



## Validation of the Perseverative Thinking Questionnaire (PTQ) in a sample of Afghan students

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### ABSTRACT

**Background:** Perseverative negative thinking is a significant cognitive process strongly associated with psychological distress and mental disorders. In light of Afghanistan's ongoing social and economic challenges, a reliable self-report measure is essential for accurate clinical assessment among Afghan populations.

**Objective:** The present study aimed to translate and validate the Dari/Farsi version of the Perseverative Thinking Questionnaire (PTQ) in a sample of Afghan students.

**Method:** The statistical population of this study consisted of 254 undergraduate students at Herat University, Afghanistan, who were enrolled in the 2024–25 academic year. In this study, students were selected using convenience sampling and completed an online survey (Qualtrics). To calculate test-retest reliability, 40 individuals were also selected and completed the PTQ within two weeks. In this study, the PTQ and the Depression Anxiety Stress Scale- 21 Items (DASS-21) were administered.

**Results:** The confirmatory factor analysis (CFA) results showed that the three-factor model and the second-order three-factor model of PTQ had the same and a good fit ( $\chi^2/df = 2.35$ , CFI = .94, RMSEA = .07). Furthermore, PTQ showed a moderate positive association with depression, anxiety, and stress ( $r(254) = .66, 0.56, 0.60, p < .05$ ), a strong test-retest reliability, ( $r(40) = .73, p < .05$ ), and excellent internal consistency ( $\alpha = .92$ ).

**Conclusion:** Given its strong psychometric properties, the Dari/Farsi version of the PTQ can be considered a reliable tool for both research purposes and clinical assessment. Its use is highly recommended for psychologists and mental health practitioners in diagnostic contexts as well as in investigative and applied studies.

### 1. Introduction

Over recent decades, Afghanistan has experienced persistent conflict, insecurity, economic hardship, and social disruption. These adverse conditions have profoundly influenced the psychological well-being of its population, especially among women, adolescents, and young adults (Afsharzada et al., 2025; Naghavi et al., 2022). In such a challenging socio-political context, Repetitive Negative Thinking (RNT) emerges as a particularly relevant cognitive process warranting rigorous scientific investigation. RNT, typically expressed through prolonged rumination and chronic worry, is considered a key transdiagnostic mechanism that contributes to the onset, persistence, and intensification

of psychological difficulties, including anxiety, depressive symptoms, and stress-related disorders (Ehring & Watkins, 2008). Within contemporary transdiagnostic models of emotional disorders, repetitive negative thinking is understood as a core maladaptive emotion regulation process (Moulds & McEvoy, 2025). According to the unified protocol framework, heightened negative affect, combined with maladaptive cognitive control processes, leads individuals to engage in persistent mental elaboration about perceived threats (Barlow et al., 2017, 2020). In trauma-related conditions, this process manifests as continuous mental simulation of past and future danger, thereby maintaining hyperarousal and preventing emotional processing (Watkins, 2018). Consequently, RNT is not merely a symptom but a maintaining

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mechanism linking anxiety, depression, and post-traumatic reactions. Contemporary studies have further confirmed this transdiagnostic perspective by demonstrating that repetitive negative thinking operates as a stable vulnerability factor across different emotional disorders and cultural contexts (Mattioni et al., 2025; Rosenkranz et al., 2020).

Earlier cognitive models already suggested that repetitive negative thinking plays a central role in the emergence and persistence of anxiety and depression (Raes, 2012; Spasojević & Alloy, 2001), a proposition that has been further supported by contemporary transdiagnostic research. This cognitive process manifests through various forms such as worry, rumination, threat monitoring, and self-focused attention. Examples of this process include worry, rumination, threat monitoring, and self-focused attention. These components form the core of depressive disorders (Watkins, 2011) and anxiety-related disorders such as generalized anxiety disorder (McEvoy & Mahoney, 2013), obsessive-compulsive disorder (Abramowitz et al., 2003; Amir et al., 1997), post-traumatic stress disorder (Clohessy & Ehlers, 1999), social anxiety disorder (Joormann et al., 2006), health anxiety (Fink et al., 2004), phobias (Eccleston et al., 2001), and unspecified anxiety and depressive disorders (Harvey et al., 2004). Cultural beliefs, religious coping styles, and ongoing exposure to insecurity may shape the content and persistence of repetitive negative thinking in Afghan populations. Therefore, investigating this phenomenon within the socio-cultural context of Afghanistan is not only of scientific importance but also of clinical necessity. Empirical evidence indicates that perseverative thinking maintains psychological distress by prolonging emotional activation and interfering with adaptive emotional regulation across both clinical and non-clinical populations (Lo et al., 2023; Lopez et al., 2025).

In this regard, university students represent one of the social groups particularly vulnerable to experiencing high levels of stress and psychological disorders, due to various factors such as academic, economic, and social pressures (Naghavi et al., 2022). Reliable measurement of repetitive negative thinking within this group is therefore essential for the early detection of psychological vulnerabilities and the development of targeted preventive and therapeutic strategies. In the context of Afghanistan, where access to mental health services and specialized therapeutic resources remains limited, implementing preliminary screening with well-validated psychological instruments represents a practical and cost-effective means of supporting student mental health (Naghavi et al., 2022; Saadat et al., 2025).

In crisis-affected countries such as Afghanistan, socially traumatic experiences, including poverty, violence, deprivation, restrictions, discrimination, and political instability, are directly linked to the mental health of citizens. A growing body of research indicates that repetitive negative thinking not only emerges as a response to such traumatic social conditions but also functions as a mediating mechanism that contributes to the onset and persistence of various mental health disorders (McEvoy & Mahoney, 2013; McEvoy et al., 2018). Today, repetitive negative thinking is recognized as a key diagnostic process in the onset, persistence, and recurrence of many psychological disorders (Ehring & Watkins, 2008; Watkins, 2011). The development of psychological treatments targeting worry and rumination, along with evidence supporting their effectiveness, has highlighted the central role of repetitive negative thinking within contemporary cognitive-behavioral approaches (Watkins, 2011, 2009). Given the crucial role of this process in the pathology and treatment of psychological disorders, its accurate assessment and evaluation are vital in countries like Afghanistan, which are exposed to structural and social crises.

In this context, the Perseverative Thinking Questionnaire (PTQ) has been developed and widely used as one of the internationally recognized tools for assessing repetitive negative thinking as a transdiagnostic process and is suitable for students, older adults, perinatal populations (pregnant and postpartum women), and other types of people. Originally introduced by Ehring et al. (2011). The PTQ is based on the following working definition: "Repetitive negative thinking ... is a style

of thinking about one's problems (current, past, or future) or negative experiences (past or anticipated) that shows three key characteristics: (a) The thinking is repetitive, (b) it is at least partly intrusive, (c) and it is difficult to disengage from" (Ehring et al., 2011). The questionnaire has since been translated and validated in several languages, including English, Polish, Danish, Dutch, French, Turkish, and Chinese (Altan-Atalay & Saritas-Atalar, 2018; Devynck et al., 2017; Ehring et al., 2012, 2011; Kami et al., 2019; Kornacka et al., 2016; Moeller et al., 2023; Yao et al., 2023). Recent research further suggests that the PTQ assesses a general transdiagnostic cognitive process across cultures rather than merely language-specific symptom patterns (Mattioni et al., 2023).

Although initial evidence supports the utility of the Perseverative Thinking Questionnaire, a version specifically adapted to the cultural and social realities of Afghanistan is still lacking. This gap limits its direct application in local research settings. While existing findings are encouraging, additional studies are required to verify and extend these results, especially within culturally varied populations. Cross-cultural validation is critical for confirming the reliability and validity of psychological instruments and ensuring their suitability for non-English-speaking groups. Moreover, continued investigation into the construct validity of the measure is necessary to further solidify its psychometric soundness and enhance its applicability in diverse contexts. For this reason, the present study was conducted to translate and validate the Dari/Farsi version of the Perseverative Thinking Questionnaire (PTQ) among Afghan university students.

## 2. Method

### 2.1. Methods and participants

It employed a descriptive and validation-based approach. The participants were recruited among undergraduate students at Herat University in Afghanistan, enrolled in the academic year 2024–2025. Due to current restrictions on female in-person university attendance in Afghanistan, some courses continue through remote and informal online educational arrangements. Female students who had access to these academic networks were therefore able to voluntarily participate in the study online, whereas male participants were primarily recruited from students attending in-person classes at the university. Consequently, the sample reflects students with ongoing access to higher-education communication channels rather than exclusively campus-attending individuals. Using G\*Power calculations ( $1 - \beta = 0.90$ ,  $\alpha = 0.05$ ), the required sample size for a moderate correlation was determined to be 220 students. To account for potential dropouts, the final sample size was increased to 270. A convenience sample of 270 participants answered an online survey via Qualtrics survey software (Qualtrics, Provo, UT). Convenience sampling was selected due to restricted institutional access and security-related limitations that prevented probabilistic recruitment procedures. University students represented one of the few accessible populations for systematic psychological research; therefore, the sampling strategy reflects feasibility constraints rather than theoretical preference. Inclusion criteria were age between 18 and 45 years, no history of psychiatric disorders, and no history of divorce or parental death. After data screening, questionnaires were excluded if they were incomplete (more than 30 % missing responses) or showed invalid or inconsistent response patterns. Following this procedure, 254 valid questionnaires were retained for the final analysis. Thus, the final sample consisted of 254 participants aged 18–45 years (mean age = 21.67, SD = 3.23) who were included in the study. Of these, 35.4 % were female ( $n = 90$ ) and 64.6 % were male ( $n = 164$ ). Regarding marital status, 63.8 % were single ( $n = 162$ ) and 36.2 % were married ( $n = 92$ ). In terms of employment, 53.1 % were unemployed ( $n = 135$ ) and 46.9 % were employed ( $n = 119$ ). Table 1 reports on the demographic characteristics of the sample.

Additionally, participants were asked to provide contact information if they were willing to answer the questionnaire a second time. Forty

**Table 1**  
Demographic characteristics of the sample (N = 254).

Variable	M (SD) / n (%)
Age (years)	21.67 (3.23)
<b>Gender</b>	
Female	90 (35.4 %)
Male	164 (64.6 %)
<b>Marital Status</b>	
Single	162 (63.8 %)
Married	92 (36.2 %)
<b>Employment Status</b>	
Employed	119 (46.9 %)
Unemployed	135 (53.1 %)

Note. M = mean; SD = standard deviation. The percentages are based on the total sample size.

participants were randomly selected to complete the PTQ again two weeks after the initial administration to assess retest reliability. All participants were fully informed about the study and provided digital informed consent. Moreover, they were guaranteed that their participation would not involve any physical or psychological risk.

2.2. Procedure and material

Researchers employed a rigorous forward-backward translation procedure to adapt the PTQ into the Dari/Farsi language. Initially, two members of the research team independently translated the questionnaire from English into Dari/Farsi, ensuring that cultural nuances and linguistic accuracy were carefully considered. The preliminary Dari/Farsi version was then created by comparing, reconciling, and refining the two translations. Subsequently, this version was back-translated into English by two professional translators who were blind to the original PTQ to prevent bias and ensure conceptual consistency. The research team reviewed the original and back-translated versions in detail, identifying discrepancies and resolving them through multiple rounds of discussion. Finally, an expert panel evaluated the items for clarity, cultural appropriateness, and semantic equivalence, leading to full agreement on the finalized Dari/Farsi version of the questionnaire.

2.3. The Perseverative Thinking Questionnaire (PTQ)

The Perseverative Thinking Questionnaire (PTQ) is a self-report questionnaire developed by Ehring et al. (2011) to measure perseverative negative thinking across mental disorders (Ehring et al., 2011). The questionnaire is composed of 15 items evaluating (1) the core characteristics of RNT, that is, the repetitiveness of RNT (items 1, 6, and 11), the intrusiveness of RNT (items 2, 7, and 12), and the difficulty of disengaging (items 3, 8, and 13), (2) the perceived unproductiveness of RNT (items 4, 9, and 14), and (3) RNT capturing mental resources (items 5, 10, and 15). The participants respond to each item using a 5-point Likert scale (0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Often, 4 = Almost always). So, the total score of the PTQ ranges from 0 to 60, with a higher score reflecting a higher level of repetitive negative thinking. In a study conducted among a sample of 256 students, Azevedo et al. (2017) reported a Cronbach's alpha coefficient for internal consistency is 0.95 for the total questionnaire score.

2.4. Depression anxiety stress Scale- 21 items (DASS-21)

The DASS-21, developed by Lovibond and Lovibond (1995), is a self-report instrument designed to measure the emotional states of depression, anxiety, and stress. The questionnaire comprises 21 items, divided equally across three subscales, with each subscale containing seven items. Responses are recorded on a four-point Likert scale ranging from 0 to 3, where 0 indicates "Did not apply to me at all", 1 "Never", 2 "Sometimes", and 3 "Almost always". Participants are asked to select the

response that best reflects their experiences over the past week. The general score for each subscale ranges from 0 to 21, with higher scores demonstrating more serious indications. The DASS-21 is applicable across a wide age range, from adolescents aged 14 to older adults, and its psychometric properties have been supported by numerous studies (Lovibond & Lovibond, 1995). Supporting its applicability within the Afghan context, a validation study involving 1318 Afghan participants reported a Cronbach's alpha of 0.94 (Neyazi et al., 2025), reflecting excellent internal consistency.

2.5. Statistical analysis

Data were analyzed using SPSS-27 and AMOS-24. Internal consistency was evaluated through Cronbach's alpha coefficient, while test-retest reliability was assessed using the Pearson correlation coefficient. To examine the construct validity of the PTQ, the single-factor, three-factor, and second-order factor structure was tested using confirmatory factor analysis (CFA). Additionally, criterion validity was determined by calculating Pearson's correlation coefficients between the PTQ and the DASS-21.

3. Results

In this study, a total of 254 college students completed the online survey. Due to the heterogeneity of gender distribution, the findings showed that there was no significant difference between gender and PTQ scores ( $t = 1.93, P = 0.06$ ); accordingly, controlling for gender in factor analysis is not required. Table 2 displays the items and corresponding descriptive statistics for the PTQ. The mean scores for all items were approximately at the weak to moderate end of the Likert scale, indicating weak to moderate levels of reported perseverative thinking. Additionally, the items demonstrated strong item-total correlations, ranging from 0.40 to 0.81, which exceeds the acceptable threshold of 0.30 and suggests that each item contributed meaningfully to the overall construct measured by the PTQ.

3.1. Validity

Confirmatory factor analysis (CFA) was used to examine the construct validity. In the following, single-factor, three-factor, and second-order factor analyses are presented in Fig. 1.

The results of the measurement model indicate that all PTQ questions have an appropriate factor loading between 0.41 and 0.86 (>0.40); Table 3 presents the fit indices of the measurement model in maximum

**Table 2**  
Descriptive Statistics for PTQ.

Items	Mean	SD	Skewness	Kurtosis	Item-Total Correlation
1	1.43	1.04	.15	-0.81	.74**
2	1.18	1.21	.75	-0.44	.72**
3	1.39	1.15	.32	-0.78	.77**
4	1.45	1.23	.42	-0.83	.73**
5	1.16	1.19	.82	-0.17	.80**
6	1.10	1.05	.62	-0.57	.40**
7	1.21	1.16	.70	-0.39	.63**
8	1.17	1.08	.56	-0.58	.72**
9	1.44	1.16	.47	-0.65	.51**
10	1.55	1.17	.18	-1.06	.62**
11	1.59	1.14	.27	-0.74	.61**
12	1.25	1.17	.56	-0.62	.77**
13	1.25	1.16	.49	-0.70	.81**
14	1.24	1.15	.61	-0.50	.73**
15	1.24	1.09	.67	-0.15	.61**
PTQ	19.65	11.78	.18	-0.60	-

Next, the construct validity was examined using confirmatory factor analysis. \*\* Correlation is significant at the 0.01 level (2-tailed).

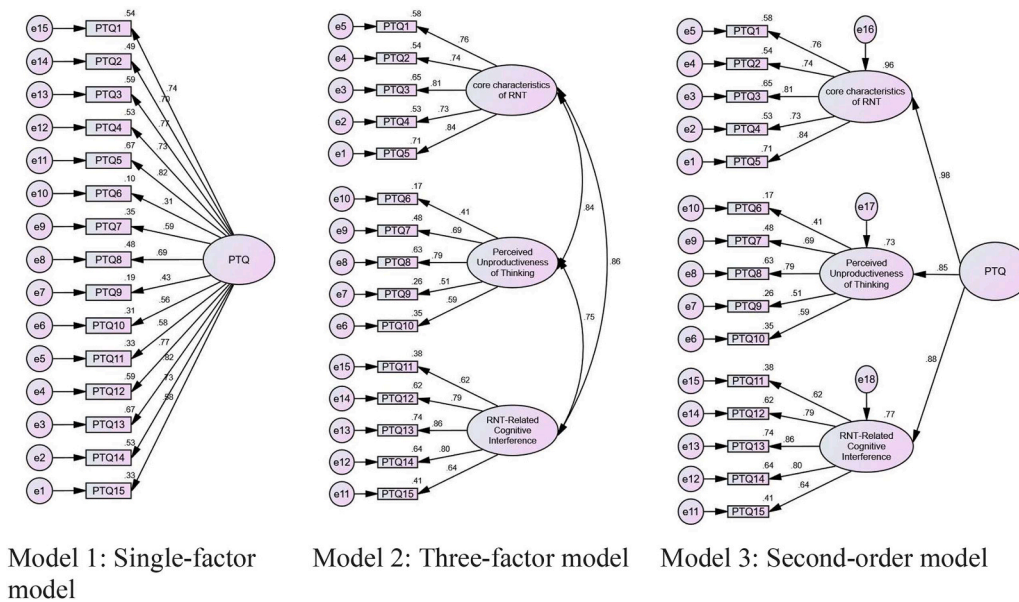


Fig. 1. Confirmatory factor analysis for PTQ.

Table 3  
Fit indices for the three models.

Index	Single-factor model	Three-factor model	Second-order model	Decision criterion
( $\chi^2$ )	326.11	204.44	204.44	$P > 0.05$
(Df)	90	87	87	-
P (Value)	.01	.01	.01	$P > 0.05$
( $\chi^2/df$ )	3.62	2.35	2.35	CMIN/DF < 3
Comparative Fit Index (CFI)	.88	.94	.94	CFI > 0.90
Goodness of Fit Index (GFI)	.83	.90	.90	GFI > 0.90
Incremental Fit Index (IFI)	.88	.94	.94	IFI > 0.90
root mean square error of approximation (RMSEA)	.10	.07	.07	RMSEA < 0.08

likelihood mode.

The results of confirmatory factor analysis showed that the three-factor model and the second-order three-factor model have the same and optimal fit ( $\chi^2/df=2.35$ , CFI=0.94, RMSEA=0.07); but the single-factor model does not have optimal fit ( $\chi^2/df=3.62$ , CFI=0.88, RMSEA=0.10). Table 4 also provides evidence for the instrument's criterion validity. The three-factor models and the second-order three-factor model only have a good fit, the single-factor model does not have a good fit. It can also be stated that of the two good models, the three-factor model is the preferred and recommended one because the second-order model is based on three factors.

The results of criterion validity showed that PTQ had a positive and significant relationship with depression ( $r = 0.66$ ), anxiety ( $r = 0.56$ ), and stress ( $r = 0.60$ ) ( $P < 0.05$ ). In fact, it can be said that PTQ has desirable criterion validity in a sample of Afghan students.

Table 4  
Criterion validity results.

Variables	Depression	Anxiety	Stress
PTQ	.66**	.56**	.60**

\*\* Correlation is significant at the 0.01 level (2-tailed).

### 3.2. Reliability

Internal consistency reliability was calculated by calculating Cronbach's alpha coefficient for PTQ ( $\alpha=0.92$ ). Also, test-retest reliability was calculated with an interval of two weeks for the PTQ ( $r = 0.73$ ).

### 4. Discussion

The current study aimed to translate and validate the Perseverative Thinking Questionnaire (PTQ) in a sample of Afghan students. The translation process adhered to standard forward and backward translation protocols to ensure conceptual and linguistic equivalence. Following the translation, a comprehensive psychometric evaluation was conducted to assess the reliability and validity of the Dari/Farsi version of the PTQ. Confirmatory factor analyses were employed to examine the underlying factor structure of the scale. In this study, three models were examined: (1) single-factor, (2) three-factor model (3) second-order three-factor model. The results showed that all items loaded significantly onto their respective factors, mirroring the structure proposed in the original scale developed by Ehrling et al. (2011). The confirmatory factor analysis supported the three-factor model and the second-order three-factor model, demonstrating a good fit for the data, but the single-factor model did not fit well. Given that the three-factor model is the basis of the second-order model; the preferred and basic model is the three-factor model; this model is also supported based on the theoretical framework provided by its developers. This apparent equivalence does not indicate that the two models are conceptually identical but rather reflects the hierarchical nature of the construct. In the original PTQ framework, the three components represent distinguishable cognitive manifestations of perseverative thinking, whereas the higher-order factor represents the common regulatory process underlying them (Ehrling et al., 2011). Such a structure is consistent with transdiagnostic models of emotional disorders, which propose that repetitive negative thinking functions as a shared vulnerability mechanism expressed through different cognitive experiences (Ehrling & Watkins, 2008; McEvoy et al., 2013). Therefore, the first-order factors provide explanatory value at the psychological level, while the higher-order factor provides measurement efficiency at the assessment level. On the other hand, given that the three-factor and second-order models have the same fit, this also supports the applicability of the

PTQ total score in future studies and can be a valid evaluation indicator.

Although overall factor loadings were acceptable, some items showed comparatively lower loadings (around 0.40). These items were primarily related to perceived cognitive interference and mental capacity during repetitive thinking. One possible explanation may lie in cultural differences in how cognitive distress is conceptualized. In the Afghan context, psychological suffering is often expressed through emotional and somatic language rather than through descriptions of cognitive inefficiency. Therefore, individuals may more readily report emotional burden than difficulties in concentration or mental control. This pattern suggests that while the construct of repetitive negative thinking is cross-culturally robust, certain cognitive descriptors may be interpreted differently across cultural contexts. The PTQ also demonstrated strong internal consistency and robust test-retest reliability, indicating that the scale yields reliable scores over time. Consistent with previous research (Ehring et al., 2011; Kami et al., 2019; Mattioni et al., 2023; Yao et al., 2023), the total scores of the PTQ were positively correlated with levels of depression, anxiety, and stress, supporting the scales' criterion validity. These findings are also in line with contemporary models suggesting that repetitive negative thinking represents a broad cognitive vulnerability mechanism rather than a disorder-specific construct (Coskun Benlidayi et al., 2025).

The reliability analysis demonstrated that PTQ has good internal consistency and retest reliability. Cronbach's alpha coefficient for the scale was 0.92, and the two-week retest correlation coefficient was 0.73. These findings are consistent with the results of the original scale development study (Ehring et al., 2011). Thus, the Dari/Farsi translation of the PTQ demonstrates sufficient validity and reliability, with the results highlighting a robust factor structure. However, because no structured clinical interviews were conducted, the findings should be interpreted as reflecting cognitive vulnerability rather than confirmed psychiatric disorders. The instrument, therefore, functions as a screening indicator rather than a diagnostic measure in the present study. The findings are consistent with previous validation studies (Altan-Atalay & Saritas-Atalar, 2018; Devynck et al., 2017; Ehring et al., 2012, 2011; Kami et al., 2019; Moeller et al., 2023; Yao et al., 2023). According to the findings of this study, the questionnaire demonstrates appropriate psychometric properties within Afghan society. Beyond research applications, its brevity and transdiagnostic nature make it particularly suitable for routine psychological screening in counseling and educational settings. Assessing perseverative negative thinking may help practitioners identify cognitive vulnerability before full clinical symptoms emerge and guide preventive intervention strategies. The availability of a validated Dari/Farsi version of the PTQ therefore has important implications for mental health practice in Afghanistan. Given the limited availability of specialized psychological services, brief transdiagnostic screening instruments are particularly valuable in university counseling centers and community psychosocial programs. The scale may be used as an initial screening tool to identify individuals at risk for emotional disorders before symptoms reach clinical severity, thereby supporting early preventive efforts. In low-resource contexts, psychological care is often delivered by non-specialist providers and relies on brief structured interventions. Because repetitive negative thinking represents a shared cognitive mechanism underlying multiple forms of distress, assessing it can help practitioners prioritize cognitive-focused strategies such as problem-solving training, meta-cognitive techniques, and brief cognitive-behavioral approaches rather than disorder-specific treatments. In addition, the instrument may be incorporated into psychoeducation and mental health training for counselors, educators, and psychosocial workers. Within conflict-affected settings where scalable and easily interpretable measures are needed, the PTQ may therefore function not only as a research instrument but also as a practical tool for early detection and preventive psychological intervention.

## 5. Limitations

The findings of this study should be interpreted in light of several methodological and contextual limitations. First, participants were recruited using convenience sampling from students at Herat University, which limits representativeness and reduces the generalizability of the results to the broader Afghan population. University students may differ from the general community in educational level, socioeconomic status, and access to psychosocial resources, potentially influencing patterns of repetitive negative thinking. In addition, the gender distribution was uneven due to contextual limitations in educational access; therefore, the results cannot be generalized equally across genders. Second, the reliance on self-report measures introduces potential reporting biases despite social desirability screening procedures. Third, no structured clinical diagnostic interviews were conducted, and the findings should therefore be interpreted as indicators of psychological vulnerability rather than clinically diagnosed disorders. Furthermore, cultural interpretations of distress and intrusive thoughts may have influenced how participants understood and responded to questionnaire items. Finally, due to the limited availability of validated psychological instruments in the Afghan context, the DASS-21 was used to examine criterion validity, which should be considered when interpreting the strength of associations.

Given these limitations, it is recommended that future assessments utilize complementary tools alongside the PTQ, such as the Penn State Worry Questionnaire (PSWQ), the Difficulties in Emotion Regulation Scale (DERS), the Ruminative Response Scale (RRS), and other related measures to ensure a more comprehensive and accurate evaluation. It is further suggested that future research explore the relationship between PTQ and worry, psychological capital, emotion regulation, and rumination. Moreover, subsequent studies should aim to enhance the generalizability of findings by including larger and more diverse samples, applying random sampling methods, and integrating qualitative approaches such as interviews to enrich and strengthen data obtained through self-report questionnaires.

## 6. Conclusion

In conclusion, the findings of the present study provide strong evidence that the Dari/Farsi version of the Perseverative Thinking Questionnaire (PTQ) is a psychometrically sound instrument when applied to a non-clinical sample of Afghan university students. The scale demonstrated a clear and stable factor structure, along with satisfactory levels of internal consistency, confirming the coherence and reliability of its items. In addition, the retest reliability results supported the temporal stability of the PTQ, indicating that the measure produces consistent scores over time.

The results of the confirmatory factor analyses revealed that both the three-factor model and the second-order three-factor model exhibited excellent model fit, supporting the theoretical structure of perseverative negative thinking within the Afghan cultural context. Furthermore, the PTQ showed acceptable criterion validity by effectively capturing the expected associations between perseverative negative thinking and key indicators of psychological distress, including depression, anxiety, and stress. Taken together, these findings suggest that the Dari/Farsi version of the PTQ is a robust, reliable, and culturally appropriate tool that can be confidently used in both research and psychological assessment settings among Dari-speaking Afghan populations. Therefore, the Dari/Farsi PTQ can be considered an appropriate screening tool for assessing transdiagnostic cognitive vulnerability in Afghan student populations.

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

This study was conducted in accordance with the principles of the Declaration of Helsinki. Ethical approval was obtained from the Research Committee of the Department of Counseling and Psychology, Faculty of Education, Herat University, Afghanistan, which served as the Institutional Review Board for this study (Approval No: HU-CP-2025-0142). All participants were fully informed about the study procedures and provided written informed consent prior to participation.

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## CRediT authorship contribution statement

**Mohammad Sajjad Afsharzada:** Writing – original draft, Supervision, Project administration, Methodology. **Abbas Sadeghi:** Writing – review & editing, Visualization, Methodology, Data curation. **Somaya Haqyar:** Writing – review & editing, Methodology. **Sajjad Saadat:** Software, Methodology, Formal analysis, Data curation. **Basir Ahmad Azizi:** Writing – review & editing, Methodology, Data curation. **Wahidh Talbian:** Writing – review & editing, Validation, Software, Methodology, Data curation.

## Declaration of competing interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest

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