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DEVELOPMENT AND VALIDATION OF THE PISTANTHRO-PHOBIA SCALE: A MIXED-METHODS PSYCHOMETRIC STUDY

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Abstract

Background. A socially and clinically significant phenomenon of pathological fear of trusting others following betrayal has not been adequately measured despite its great impact on interpersonal functioning and psychological well-being. The lack of a validated theory-driven instrument has limited the possibility of systematic research, beneficial clinical evaluation, and restrictive intervention development in relation to severe trust-related distress. Objective. This paper designed and psychometrically tested the Pistanthro-Phobia Scale (PPS), a bilingual, cross-cultural instrument, which is designed to represent the multidimensional concept of pathological fear of trust as a result of betrayal trauma.

Method. An integrated design involving qualitative and quantitative steps consisted of a sequential exploratory mixed-method design. Phase One relied on semi-structured interviews of 25 purposively recruited people who reported having challenges in developing or sustaining trust; thematic analysis in the six-phase procedure identified by Braun and Clarke produced an item pool. A pilot test was done with a refined 36 items, and a total of 39 items were subjected to expert content review (n=8) and pilot test (n=30). Phase Two tested the psychometric properties using Exploratory Factor Analysis (EFA; n=229) with principal axis factoring and Promax rotation, and Confirmatory Factor Analysis (CFA; n=291) in SmartPLS 4. The psychometric standards assessed construct validity, internal consistency, composite reliability, convergent validity, and discrimination validity.

Results. Qualitative analysis yielded twelve themes that informed item content and ensured conceptual breadth. EFA supported a coherent six-factor structure accounting for 65.6% of total variance: Psycho-social Impact (18.21%), Past Betrayal (12.34%), Severity/Impact (10.83%), Withdrawal Behaviors (9.74%), Cognitive Patterns (9.09%), and Impact on Daily Life (5.39%). Sampling adequacy (Kaiser–Meyer–Olkin = .948) and Bartlett's test (χ^2 = 5765.35, $p < .001$) indicated excellent factorability. CFA produced acceptable-to-good fit ($\chi^2/df = 2.15$, CFI = .90, TLI = .88, RMSEA = .07, SRMR = .06). Subscales demonstrated strong internal consistency (Cronbach's α = .81–.91), composite reliability (ρc = .81–.91), and adequate convergent validity (AVE = .50–.69). Discriminant validity was supported by Fornell–Larcker comparisons and HTMT ratios below .90; all standardized loadings exceeded .59 ($p < .001$). **Conclusions**. The Pistanthro-Phobia Scale is a psychometrically robust, theoretically grounded, and culturally adapted instrument that captures cognitive, emotional, behavioral, and functional dimensions of pathological mistrust. It provides researchers and clinicians with a comprehensive tool for screening, assessment, treatment planning, and outcome monitoring, such as well-being, social functioning, and quality of life. Future work

should assess test–retest reliability, longitudinal predictive validity, clinical sensitivity, and wider cross-cultural generalizability.
Keywords: pistanthro-phobia, scale development, psychometric validation, betrayal trauma, trust, factor analysis, mixed-methods research

INTRODUCTION

This is a complication of human relationships, where the trust element is ultimate, and this fact has been the center of discussion, both in awe and scrutiny, among influential thinkers and scholars in each era. Trust not only complies with the meaning of trusting the reliability of others and oneself, but also denotes openness, emotional relatedness, and the risk of suffering in relationship expectations (Mayer et al., 2020).

When repeated betrayals and deceit erode the basic capacity to trust, some people move past ordinary caution and develop deep, maladaptive mistrust. Often called pistanthro-phobia, an overwhelming fear of placing trust in others that typically follows relationship trauma, this phenomenon is discussed informally but has not been incorporated into major diagnostic manuals such as the DSM-5-TR (American Psychiatric Association, 2022). Its common signs, avoiding intimacy, chronic suspicion, and elevated physiological anxiety, fit the pattern of a specific phobia, producing disproportionate fear, significant distress, and impairment in daily life (Ahmed et al., 2023).

In spite of the fact that clinicians and theorists have long been aware of the extreme fear of trusting others, there is a lack of systematic measurement and empirical research. This gap is notably critical in the light of the modern increasing relationship instability, infidelities, which can be traced digitally, and the corresponding rise in mistrust in society (Twenge et al., 2019), and it makes practitioners learn to work with clients whose main challenge is the inability to create or maintain trust. More recent research has identified trust as the main element of mental health and evident connections between trust issues and depression, anxiety, relationship collapse, and worse quality of life (Simpson, 2021; Fang & Mushtaque, 2024). Current measures are more likely to measure general or context-dependent trust but not phobic, chronic fear reactions that some individuals have, which have hampered progress in research and the creation of useful clinical measures and interventions.

The term pistanthro-phobia was suggested as a combination of the Greek: pistis (trust) and anthropos (human), to describe and quantify extreme distrust which may follow severe betrayal. It is not the same as general social anxiety or attachment issues because it is concentrated on the thoughts, feelings, and behavior attributed to fear of trust. In contrast to the fear of being judged or performing, pistanthro-phobia is based upon the anticipation of betrayal and the distressing exposure that anticipation exposes the close relationships to.

Contemporary Relevance and Social Context

Despite the fact that studies on the prevalent psychological issues related to trust are still at an early stage and limited, there is emerging evidence that psychological challenges fueled by mistrust are gradually increasing in modern society. According to the recent work, younger cohorts also express a greater degree of interpersonal mistrust and anxiety in relations compared to older generations (Twenge & Campbell, 2021). Extensive use of social networking sites, although helping to form relationships, also invites new spheres of the strain and betrayal of trust, which is why digital natives are more likely to become anxious about trusting other people (Woods & Scott, 2020). Greater societal changes, such as increased mobility, change in family composition, and economic insecurity, can also have contributed to the increase in the level of interpersonal suspicion.

The internet age has also brought about other complications to the establishment and upkeep of trust. The interactions that occur online are usually one-on-one conversations with less physical interaction, fewer indicators of the other person's motive or personality, factors which facilitate and complicate attempts to deceive (Rosen et al., 2019). The issues of catfishing, misleading dating activities over the Internet, and social-media betrayal form a new type of relational trauma, which may predispose vulnerable people to pistanthro-phobia.

At the same time, social neuroscience studies have also started tracing the biological roots of trust and deceit. Neuroimaging data creates a view of the brain areas that are engaged in making a trust-related decision, and the locations most frequently are the anterior cingulate cortex and bilateral caudate nuclei (Rilling & Sanfey, 2023). In case these neural systems are affected due to being betrayed, individuals can have a long-lasting change in the way trust is handled in the brain that can be clinically expressed in the form of pistanthro-phobia.

THEORETICAL FOUNDATIONS

An integrated conceptual framework to explain the fears of trust is based on various psychological approaches, especially attachment theory, betrayal-trauma theory, and cognitive behavioral model of the anxiety and avoidance. It states that attachment theory states that the early relationships with caregivers form internal working models about self and others; secure patterns result in the possibility to trust in adult relationships, and insecure patterns make people susceptible to distrust and prone to develop pistanthro-phobia after being betrayed (Bowlby, 2021; Ainsworth et al., 2020).

Betrayal-trauma theory deals particularly with the great damages that ensue when an individual relied on breaks that trust arguing that the breaches cause a unique kind of trauma that makes the subsequent establishment of trust ineffective (Freyd, 2022). In addition to these accounts, cognitive-behavioral formulations explain that the development of maladaptive beliefs, hypervigilant threat appraisals, and avoidance behaviors is learned and maintained, and the combination of early attachments and interpersonal betrayals forms a persistent fear of trusting others.

Cognitive-behavioral views focus on the ways avoidance behaviors, safety-seeking behaviors, and distorted cognitions maintain the trauma-related fears of trust by arguing that these processes produce structural problems that are long-lasting. These models suggest that pistanthro-phobia can be perpetuated through increased attentiveness to cues of deceit, anticipatory catastrophic preoccupations with the effects of disloyalty, and avoidance, which dissuades remedial learning and reinforces fear (Beck et al., 2021). These theories explain pistanthro-phobia as a complex process encompassing biased threat detection, emotional dysregulation in the face of vulnerability, behavioral withdrawal in the face of trusting situations, and maladaptive coping, which is counterproductive and only serves to isolate and add more distress (Mushtaque et al., 2021). Investigation should therefore be deep in that it needs extensive evaluation instruments that are able to measure the multiple facets of the construct and differentiate between trust phobic responses and other forms of related psychological disorders (Sansakorn et al., 2024).

Problem Statement

Even though the clinical significance of pistanthro-phobia has not been fully valued due to its perceived manifestation and lack of instruments to quantify it as a distinct psychological phenomenon, the psychology discipline currently lacks the appropriate mechanisms to quantify the phenomenon. This measurement hole is a significant research and clinical barrier to elucidating the correlations, actual prevalence, and implications of trust-related distress: the current trust scales were developed to measure attitudinal or situational trust and thus they are not able to identify the rigid, phobic type of mistrust. In brief, the contemporary tools fail to discover the unique trend of inflexible suspicion and fear that characterizes phobic levels of mistrust.

Lack of standard measures creates a number of interrelated issues. Scholars cannot effectively locate and sample trust-specific phobics to study them specifically, and this limits the development of empirical knowledge. Without a proper assessment tool, prevalence estimates are not precise, and the full extent and social cost of this deplorable condition are not investigated. Similarly, the relationships between trust-related fears and such significant mental-health effects as social functioning and quality of life are under-researched since the domain does not yet have instruments that would identify and measure phobic mistrust.

Clinical Assessment Challenges

The clinical need to have reliable assessment instruments that are validated that can detect and measure challenges in trusting others is evident. Such deficiency is especially problematic as the issues related to trust are often secondary to more global relationship issues or they co-occur with mood and anxiety disorders. The absence of suitable instruments can make clinicians miss the primary role of fears regarding trust in the distress of a client that can hinder the planning of treatment and decrease the chances of the interventions targeting the core causes of dysfunction.

The problem of this measurement is magnified in the context of different cultures where trust is associated with different meaning and implications. In such collectivized cultures, such as in the example of trust violation, the effects may be transmitted by the individual to the family, societal status and communal affiliation, which may not be well represented by the Western-constructed tools. This means that there is an urgent necessity of culturally sensitive and validated steps that capture the different expectations and social consequences of trust breach among different populations.

Research and Theoretical Limitations

Additionally, the scarcity of empirical information about the phenomenon of pistanthro-phobia restricts the opportunity to design evidence-based interventions that can help people who have a fear of trusting others. Existing treatment strategies for trust problems are more prone to rely on general concepts of relationship psychology and anxiety minimization, but rarely address the antecedents that are particular to the cognitive, affective, and behavioral patterns expressed in the trust-related phobias. Due to the poor mapping of the construct and its correlates by the existing research, the development of interventions is often based on a set of assumptions and thus may fail to be effective in the real world.

This is complicated by the fact that trust as a psychological phenomenon is a complex phenomenon: it entails cognitive assessment, emotional reaction, actions, and social relations all at the same time. Such multidimensionality requires advanced measurement tools that can be used to measure multiple aspects of fear relating to trust and still maintain good psychometrics and clinical utility. Using unidimensional scales of trust may not be adequate in identifying the subtle expressions of pistanthro-phobia and its effects on the functioning of the mind.

Even though the previous research has achieved some progress in developing trust measures in specific settings, the developments are quite localized. As an example, a context-specific, group-oriented trust scale tested in health care environments found that such factors as loyalty, competence, and honesty were different (Johnson et al., 2022).

Institutional or patient-provider contexts were developed such tools and they do not sufficiently address the pathological distrust or avoidance behaviors that characterize pistanthro-phobic adults.

Conceptual and Measurement Gaps

As a concept, trust and distrust are not supposed to be placed as opposite sides of the same spectrum. According to recent studies of twins, it can be seen that trust has a significant genetic basis, and distrust is mainly socially determined, which highlights the distinction between their psychological origins (Anderson et al., 2023). This distinction is supported by theoretical explanations which suggest that distrust may arise immediately following one negative event, and cause particular emotional responses, e.g., being more wary or suspicious that are not of the same kind as those linked to trust. Combined, these results posit that the conventional tools used to measure general or institutional trust cannot be used to capture the extreme, clinically significant distrust that is a hallmark of pistanthro-phobia.

Empirical studies are in the nascent phases to record the actual evils of distrust. Interpersonal distrust among peers who were victimized by peer bullying was more pronounced in a longitudinal cohort of adolescents, and this distrust increased the probability of developing mental health issues in those adolescents approximately 3.5 times compared to their less distrustful peers (Martinez et al., 2023). This trend shows that adverse impacts of maladaptive distrust on psychological well-being are measurable.

Based on this literature four main research gaps can be identified: 1) There is no validated measure specifically aimed at measuring pistanthro-phobia (the fear of trusting others). 2) Epidemiological studies that quantify the prevalence of pistanthro-phobia among adult groups do not exist. 3) The psychological consequences of pistanthro-phobia are not clearly known with regard to mental health, social functioning, and quality of life. 4) Mental practitioners do not have empirically validated and clinically tested tools to support the assessment and study of this condition.

Research Objective

The Objective of this research was to develop and validate the Pistanthro-Phobia scale as a distinct psychological construct.

METHODOLOGY

The study embraced a sequential exploratory mixed-methodology to develop and confirm the Pistanthro-phobia Scale where qualitative interviews were used to generate items, after which quantitative psychometric tests were used to confirm the items. It was hoped that this methodology would be suitable to capture the psychological subtleties of pistanthro-phobia and to generate a scale that is culturally and context-sensitive (Braun & Clark, 2022).

Participants and Sampling Procedures

The mixed-methods nature of the study combined qualitative and quantitative pools of participants where purposive and convenience sampling were used to select the participants as relevant, diverse, and suitable to develop the scale. To achieve the qualitative phase, a sample of 25 people was used to make sure that the breadth and depth of the responses were achieved; this is in line with the qualitative norms that typically consider 20-30 respondents enough to saturate the themes in construct-development studies (Guest, Bunce, & Johnson, 2006; Braun & Clarke, 2022). The sample achieved demographic variety across age, gender, marital status, education, and socio-economic status that is an important consideration when developing measures for culturally and contextually embedded psychological constructs (Patton, 2015; DeVellis, 2017). Recruitment was carried out via referrals from clinical psychologists, community counselors, and mental-health NGOs operating in urban and semi-urban areas of Pakistan, and participants were included based on self-reported histories of relational trauma, betrayal, or enduring interpersonal mistrust.

As Inclusion Criteria, the participants had to be at least 18 years old, able to give informed consent, proficient in Urdu, and able to describe emotional responses to breaches of trust; anyone with major cognitive deficits or an acute psychiatric episode that would impede participation in semi-structured interviews was excluded. After generating the initial item pool from the qualitative work, a pilot involving 30 individuals (15 men and 15 women) assessed the items for clarity, linguistic and cultural appropriateness, and response spread; these pilotees were recruited from campus settings, local communities, and outpatient mental-health clinics and met the same inclusion criteria as the qualitative sample, with additional screening to confirm sufficient literacy to follow instructions in English and Urdu. For psychometric validation, exploratory and confirmatory factor analyses were planned on larger cohorts obtained via stratified convenience sampling across universities, counseling services, and community organizations in multiple Pakistani cities, with a minimum of about 300 cases for EFA and at least 300 for CFA to secure robust factor extraction and factorial validity (Worthington & Whittaker, 2006; Costello & Osborne, 2005). All participants provided written informed consent, the protocol received IRB approval from The Islamia University of Bahawalpur and adhered to the APA Ethical Principles (2017), and respondents were assured anonymity, confidentiality, voluntary participation, and the right to withdraw without penalty; qualitative excerpts were reported using pseudonyms to protect identities.

Semi-Structured Interview Guide

Grounded in the study's rationale and theoretical foundations, a semi-structured interview guide was devised to inform the construction of the Pistanthro-phobia Scale by eliciting the lived experiences of individuals reporting persistent

fear of trusting others. The protocol integrated a synthesis of relevant psychological theories and empirical findings, including betrayal trauma (Freyd, 1996), attachment theory (Bowlby, 1988), cognitive theory (Beck, 1976), and models of interpersonal trust (Mayer et al., 1995), and aligned constructs such as fear of intimacy, hypervigilance, maladaptive cognitions, and functional impairment with diagnostic frameworks and relational behavior models (Bartholomew & Horowitz, 1991; Li et al., 2021). Developed according to qualitative best practices for construct development (Creswell & Poth, 2018; Kvale, 2007), the guide was organized into four principal sections: (1) rapport building and conceptual clarification; (2) emotional and cognitive sequelae of trust violations; (3) functional and interpersonal ramifications of trust difficulties; and (4) participant-driven reflections. This ordering follows a psychologically coherent progression, beginning with overarching narratives of trust and betrayal and advancing toward discrete emotional, behavioral, and functional consequences, thereby facilitating a natural cognitive-affective flow for respondents and producing rich material for thematic analysis. Example prompts included inquiries such as, “Have you experienced betrayal that affected your ability to trust?”, “How do trust issues influence your personal and professional life?”, and “Do your trust issues lead to misunderstandings in your relationships?”; questions were open-ended and probes were employed as needed to deepen responses. Two supplementary items targeted culturally and gender-specific expressions of trust, acknowledging the role of sociocultural norms in shaping manifestation and coping; this inclusive approach was intended to strengthen content validity and cultural relevance. The finalized guide underwent review by three clinical-psychology and psychometrics experts to verify clarity, theoretical completeness, and suitability for diverse populations, and pilot testing with three individuals confirmed that items elicited pertinent and emotionally accessible material. The instrument subsequently provided the basis for thematic analysis and the generation of the initial item pool for the Pistanthro-phobia Scale.

Data Collection Procedure

The data collection process was carried out in two phases, i.e., qualitative and quantitative. In the qualitative phase, semi-structured interviews were conducted with 25 purposely sampled persons who reported having problems with the formation or maintenance of trust in intimate relationships. The recruitment techniques involved referrals through the counseling facilities, outreach through social media, and snowball sampling. Informed consent was obtained through written informed consent. The interviews were done in Urdu or English as the respondent wished and were recorded on audio with their consent and transcribed verbatim to be later subjected to thematic analysis.

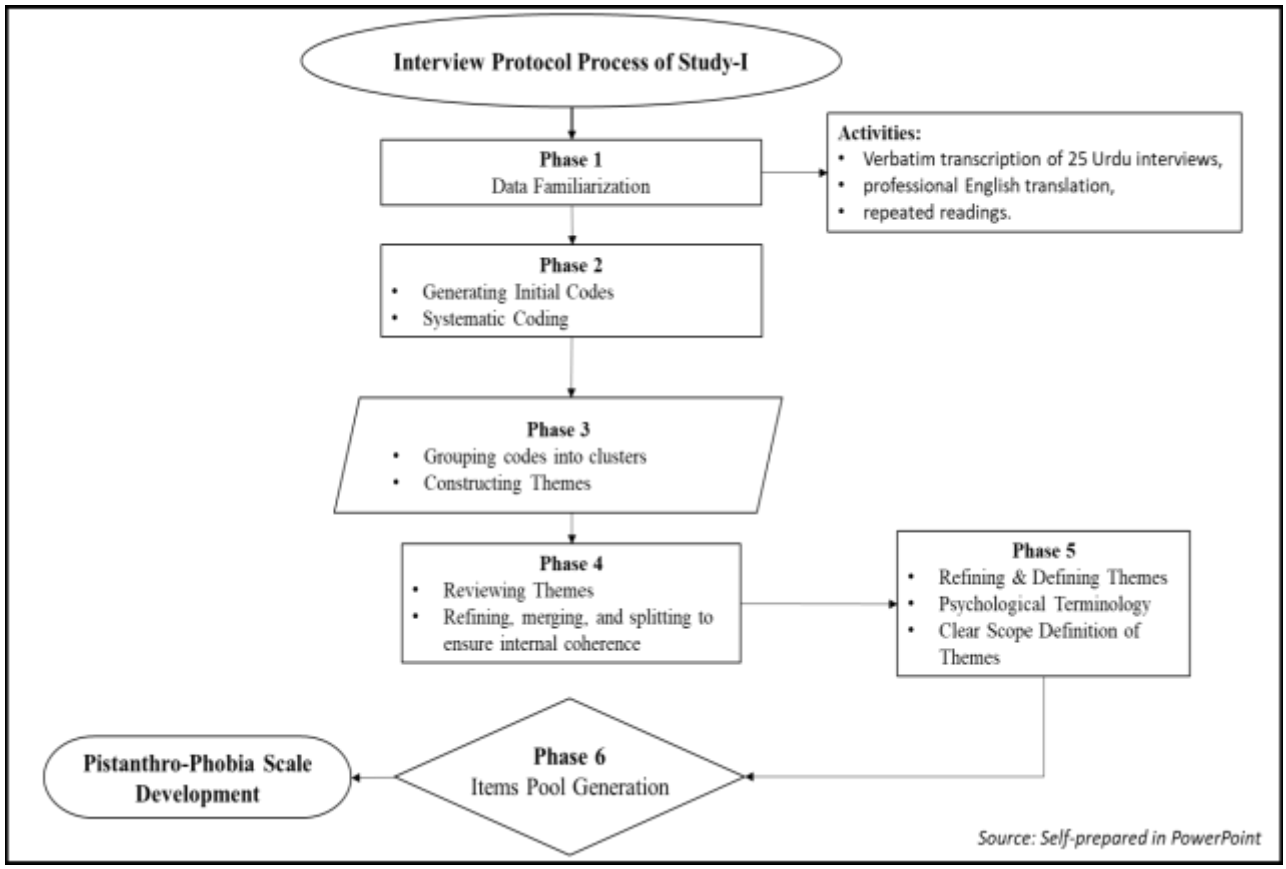
During the quantitative phase, the research engaged in item-pool assessment, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and a reliability test. A pre-test version (39 items) of the Pistanthro-phobia Scale was tested on 30 respondents to test the question clarity, internal consistency, and initial performance of the scale; responses were given by participants to enable some revision of words and items structure. In the case of the main psychometric studies, a stratified sample of 300 subjects was used, and it was split in terms of gender, age, and educational background.

Thematic Analysis and Item Generation

Qualitative data were collected to inform the development of the Pistanthro-phobia Scale by taking semi-structured interviews with 25 purposely chosen participants of diverse demographic and professional backgrounds between March and June 2024. There was heterogeneity in terms of age, gender, marital status, socioeconomic position, and occupation. The interviews were recorded with permission in 24 cases; the interviews were conducted in Urdu, and took between 45 and 90 minutes, and were conducted privately in the closed clinical rooms or the homes of the interviewees, as per their preference. Each of the sessions was verbatim transcribed and then translated into English by professional translators to be analyzed. Member-checking was also done on ten participants to ensure the honesty of interpretations (Lincoln and Guba, 1985). The data was analyzed through an inductive thematic method with six steps as outlined by Braun and Clarke (2022) as shown in Figure 1.

Figure 1: **Phases of Thematic Analysis**

Exploratory Factor Analysis (EFA)



An Exploratory Factor Analysis (EFA) using principal axis factoring and the Promax rotation procedure was conducted to examine the underlying factor structure of the Pistanthro-phobia Scale and to reduce item loadings to form meaningful constructs. The sample consisted of 229 people, which described as large and corresponds to the recommendations: it should have a minimum of 510 participants per item to achieve a robust factor analysis (Osborne & Costello, 2005; Tabachnick & Fidell, 2019). The factorability assumptions were tested prior to analysis using Bartlett's sphericity test and the Kaiser-Meyer-Olkin measure of sampling eligibility. The items with low communalities (< 0.30), large cross-loadings, or model loadings below 0.40 were to be removed to allow the purity of the construct. The retained factors were identified by parallel analysis and by an inspection of the scree plot. The EFA yielded a structure of subscales defined by discrete but strongly related aspects of pistanthro-phobia, which correlated with the thematic structure produced by the qualitative analysis. This was important in reducing the item pool to a leaner and psychometrically sound single scale.

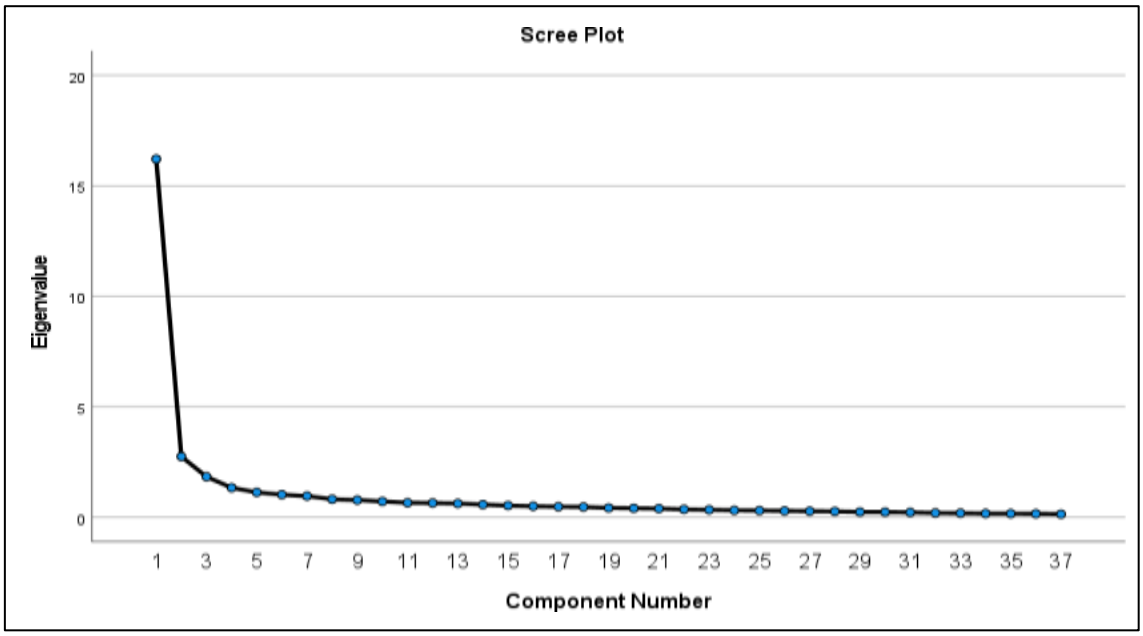
KMO and Bartlett's Test of Sphericity

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure		Values
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.948
Bartlett's Test of Sphericity	Approx. Chi-Square	5765.35
	df	666
	Sig.	.000

According to Table 1, the Kaiser-Meyer-Olkin (KMO) value (0.948) suggests that the data is most adequate to be used in a factor analysis since it is a large value. Further, the Test of Sphericity performed by Bartlett produced a Chi-Square value of 5765.356 with 666 degrees of freedom and significance of p =.000 which proves that the correlation matrix is not an identity matrix. All these findings support the correctness of the next step which is to use Exploratory Factor Analysis.

Figure 2: Scree Plot



Factor Loading and Variance

The largest percentage of variance was explained by Factor 1, which is Psycho-social Impact (18.21), and included the items of emotional distress, worry, and overthinking, which relate to trust issues. Factor 2, Past Betrayal (12.34% variance explained), included the questions concerning personal experiences of betrayal and disloyalty of the close people. Factor 3, Severity/Impact (10.83% variance explained) had statements that expressed the perceived severity and increment of trust-related problems over a time. The large factor loadings (all of them over.40) in every component reveal good relationships between items and the underlying factors and show clear and yet interrelated dimensions of trust issues. Factor 4, Withdrawal Behaviors (9.74% variance explained), included self-protective behaviors (avoiding relationships, self-disclosure and social contact with people). Factor 5, Cognitive Patterns (9.09% variance explained) had some tendencies to avoid working in a team, avoid seeking help, and feel the need to come up with reasons to avoid interaction. The level of interference of the issues of trust with the personal, academic, and professional functioning was expressed in Factor 6, Impact on Daily Life (5.39% variance explained).

Reliability Analysis

The reliability analysis revealed that all six factors had high internal consistency with Cronbach alpha of between.810 and.911 which confirms the strength of the factor structure. All these results reflect the development of a complex pattern where matters of trust are reflected in such aspects as emotional experience, historical experiences, cognitive inclination, behavioral withdrawal, and real-life effects.

Confirmatory Factor Analysis (CFA)

Following the EFA, a Confirmatory Factor Analysis (CFA) was conducted on a separate validation sample of 291 participants to assess the factorial validity of the refined scale structure. The analysis was carried out using SmartPLS 4 software, which employs maximum likelihood estimation, depending on the sample characteristics and multivariate assumptions. Model fit was evaluated in terms of absolute Chi-square test statistic, Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Standardized Root Mean Residual (SRMR), with thresholds based on conventional cutoffs (Hu & Bentler, 1999). The modification indices were cross-validated to identify and correct local misfits without compromising the theoretical coherence. The obtained final CFA model confirmed the multidimensionality of pistanthro-phobia and the factorial invariance of the established scale across gender and age subgroups. Significant path coefficients and factor loadings, but at a low level of 0.50 or greater, also supported the structural soundness of the measurement model.

Model fit

Table 2: **Model fit of Confirmatory Factor Analysis**

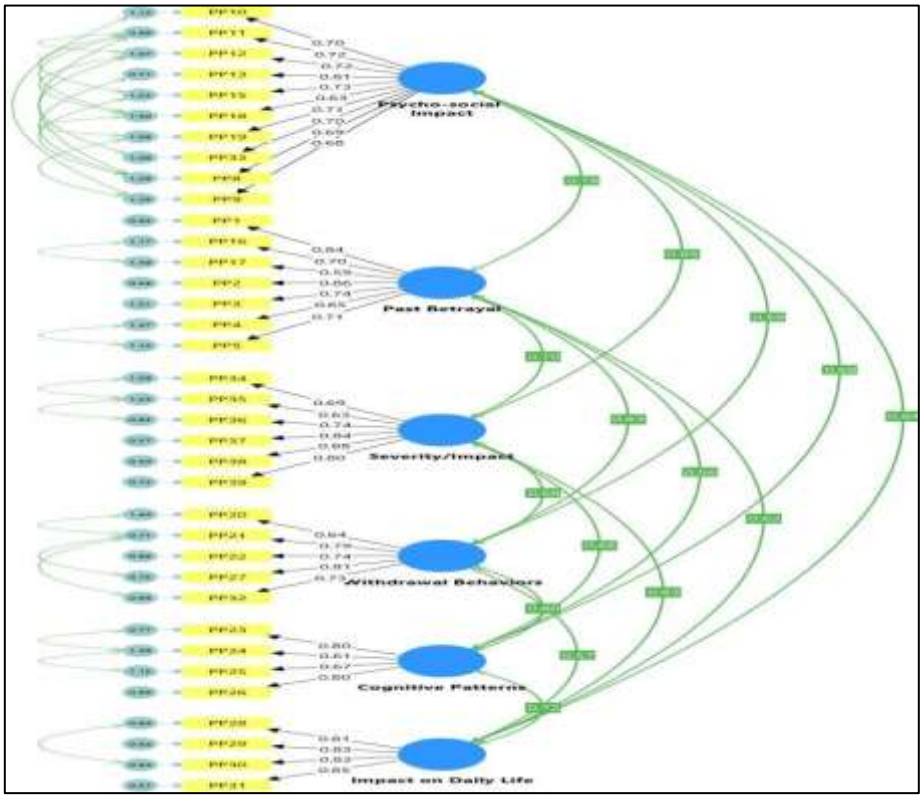
Model fit Indices	Estimated model
χ^2	1197.55
Df	558.00
P	0.00
ChiSqr/df	2.15

RMSEA	0.07
RMSEA LOW 90% CI	0.06
RMSEA HIGH 90% CI	0.07
GFI	0.79
AGFI	0.75
PGFI	0.66
SRMR	0.06
NFI	0.82
TLI	0.88
CFI	0.90

Note. χ^2 = Chi-square test of model fit; df = degrees of freedom; p = Significance value; χ^2/df = chi-square divided by degrees of freedom; RMSEA = Root Mean Square Error of Approximation; RMSEA LOW 90% CI and RMSEA HIGH 90% CI = lower and upper bounds of the 90% confidence interval for RMSEA; GFI = Goodness-of-Fit Index; AGFI = Adjusted Goodness-of-Fit Index; PGFI = Parsimony Goodness-of-Fit Index; SRMR = Standardized Root Mean Square Residual; NFI = Normed Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index.

As presented in Table 2, the Confirmatory Factor Analysis results indicate an acceptable model fit. The chi-square value of 1197.55 with 558 degrees of freedom is significant (p = 0.00), which is expected in large samples. The relative chi-square (χ^2/df) ratio of 2.15 falls within the acceptable range, suggesting reasonable model fit. The RMSEA value of 0.07, with a 90% confidence interval ranging from 0.06 to 0.07, also indicates an acceptable level of approximation error. The SRMR value of 0.06 meets the recommended threshold for a good fit. Incremental fit indices, including NFI (0.82), TLI (0.88), and CFI (0.90), indicate that the model exhibits an adequate comparative fit, with CFI reaching the commonly accepted threshold for good fit. However, absolute fit indices such as GFI (0.79) and AGFI (0.75) are slightly below the ideal value of 0.90, while the PGFI value of 0.66 indicates a moderate parsimony-adjusted fit. Overall, the indices collectively support that the hypothesized measurement model adequately represents the data.
Figure 3: Confirmatory Factor Analysis (CFA) Model

Outer Loadings
Table 3: **Outer Loadings of the Pistanthro-phobia scale's latent variables**



	λ	SE	t	p
PP1 <- Past Betrayal	0.84			
PP16 <- Past Betrayal	0.70	0.07	12.16	0.00
PP17 <- Past Betrayal	0.59	0.07	9.90	0.00
PP2 <- Past Betrayal	0.86	0.06	17.38	0.00
PP3 <- Past Betrayal	0.74	0.07	13.36	0.00
PP4 <- Past Betrayal	0.65	0.07	11.28	0.00
PP5 <- Past Betrayal	0.71	0.07	12.61	0.00
PP10 <- Psycho-social _Impact	0.70			
PP11 <- Psycho-social _Impact	0.72	0.09	10.80	0.00
PP12 <- Psycho-social _Impact	0.72	0.10	10.83	0.00
PP13 <- Psycho-social _Impact	0.81	0.10	12.08	0.00
PP15 <- Psycho-social _Impact	0.73	0.10	10.92	0.00
PP18 <- Psycho-social _Impact	0.63	0.10	9.46	0.00
PP19 <- Psycho-social _Impact	0.71	0.10	10.60	0.00
PP33 <- Psycho-social _Impact	0.70	0.09	10.54	0.00
PP8 <- Psycho-social _Impact	0.69	0.10	10.42	0.00
PP9 <- Psycho-social _Impact	0.68	0.08	12.34	0.00
PP20 <- Withdrawal Behaviors	0.64			
PP21 <- Withdrawal Behaviors	0.79	0.11	10.35	0.00
PP22 <- Withdrawal Behaviors	0.74	0.11	9.74	0.00
PP27 <- Withdrawal Behaviors	0.81	0.12	10.14	0.00
PP32 <- Withdrawal Behaviors	0.73	0.11	9.51	0.00
PP23 <- Cognitive Patterns	0.80			
PP24 <- Cognitive Patterns	0.61	0.08	9.00	0.00
PP25 <- Cognitive Patterns	0.67	0.08	10.59	0.00
PP26 <- Cognitive Patterns	0.80	0.07	13.38	0.00
PP28 <- Impact on Daily Life	0.81			
PP29 <- Impact on Daily Life	0.83	0.07	15.00	0.00
PP30 <- Impact on Daily Life	0.83	0.08	13.31	0.00
PP31 <- Impact on Daily Life	0.85	0.07	15.50	0.00
PP34 <- Severity/Impact	0.69			
PP35 <- Severity/Impact	0.63	0.09	10.31	0.00
PP36 <- Severity/Impact	0.74	0.09	11.04	0.00
PP37 <- Severity/Impact	0.84	0.10	12.28	0.00
PP38 <- Severity/Impact	0.88	0.11	12.64	0.00
PP39 <- Severity/Impact	0.80	0.10	11.80	0.00

Note. λ = Factor loading; SE = Standard error; t = T value; p = P value.

Figure 3 and Table 3 present the outer loadings at the Pistanthro-phobia scale, latent variables indicate that the observed item and the latent constructs have strong and statistically significant relationships with each other. In the case of Past Betrayal factor, the loading is between 0.59(PP17) and 0.86(PP2) and the p-value is 0.00 all of which are high. The Psycho-social Impact factor indicates the loadings of 0.63 (PP18) to 0.81 (PP13), which indicate the high contributions of the items in the construct. In the case of Withdrawal Behaviors, loading values are 0.64 (PP20) to 0.81 (PP27), whereas in the case of Cognitive Patterns, they are 0.61 (PP24) to 0.80 (PP23 and PP26). Particularly high loadings are shown by the Impact on Daily Life factor, which ranges between 0.81 (PP28) and 0.85 (PP31) indicating that the construct has a good representation using the items. Lastly, Severity/Impact has loadings of 0.63

(PP35), through to 0.88 (PP38), which again affirm the strength of item-to-construct relationships. The t-values of all indicators are high, and the p-values are significant and consistent, which indicates that all items are good measurements of the corresponding latent variables in the model.

Construct Reliability and Validity

Table 4: **Construct Reliability and Validity**

Factors	α_i	α_u	ρc	AVE
Cognitive Patterns	0.81	0.81	0.81	0.52
Impact on Daily Life	0.89	0.89	0.91	0.69
Past Betrayal	0.89	0.89	0.88	0.54
Psycho-social _Impact	0.91	0.91	0.90	0.50
Severity/Impact	0.90	0.90	0.88	0.59
Withdrawal Behaviors	0.85	0.85	0.88	0.56

Note. α_i = Cronbach's alpha (standardized); α_u = Cronbach's alpha (unstandardized); ρc = Composite reliability; AVE = Average variance extracted

As presented in **Table 4,** all six constructs of the Pistanthro-phobia scale exhibit high internal consistency and reliability. Cronbach's alpha values, both standardized and unstandardized, range from 0.81 (Cognitive Patterns) to 0.91 (Psycho-social Impact), exceeding the commonly accepted threshold of 0.70, indicating strong reliability. Composite reliability (ρc) values similarly range from 0.81 to 0.91, further confirming the stability of the measurement across items within each construct. The Average Variance Extracted (AVE) values range from 0.50 (Psycho-social Impact) to 0.69 (Impact on Daily Life), meeting or exceeding the 0.50 benchmark for convergent validity, which shows that each construct explains at least half of the variance in its indicators. These results collectively demonstrate that the measurement model is both reliable and valid in representing the underlying latent constructs.

Discriminant Validity

Table 5: **Discriminant Validity**

	Heterotrait-monotrait ratio (HTMT)					
	Cognitive Patterns	Impact on Daily Life	Past Betrayal	Psycho-social _Impact	Severity /Impact	Withdrawal Behaviors
Cognitive Patterns						
Impact on Daily Life	0.71					
Past Betrayal	0.59	0.65				
Psycho-social Impact	0.67	0.85	0.81			
Severity/Impact	0.69	0.83	0.73	0.86		
Withdrawal Behaviors	0.82	0.57	0.67	0.58	0.62	
	Fornell-Larcker criterion					
Cognitive Patterns	0.72					
Impact on Daily Life	0.72	0.83				
Past Betrayal	0.56	0.62	0.73			
Psycho-social Impact	0.68	0.84	0.78	0.71		
Severity/Impact	0.66	0.83	0.70	0.85	0.77	
Withdrawal Behaviors	0.80	0.57	0.63	0.59	0.58	0.75

As shown in **Table 5,** the discriminant validity of the Pistanthro-phobia scale was assessed using both the Heterotrait-Monotrait ratio (HTMT) and the Fornell-Larcker criterion. All HTMT values fall below the threshold of 0.90, with the highest being 0.86 between Psycho-social Impact and Severity/Impact, indicating satisfactory discriminant validity and confirming that the constructs are empirically distinct. The Fornell-Larcker results further support this finding, as the square roots of the Average Variance Extracted (AVE) for each construct (diagonal values) are greater than their respective inter-construct correlations (off-diagonal values). For instance, Impact on Daily Life shows an AVE square root of 0.83, which exceeds its correlations with all other constructs. These results collectively confirm that each latent

variable shares more variance with its own indicators than with other constructs, thereby establishing strong discriminant validity for the measurement model.

DISCUSSION

The current research was able to construct and test the Pistanthro-Phobia Scale (PPS), which is a psychometrically sound measurement tool to assess the presence of pathological fears of trusting others after being betrayed. The resultant 6-factor structure (Psycho-social Impact, Past Betrayal, Severity/Impact, Withdrawal Behaviors, Cognitive Patterns, and Impact on Daily Life) shows good theoretical coherence and explains 65.6 percent of the total variance. The scale had very high internal consistency (α =.81 -.91), high composite reliability (rho c =.81 -.91), and fair model fit measures (CFI =.90, RSMEA =.07), and thus fills an essential measurement gap in betrayal trauma research. These results should be taken into consideration in terms of how they relate to the current theory, clinical practice, and policy implications, methodological shortcomings, and future research.

Findings and Theoretical Contribution

The empirical evidence of the theoretical frameworks used in developing the PPS is supported by the six-factor framework of the PPS, which is convincing. Attachment theory (Bowlby, 1988, 2021; Ainsworth et al., 2020) suggests that the first relationship experiences define the inner working models that regulate future capacity to trust. The fact that Past Betrayal was identified as an independent variable (12.34% variance) confirms this theoretical assumption through the fact that relational violations occur in particular instances that are independent of their subsequent effects. This observation is in line with the theory of betrayal trauma proposed by Freyd (1996, 2022), where it is stated that when trusted individuals violate the trust of others, it leaves a distinct and enduring trauma that has a qualitatively different psychological impact than other negative events do. The separation of the factor with current symptomatology supports the theoretical difference between traumatic etiology and persistent psychopathology, which implies that betrayal is merely a precipitating event that results in further maladaptive patterns instead of being low trust.

Cognitive-behavioral theories of anxiety maintenance are supported by the appearance of Withdrawal Behaviors and Cognitive Patterns as separate variables (Beck, 1976; Beck et al., 2021). These dimensions reflect the hypervigilant threat monitoring, catastrophic appraisals, and avoidance behaviors which cognitive theory forecasts to persist in fear reactions after trauma (Sarfraz et al., 2022). The empirical distinction of cognitive and behavioral elements allows testing a greater number of cognitive-behavioral theoretical propositions, including the causal role of maladaptive cognitions in causing and maintaining avoidance or whether behavioral withdrawal leads to secondary cognitive elaboration. Moreover, the fact that the Psycho-social Impact (18.21% variance) is the most dominant factor highlights the omnipresence of the emotional and interpersonal implications of the fears related to the trust, which is not confined to the circumscribed phobic reaction, but is spread across the board of the psychological operation that corresponds to the diagnosis of specific phobia marked distress or impairment (American Psychiatric Association, 2022).

It is important to note that the PPS structure also criticizes the current theoretical models in some significant aspects. The match of this scale with phobia phenomenology implies that extreme distrust might not merely be the low end of a continuum of trust as most models suggest, but a qualitatively different psychological phenomenon, which is severe fear, strong avoidance, and functional incapacity. These re-definitional implications of reconceptualization as to the way researchers and clinicians cognize pathological mistrust indicate that it may be even a theme of consideration as an anxiety-spectrum disorder as opposed to a personality trait or relation-attitude. The multidimensional form also provides a challenge to the unitary conceptualization of trust by showing that pathological trust problems are not solitary in their complexities in cognitive, emotional, and behavioral and functional levels at the extremity levels (Sawangchai et al., 2022).

Clinical Practice and Policy Implications

The implications of the PPS development on clinical practice are considerable because the identification and measurement of pistanthro-phobia have not been previously studied using a reliable instrument. There has traditionally been the understanding by clinicians that extreme trust fears occur after betrayal, which have been poorly assessed systematically, and their measurement has been left to general measures of anxiety or unstructured clinical judgment (as noted in our problem statement). The PPS facilitates the use of standardized screening in environments where trust issues are common, such as couples therapy, trauma treatment programs, and general mental health services. The multidimensional profile of the scale can enable clinicians to diagnose the presence of mostly cognitive (hypervigilance, catastrophic thinking), behavioral (avoidance, social withdrawal), or functional impairment, and in turn inform the development of case conceptualization and treatment plans.

PPS subscales are theoretically based on cognitive-behavioral frameworks implying natural intervention target. Cognitive Patterns items are about distorted beliefs that can be cognitively restructured; Withdrawal Behaviors items are about avoidance that can be overcome through graded exposure; Psycho-social Impact items are about emotional dysregulation that can be overcome using emotion-regulation training. This alignment places the PPS not just as a tool of assessment but a framework of treatment planning which allows the use of measurement-based care. The Impact

on Daily Life subscale can be of some specific use in the context of outcome monitoring, as it can offer clinically meaningful results of functional recovery beyond symptom reduction. The consistent PPS intake during treatment would help to inform the moment in which interventions effectively affect particular dimensions of pistanthro-phobia and the moment when alternative strategies have to be considered.

Policy-wise, PPS allows carrying out epidemiological studies that prove the prevalence and the burden of pistanthro-phobia on the human population, which is still unavailable because of measurement restrictions. This evidence may be used to develop mental health service plans, resources, and prevention programs. Since longitudinal studies have shown that interpersonal distrust is a risk factor that exacerbates mental health issues by about 3.5-fold (Martinez et al., 2023), referencing and treating people at risk may be a potentially useful preventive measure. Early intervention before the establishment of the pistanthro-phobia would be possible in the screening programs in settings that serve the population at risk of relationship trauma, such as domestic violence services, divorce counseling, or youth mental health programs. The availability of the scale also allows measuring social policies that influence the stability of relationships and trust (family support programs or regulations of digital platforms against online deception and betrayal).

Limitations

This study has a number of weaknesses that must be mentioned despite its strengths. To begin with, the cultural context of Pakistanis, although facilitating the development of culturally sensitive instruments, does not allow the possibility of generalization to other populations. The collective cultures can have violations of trust as this affects the status of the family and belonging to a community rather than individual distress which may result in item content or factor structure that cannot be replicated in the individualistic Western culture. The cross-cultural invariance of the factorial structure has not been investigated and so it is important to replicate it in different cultural settings before stating that it is universally applicable. Second, convenience and purposive sampling techniques, which are suitable in the development of a preliminary scale, expose the risk of selection bias. Clinical network samples might have more severe pistanthro-phobia than community samples and so the item difficulty distributions may differ, as well as generalizability to subclinical groups. Subsequent studies that utilize probability sampling would determine the population-representative norms and help to understand whether the factor structure can be replicated in non-clinical samples.

Third, the design is cross-sectional, which does not allow the researcher to analyze temporal stability and predictive validity. Although there is strong psychometric properties, the test-retest reliability test over reasonable intervals would determine whether PPS scores are indicative of stable characteristics or state-specific variability. The longitudinal design that would be able to assess the scores after the betrayal experiences or after therapeutic intervention would help understand the sensitivity of the scale to change and predict the clinically relevant outcomes like relationship quality or mental health trajectories. Fourth, pure use of self-report methodology creates the possibility of response bias, such as the social desirability and retrospective recall bias. Construct validity would be enhanced by the use of multi-method validation, such as behavioral observation, informant reports, or implicit measures of trust-related cognitions, which would prove consistency among different measurement modalities. Lastly, although the discriminant validity was found to be achieved between PPS subscales, it is not thoroughly clarified as to whether it is differentiated from related constructs such as attachment insecurity, social anxiety, and generalized anxiety. Examination of patterns of PPS scores in each of the diagnostic groups would determine whether the scale is a measure of a specific syndrome or a dimension shared among various psychological disorders.

Future Research Directions

These findings raise a number of research priorities. In the first place, cross-cultural replication that would investigate the presence of measurement invariance between different populations would determine the generalizability of the PPS, as well as determine the possible cultural adaptations necessary to use it in various settings. Specific consideration should be given to the question of whether the factor structure is similar in individualistic Western societies and whether the items will serve in the same way among the gender, age, and cultural groups. Second, longitudinal studies that track persons who were betrayed up to pistanthro-phobia development may be able to establish risk and resilience variables, which determine whether betrayal can cause temporary distrust or long-lasting phobic terror. This type of research may study the role of betrayal features (degree, type of relationship of betrayal, intentionality), personal features (attachment style, history of prior traumas, trait anxiety), or situational factors (social support, cultural norms) in mediating the relationship between betrayal and pistanthro-phobia.

Third, criterion validity studies must look into PPS correlations with objective relationship outcomes such as relationship duration, friendship network size and behavioral indicators of trust of self-disclosure depth or willingness to rely on others in experimental paradigms. To increase ecological validity, it would make sense to establish that high scores at PPS are predictive of actual trust-related behavior outside of self-reported tendencies. Fourth, the pistanthro-phobia could be treated with evidence-based treatment defined through intervention research with the PPS. Cognitive-behavioral therapy versus acceptance based versus interpersonal therapy applied in randomized trials would prove relative efficacy and identify treatment-specific mechanisms and ideal targets of intervention using PPS subscales.

Lastly, neuroimaging studies utilizing the PPS would test neural correlates between high and low scorers to determine whether pistanthro-phobia comes with a change in the workings of trust-processing neural networks such as anterior cingulate cortex and caudate nucleus, which would prove biological validity (Rilling and Sanfey, 2023).

To sum up, the Pistanthro-Phobia Scale is an important methodological improvement that allows investigating a clinical phenomenon that was not quantified before. Its strong psychometric measures, theoretical and practical usefulness make it one of the useful tools in the hands of researchers and clinicians dealing with the problems of trust after betrayal. Further studies on the scale will be useful in determining the utility of the scale as well as the future studies may be done on how profound experiences of betrayal transform the underlying abilities of trusting others.

CONCLUSION

The research establishes pistanthro-phobia as a valid psychological phenomenon that should be pursued in further scholarly and clinical research. The research highlights the importance of trust-related challenges in research and practice by making a trustworthy assessment instrument and stating its characteristics of links with wellbeing, social functioning, and the quality of life (Khan & Khan, 2025a, 2025b). The results indicate that pistanthro-phobia is not an isolated problem, but a multidimensional one, and therefore, should be assessed and treated using multidimensional methods of intervention to cover the many aspects of trust-based fear instead of a one-fits-all solution.

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