Report and Systematic Review. *J Geriatr Psychiatry Neurol*. 2021; 34(5):445-453. doi:10.1177/0891988720933361
11. Heintz HL, Freedberg AL, Harper DG. Dependent personality in depressed older adults: A case report and systematic review. *J Geriatr Psychiatry Neurol* 2021; 34(5): 445-53.
12. Sachse R, Kramer U. Clarification-oriented psychotherapy of dependent personality disorder. *J Contemp Psychother* 2018; 49(1): 15-25.
13. Roncero C, de Miguel A, Fumero A, Abad AC, Martín R, Bethencourt JM, et al. Anxiety and depression in drug-dependent patients with cluster C personality disorders. *Front Psychiatry* 2018; 9: 19.
14. Tyrer P, Morgan J, Cicchetti D. The Dependent Personality Questionnaire (DPQ): A screening instrument for dependent personality. *Int J Soc Psychiatry* 2004; 50(1): 10-17.
15. Krolewicz C. *Understanding personality disorders (Diseases and Disorders)*. New York: Lucent; 2020: 29-30.
16. Loas G, Cormier J, Perez-Diaz F. Dependent personality disorder and physical abuse. *Psychiatry Res* 2011; 185(1-2): 167-70.
17. Furnham A. A Big Five facet analysis of sub-clinical dependent personality disorder (Dutifulness). *Psychiatry Res* 2018; 270: 622-26.
18. McClintock AS, McCarrick SM. An examination of dependent personality disorder in the alternative DSM-5 model for personality disorders. *J Psychopathol Behav Assess* 2017; 39(4): 635-41.

19. De Francisco Carvalho L, Pianowski G, Gonçalves AP. Dimensional clinical personality inventory-2: Investigating key factors on the assessment of dependent personality disorder. *Psychol Health Med* 2019; 24(6): 732-8.
20. Bornstein RF. Interpersonal dependency in child abuse perpetrators and victims: A meta-analytic review. *J Psychopathol Behav Assess* 2005; 27: 67-76.
21. Faith C. Dependent personality disorder: A review of etiology and treatment. *Graduate journal of counseling psychology* 2009; 1(2): 45-57.
22. Ramsay G, Jolayemi A. Personality disorders revisited: A newly proposed mental illness. *Cureus* 2020; 12(8): e9634.
23. Maccaferri GE, Dunker-Scheuner D, De Roten Y, Despland JN, Sachse R, Kramer U. Psychotherapy of dependent personality disorder: The relationship of patient-therapist interactions to outcome. *Psychiatry* 2020; 83(2): 179-94.
24. Rashn Sh, Makvand-Hosseini Sh, Rezaei AM, Tabatabaee M. [The effect of long-term dynamic psychotherapy on the personality structure of patients with dependent personality disorder]. *Journal of clinical psychology* 2018; 9(4): 1-12. (Persian)
25. Brown TA. Confirmatory factor analysis for applied research. New York: Guilford; 2006.
26. Polit DF, Beck CT. Nursing research: Principles and methods. Philadelphia: Lippincott Williams and Wilkins; 2004.
27. Bentler PM, Chou CH. Practical issues in structural modeling. *Sociol Methods Res* 1987; 16: 78-117.
28. Tyrer H, Tyrer P, Barrett B. Influence of dependent personality status on the outcome and health service costs of health anxiety. *Int J Soc Psychiatry* 2013; 59(3): 274-80.
29. Sharifi AA. [MCMI-III Manual]. Tehran: Ravansanji; 2017. (Persian)
30. Tabachnick BG, Fidell LS. Using multivariate statistics. 6th ed. New Jersey: Pearson education Inc; 2013.
31. Wheaton B, Muthen B, Alwin DF, Summers G. Assessing reliability and stability in panel models. *Sociol Methodol* 1977; 8(1): 84-136.
32. Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struct Equ Modeling* 1999; 6(1): 1-55.
33. Byrne BM. Structural equation modeling with AMOS: Basic concepts, applications and programming. 2nd ed. New York: Taylor and Francis; 2010.
34. Cox T, Ferguson E. Measurement of the objective work environment. *Work Stress* 1994; 8: 98-109.
35. Tyrer P, Alexander J, Ferguson B. Personality assessment schedule. In: Tyrer P. (editor). *Personality disorders: Diagnosis, management and course*. London: Butterworth/Wright; 1988.
36. Loas G, Monestes JL, Wallier J, Berthoz S, Corcos M. The Dependent Personality Questionnaire (DPQ): French translation and validation study in a population of 138 hospitalized psychiatric patients. *L'Encephale* 2010; 36(2): 111-5.
37. Leboeuf I, Antoine P. Exploring the processes of connection and disconnection in imagery work in a patient with depression and dependent personality disorder. *J Clin Psychol* 2023; 79(7): 1641-55.