

ANXIETY SEVERITY AMONG PAKISTANI ADULTS: IMPLICATIONS FOR POSITIVE PSYCHOLOGICAL INTERVENTIONS AND MENTAL HEALTH PROMOTIONS

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ABSTRACT

Anxiety is among the most widespread forms of psychological distress in Pakistan, yet the national evidence base remains predominantly deficit-oriented, quantifying pathology without mapping the subclinical distress and psychological strength across which promotion and prevention efforts must operate. This study characterised the full severity distribution of generalized anxiety symptoms among Pakistani adults, examined its gender patterning, and interpreted both through a positive psychological lens. A cross-sectional survey was conducted with 356 adults (195 men, 161 women) aged 18 to 60 years, recruited from all four provinces using convenience and snowball sampling. Participants completed the Urdu Generalized Anxiety Disorder Scale (GAD-7), which showed good internal consistency ($\alpha = .87$). The sample mean was 7.57 ($SD = 5.87$). Severity was graded rather than dichotomous: 36.5% minimal, 28.1% mild, 19.7% moderate, and 15.7% severe, with 35.4% (95% CI [30.4, 40.4]) at or above the clinical threshold. Women scored higher than men, $t(354) = 3.99, p < .001, d = 0.43$, and were displaced upward across the entire distribution, $\chi^2(3, N = 356) = 14.15, p = .003$, Cramér's $V = .20$, being 1.61 times as likely to score in the moderate-to-severe range. A substantial clinical burden therefore coexists with a subclinical majority that threshold-based services cannot reach. These findings support a tiered, dual-continua public mental health strategy for Pakistan in which brief, culturally grounded interventions that build psychological strength operate alongside clinical care rather than in place of it.

1. INTRODUCTION

Anxiety disorders rank among the leading contributors to global disability, and their burden has grown rather than stabilised over the past three decades (GBD 2019 Mental Disorders Collaborators, 2022). Modelling of the pandemic period estimated a further substantial increase in anxiety disorders during 2020 alone (COVID-19 Mental Disorders Collaborators, 2021). The burden falls unevenly: low- and middle-income countries carry a disproportionate share while commanding a small fraction of global treatment capacity (Main Thompson & Saleem, 2025; Naveed et al., 2020). Pakistan represents an acute instance of this asymmetry. The National Psychiatric Morbidity Survey, conducted with a nationally representative sample of 17,773 adults, estimated current weighted prevalence of psychiatric disorder at 32.28% and lifetime prevalence at 37.91% (Rahman et al., 2024). Analyses of

Global Burden of Disease data indicate that this burden is gendered, with women of reproductive age carrying markedly higher disability-adjusted life-year loss than men (Alvi et al., 2024). Set against this, the country has approximately 0.19 psychiatrists per 100,000 populations and allocates roughly 0.4% of its health budget to mental health (Ahmad, 2025; Main Thompson & Saleem, 2025). Any strategy premised on specialist treatment alone is arithmetically incapable of meeting demand at this scale.

Pakistani mental health research has nonetheless been shaped largely by a deficit-oriented convention: report the proportion exceeding a clinical cut-off, then argue for expanded services (Saleem et al., 2024; Riaz et al., 2025). The reasoning is sound but the frame is incomplete, because it renders two groups analytically invisible. The first comprises individuals with subclinical or mild symptoms, who fall below referral criteria yet remain at elevated risk of progression. The second comprises individuals reporting minimal distress, whose functioning constitutes a reservoir of naturally occurring coping resources. Recent Pakistani evidence indicates that these strengths are substantial and measurable: in a community survey of 400 adults, roughly three-quarters demonstrated fair-to-good coping self-efficacy and half scored highly on well-being, even as clinically relevant symptoms were common (Malik et al., 2025). Distress and capability coexist, and a design that measures only the former cannot detect the latter. Positive psychology supplies the complementary frame. The dual-continua model treats psychological distress and psychological well-being as related but separable dimensions, such that reducing symptoms and building well-being are distinct tasks requiring distinct strategies (Keyes, 2007). Contemporary evidence indicates that interventions targeting the second dimension are effective: a mega-analysis synthesising 198 meta-analyses, 4,065 primary studies, and more than 500,000 participants found small to medium post-intervention effects for positive psychological interventions on well-being, quality of life, character strengths, depression, anxiety, and stress (Carr et al., 2024; Riaz et al., 2025). Because such interventions are typically brief, inexpensive, deliverable by non-specialists, and framed around capability rather than illness, they align closely with the constraints of the Pakistani service context.

Self-affirmation is of particular relevance among these approaches. Self-affirmation theory holds that people are motivated to maintain a global sense of self-integrity, and that reflecting on core values buffers the self against threat (Steele, 1988). The empirical base has matured considerably. A meta-analysis of 129 independent tests from 67 articles reported small but reliable effects of self-affirmation on self-perception, general well-being, and social well-being, together with reductions in psychological barriers (Zhang et al., 2025; Ahmad et al., 2026), while a synthesis of 114 studies in educational settings estimated a mean effect of $d = 0.41$ (Escobar-Soler et al., 2024). Critically, the theory does not specify which values must be affirmed, and the operational literature has been overwhelmingly Western; of the 114 studies in the latter synthesis, 77 were conducted in the United States and the remainder almost entirely in other high-income settings. The content of affirmation has therefore been calibrated to independent self-construal, leaving open the question of what affirmation looks like where identity is constituted relationally.

That question is consequential in Pakistan. A systematic review of positive psychology practice in Muslim communities observes that the field's emphasis on personal growth and independence sits in tension with Islamic teachings that foreground community, collective responsibility, and submission to divine guidance, and concludes that adaptation must reflect interdependence rather than simply translate individualistic content (Anli, 2025). Cultural adaptation, on this account, is a design requirement rather than a cosmetic refinement. Encouragingly, the delivery model such adaptation implies is already demonstrably feasible in Pakistan: community-based and digitally supported programmes delivered by frontline non-specialist workers have been implemented for anxiety and depression in rural settings (Rabbani et al., 2025), and task-sharing with non-specialist providers is now central to proposals for national mental health system reform (Main Thompson & Saleem, 2025). Designing such programmes requires knowing how distress is distributed in the population and which subgroups carry disproportionate burden. The present study addresses that requirement as the first phase of a sequential mixed-methods programme developing an indigenous self-affirmation intervention for anxiety among Pakistani adults. Its purpose is not to report a prevalence figure in isolation but to characterize the shape of the severity distribution and its gender patterning, and to derive from that shape the specification for a tiered, strengths-based response. Four objectives were addressed: (a) to examine the internal consistency of the Urdu-translated GAD-7 in a community sample; (b) to determine the distribution of generalized anxiety symptom severity; (c) to examine

gender differences in mean anxiety scores; and (d) to examine the association between gender and anxiety severity category. It was hypothesized that women would report significantly higher anxiety scores than men (H1) and that gender would be significantly associated with severity category (H2).

II. METHOD

Research Design

Research design covers the entire process that is used in conducting research (Yousaf et al., 2026). A quantitative, descriptive, cross-sectional survey design was employed and is reported in accordance with the STROBE recommendations for observational research. This design is appropriate for estimating the distribution of symptom severity in a defined adult population and for examining demographic patterning within it, but it does not permit causal inference.

Participants

The target population comprised adults' resident in Pakistan. Of 357 individuals who participated, one case was excluded for missing data, yielding an analytic sample of 356 (195 men, 54.8%; 161 women, 45.2%) aged 18 to 60 years. Participants were recruited from all four provinces (Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan), from both urban and rural areas, and varied in educational attainment, occupation, and socioeconomic background. Eligibility required participants to be aged 18 to 60 years, hold Pakistani nationality, be able to read and understand Urdu, and provide informed consent. The age range captured legal adulthood while limiting confounding from age-related cognitive decline. Individuals were excluded if they reported a diagnosed severe psychiatric disorder or severe cognitive impairment likely to interfere with comprehension, or if they were receiving inpatient psychiatric care, so that reported symptoms would reflect generalized anxiety in a community rather than an acute clinical population. Non-probability convenience sampling was used, supplemented by snowball sampling in which participants referred eligible individuals from their social networks. This approach was adopted because no comprehensive national sampling frame was available and because it permitted recruitment across geographically dispersed regions within the resource constraints of the study. Its implications for generalizability are addressed in the Limitations section.

Measure

Generalized anxiety symptoms were assessed with the Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006), a seven-item self-report measure of symptom frequency over the preceding two weeks. Items are rated from 0 (*not at all*) to 3 (*nearly every day*), yielding a total score of 0 to 21, with cut-offs of 5, 10, and 15 demarcating mild, moderate, and severe symptom levels. The GAD-7 is among the most widely validated brief anxiety screeners internationally and has been applied extensively in Pakistani samples (Malik et al., 2025). The officially translated and culturally adapted Urdu version (Ahmad et al., 2017) was administered. Written permission was obtained from the translator before data collection. Use of a linguistically and culturally appropriate version was essential given the educational range represented in the sample.

Procedure

Following institutional ethical approval, participants were approached in universities, workplaces, residential neighborhoods, and public spaces. A mixed-mode strategy combined in-person paper-and-pencil administration with online distribution via Google Forms, extending reach to geographically distant participants while holding item content constant. The purpose and voluntary nature of the study were explained and confidentiality assured; informed consent was obtained in written or verbal form before administration. Completion required approximately five to seven minutes. Recruitment continued until the target sample size was reached. The study was approved by the institutional ethical review committee of the Department of Applied Psychology, The Islamia University of Bahawalpur. Participation was voluntary and uncompensated, withdrawal was permitted at any point without consequence, and no personally identifying information was recorded. Participants scoring in the severe range were provided with information about available psychological support services. Analyses were conducted in IBM SPSS Statistics Version 26. Internal consistency was evaluated using Cronbach's alpha and corrected item-total correlations. Descriptive statistics and frequency distributions characterised symptom severity, with Wilson score confidence intervals computed for category proportions. An independent-samples *t* test examined gender

differences in mean scores, with Levene's test used to evaluate homogeneity of variance. A chi-square test of independence examined the association between gender and severity category; Cramér's V is reported as the effect size and standardised residuals are reported to localise the source of the association. Cohen's d and 95% confidence intervals quantify the magnitude and precision of the mean difference. Alpha was set at .05, two-tailed.

III. RESULTS

Reliability of the Urdu-Translated GAD-7

Of 357 responses, 356 (99.7%) were retained after listwise deletion of one incomplete case. Internal consistency was good, $\alpha = .87$. Corrected item-total correlations ranged from .54 to .72, comfortably exceeding the conventional .30 thresholds, and no alpha-if-item-deleted value exceeded the overall coefficient, indicating that all seven items contributed to the scale. The measure was therefore judged psychometrically adequate for the analyses reported below.

Distribution of Anxiety Symptom Severity

The sample mean was 7.57 ($SD = 5.87$), with observed scores spanning the full possible range of 0 to 21. Although the mean falls within the mild band, the standard deviation is large relative to it, indicating that the mean does not describe a typical participant and that the distributional form is the more informative quantity. Table 1 presents the severity distribution with confidence intervals. Symptoms were graded across the full range rather than clustering at either extreme. Minimal symptoms were reported by 130 participants (36.5%) and mild symptoms by 100 (28.1%), so that 64.6% of the sample fell below the conventional clinical threshold. Moderate symptoms were reported by 70 participants (19.7%) and severe symptoms by 56 (15.7%). Combining the upper two categories, 126 participants (35.4%, 95% CI [30.4, 40.4]) scored at or above 10, the level at which further assessment would ordinarily be indicated.

Table I: Distribution of GAD-7 Anxiety Severity Categories (N = 356)

Severity category	Score range	n	%	95% CI [LL, UL]
Minimal	0–4	130	36.5	[31.5, 41.5]
Mild	5–9	100	28.1	[23.4, 32.8]
Moderate	10–14	70	19.7	[15.5, 23.8]
Severe	15–21	56	15.7	[11.9, 19.5]
Moderate to severe	≥ 10	126	35.4	[30.4, 40.4]

Note. Confidence intervals are Wilson score intervals for a single proportion. The final row combines the moderate and severe categories and is therefore not additive with the rows above it.

Gender Differences in Anxiety Scores

Levene's test was non-significant, $F = 0.70$, $p = .403$, so equal variances were assumed. The independent-samples t test revealed a significant difference between men and women, $t(354) = 3.99$, $p < .001$ (Table 2). Women reported higher anxiety ($M = 8.91$, $SD = 5.84$) than men ($M = 6.47$, $SD = 5.67$), a mean difference of 2.44 points, 95% CI [1.24, 3.64]. The standardised effect was small to moderate, $d = 0.43$, 95% CI [0.21, 0.64]. H_1 was therefore supported.

Table II: Independent-Samples t Test for Gender Differences in GAD-7 Scores (N = 356)

Gender	n	M	SD	$t(354)$	p	d	95% CI for d
Men	195	6.47	5.67	3.99	$< .001$	0.43	[0.21, 0.64]
Women	161	8.91	5.84				

Note. The mean difference was 2.44 points, 95% CI [1.24, 3.64]. Levene's test was non-significant, $F = 0.70$, $p = .403$; equal variances were assumed. Cohen's d was computed using the pooled standard deviation.

Association between Gender and Anxiety Severity

The chi-square test of independence indicated a significant association between gender and severity category, $\chi^2(3, N = 356) = 14.15$, $p = .003$, Cramér's $V = .20$, a small to moderate association (Cohen, 1988). All expected cell frequencies exceeded five (minimum expected count = 25.33), satisfying the assumptions of the test. The linear-

by-linear association was also significant, $\chi^2(1) = 13.58, p < .001$, indicating that the relationship was ordered rather than merely categorical. Table 3 presents the cross-tabulation with percentages calculated within gender and standardised residuals reported for each cell. No single cell dominated the association; instead, residuals shifted monotonically from negative at the minimal level to positive at the moderate and severe levels for women, indicating systematic displacement across the distribution rather than a difference confined to the extremes. Among men, 44.1% reported minimal symptoms compared with 27.3% of women, whereas 20.5% of women reported severe symptoms compared with 11.8% of men. Aggregating the upper two categories, 44.7% of women scored at or above the clinical threshold compared with 27.7% of men, a relative risk of 1.61. H2 was therefore supported.

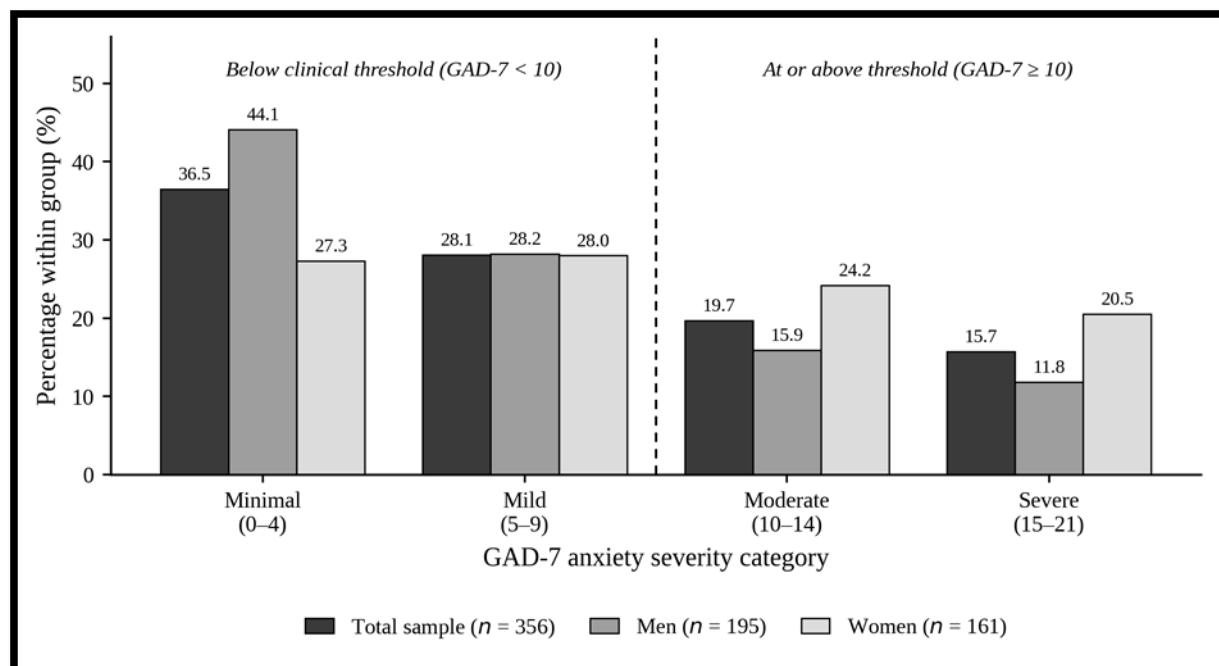
Table III: Cross-Tabulation of Gender and Anxiety Severity Category (N = 356)

Severity category	Men n (%)	Women n (%)	Total n	Std. residual (W)
Minimal	86 (44.1)	44 (27.3)	130	-1.8
Mild	55 (28.2)	45 (28.0)	100	-0.0
Moderate	31 (15.9)	39 (24.2)	70	+1.3
Severe	23 (11.8)	33 (20.5)	56	+1.5
Total	195 (100)	161 (100)	356	

Note. Percentages are calculated within gender. Standardized residuals are shown for the female column; those for the male column are equal in magnitude and opposite in sign. $\chi^2(3, N = 356) = 14.15, p = .003$, Cramer's $V = .20$.

Figure 1 displays the severity distribution for the total sample and separately by gender, making the direction and consistency of this displacement visible across all four categories.

Figure 1: Distribution of GAD-7 Anxiety Severity by Gender



Note. Bars show the percentage of each group falling in each severity category; percentages sum to 100 within group. The dashed line marks the conventional clinical threshold ($GAD-7 \geq 10$). $N = 356$.

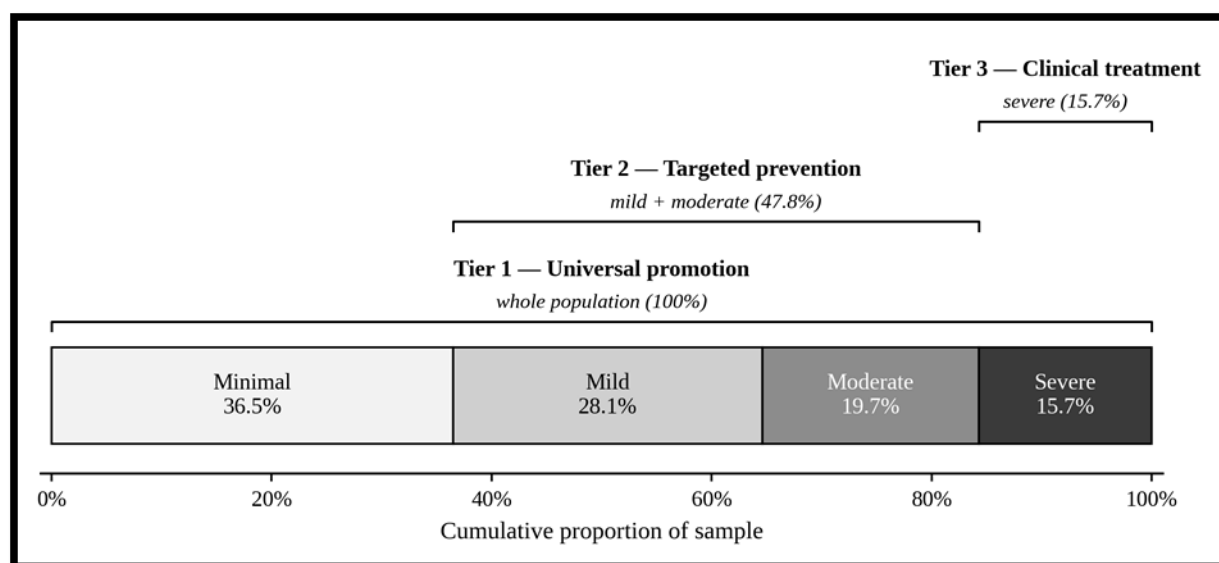
IV. DISCUSSION

This study characterised the severity distribution of generalized anxiety symptoms among 356 Pakistani adults and examined its gender patterning. Three findings warrant attention. The Urdu GAD-7 performed reliably in a heterogeneous community sample. Symptoms were graded rather than binary, with just over one-third of participants at or above the clinical threshold and nearly two-thirds below it. Women were displaced upward across the entire distribution rather than differing from men only at its extremes. Taken together, these results specify a tiered and strengths-based response rather than a treatment-only one.

Anxiety as a Graded Rather Than Binary Phenomenon

The observed rate of clinically significant anxiety, 35.4%, is substantial and broadly consistent with national estimates of psychiatric morbidity in Pakistan (Rahman et al., 2024) and with international evidence on the burden of anxiety disorders (GBD 2019 Mental Disorders Collaborators, 2022). Reported in isolation, that figure would conventionally motivate an argument for expanded clinical services, and such expansion is indeed warranted. The distributional picture, however, is the more actionable finding. After the minimal category, the largest single group was the mild band, comprising 28.1% of the sample. This group occupies a position of strategic importance. Its members fall below referral criteria and would be filtered out by any threshold-based service model, yet subthreshold anxiety is a recognized precursor of full disorder and carries functional impairment in its own right. Where specialist capacity stands at roughly 0.19 psychiatrists per 100,000 populations (Ahmad, 2025), this is precisely the group for whom brief, scalable, non-clinical intervention is both most appropriate and most likely to be cost-effective. Figure 2 maps the observed distribution onto the corresponding tiers of response.

Figure II: Observed Severity Distribution Mapped onto a Tiered Public Mental Health Response



Note. Tier 1 addresses the whole population irrespective of symptom level; Tier 2 targets those with mild to moderate symptoms who fall below referral criteria; Tier 3 comprises clinical treatment. Tiers are cumulative rather than mutually exclusive.

Positive psychological interventions are well matched to the first two tiers. The available synthesis indicates small to medium effects across well-being and distress outcomes (Carr et al., 2024), and while these magnitudes are modest at the individual level, interventions applied across the 84.3% of the distribution below the severe threshold operate on a population base that clinical services cannot approach. Tier 3 remains the province of specialist treatment; the argument advanced here is one of complementarity, not substitution.

The Minimal-Symptom Majority as a Cultural Resource

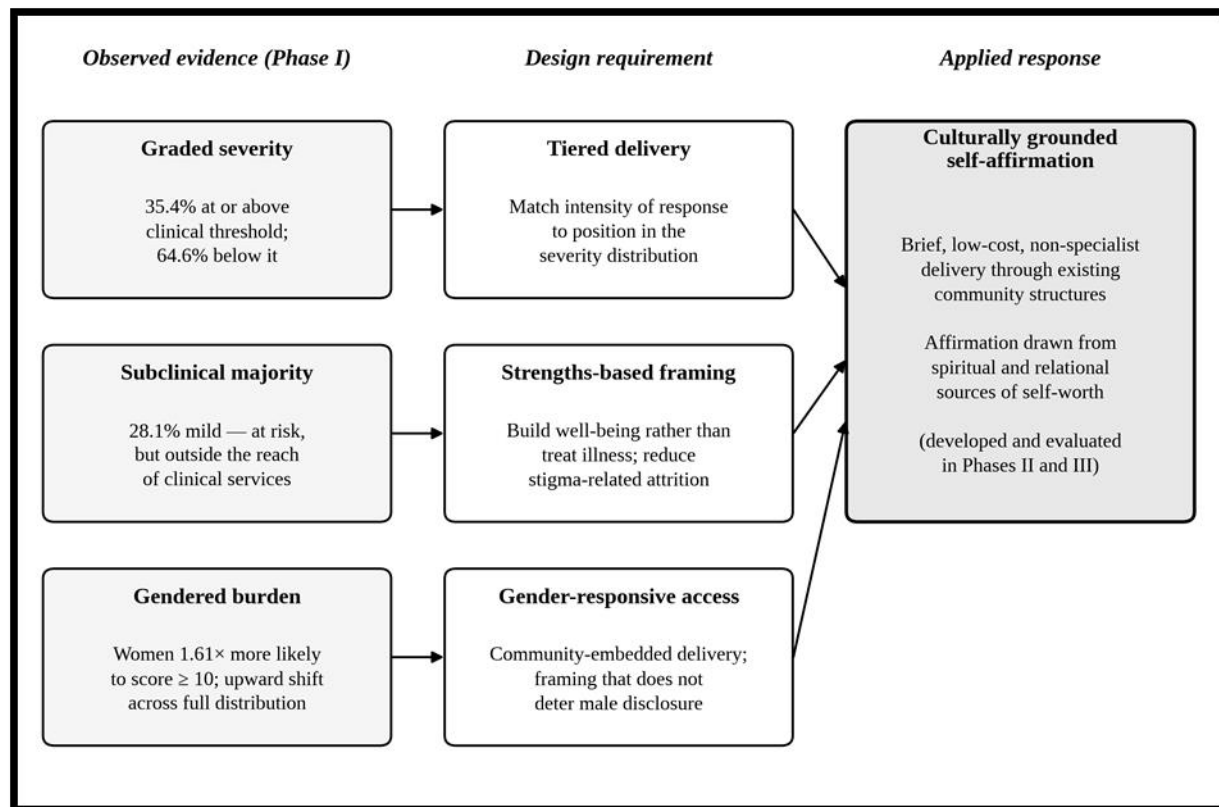
A deficit-focused reading would treat the 36.5% reporting minimal symptoms as a residual category of no analytic interest. The dual-continua model indicates otherwise (Keyes, 2007). Low symptom levels do not entail flourishing, and some proportion of this group may be languishing without meeting symptom criteria. Equally, the size of the group raises a question that deficit-oriented designs cannot answer: what sustains these individuals? Pakistani adults navigate documented economic instability, unemployment, and intense social and familial expectation with minimal access to formal psychological services, yet a substantial proportion report low distress. Recent survey evidence pointing to high coping self-efficacy alongside considerable symptom burden in Pakistani community samples (Malik et al., 2025) suggests that this reflects the operation of naturally occurring, culturally embedded coping and affirmation processes rather than a mere absence of stressors. Identifying those processes is a research task in its own right, and one for which positive psychology supplies the appropriate orientation. Self-affirmation theory predicts that affirming core sources of self-worth buffers the self against threat (Steele, 1988; Zhang et al., 2025), yet it remains agnostic as to which sources are operative in a given culture, and the operational literature has been calibrated almost entirely to Western individualistic settings (Escobar-Soler et al., 2024). Where identity is constituted through family, community, and faith, the sources available for affirmation are more plausibly relational and spiritual, and interventions that ignore this risk failing not on mechanism but on content (Anli, 2025).

Gender Patterning and Its Implications

Women reported significantly higher anxiety than men, with a small-to-moderate effect consistent with Global Burden of Disease analyses showing greater mental disorder burden among Pakistani women of reproductive age (Alvi et al., 2024). The distributional analysis adds specificity: standardized residuals shifted monotonically across categories, indicating systematic displacement rather than a difference localized to severe cases. Women in this sample were 1.61 times as likely as men to report clinically significant anxiety. Sociocultural explanation appears particularly salient here. Women in Pakistan commonly manage multiple concurrent role demands, exercise more limited personal autonomy, and encounter greater exposure to interpersonal and familial stressors, while structural constraints on mobility restrict independent access to services. An interpretive caution is nonetheless required: reporting norms are themselves gendered, with emotional expression more socially permissible for women, so masculine norms of restraint may produce under-reporting among men. The observed gap may thus reflect both a difference in distress and a difference in willingness to disclose it. Both readings converge on the same practical conclusion, since under-reporting is itself a barrier to help-seeking that intervention design must address. This implies differentiated rather than uniform delivery. Programs for women may need to operate within domestic and community settings that do not require independent travel, and to work with relational and familial identity as a source of affirmation rather than against it. Programs for men may require framing that does not activate stigma around emotional disclosure, presenting content in terms of resilience, capability, and functioning rather than symptom reduction. Gender-neutral design risks reaching neither group well.

Implications for Mental Health Promotion in Pakistan

Figure 3 summarises how each empirical finding translates into a design requirement and, in turn, into the applied response pursued in the later phases of this research programme.

Figure III: From Phase I Evidence to Intervention Design Requirements

Note. The left column summarises findings from the present study; the middle column states the design requirement each finding implies; the right column describes the applied response developed and evaluated in the subsequent phases of the research programme.

Three implications follow. First, with fewer than one in six participants reporting severe symptoms and nearly two-thirds below the clinical threshold, a service model organised exclusively around treatment would leave most of the distribution unaddressed; promotion and prevention are not supplementary here but are the components with the widest reach. Second, the non-stigmatising framing characteristic of positive psychological approaches is a practical asset rather than a conceptual preference, since programmers presented as building well-being rather than treating illness are more likely to be accepted where mental illness carries substantial social cost. Third, such approaches lend themselves to delivery through universities, workplaces, and community organizations by trained non-specialists, following a task-sharing logic already demonstrated for anxiety and depression in rural Pakistan (Rabbani et al., 2025) and now central to proposals for system reform (Main Thompson & Saleem, 2025). Cultural grounding should be understood as a design requirement rather than an optional refinement. Translation does not confer cultural validity. An affirmation exercise inviting reflection on individual achievement may simply fail to engage a person whose sense of worth is constituted through family standing and faith (Anlı, 2025). The present findings establish the magnitude and demographic patterning of the problem; identifying the indigenous affirmation processes on which such interventions should be built is the task of the subsequent phases of this programme.

Limitations

Several limitations qualify these findings. Convenience and snowball sampling means the sample is not probabilistically representative, and the severity distribution should be read as an estimate within this sample rather than a national prevalence figure; snowball recruitment in particular produces clustering within social networks, and the confidence intervals in Table 1 assume simple random sampling and are therefore likely to be optimistic. The cross-sectional design precludes causal inference and cannot establish whether subthreshold symptoms progress to disorder in this population. The GAD-7 is a screener rather than a diagnostic interview, so

the figures index probable clinically significant symptomatology rather than confirmed diagnosis. Mixed-mode administration may have introduced mode effects that were not formally tested. Self-report is subject to social desirability bias, which the gender analysis suggests may itself be gender-patterned. Finally, although age, education, occupation, and locality varied within the sample, only gender was modelled here, and no measure of well-being or flourishing was administered alongside the symptom measure, so the dual-continua interpretation advanced in this article remains inferential rather than directly tested.

Directions for Future Research

Four directions follow. Probability-based sampling would permit defensible national estimation and would allow the present distributional findings to be tested against a representative frame. Concurrent administration of well-being and symptom measures would allow the dual-continua model to be evaluated rather than assumed, and would identify the languishing subgroup that symptom screening alone cannot detect. Qualitative investigation of adults reporting minimal distress would characterise the indigenous affirmation and coping processes that the present design can only infer. Finally, controlled trials of culturally grounded positive psychological interventions, with adequate follow-up and prespecified attention to differential effects by gender, are needed to establish whether such programmes reduce anxiety and build well-being in this population.

V. CONCLUSION

Anxiety among Pakistani adults is both widespread and graded. Just over one-third of this sample reported clinically significant symptoms, and women carried a disproportionate share of that burden across the full severity range. Yet most participants fell below the clinical threshold, and more than a third reported minimal distress despite operating under considerable stress with little access to formal psychological care. Read through a positive psychological lens, this distribution describes not only a treatment need but a promotion and prevention opportunity, alongside a body of naturally occurring cultural resilience that has yet to be systematically characterized. Meeting the mental health needs of the Pakistani population will require a tiered strategy in which brief, scalable, culturally grounded interventions that build psychological strength operate alongside clinical services rather than in place of them.

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