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Development and Validation of *Khawajasira* Stigma Scale

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Abstract

Background. Gender non-conforming individuals or locally called *Khawajasiras/Hijras* experience social and institutional stigma in Pakistan. To measure their perceptions of societal stigma we designed and validated a culturally grounded *Khawajasira* Stigma Scale.

Method. A mixed-methods sequential exploratory design was employed. In Phase I, an initial pool of perceived stigma items was created by employing qualitative content analysis to investigate semi-structured interviews with ten GNC individuals. There were 49 items instead of 59 after expert assessments and Lawshe's Content Validity Ratio (CVR) were used. For Phase II psychometric validation, 300 GNC participants were chosen by snowball sampling. Reliability analysis, exploratory factor analysis (EFA) utilizing Principal Axis Factoring, item-total correlations, and convergent validity were all performed.

Results. Convergent validity was supported by a concluded 35-item scale that showed moderate positive correlation with the Victimization Scale ($r = .25$, $p < .01$) and strong internal consistency (Cronbach's $\alpha = .82$). The lack of a distinct multidimensional factor structure in the factor analysis suggested that stigma is a unidimensional phenomenon.

Conclusion. The KSS is a psychometrically valid and culturally appropriate tool that measures the perceived stigma that GNC people in Pakistan undergo. By capturing environmental, interpersonal, institutional, and intra-community stigma, the measure provides a reliable tool for research, clinical assessment, and policy interventions aimed at enhancing the well-being of the *Khawajasira community*.

Keywords. Gender non-conforming, *Khawajasira, Khawajasira* Stigma Scale, stigmatization, transgender, gender identity, discrimination, ageism

Introduction

Gender non-conforming Individuals (GNCIs) have historically endured continuous social exclusion and marginalization around the world. Gender identity, its expression or roles diverge from cultural standards associated with sex assigned roles at birth (APA, 2015; Hughto et al., 2015). In Pakistan and in other South Asian countries, GNCIs can be called a *Khawajasira* (honorific and politically correct label)*, Khusra, hijra* (more pejorative label), or *Zenana* (effeminate man) who typically lives in a *khawajasira* community, a socio-culturally distinct group that comprises of *Khawajasiras hijras, khusras or Zenanas* (plurals). These terms represent various identity categories, for example, *hijras* or *khawajasiras* are referred to as, [intersex or] *third gender* or eunuch-transvestites (Reddy, 2003); while *zenanas* maintain their female identity with no biological transitions (Amin & Saeed, 2004). Members of *khawajasira* community face systemic violence, prejudice, and institutional marginalization despite their longstanding presence in the history and culture of the area (Reddy, 2003; Nisar, 2018). Studies in Pakistan on this subject reveal pervasive rejection of these people, which starts early in childhood, includes bullying, family estrangement, school harassment, and general community exclusion (Alizai et al., 2017; Manzoor et al., 2022). Among gender-diverse communities, these experiences are linked to psychological discomfort, low self-esteem, sadness, and anxiety (Bockting et al., 2013; Grossman & D'Augelli, 2007). Barriers in education, healthcare, employment and legal protection have been documented yet very little attention has been paid to how marginalized GNCIs cope.

Gender stigma awareness includes, how society views the identity of GNCIs and comprises of perceptions, interpretations, expectations, and feelings of gender marginalized people like the GNCIs (Link & Phelan, 2001). Perceived stigma among gender-diverse and marginalized communities predict poor mental health outcomes, lower well-being, and avoidance of social services and healthcare (Testa et al., 2015; Azhar et al., 2024).

Members of the *khawajasira* group perceive and are aware about their stigmas that originate from inclusive groups of society, which include judgments about their gender non-conformity, assumed sexuality, engagement in marginalized (sex) work and other age-related vulnerabilities (Khan, 2016). Young *khawajasiras* frequently anticipate and encounter stigmatizing reactions of others based on their gender presentation, while older ones experience increased rejection from society and their own community when their social capital declines (Sultana & Kalyani, 2012).

Stigma is a social construction process that excludes people based on perceived differences and causes them to be discriminated against (Goffman, 1963). Stigma theory by Goffman's classic understanding views stigma as a process by which people who have socially discredited characteristics go through devaluation and social rejection. Building on this perspective, Link and Phelan (2001) broadened the understanding through defining stigma as a dynamic social process of labeling, stereotyping, separation, status loss, and discrimination maintained through unequal power relations and cultural value systems.

Gender non-conforming individuals face marginalization (Bockting et al., 2013). Marginalization is defined as the systemic exclusion and oppression through major social institutions, including schools, families, and healthcare systems, due to their identities or behaviors not aligning with dominant cultural norms (Khan, 2020). Stigma is experienced and perceived by marginalized communities, such as gender non-conforming people, in a variety of individual, interpersonal, and structural contexts (Hughto et al., 2015). The absorption of social disapproval and guilt related to a person's gender identity is known as internalized stigma, and it frequently results in low self-esteem and mental health problems (Bockting et al., 2013). Expecting rejection is known as anticipated stigma, and it can lead to avoidance and concealment strategies (Quinn & Chaudoir, 2015). Overt experiences of violence, exclusion, and discrimination are examples of enacted stigma (Herek, 2007; Hatzenbuehler & Link, 2014).

A 2008 study looked at stigmatization as an intersectional process, where persons who have intersecting identities such as sexual orientation, gender nonconformity, class, age, and occupation face several overlapping forms of stigma (Mahajan et al., 2008). These overlapping stigmas are not

only externally imposed, but people also perceive, expect, and internalize them, which affects how they personally experience marginalization. In order to comprehend and manage the cumulative effects of intersectional stigma in their daily lives, people turn to perceived stigma as a critical lens.

By increasing their exposure to psychosocial stress and doubling their exclusion from services, superimposed stigmas significantly increase the risk for GNC individuals. *Khawajasira* people's lives are made more difficult by intra-community hierarchies in addition to outward stigma. Exclusionary practices are reinforced by hierarchical differences; for example, *Khusras* (intersex people) are always perceived as more authentic than *Zenanas* (effeminate men), leading to intra-community stratification (Jami & Kamal, 2015). These stigmas are additionally made worse by colonial legal customs, religion, and patriarchal religious-cultural practices (Reddy, 2003; Nisar, 2018).

There is still a big gap between the research and the creation of suitable stigma measures, even if qualitative studies show the psychological and social costs of stigma among *Khawajasira* people (Azhar et al., 2024; Kanwal, 2020; Meyer, 2003). The majority of today's stigma tools were created in Western settings, and they frequently have limited scopes and neglect to take into account intersectionalities that are culturally specific. Such as the Transgender Identity Scale (TIS) and the Internalized Transphobia Scale (ITS) are mostly focused on self-directed stigma and cannot quantify culturally, socially, or structurally oriented prejudice (Bockting et al., 2020; Testa et al., 2015). The HIV Stigma Scale, developed by Berger et al. (2001), is as well not highly generalizable beyond the medical context. The conceptual conceptualizations like the minority stress model by Meyer et al. (2008)'s and the concept of stigma by Link's (1987), though they shed some light on the experiences of stigma, were created in the western sociocultural setting and, therefore, are inadequate when it comes to understanding the multifaceted stigma experiences of gender non-conforming people in south Asian context.

The current study develops a culturally based measure on the basis of existing research through the combination of both qualitative and quantitative research methods. The quantitative part permits the generalizability and reliable evaluation, and the qualitative part make sure that the lived *khawajasira* people experiences, social cultural reality and intersectional marginalization are correctly conveyed. Moreover, this paper addresses several of shortcomings identified in previous researches, like absence of culturally validated measures and a lack of emphasis on structural barrier and stigma exist in society. By developing a measure called the KSS-GNC (*Khawajasira* Stigma Scale for Gender Non-Conforming Individuals), this study seeks not just to fill empirical gap but also to come up with a tool by which culturally appropriate interventions, policy advocacy, and future research on stigma within South Asia will be absolutely informed.

Objectives

- To develop a culturally sensitive measure for measuring stigma among gender non-conforming individuals of *Khawajasira* community in Pakistan,
- To establish the psychometric properties of the newly developed measure through rigorous empirical validation.

Method

Phase 1: Interviews and Item Pool

Sample

In Phase 1, a snowball sample of 10 GNCIs (five declined to participate) from *khawajasira* community in Islamabad and Rawalpindi were asked to participate in in-depth biographical interviews until response saturation occurred; no new content surfaced after the tenth interview. Guest et al. (2006) suggest, a sample of 6 to 12 individuals is sufficient to reflect the extent of experiences saturating them effectively. They ranged in age from 40 to 49 years, with extensive lived experience in their gender cast. Five participants identified themselves as *khawajasiras* and the other five as *zenanas*; seven were *chelas* (disciples) one as a *guru* (mentor), and two that titled them as both; seven were single (unmarried), two married, and one was divorced; most of the participants left their homes as teenagers (ostracized early), leaving age ranged from 8 to 27 years, see Table 1 for details.

Table 1

Demographic Characteristics of Participants(N=10)

Participant	Age (*Y*)	ALH (*Y*)	GID	Status	Ethnicity	Marital Status
KS7	41	15	*Khawajasira*	*Chela*	Punjabi	Divorced
KS9	40	15	*Zenana*	*Chela*	Punjabi	Single
KS5	40	13	*Khawajasira*	*Chela*	Punjabi	Single
KS4	43	14	*Khawajasira*	*Chela*	Punjabi	Single
KS3	49	8	*Zenana*	*Guru*	Punjabi	Single
KS1	45	15	*Zenana*	Both	Punjabi	Single
KS8	47	27	*Khawajasira*	*Chela*	Punjabi	Married
KS6	44	12	*Zenana*	*Chela*	Punjabi	Single
KS2	46	12	*Khawajasira*	Both	Punjabi	Married
KS10	45	15	*Zenana*	*Chela*	Punjabi	Single

Note. ALH = Age Leaving Home, Y = Years, GID = Gender Identity

Assessment Measures

An interview guide consisted of 13 broad questions that identified central issues like, *Khawajasira* gender and sexual identity, childhood experiences, family reactions and dynamics, schooling, and *Khawajasira* community support, for example some questions were: how much schooling did you receive and where did you obtain it? If you did not go to school what were the underlying reasons? Describe your experiences in school? Did you feel you were different from other children? What impact did this have on your education? In addition, 38 more specific probing questions were subsequently asked to relate their lived experiences of social discrimination and stigmas. These included how and why did you join the *Khawajasira* community, and what challenges did you face? What problems and criticism did you encounter as a *Khawajasira* etc.?

Design and Procedure

Interviews. In Step 1, semi-structured interviews were carried out using the guide to generate items for the scale. articipants gave their consent after agreeing to participate in the study, all were assured their personal information and data would be kept confidential and anonymous. Duration of the interview was 40-60 minutes, audio-recorded and transcribed with permission. The interviews were conducted in a culturally appropriate manner. The interview questions were in Urdu however, if clarity was needed, Punjabi was also employed. We gave each participant was a small monetary incentive and thanked them for participating in the study.

Item Pool. In Step 2, transcribed interviews went through content analysis, and recurring stigma themes led to extract a pool of 59 items that were based on at least half of the participants that included anticipated, internalized, and enacted stigmas. Items tapped into experiences of *Khawajasiras* about gender identity, sexuality, race and ethnicity, marital status, and community membership etc. Examples include: *People consider khawajasiras as a pile of filth | People think khawajasiras are only meant for sex | I feel sorry for not being born a complete male or female* etc.

Evaluation and Content Validity. In Step 3, an evaluation of the above items were reviewed by panel of ten subject matter experts (SMEs) in the fields of clinical psychology, gender studies, and researchers working with GNSIs. To help the SMEs authors of this study provided definitions and examples of perceived stigma. They were requested to assess each item on face validity, linguistic clarity, relevance to perceived stigma, redundancy or item overlap and appropriateness for the target population. After their review, SMEs modified, rephrases, and

kept items as is from this pool. Then, the same set of ten experts rated above items to establish content validity (Lawshe, 1975). Content Validity Ratio (CVR) analysis retained an item if CVR was .60 or above. Ten items were screened leaving behind 49 items (M_{CVR} = .79) for further analysis. Experts screened items for relevance and sufficiency about stigma members of *khawajasira* community may have about inclusive groups of society.

Naming the Scale. In Step 4, authors applied a 5-point Likert-type response format to each of the 49 items that ranged from Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). This response format was selected because middle value (neutral) flanked agreement and disagreement clearly and could identify presence or absence of stigma. No item was reversed scored. The range of composite scores could be between 49 to 245, where higher numbers represented greater stigma perceived or felt by Khawajasira s from society. All authors agreed to call it the *Khawajasira* Stigma Scale.

Phase 2: Validation of the Scale

Sample

After pilot testing KSS for clarity and ease of comprehension on a small sample of *Khawajasiras*, a snowball sample of 300 GNCIs or *Khawajasira*s, age range 18 - 70 years (M = 33.53, SD = 9.13) were approached to complete KSS after consent. Data from 30 participants were excluded for inconsistent or incomplete response entries.

Assessment Measures

Khawajasira Stigma Scale (KSS). Developed in this study, KSS a self-report scale contains 49 items with no reverse-coded items. Each item can be rated on a 5-point Likert-type response format from Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5) with a composite score range between 49 to 245. Higher scores indicate higher levels of perceived stigma. The scale demonstrated acceptable to moderate internal consistency (α = .77) in the current sample.

Victimization Scale (VS). Originally developed by Testa et al. (2015) and translated into Urdu by Fatima and Jami (2022), is a six item scale that measures experiences of victimization across three timeframes: before age 18, after age 18, and within the past year. A 5-point Likert-type scale measures each item on (0) to (4) response format, with a 0-24 composite score range with no reverse-coded items. Higher scores indicate greater victimization. The scale showed acceptable internal consistency in this study (α = .71).

Results

In order to test the psychometric properties of the *Khawajasira* Stigma Scale (KSS), reliability analysis, convergent validity, exploratory factor analysis, and item to total correlation statistics were computed.

Reliability and Descriptive Statistics

The internal consistency of the *Khawajasira* Stigma Scale was analyzed by using Cronbach's alpha. Alpha value (α = .77) shows the strong internal consistency of the scale. While descriptive statistics showed a mean score of M = 205.46 (SD = 13.65) reflecting similar stigma experience across respondents.

Validation of *Khawajasira* Stigma Scale through victimization scale

Convergent validity of KSS was examined by correlating with victimization scale. It was hypothesized that individuals who face higher victimization would report higher perceived stigma. The Pearson Product-Moment correlation analysis showed a statistically significant positive correlation between the *Khawajasira* stigma and victimization (r = .25, p < .01), validating the convergent validity of the *Khawajasira* Stigma Scale. The small-to-moderate effect size shows that more experiences of the victimization are associated with the higher levels of perceived stigma among gender non-conforming individuals.

Exploratory Factor Analysis (EFA)

Table 2

Exploratory Factor Analysis of the Khawajasira Stigma Scale (N = 300)

Items	Factor 1	Communality (h^2)	Items	Factor 1	Communality (h^2)
KSS 28	.53	.30	KSS 10	.35	.19
KSS 38	.52	.29	KSS 29	.37	.21
KSS 48	.47	.28	KSS 15	.39	.23
KSS 25	.47	.28	KSS 05	.36	.20
KSS 20	.43	.27	KSS 27	.33	.17
KSS 12	.43	.27	KSS 26	.33	.17
KSS 16	.42	.26	KSS 14	.35	.19
KSS 08	.41	.25	KSS 37	.37	.21
KSS 06	.41	.25	KSS 35	.34	.18
KSS 07	.41	.25	KSS 30	.32	.16
KSS 24	.40	.24	KSS 48	.32	.16
KSS 19	.41	.25	KSS 18	.29	.13
KSS 45	.42	.26	KSS 22	.28	.12
KSS 13	.39	.23	KSS 23	.29	.13
KSS 43	.38	.22	KSS 03	.26	.10
KSS 39	.37	.21	KSS 49	.25	.09
KSS 17	.39	.23			
KSS 47	.40	.24			
KSS 40	.41	.25			

Note. Extraction Method = Principal Axis Factoring. One Factor Solution Specified.

Exploratory Factor Analysis (EFA) was conducted on a sample of 300 gender non-conforming individuals to explore underlying factor structure of KSS using Principal Axis Factoring. The sample size of 300 was deemed adequate for EFA as per guidelines by Pearson and Mundform (2010). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .74, satisfactory for factor analysis (Kaiser, 1974). Bartlett's Test of Sphericity was significant, χ^2 (595) = 2484.50, $p < .001$, suggesting that the data were suitable for factor analysis. Several factor solutions (three to six factors) were examined using both Promax (oblique) and Varimax (orthogonal) rotations. The scree plot suggested a five-factor solution; however, the extracted factors lacked theoretical clarity, and several items exhibited significant cross-loadings or weak loadings. Due to the absence of a coherent and interpretable factor structure, the KSS was retained as a unidimensional scale measuring Stigma. The final one factor solution yielded an eigenvalue of 4.80, accounting for 13.71% of the total variance. Factor loading ranged from .25 to .53, with majority of items exhibiting moderate to strong loading (≥ .30) supporting strong association with the latent construct. Items with relatively low loading were retained based on the theoretical relevance and acceptable items to total correlation.

Items to Total Correlation

As exploratory factor analysis (EFA) did not yield a stable factor structure, so item retention was led by item–total correlations, which are commonly advocated as a viable approach for item reduction in classical test theory. As Clark and Watson (1995) emphasize, internal consistency analyses especially

item–total correlations are amongst the most frequently used and empirically supported methods for item selection in unidimensional scale. Item-to-total correlation analysis was conducted to determine the contribution of each item to the overall internal consistency of the scale. Following the guidelines of Clark and Watson (1995), items with item-total correlations below .20 were considered for removal. Of the 49 items, 14 items demonstrated correlations below the .20 threshold and were therefore excluded from the final version of the scale. The remaining 35 items revealed correlations of.20 to.45 (M =.29), indicating their inclusion. The internal consistency of the *Khawajasira* Stigma Scale improved after item refinement, with Cronbach's alpha increasing from.77 (49 items) to.82 (35 items), indicating better dependability. The *Khawajasira* Stigma Scale has 35 items that contribute significantly to measuring the construct (See Appendix).

Discussion

The current study aimed to developing and validating the *Khawajasira* Stigma Scale for gender non-conforming members of the *Khawajasira* community in Pakistan. The scale was created to assess how stigma is perceived in daily life across a range of factors, including socioeconomic position, aging, gender nonconformity, sexual identity, and discrimination within the community. The main stages of the study and the thematic categories that emerged from the validated instrument are explored in relation to the results, which together provide an extensive understanding of how stigma functions in various institutional and social situations.

According to minority stress studies (Meyer, 2003; Testa et al., 2015), the KSS demonstrated good internal consistency (α =.82), demonstrating its reliability in evaluating perceived stigma among GNC individuals. Items below the total were examined for relationships with the items. DeVellis (2016) reduced the original 49-item draft to a 35-item scale by eliminating the .20 threshold. Bartlett's Test of Sphericity was significant (p <.001), indicating factor analysis abilities, and an explanatory factor analysis yielded a KMO value of.74, indicating good sample adequacy (Kaiser, 1974). The substantial internal consistency indicates unidimensionality, indicating that the KSS operates as a single connected construct rather than numerous dimensions, even though the EFA could not identify clearly separate multidimensional variables. This unidimensionality demonstrates how several types of stigma, such as contempt, social exclusion, sexual objectification, and family rejection, work together to provide a more comprehensive, cumulative feeling of societal devaluation.

The KSS had a substantial positive correlation with the Victimization Scale ($r=.25, p<.01$), indicating convergent validity. This is taken into account in light of the theoretical assumption that violent episodes are linked to higher stigma attitudes among GNC people, as established in earlier study (Testa et al., 2014). It should be emphasized that the KSS includes only identity-based characteristics, which sum up the stigma, including gender expression, sexual orientation, and marital status, and contextual modifying features of healthcare, education, family, and community. Unlike more classic measures of stigma, such as the Internalized Transphobia Scale (Bockting et al., 2020) or Gender Minority Stress and Resilience Scale (Testa et al., 2015) which are created in Western cultures, the KSS is shaped by the *Khawajasira*-specific experiences, the manifestations of marginalization on the local level. Due to its contextual sensitivity, the scale is more ecologically valid and can be particularly applicable in the research and intervention development in the South Asian cultural setting.

KSS found out several primary reasons that describe how individuals who consider themselves as gender nonconforming feel stigmatized. The results of the study indicated a similar fashion: *Khawajasira* individuals are subject to a significant stigma in the community. The KSS contains several sentences that show the intensely set up societal demeaning of nonconforming genders in Pakistan, such as, "People think we have bad influence on their children, neighbors think we are piles of filth, the good people in society think badly of the *Khawajasira* people personages. These remarks indicate that stigma is not confined to exceptional events, but it is a part of all aspects of social life, such as in the community and even during a family reunion. Even the spaces of kinship may become a source of shame and isolation in the collectivist civilizations, which is depicted

in the item by the description when I attend family events, they call me names such as "*Zenanas*." This is consistent with Link and Phelan's (2001) concept, which states that stigma is a process that comprises identifying, stereotyping, separating, and status loss and takes place inside societal bodies dominated by power. According to Shafaat (2004), gender nonconformity is usually viewed as a moral and religious transgression in Pakistan. Popular cultural narratives that depict *Khawajasira* as distinct, harmful, or humiliating serve to further this stigma.

Stigma can also appear in a family setting. Items like "Family members add to our sorrows and sufferings instead of feeling our sorrow" "The family forbids us from staying with them because they are afraid of society." "I regret that I had to distance myself from my parents due to my gender identity and behavior." "Families arrange our marriages to indorse our masculinity in order to preserve their honor." "My family forbids me from meeting my married sisters in order to preserve their honor." These items are a reflection of deeply ingrained stigma based on family. Research has consistently shown that family rejection is a major source of suffering for GNC and transgender people (Jami & Kamal, 2015). This rejection originates from the fear of loss of societal honor and deviation from acceptable gender roles, further excluding GNC individuals.

Furthermore, perceived objectification and sexualization also appeared as prominent contributor to stigma. Several of these items refer to the commodification and hypersexualization of *Khawajasira bodies*, including "People in society perceive us as sexual objects" and "While begging, people offer money in exchange for sexual favor." "Even during sacred months, people pressure us for sexual relations" "Male University students express a desire to engage in sexual acts with us" "Voyeurs drug us and sexually assault us" "Because of my mannerisms and behavior, men take me to various places for sex work". They refer to how *Khawajasira individuals* are continually sexualized regardless of context or consent. Such experiences in schools, places of worship, and public spaces attest to the ubiquity of sexual objectification across every aspect of *Khawajasira* individual's lives. Such objectification is not merely passive but usually takes the form of active sexual coercion, exploitation, and abuse (Aziz & Azhar, 2020). As noted by studies by Winter et al. (2009), transgender and gender non-conforming people in South and Southeast Asia are often subjected to sexual harassment, offers of transactional sex, and even coercive sex by virtue of their gender status and the prevailing belief that they are mostly for sexual gratification. In addition to violating physical autonomy, these interactions reinforce stigma by portraying *Khawajasira* as hypersexual individuals, a deeply ingrained stereotype connected to colonial and post-colonial narratives (Reddy, 2005).

Participants reported stigma in healthcare settings "Doctors and nurses put on gloves and masks upon seeing us" Although the wearing of gloves and masks by healthcare professionals is a common infection-control practice, participants in this study constantly reported that such measures were selectively and disproportionately applied to them, rather than to all patients. Participants reported that healthcare staff displayed visible discomfort, avoided being in close proximity, and often used derogatory remarks alongside the use of protective equipment. These experiences show that the precautions were perceived as expressions of dread, contamination worries, and social distancing specifically aimed at them as *Khawajasira* persons rather than as standard therapeutic practice in and of itself. In line with earlier research demonstrating that transgender and gender-diverse individuals tend to be subjected to degrading, discriminatory treatment in clinical settings as well (Kosenko et al., 2013).

Items like "In educational institutions, students call us with mocking tones" emphasize the absence of inclusive and safe learning environments for GNC individuals. South Asian research has found systematic bullying, exclusion, and dropout of transgender young people due to ongoing harassment. In school environments, *Khawajasira's* are often rejected due to their departure from the traditional masculine gender norms (Alizai et al., 2017; Khan, 2020).

The majority of them stated that because they played with dolls, painted their nails, and applied makeup as children, they were perceived as effeminate boys (Alizai et al., 2017).They never

played or related with them since such gender performances often left them isolated by their friends and mocked by their teachers (Somasundaram, 2009; Virupaksha and Muralidhar, 2018).

Moreover, prejudice in the community is also captured in the KSS, which is commonly disregarded in traditional stigma research. The prevalence of ageism and classism bias in the *Khawajasira* group is depicted by statements like the one which encompasses that I feel stigmatized in the community because I am old or married. Other phrases such as I face discrimination in my community because of my skin color, it is because of my beauty and I face discrimination in my community because I am married, all lend credence to this trend. The fact that low financial status individuals are victims of the extortion process also emphasizes the weakness of the members of the disadvantaged group. This observation aligns with the past studies showing the effects of economic hierarchies, beauty standards, and power dynamics on intra-community dynamics (Hossain, 2012; Khan, 2020). Old age has become a central point of marginalization. With the age of *Khawajasira* people, they suffer discrimination not only within their community but also with the rest of the population. Khan et al. (2009) note that desertion, low social status, and accessibility of economic opportunities are common challenges older *Khawajasira* have to face. This age discrimination contributes to invisibility and dispensability, and it creates competition among the members of the younger generation. Alamgir (2022) argues that the stigma of *Khawajasira* individuals does not diminish over time, instead, it changes and becomes apparent in workplace situations in various forms of discrimination and social apathy. The results indicate the importance of considering intra-community stigma to be a significant source of the cumulative burden of perceived stigma.

The *Khawajasira* Stigma Scale (KSS) systematically measures labor market exclusion by statements such as "We are not given a respectable job" and "The government does not give us jobs because we are *Khawajasira*." These items shows that gender non-conforming individuals face institutional and structural challenges, as well as individual-level prejudice at employment in Pakistan and across South Asia. Moreover, GNC employees repeatedly face discrimination, harassment, and abuse at work (Grant et al., 2011).

Limitations and Future Directions

Even though the scale verified strong psychometric performance, the EFA did not produce theoretically relevant factors, implying that the concept of perceived stigma is best understood as a unidimensional yet complex experience. Future study might reveal the use of confirmatory factor analysis (CFA), explanatory factor analysis (EFA), and cross-cultural validation to further clarify its structure.

Furthermore, the non-random sample and geographical confinement to Islamabad and Rawalpindi limit the findings' applicability to larger GNC populations. More studies are required across other provinces and various linguistic and cultural environments in Pakistan.

Conclusion

The validated KSS offers a culturally and contextually entrenched measure to assess the perceived stigma experienced by GNC individuals in Pakistan. The scale advances over uni-dimensional conceptualizations of perceived stigma and includes institutional, sociocultural, sexual, intra-community and economic aspects. Through operationalizing these lived experiences using a psychometrically reliable scale, our research offers a crucial tool to clinical, policy, and advocacy work towards enhancing the mental health and social well-being of the *Khawajasira community*.

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Appendix

Khawajasira Stigma Scale for Gender Non-Conforming Individuals (KSS-GNC)

ہدایات: مندرجہ ذیل بیانات خواجہ سرا کے روزمرہ کے تجربات کے بارے میں ہیں کہ کس حد تک ان کو کمیونٹی یا کمیونٹی کے باہر تنقید کا سامنہ کرنا پڑتا ہے۔ مندرجہ ذیل بیانات کو غور سے پڑھیں / سنیں اور بتائیں آپ کس حد تک مندرجہ زیل صورتحال یا تنقید کا سامنا کرنا پڑتا ہے؟

1= مکمل طور پر غیر متفق: 2= غیر متفق: 3= نہ متفق نہ غیر متفق: 4= متفق: 5= مکمل طور پر متفق

نمبر	بیانات	مکمل طور پر غیر متفق	غیر متفق	نہ متفق نہ غیر متفق	متفق	مکمل طور پر متفق
1	گھر والے ہمارا دکھ محسوس کرنے کے بجائے ہمارے دکھوں اور تکالیف میں اضافہ کرتے ہیں۔	①	②	③	④	⑤
2	معاشرے کے لوگ ہمیں زنانہ کپڑوں اور میک اپ کی وجہ سے جنسی کاموں کی مشین سمجھتے ہیں۔	①	②	③	④	⑤
3	محلے والے ہمیں گندگی کا ڈھیر سمجھتے ہیں۔	①	②	③	④	⑤
4	دنیادار خواجہ سرا کو حقیر سمجھتے ہیں۔	①	②	③	④	⑤
5	کام کی جگہ ہو یا کوئی محفل، لوگ ہم سے زبردستی کرتے ہیں اور تشدد کا نشانہ بناتے ہیں۔	①	②	③	④	⑤
6	ہمیں جنسی کاموں میں ملوث ہونے کی وجہ سے مختلف خطرناک (ایڈز، ہیپاٹائٹس وغیرہ) بیماریاں لگ جاتی ہیں۔	①	②	③	④	⑤
7	لوگ مجھے بھیک مانگنے وقت جنسی کاموں کے لیے پیسوں کی آفر کرتے ہیں۔	①	②	③	④	⑤
8	گھر والے معاشرے کے خوف سے ہمیں اپنے پاس نہیں رہنے دیتے۔	①	②	③	④	⑤
9	تعلیمی اداروں میں طالب علم ہمیں طنز بھرے لہجوں اور مختلف ناموں سے پکارتے ہیں۔	①	②	③	④	⑤
10	.میری حرکتوں اور چال چلن کی وجہ سے مجھے تنقید کا نشانہ بنایا جاتا ہے۔	①	②	③	④	⑤
11	مجھے جنسی طور پر نامکمل ہونے کا طعنہ دیا جاتا ہے۔	①	②	③	④	⑤
12	خواجہ سرا کمیونٹی میں اگر میں نربان (castrated) نہیں ہوں تو مجھے مرد ہونے کا طعنہ دیا جاتا ہے۔	①	②	③	④	⑤
13	لڑکوں کی طرف جنسی رجحان ہونے کی وجہ سے مجھے تنقید کا نشانہ بنایا جاتا ہے۔	①	②	③	④	⑤
14	مجھے افسوس ہوتا ہے کہ میں مکمل مرد یا عورت کیوں پیدا نہ ہوا۔	①	②	③	④	⑤
15	مجھے دکھ ہے کہ اپنی مختلف صنفی رجحان اور حرکات کی وجہ سے مجھے ماں باپ سے دور ہونا پڑا۔	①	②	③	④	⑤

نمبر	بیانات	مکمل طور پر غیر متفق	غیر متفق	نہ متفق نہ غیر متفق	متفق	مکمل طور پر متفق
16	ہمیں باعزت نوکری نہیں دی جاتی۔	①	②	③	④	⑤
17	جب ہم ہسپتال جاتے ہیں تو ہمیں دیکھ کر ڈاکٹر اور نرسیں دستانے اور ماسک پہن لیتے ہیں۔	①	②	③	④	⑤
18	معاشرے کا ہر طبقہ ہمیں نفرت کی نگاہ سے دیکھتا ہے۔	①	②	③	④	⑤
19	ہمیں خواجہ سرا ہونے کی وجہ سے حکومت نوکری نہیں دیتی۔	①	②	③	④	⑤
20	اپنی عزت کی خاطر خاندان والے ہماری شادیاں کرا دیتے ہیں تا کہ ہمیں مرد ثابت کر سکیں۔	①	②	③	④	⑤
21	جب میں خاندان کی تقریبات میں شرکت کرتی ہوں تو لوگ مجھے زنانہ کھسرا کہتے ہیں۔	①	②	③	④	⑤
22	لوگ سمجھتے ہیں کہ ہماری وجہ سے اُن کے بچوں پر برا اثر پڑتا ہے۔	①	②	③	④	⑤
23	مجھے خواجہ سرا ہونے کی وجہ سے ناقابل برداشت باتیں بھی برداشت کرنی پڑتی ہیں۔	①	②	③	④	⑤
24	مقدس مہینوں میں بھی لوگ جنسی تعلقات کے لیے مجبور کرتے ہیں۔	①	②	③	④	⑤
25	یونیورسٹی میں مرد طالب علم ہم سے جنسی کام کرنے کی خواہش ظاہر کرتے ہیں۔	①	②	③	④	⑤
26	تماش بین ہمیں نشہ آور چیزیں دے کر زیادتی کا نشانہ بناتے ہیں۔	①	②	③	④	⑤
27	خواجہ سرا کمیونٹی کا حصہ بننے کے بعد لوگوں کی تنقید سے بچنے کے لیے میں اپنے اصلی گھر سے باہر کم نکلتی ہوں۔	①	②	③	④	⑤
28	شادی شدہ خواجہ سراؤں کو ان کی بیوی کی جانب سے بھی تنقید کا سامنا کرنا پڑتا ہے۔	①	②	③	④	⑤
29	بڑھتی عمر کے ساتھ لوگ ہمیں بھیک دینے سے بھی انکار کر دیتے ہیں۔	①	②	③	④	⑤
30	خاندان والے اپنی عزت کی خاطر مجھے میری شادی شدہ بہنوں سے نہیں ملنے دیتے۔	①	②	③	④	⑤
31	میری مختلف چال ڈھال اور حرکتوں کی وجہ سے مرد مجھے جنسی کاموں کے لیے مختلف ٹھکانوں پر لے جاتے ہیں۔	①	②	③	④	⑤
32	مجھے میری کمیونٹی میں رنگ، خوبصورتی وغیرہ کی بنیاد پر امتیازی سلوک کا سامنا کرنا پڑتا ہے۔	①	②	③	④	⑤
33	مجھے میری کمیونٹی میں بڑی عمر کی بنیاد پر امتیازی سلوک کا سامنا کرنا پڑتا ہے۔	①	②	③	④	⑤
34	مجھے میری کمیونٹی میں شادی شدہ ہونے کی وجہ سے امتیازی سلوک کا سامنا کرنا پڑتا ہے۔	①	②	③	④	⑤
35	.خواجہ سرا کمیونٹی میں کم مالی حیثیت رکھنے والے خواجہ سرا استحصال کا شکار ہوتے ہیں۔	①	②	③	④	⑤

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Physical and Psychological Well-being in Father-Daughter Dyads: A Systematic Scoping Review of Global Interventions

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Abstract

Background. Adolescent girls' physical inactivity and mental health challenges are increasing globally, particularly in contexts where sociocultural barriers restrict girls' mobility. Father-daughter engagement through structured physical activity (PA) and awareness programs has emerged as a promising strategy to address these concerns.

Objective. This systematic scoping review aims to synthesize global evidence on intervention-based programs involving father-daughter dyads and examine their impact on physical and psychological well-being.

Methods. A systematic search was conducted using PubMed and Google Scholar for studies published between January 2014 and May 2025. A total of 36 intervention-based studies meeting predefined inclusion criteria were analysed following PRISMA-ScR guidelines.

Results. Findings indicate that father-daughter co-participation in structured programs significantly improves physical activity levels, reduces sedentary behaviour and enhances psychological outcomes, including emotional resilience, self-esteem, and relational bonding. Interventions such as Dads And Daughters Exercising and Empowered (DADEE), Run Daddy Run and Healthy Youngsters Healthy Dads (HYHD) demonstrated consistent effectiveness. Key mechanisms underpinning these outcomes include emotional regulation, role-modelling and co-parenting dynamics.

Conclusion. Father-inclusive interventions offer a robust and culturally adaptable approach to improving girls' physical and psychological well-being. These programs also contribute to challenging gender norms and strengthening family relationships. The findings provide actionable insights for researchers, educators, and policymakers to design community-based, gender-sensitive interventions.

Keywords: Father-daughter dyads, physical activity, psychological well-being, interventions, empowerment, co-parenting

Introduction

Adolescent girls' physical inactivity and declining mental health represent pressing global public health concerns. Increasing screen time, sedentary lifestyles, and reduced access to safe recreational spaces have contributed to rising levels of anxiety, depression and poor physical health among young people (Vella et al., 2023). These challenges are further exacerbated in gender-conservative societies, such as Pakistan and Bangladesh, where sociocultural norms often restrict girls' mobility and reinforce gendered expectations around space use (Asif, 2024; Ahmed et al., 2023). In such contexts, girls face compounded risks of social isolation and physical decline, necessitating interventions that address both biological and cultural barriers.

Within this landscape, the role of family has gained increasing attention as a critical determinant of adolescent development. While maternal influences have traditionally been the focus of family-based research, a growing body of literature highlights the distinct and complementary role of fathers. Positive father involvement is consistently associated with higher self-esteem and better emotional regulation (Zhu et al., 2024; Juliyanti & Magistarina, 2024; Leppard & Dufur, 2021). Specifically, parental warmth and validation have been linked to improved resilience and lower risks of disordered behaviours (Walsh et al., 2024; Mestermann et al., 2023). Conversely, parental "invalidation" or absence has been shown to correlate with higher rates of disordered eating and emotional instability in daughters (Reim, 2018).

Theoretical frameworks like Social Learning Theory and Attachment Theory explain these outcomes. Fathers serve as primary role models, influencing daughters' attitudes towards physical activity through shared experiences (Schoeppe et al., 2016). Furthermore, secure father-daughter attachment fosters the emotional security required for adaptive stress regulation during the transition to adulthood (Hoegler et al., 2023).

In recent years, structured father-daughter interventions have emerged as potent tools for change. The DADEE program in Australia demonstrated that targeting the father-daughter dyad specifically can improve daughters' fundamental movement skills and social-emotional well-being more effectively than general family programs (Morgan et al., 2019; Young et al., 2019). Similarly, HYHD and "*Run Daddy Run*" programs emphasize that when fathers model healthy lifestyles, daughters are more likely to sustain physical activity levels (Ashton et al., 2024; Latomme et al., 2023).

Beyond Western contexts, emerging research highlights the cultural adaptability of these models. In Canada, community-based initiatives for South Asian immigrant families have focused on using father-daughter bonding to challenge restrictive gender norms (Jamal et al., 2022). In the United States, the "South Asians Active Together" (*SAATH*) protocol illustrates how dyadic physical activity can be used to navigate cultural barriers in minority populations (Kandula et al., 2022). These interventions suggest that when fathers are engaged as "gender-equity advocates," they not only improve their daughters' physical health but also empower them to reclaim public spaces and sports (Pollock et al., 2021).

Despite these promising developments, the existing literature remains fragmented. While individual studies provide valuable insights, there is a lack of comprehensive synthesis focusing specifically on father-daughter dyads and the mechanisms through which such interventions influence physical and psychological well-being. Moreover, limited attention has been given to contextual factors such as cultural norms, socioeconomic conditions, and program design features that may shape intervention effectiveness, particularly in underrepresented settings such as South Asia.

Addressing these gaps is both timely and necessary. In contexts like Pakistan, gender norms and structural barriers constrain girls' opportunities for physical activity, father-inclusive approaches may offer a culturally acceptable and impactful pathway for promoting well-being and empowerment. By engaging fathers as active partners in their daughters' lives to improve health outcomes and transform gendered expectations within families and communities.

Therefore, this systematic scoping review aims to synthesize global evidence on structured father-daughter intervention programs and examine their impact on physical and psychological well-being. It further seeks to identify key mechanisms,

program characteristics and contextual factors that contribute to successful outcomes. By integrating findings across the design of culturally adaptable, family-centred interventions that promote health, well-being, and gender equity among adolescent girls.

Objective of the Study

Guided by the PICO framework – Participants (father-daughter dyads), Interventions (Structured physical/awareness programs), Comparison (control groups or baseline data), and Outcomes (physical and psychological health) – the objective of this systematic scoping review is to map the global landscape of father–daughter dyadic interventions and synthesize their impact on physical and psychological health.

Research Questions

RQ1: What types of structured father-daughter intervention programs have been implemented globally, and what are their core components?

RQ2: To what extent do these interventions improve physical and psychological outcomes compared to control groups?

RQ3: What are the underlying mechanisms (e.g., role-modelling, emotional regulation) that explain the success of these dyadic interventions?

RQ4: How do cultural norms and program delivery settings influence the implementation and long-term impact of these interventions?

Method

Given the emerging nature of father-daughter dyadic research in non-Western contexts, the Preferred Reporting Items for Systematic Reviews and Meta-Analysis for Scoping Reviews (PRISMA-ScR) approach was adopted. This allowed for the inclusion of qualitative and descriptive evidence from regions like Pakistan and Bangladesh, providing a more comprehensive global perspective than a traditional meta-analysis.

Search Strategy

An extensive literature search was executed across PubMed and Google Scholar. The search terms were "psychological well-being," "father-daughter dyads," "physical activity," "intervention-based programs," and "co-parenting." Boolean operators (AND/OR) were used to refine the results. The search was limited to English language, peer-reviewed articles published between January 2014 and May 2025.

Inclusion and Exclusion Criteria

Studies were included if they: involved father–daughter dyads (ages 3–25), including fathers or father figures; examined broader family-based contexts where father involvement was explicitly reported; employed structured physical activity, lifestyle, or awareness-based interventions; reported physical (e.g., motor skills, physical activity levels) and/or psychological outcomes (e.g., self-esteem, emotional well-being, bonding); and utilized randomized controlled, observational, or qualitative research designs.

Studies were excluded if they: did not report any form of father involvement; focused exclusively on non-family or peer-based interventions; lacked measurable physical or psychological outcomes; or were editorials, opinion pieces, or non-scholarly sources.

Screening and Selection Process

The initial search yielded 1,114 articles. After removing duplicates, titles and abstracts were screened for relevance, leaving 74 studies for full-text review. Ultimately, 36 articles met our stringent inclusion criteria and were included in the final synthesis (refer Fig. 1).

Figure 1

PRISMA Flowchart of the Conducted Search

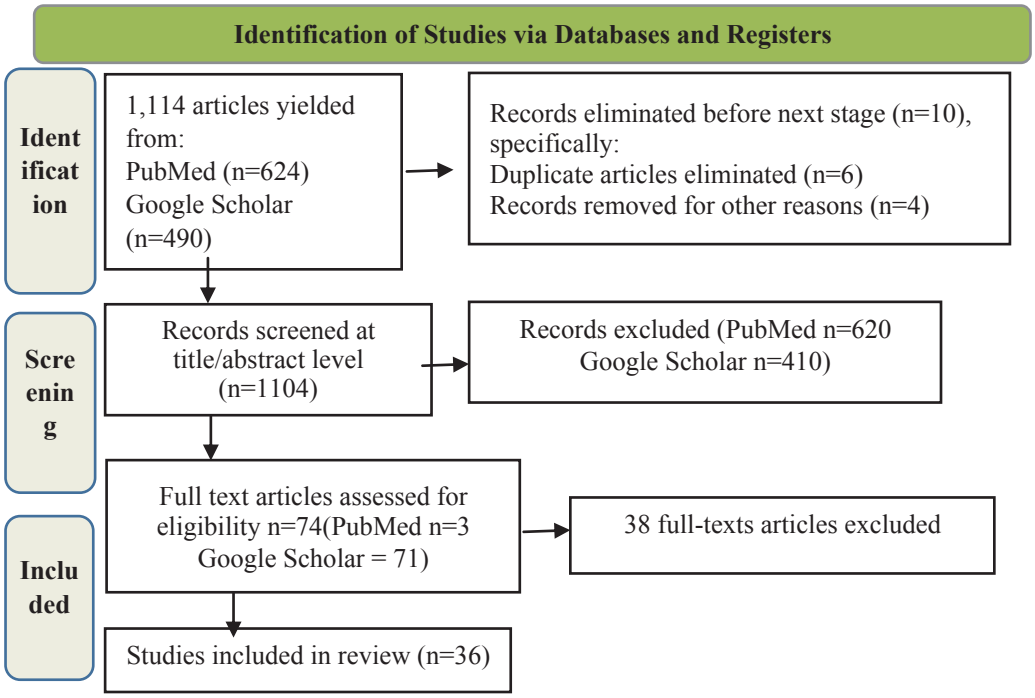

Table 1

Comprehensive Synthesis of Findings (N=36)

Author (Year)	Study Type	Country	Key Finding (Physical & Psychological)	Mechanism / Contextual Factor
Ahmed et al. (2023)	Cluster RCT	Bangladesh	Significant reduction in depression; improved life satisfaction.	School-based multicomponent delivery.
Andrieieva et al. (2022)	Correlational	Ukraine	Positive link between recreational PA and family well-being.	Family unit cohesion.
Asare & Danquah (2015)	Cross-sectional	Ghana	High sedentary behavior linked to poor mental health in girls.	Socioeconomic/African adolescent context.
Ashton et al. (2024)	Longitudinal	Australia	Sustainable impact on nutrition and activity levels (HYHD).	Long-term replicability & father modeling.
Ashton et al. (2023)	Qualitative	Australia	Strengthened family bonding and paternal engagement.	Lived experience/Father-child perspective.
Asif (2024)	Descriptive	Pakistan	"Women on Wheels" boosted mobility and independence.	Challenging gender-conservative norms.
Blackshear (2022)	Cross-sectional	USA	Strong association between father involvement and girl's PA.	Paternal support in undergraduate years.
Blackshear (2019)	Review	USA	Fathers are an "untapped resource" for African American girls.	Cultural relevance for minority groups.
Brady & O'Connor (2014)	Theoretical	USA	Community organizing leads to sustainable social change.	Social Change Theory.
Day (2025)	Qualitative	UK	PA facilitates "reciprocal disclosure" and intimacy.	Conduit for emotional closeness.
Dechrai et al. (2022)	Correlational	Australia	Father's gender-equity beliefs predict daughter's motor skills.	Impact of paternal gender stereotypes.
Demirci (2024)	Cross-sectional	Turkey	Family interaction quality determines adolescent mental health.	Reconstituted family dynamics.
Formagini et al. (2025)	Cross-sectional	USA	Paternal support directly correlates to Latina pre-teen PA.	Cultural context of Hispanic families.
Guagliano et al. (2019)	Feasibility Trial	UK	Family-based step tracking (FRESH) is feasible and engaging.	Child-led/Digital delivery format.
Ha et al. (2019)	RCT Protocol	Hong Kong	Multi-component family PA improves MVPA and parenting.	School-to-home transition.
Hoegler et al. (2023)	RCT	USA	Reduced emotional insecurity and improved father attachment.	IPOD technique/Emotional regulation.
Jamal et al. (2022)	Community	Canada	Nurturing bonds in immigrant families improves well-being.	Challenging patriarchal gender norms.
Juliyanti & Magistarina. (2024)	Correlational	Indonesia	Father involvement predicts better adolescent emotion regulation.	Paternal presence and regulation.
Kandula et al. (2022)	RCT Protocol	USA	Multi-level intervention for S. Asian mother-daughter dyads.	Cultural adaptation for South Asians.
Latomme et al. (2023)	RCT	Belgium	"Run Daddy Run" increased co-PA and lifestyle health.	Co-creation and SMART goal setting.
Latomme et al. (2021)	Protocol	Belgium	Use of co-creation to design father-child interventions.	Bottom-up design approach.
Leppard & Dufur (2021)	Correlational	USA	Sports participation mediates paternal closeness.	Gendered associations in adolescence.
Lisinskienė & Loch. (2019)	Qualitative	Lithuania	Parental involvement in sports improves child attachment.	Sport as a relationship builder.
Lloyd et al. (2015)	RCT	Australia	Parenting practices mediate dietary and PA behavior change.	HYHD: Behavioral mediation.
McClendon et al. (2021)	Qualitative	USA	Paternal responsibilities influence Mexican-heritage PA.	Cultural duty/Paternal role.
Mestermann et al. (2023)	Correlational	Germany	Paternal psychopathology impacts child well-being.	Negative outcome mechanism.
Moodley & Lesch (2024)	Qualitative	S. Africa	Emotional closeness is central to the F-D relationship.	Socio-cultural barriers in South Africa.
Morgan et al. (2021)	RCT	Australia	DADEE effectively improved FMS and girls' self-esteem.	Gender-equity and rough-and-tumble play.
Morgan et al. (2023)	Feasibility	Australia	"Daughters and Dads Cricket" improved cricket-specific skills.	Sport-specific engagement.
Morgan et al. (2019a)	RCT	Australia	Primary DADEE findings: improved physical and social outcomes.	Original DADEE evidence base.
Morgan et al. (2019b)	Dissemination	Australia	Local facilitators can successfully deliver HYHD programs.	Scalability to underserved areas.
Mundra et al. (2025)	Review	India	Summary of physical health and well-being in children.	Comprehensive review of child health.
O'Connor et al. (2020a)	Cultural Adapt.	USA	Ecological validity model used to adapt HYHD for Hispanics.	Cultural/Ecological validity.
O'Connor et al. (2020b)	Feasibility	USA	Targeting Hispanic fathers for obesity prevention is feasible.	"Papás Saludables" feasibility.
Pollock et al. (2023)	RCT	Australia	Significant improvement in girls' social-emotional well-being.	Peer-facilitated community delivery.
Pollock et al. (2021)	Qualitative	Australia	Fathers perceive F-D programs as transformative for bonding.	Narrative feedback on DADEE.

Data Extraction and Analysis

Data was extracted on intervention type, target population, delivery format, outcomes (physical and psychological), program duration, and cultural context. Interventions were categorised by setting (school-based, home-based and community-based) and by outcome type. Both quantitative and qualitative findings were analysed to synthesize the effectiveness and scope of each program. Additionally, a thematic synthesis was conducted to identify the underlying mechanisms – such as role-modelling and emotional regulation – that drove intervention success. Tables were created to summarize study characteristics, key interventions, and their outcomes (refer to Table 2, 3 and 4).

Table 2

Summary of Study Characteristics to Identify and Categorize the Global Landscape

Author (Year)	Study Design	Country	Dyad Type (Age)	Sample Size (*N*)	Intervention Focus
Ahmed et al. (2023)	Cluster RCT	Bangladesh	Adolescents (13-15y)	320 students	School-based PA & Mental Health
Ashton et al. (2024)	Evaluation	Australia	F/D Pre-schoolers	281 total	HYHD Program: Replicability
Blackshear (2022)	Qualitative	USA	African American F/D	Undergrads	Paternal involvement in PA
Day (2025)	Qualitative	UK	F/D (Adolescent)	15 dyads	Reciprocal disclosure & intimacy
Ha et al. (2019)	RCT Protocol	Hong Kong	Children (8-11y)	204 families	"Active 1+ FUN" family-based PA
Jamal et al. (2022)	CBR/Qualitative	Canada	South Asian Immigrants	65 participants	Community-based bonding
Kandula et al. (2022)	RCT Protocol	USA	Latina/S. Asian	160 dyads	SAATH: Culturally adapted MVPA
Latomme et al. (2023)	RCT	Belgium	F/C (6-8y)	98 dyads	"Run Daddy Run" lifestyle change
Morgan et al. (2019a)	RCT	Australia	F/D (4-12y)	268 total	DADEE: Primary trial (PA/FMS)
Pollock et al. (2023)	RCT	Australia	F/D (4-12y)	351 total	Social-emotional well-being

Note: Certain mother-daughter protocols were included as comparative frameworks for culturally adapting dyadic interventions to South Asian contexts

Table 3

Intervention Delivery, Mechanism of Change and Core Components

Program Name	Core Components	Delivery Setting	Theoretical Framework	Key Mechanism
DADEE	Rough-and-tumble play; Gender-equity education.	Community/ School	Social Cognitive Theory	Role-modelling & Paternal Support
HYHD	Healthy lifestyle modelling; Nutrition	Community-based	Self-Determination Theory	Paternal Closeness
Run Daddy Run	Co-creation of activities; SMART goals	Mixed (Online/Face)	Co-creation Model	Autonomy Support
Active 1 + FUN	Multi-component school/home PA	School-based	Socio-Ecological	Family Engagement
SAATH	Cultural adaptation; Multilevel PA	Home-based	Cultural Adaptation	Culturally tailored bonding
FCP	Attachment coaching; Communication	Clinic-based	Attachment Theory	Emotional Insecurity Reduction

Table 4

Synthesis of Physical and Psychological Outcomes (Effectiveness of Interventions)

Outcome Domain	Findings from Key Studies	Overall Impact	Strength of Evidence
Physical Activity	Significant increase in MVPA (Morgan et al., 2019a; Latomme, 2023)	**Positive**	High
Motor Skills	Improved Fundamental Movement Skills (FMS) (Morgan et al., 2019a)	**Positive**	High
Emotional Regulation	Enhanced resilience and coping (Ahmed, 2023; Pollock et al., 2023)	**Positive**	Moderate
Self-Esteem	Higher self-worth in girls (Pollock et al., 2021; Blackshear, 2022)	**Positive**	Moderate
Bonding/Attachment	Improved paternal warmth and relational security (Hoegler, 2023; Day, 2025)	**Positive**	High
Gender Norms	Challenging stereotypes in sports (Asif, 2024; Pollock et al., 2021)	**Positive**	Emerging

Results

A total of 36 sources of evidence were included, representing a diverse global geographical spread across Australia, North America (USA, Canada), Europe (UK, Belgium, Germany, Ukraine), and Asia/Africa (Pakistan, Bangladesh, Ghana, South Africa, Hong Kong, Indonesia). Sample sizes ranged from small qualitative cohorts (n=10) to large-scale cross-sectional surveys (n=1,228).

The literature was categorized by study design to map the current research landscape. Quantitative researches (n=22) dominated by Randomized Controlled Trials (RCTs) and quasi-experimental designs evaluating programs such as DADEE (Morgan et al., 2019a), HYHD (Ashton et al., 2024), and *Run Daddy Run* (Latomme et al., 2023). Whereas Qualitative Research (n=14) focused on the lived experiences of dyads, particularly in gender-conservative or immigrant contexts (Jamal et al., 2022; Asif, 2024; Day, 2025).

Physical Well-being Outcomes

Evidence indicates a strong positive correlation between structured father-daughter co-participation and improved physical health.

Increased Physical Activity and Motor Skills

Studies consistently demonstrate that dyadic participation leads to significant increases in Moderate-to-Vigorous Physical Activity (MVPA). Participants in the DADEE program saw average daily step count increases of 1,638 for fathers and 1,023 for daughters (Morgan et al., 2019a). Similarly, the *Run Daddy Run* intervention reported increased Moderate Physical Activity (MPA) in fathers and light physical activity in children (Latomme et al., 2023). Beyond activity levels, 4 studies identified paternal support as a critical predictor of Fundamental Movement Skills (FMS), with DADEE reporting effect sizes for FMS proficiency ranging from d = 0.42 to 1.2 (Morgan et al., 2021; Dechrai et al., 2022).

Sedentary Behaviour and Body Composition

Interventions such as DADEE and HYHD found substantial decreases in screen time for both dyads, with medium to large effect sizes (Ashton et al., 2024). Regarding weight status, while results were mixed, the HYHD program observed significant improvements in children's Body Mass Index (BMI) z-scores and overall fitness (Ashton et al., 2024; Lloyd et al., 2015), suggesting that while physical activity levels improve rapidly, weight-related outcomes may require longer-term engagement.

Psychological Well-being Outcomes

Psychological findings were characterized by improved emotional resilience and relational security.

Emotional Resilience and Regulation

Participants showed significant gains in emotional regulation and self-awareness. DADEE demonstrated a 24.9-point gain in the Devereux

Students Strengths Assessment (DESSA), highlighting improved social-emotional competence (Young et al., 2019). Furthermore, father involvement was found to uniquely contribute to adolescent perseverance and happiness (Leppard & Dufur, 2021).

Relational Bonding and Attachment

A consistent finding across 36 papers was the strengthening of the father-daughter bond. Qualitative data from the UK and South Africa highlighted that shared physical activity serves as a "conduit for intimacy," facilitating reciprocal disclosure (Day, 2025; Moodley & Lesch, 2024). Additionally, interventions targeting inter-parental conflict resolution led to significant decreases in adolescent emotional insecurity through improved father-daughter attachment (Hoegler et al., 2023).

Mechanisms of Intervention Effectiveness

Synthesis of the data suggests three primary mechanisms driving success across the 36 studies: role modelling, emotional security and gender norm transformation. Fathers modelling healthy behaviours directly influences daughters' long-term lifestyle choices (Schoeppe et al., 2016). Secure paternal attachments act as a buffer against anxiety and disordered eating (Hoegler et al., 2023; Reim, 2018). In contexts like Pakistan and Bangladesh, dyadic programs successfully challenged sociocultural restrictions on female mobility and sports participation (Asif, 2024; Ahmed et al., 2023).

Intervention Design, Delivery, and Context

Setting and Adaptability

The review identified three primary delivery modes: School-Based, Home-Based, and Community-Oriented. School-based programs like *Girls Leading Outward (GLO)* provide safe environments for at-risk girls to develop leadership and regulation skills (Stepney et al., 2014; Ahmed et al., 2023). Home-based interventions foster co-parenting dynamics and family-level benefits through joint exercises (Pollock et al., 2023). Community-oriented programs like *Honouring Fathers and Daughters* utilize culturally relevant activities to engage immigrant or minority populations (Jamal et al., 2022).

Sustainability and Comparison

Follow-up assessments (e.g., *HYHD*) revealed sustained effects on physical activity and parenting practices at 6–12 months (Ashton et al., 2024). In contrast, control groups typically showed no significant progress in physical exercise or emotional well-being, highlighting that the benefits are specifically tied to the active, dyadic nature of these interventions (Morgan et al., 2019a; Young et al., 2019) (Refer Table 5).

Table 5

Summary of Key Interventions Models

Program	Core Focus	Primary Outcomes
DADEE	Physical Activity & Empowerment	↑ Step counts (Daughter +1,023); ↑ Social-emotional well-being.
HYHD	Lifestyle & Parenting	↑ FMS; ↓BMI z-scores; Sustained impact at 12 months.
Run Daddy Run	Lifestyle & Co-creation	↑ Father MPA; ↓Sedentary behaviour; ↑Relationship closeness.
GLO	Leadership & Regulation	↑ Self-efficacy; ↑ Resilience in at-risk adolescent girls.
Honouring F-D	Cultural Bonding	↑ Family cohesion; ↑ Cultural engagement in immigrant dyads.

Discussion

This systematic scoping review synthesized evidence from 36 studies examining the impact of father–daughter co-participation in structured physical activity and related interventions on physical and psychological well-being. The findings demonstrate consistent benefits across multiple domains, particularly in enhancing physical activity levels, improving social-emotional well-being, and strengthening father–daughter relationships. These outcomes align with the growing body of literature emphasizing the importance of family-based and gender-sensitive interventions in promoting adolescent health.

Effectiveness of Father–Daughter Interventions

A key finding of this review is the strong

effectiveness of structured interventions such as DADEE, HYHD, and Run Daddy Run. These programs consistently demonstrated improvements in MVPA and reductions in sedentary behaviour. Importantly, the involvement of fathers as primary co-participants appears to be a critical factor in enhancing engagement and adherence.

These findings support ecological and social learning perspectives, which posit that behaviour is shaped through observation and interaction within close social environments. Fathers, when actively engaged, serve as salient role models, reinforcing positive health behaviours and creating supportive contexts for sustained participation. The consistency of these findings across randomized controlled trials strengthens the evidence base for father-inclusive intervention models.

Psychological and Relational Outcomes

Beyond physical health, the reviewed studies highlight substantial psychological benefits. Improvements in emotional resilience, self-esteem, and social-emotional functioning were evident across multiple interventions. Notably, the strengthening of father–daughter relationships emerged as one of the most consistent outcomes.

Qualitative evidence provides deeper insight into these findings, suggesting that shared physical activities create opportunities for communication, trust-building, and emotional bonding. These relational improvements may act as mediating mechanisms through which psychological benefits are achieved. This aligns with attachment theory, which emphasizes the role of secure parental relationships in fostering emotional stability and resilience during adolescence.

Mechanisms Underpinning Intervention Success

The synthesis of findings suggests three key mechanisms driving the effectiveness of these interventions. Firstly, fathers modelling active lifestyles appear to influence daughters' physical activity behaviours directly. Observational learning plays a significant role in shaping health-related habits. Secondly, interventions that promote positive father–daughter interactions contribute to emotional security, which is associated with improved mental health outcomes. Thirdly, the structured nature of interventions, including scheduled sessions and home-based tasks, enhances consistency and long-term adherence.

These mechanisms highlight that the success of interventions is not solely dependent on physical activity components but also on relational and contextual factors.

Cultural and Contextual Considerations

An important contribution of this review is the inclusion of studies from diverse cultural contexts, including Pakistan and other collectivist societies. Findings suggest that father–daughter interventions may have additional significance in contexts where gender norms restrict female mobility and participation in physical activities.

In such settings, fathers can act as facilitators of change by legitimizing daughters' participation in public and recreational spaces. Community-based and culturally adapted programs demonstrated higher engagement and acceptability, underscoring the importance of context-sensitive intervention design.

Comparison with Non-Participants

Studies including control or comparison groups consistently reported minimal changes in physical and psychological outcomes among non-participants. This contrast reinforces the effectiveness of structured interventions and highlights the limitations of relying solely on natural developmental changes or unstructured activity.

Implications for Practice and Policy

The findings of this review have several practical implications. Firstly, schools and community organizations can serve as effective platforms for implementing father–daughter interventions. Secondly, policymakers should consider promoting father-inclusive health programs as part of broader adolescent well-being strategies. Moreover, the success of interventions highlights the importance of trained facilitators in ensuring program quality and sustainability.

Strengths and Limitations of the Review

This review provides a comprehensive synthesis of diverse study designs, including

experimental, observational, and qualitative research, offering a holistic understanding of father–daughter interventions. The inclusion of global studies enhances the generalizability of findings.

However, several limitations should be acknowledged. First, variability in outcome measures and intervention designs limited direct comparability across studies. Second, some studies lacked rigorous methodological reporting, including sample size and effect size data. Third, the inclusion of non-experimental studies may introduce bias in interpreting causal relationships.

Future Research Directions

Future research should focus on: conducting more randomized controlled trials in underrepresented regions, particularly in South Asia; standardizing outcome measures to improve comparability across studies; exploring long-term impacts of interventions through longitudinal designs; examining the differential effects of father involvement across age groups and socio-cultural contexts.

Conclusion of Discussion

Overall, the evidence suggests that father–daughter co-participation in structured interventions is an effective approach for improving both physical and psychological outcomes among adolescent girls. These interventions not only promote healthier lifestyles but also strengthen relational bonds and contribute to emotional well-being. Expanding such models, particularly in culturally diverse settings, holds significant potential for advancing adolescent health and gender equity.

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Availability of Data and Materials. The information about data and analyses for the present study is available from the corresponding author.

Competing Interest. The authors have no competing interest to declare

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Physical Abuse and Emotional Distress Among Adolescents: Mediating Role of Self-Blame

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Abstract

Background. Physical abuse during childhood significantly affects mental health and well-being of children as these experiences are likely to continue in the later years (adolescents and adulthood) and are often manifested in the form of emotional distress and blaming one's self. Adolescence is a period marked by number of psychological and physical changes, and therefore, tendency to internalize or externalize any negative experience such as physical abuse is relatively high.

Objective. The present study investigated how physical abuse affects emotional distress through self-blame (mediation path).

Method. A correlational research design was employed, using data from 400 adolescents aged 14 to 19 years (M = 16.89, SD = 1.54) with the history of physical abuse. The Childhood Trauma Questionnaire-Short Form (Bernstein et al., 2003), Kessler Psychological Distress Scale (Kessler et al., 2003), and Cognitive Emotion Regulation Questionnaire (Garnefski et al., 2002) were used to assess physical abuse, emotional distress, and self-blame among adolescents recruited through purposive sampling technique. **Results.** The findings revealed significant positive relationship among study variables. Moreover, self-blame positively mediated the relationship between physical abuse and emotional distress among adolescents.

Conclusion. The findings highlighted that children who endure physical abuse are more likely to self-blame, which in turn intensifies their emotional distress. These findings shed light on the abuse and suffering cycle which could be intervened through targeted therapeutic interventions and policies for a safer environment.

***Keywords*.** Physical abuse, self-blame, emotional distress.

Introduction

Physical abuse appeared to be one major global issue with severe impacts to mental health affecting millions of young adolescents (WHO, 2022; UNICEF, 2024). It includes acts (i.e., hitting and beating etc.) which cause physical pain, suffering, and emotional trauma (Annerbäck et al., 2018; Mehnaz, 2018). It is an intentional use of force which inflicts injury or trauma to the victim (Atiqul-Haque et al., 2019; Özbay et al., 2024) and is the most identified form of abuse among adolescence (Afifi et al., 2017; Abbas & Jabeen, 2019; Badr et al., 2018). The World Health Organization stated that three in every four children have experienced some form of abuse (WHO, 2022) and two in every three children out of 1.6 billion children globally are abused and psychologically assaulted by their parents (UNICEF, 2024). Similarly, Lakhdir and colleagues (2021) revealed that 42% of adolescents worldwide experience physical abuse in their own homes, which frequently involves harsh punishment. Moreover, according to a systematic review based on data from 2010 to 2022, region wise statistics appeared to have the highest rate (42.8%) of domestic and familial violence among younger adolescents in West Asia and Africa. In contrast, only 3.7% of adolescents were observed in Asia Pacific region with experienced such violence as children (Witten et al., 2023). However, in Pakistan, over 50% of children experienced severe or ongoing physical abuse and punishment including caning, slapping, and beating daily in 2017-2018 (Kamran & Kazi, 2024) whereas the numbers increased to almost 80% till 2023 (Premani, 2021; Ullah et al., 2023). This could be linked to ingrained cultural norms and traditional belief to control and discipline the child (Auslander et al., 2016; Fatima et al., 2024; Mahmood, 2016; Malik, 2010; Zakar, 2016). Although, legal framework regarding child welfare and protection exists in Pakistan, however, inadequate supervision has normalized violence in the Pakistani society, which contributes to child maltreatment (Mehmood et al., 2022). Therefore, it is crucial to understand the consequences of disciplinary practices used by Pakistani parents on emotional distress (Shaikh et al., 2023) so that efforts could be made to protect children.

Empirical evidence (Fu, et al., 2024; Myers et al., 2021; Yiğit et al., 2018) highlighted that emotional distress is experienced by a larger number of adolescents who have endured physical punishment or abuse. It encompasses negative feelings, state of anxiety, despair, and general suffering (Anghele et al., 2023; Moraes et al., 2018; McLaughlin et al., 2020; O'Neill et al., 2021; Taşören, 2022). It is often associated with feelings of guilt, worthlessness, and inadequacy (Zorbas, 2023). Physical violence intensifies emotional distress and self-blame during the mid-teen years (Dumessa et al., 2018; Downey & Crummy, 2021; Fan et al., 2024; Su et al., 2022). As a victim of physical abuse, child attributes the responsibility to himself (Sekowski et al., 2020; Fatima et al., 2024) and considers many of his actions or failures as something that warrants punishment (Mahlangu et al., 2021). This self-blame because of abuse exacerbates emotional suffering (Ahi et al., 2021) and has a detrimental effect on emotional (Niazi et al., 2022) and mental health (Kothapalli et al., 2023; Kökönyei et al., 2023; Schacter et al., 2014; Zhang et al., 2022; Fatima et al., 2024) of adolescents. Chu et al. (2022) demonstrated that the effect of physical abuse on emotional distress is mediated by self-blame, implying that individuals who self-blame experience more severe emotional suffering. Statistical data further demonstrates that self-blame appears at quite high rate (25.6%) among all coping skills in late adolescents (Song et al., 2020).

Stress and Coping Theory (1984) offers a general conception on how one reacts to the physical pain of abuse pertaining to coping and stressing. It accounts for the use of cognitive appraisal as the coping strategy and explains the linkage between physical punishment, self-blame, and negative feelings. Adolescents who are punished physically blame themselves (Cuartas et al., 2021; Zeng et al., 2025). This impression stems from the culture that accepts use of physical punishment which decreases the use of problem-solving coping strategies (Jalil & Khan, 2022; Kim et al., 2021). Considering self-blame as aversive coping mechanism, adolescents intensify their emotional suffering which results in low self-esteem and feelings of anxiety and depression (VanMeter, 2020; Zandi et al., 2021). Therefore, it is imperative to understand to what extent self-blame is used as a coping mechanism by

Pakistani adolescents.

Although previous researchers have clearly established a significant association between physical abuse and emotional distress among adolescents, yet the underlying cognitive mechanisms that explain this association remain insufficiently explored. Existing empirical literature has primarily emphasized on the direct psychological outcomes of abuse, however little attention has been given to the internal cognitive mechanisms through which abused adolescents interpret, label and respond to traumatic experiences. More specifically, although self-blame has been identified as a widely employed maladaptive cognitive coping strategy paired with depression, anxiety, guilt, and emotional distress, yet its mediating role in the relationship between physical abuse and emotional distress needs to be investigated, especially within non-Western and culturally diverse environments.

Additionally, the existing empirical evidence originating from Western contexts, limit the applicability of these findings to collectivistic societies such as Pakistan, where existing cultural norms, values, family structures, parenting practices, and societal attitudes and acceptance toward abuse is likely to shape emotional responses and coping strategies differently. In collectivistic societies the likelihood that individuals will internalize the abusive experience dure to diverse factor such as social stigma, power structures and limited emotional support potentially increases the risk toward self-blame and emotional distress distress. Despite these strong contextual factors, empirical research examining the cognitive factors linking physical abuse to emotional distress among Pakistani adolescents remains grossly underexplored.

To conclude, there exists a substantial gap in understanding whether or not self-blame functions as a linking psychological mechanism through which experiences of physical abuse contribute to emotional distress among adolescents. Addressing this gap is crucial not only for developing solid theoretical understanding of trauma-related cognitive processes but also for designing culturally sensitive prevention and intervention strategies. Keeping this framework in mind, the present study aims to test the mediating role of self-blame in relationship between physical abuse and emotional distress among Pakistani adolescents.

Hypothesis

1. There will be a positive significant relationship between physical abuse, self-blame and emotional distress among adolescents.
2. Self-blame will mediate the relationship between physical abuse and emotional distress among adolescents.

Method

The present study employed a correlational research design. Adolescents (N = 400) aged 14 to 19 years (M = 16.89, SD = 1.54) were recruited through purposive sampling. Formal clearance was sought before the collection of data from Ethical Review Committee of the institute (Psychology/ ERC/2025-02). All relevant information pertaining to the study including the study's aims, objectives, ethical considerations, as well as a consent form were incorporated in the booklet. After being informed about the study's objectives, around 52 of the initially approached participants declined to participate. The remaining 400 individual voluntarily completed the questionnaire. After completing the booklet, participants were thanked for their time and contributions to the study.

The study included 400 adolescents aged 14 to 19 years (M = 16.89, SD = 1.54) recruited through purposive sampling. Equal number of male and female participants (N = 200) participated in the study. Most of them were educated to a either lower-intermediate level (36.5%) or had a college degree (26.5%). Most of the participants (62.7 %) were in late adolescents between the ages of 17-19 years whereas 37.3% were in the middle adolescence between the ages of 14-16 years.

Procedure

The present study employed a correlational cross sectional research design. The participants were selected through purposive sampling technique from the colleges and universities of Islamabad and Rawalpindi, Pakistan. Ethical approval of the present study was sought from Riphah International University's Ethical Review Committee (Psychology/ ERC/2025-02) data collection. Participants were

approached at their places of study and data were obtained with the use of a paper and pen instrument. Adolescents were given a booklet containing the study questionnaire along with comprehensive study instructions. All relevant information pertaining to the study including the study's aims, objectives, ethical considerations, as well as a consent form were incorporated in the consent form. In cases where participants felt uncomfortable taking part in the research, they were free to withdraw out at any time. After being informed about the study's objectives, around 52 of the initially approached participants declined to participate. The remaining 400 individuals voluntarily completed the questionnaire. After completing the booklet, participants were thanked for their time and contribution to the study.

Instruments

Physical Abuse Subscale (CTQ-SF; Bernstein et al., 2003). Physical abuse was evaluated through the physical abuse subscale of the Childhood Trauma Questionnaire – Short Form (Bernstein et al., 2003). It consists of five items (9, 11, 12, 15, and 17) that are answered using a five-point Likert scale, with 1 being 'never true' and 5 being 'very often true.' Higher values on this subscale reflect increased levels of reported physical abuse experienced during childhood. The physical abuse subscale has been shown to have a satisfactory internal consistency with a Cronbach's alpha coefficient of α = .69 (Bernstein et al., 2003).

The Kessler Psychological Distress Scale (K10: Kessler et al., 2003). Psychological distress of adolescents was measured with the Kessler Psychological Distress Scale (K10; Kessler et al., 2003). The scale consists of ten items that measure different emotional states, including anxiety and depression, over the last month. Each item is rated on a Likert-type scale of 1 to 5, where 1 means 'none of the time' and 5 means 'all of the time'. High scores indicate higher tendency of emotional distress of the participants. The scale had good reliability as indicated by Cronbach's alpha of α = .84 (Kessler et al., 2003).

Self-Blame subscale (CERQ; Garnefski et al., 2002). The Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2002) has been proven to be reliable for evaluating strategies for cognitive emotion regulation. In this study self-blame was assessed using the self-blame subscale of the CERQ. This subscale consists of four items (1,10,19, and 28) that measure self-blaming and internal negative self-appraisal. Each item is scored on a five-point Likert scale, from 1 (almost never) to 5 (almost always). Higher scores on this sub-scale indicate a stronger tendency to use self-blame as a coping mechanism and vice versa. The self-blame subscale showed high internal consistency, with a Cronbach's alpha coefficient of α =. 81 (Garnefski et al., 2002).

Results

The statistical analyses were carried out using SPSS 26 version. The reliability coefficients ranged from satisfactory to good (α = .73 to α = .90). Correlational analysis indicated significant and positive association between all study variables (see Table 1). Similarly, mediation analysis (Model 4) was carried out using PROCESS macro by Andrew F. Hayes (Hayes,2013) (see Table 2).

Table 1

Correlation Among Physical Abuse, Self-Blame, and Emotional Distress (N = 400)

Variables	1	2	3
Physical Abuse	-	.29**	.21**
Self-blame	-	-	.24**
Emotional distress	-	-	-
α	.73	.83	.90
M	10.31	13.35	34.79
SD	3.60	2.58	6.54

**$p < .01$.

Table 1 results revealed a significant positive relationship between physical abuse, self-blame and emotional distress among adolescents. The reliability of study measures ranged from. 73 to .90 providing evidence for internal consistency of the scales. In order to confirm the mediating role of self-blame in relationship between physical abuse and emotional distress mediation analysis was carried out.

Table 2

Mediating Role of Self-Blame in Relationship Between Physical Abuse and Emotional Distress (N = 400)

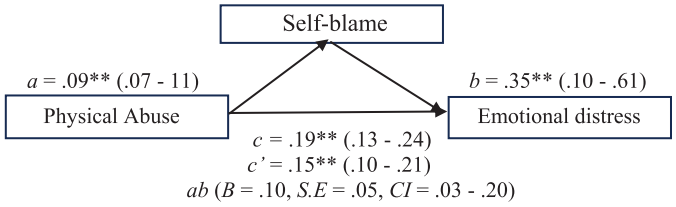
Model	*B*	*SE*	*p*	*95 % CI*	
				LL	*UL*
Model without mediator					
Constant	30.38	.97	.000	28.92	32.74
Childhood Trauma-Emotional distress *(c)*	.38**	.09	.000	.21	.56
R^2 *(X, Y)*	.04				
Model with addition of mediator					
Model 1: Self-Blame as Dependent variable					
Constant	11.22	.38	.000	10.48	11.95
Childhood Trauma-Self-Blame *(a)*	.21**	.03	.000	.14	.27
R^2	.08				
Model 2: Emotional Distress as Dependent variable					
Constant	25.23	1.72	.000	22.85	28.60
Self-Blame-Emotional Distress *(b)*	.28**	.09	.000	.10	.46
Childhood Trauma-Emotional distress *(c')*	.50**	.13	.000	.25	.75
Indirect effect	.10	.05		.03	.20
R^2 *(X, M, Y)*	.08				

**$p < .01$.

Table 2 indicated significant mediating role of self-blame in relationship between physical abuse and emotional distress among adolescents. The first model (without mediator) indicated that physical abuse significantly predicted emotional distress accounting for 4% variance. Model 2 indicated that both self-blame and physical abuse collectively accounted for 8 % variance. Thus, an additional 4% variance in emotional distress was explained by self-blame (mediator).

Figure 1

Mediating Role of Self-blame Between Physical Abuse and Emotional Distress



Discussion

The purpose of the current study was to investigate the mediating role of self-blame in relationship between physical abuse and emotional distress among adolescents. Correlation analysis demonstrated significant associations between physical abuse, self-blame, and emotional distress among adolescents. These results were in accordance with prior studies (Colak et al., 2023, Haim-Nachum et al., 2024; Gong & Chan, 2018; Negriff, 2020; Salokangas 2019; Xie et al., 2023; Yang et al., 2022). Studies suggest that adolescents with a history of abuse are more likely to internalize negative experiences which results in intensified self-blame sentiments that evoke guilt, shame, worthlessness, and subsequently distress (Fatima et al., 2024; Garnefski & Kraaij, 2016; Garnefski & Hossain, 2017; Tang & Dai, 2018) and lower self-worth (Lassri & Gewirtz-Meydan, 2021; Melamed et al., 2024; O' Loghlen et al., 2023; Su et al., 2022).

Cultural, psychological, and systematic factors play a significant role in the general acceptance of physical punishment among adolescents by reinforcing the belief that such treatment is a justified consequence of their own actions (Ali et al., 2014; Elzamzamy et al., 2022; Heekes et al., 2020; Khawaja et al., 2015). In Pakistan, this mindset is considered an essential disciplinary tool (Iqbal et al., 2021; Lakhdir et al., 2021; Seher & Manzoor,

2024); despite of efforts to curb this, it's a prevalent issue (Jabeen, 2021), which leads to internalization of self-blame for the abuse (Fatima et al., 2024).

In collectivistic societies, where community harmony takes priority over individual needs, such norms further reinforce the belief that elders are always correct, and is therefore, physical abuse is justified as necessary to preserve family unity (Lee & Watson, 2017; Pinquart, 2021; Fatima et al., 2024). These factors make it challenging for adolescents to resist or break free from the cycle of physical punishment (Ashraf & Holden, 2022; Abbas et al., 2024; Rafique et al., 2020), hence they absorb it as a regular part of life and develop self-blame and emotional distress (Bender et al., 2007). Results of mediation analysis confirmed this association, aligned with the previous literature (Doba et al., 2022; Dorresteijn et al., 2019; Huh et al., 2017; Jiang et al., 2022; Waheed & Tariq, 2024; Zhang et al., 2024) indicating that the psychological impact of physical abuse can be understood through the cognitive processes adolescents use to internalise their experiences. Self-blame seems to worsen the distress and induce negative emotions (Milojevich et al., 2019; Zhou & Zhen, 2022). This association further elaborates that unresolved adverse experiences lead to self-blame (Guo et al., 2023; Wu et al., 2022), adversely impacting the mental health of individuals. The socio-cultural context of Pakistan shapes attitudes and practices of the society towards violence against children, and to some extent, its psychological impact (Fatima et al., 2024; Lakhdir et al., 2019; Qadeer et al., 2023; Shahnawaz & Malik, 2016). Therefore, in this context, it is pertinent to address how adolescents are dealing with their trauma with minimum awareness, support and resources (Bevilacqua et al., 2021), so that targeted interventions both at individual and cultural level could be developed and implemented.

Implications

Focussed parenting, awareness, and teaching programs could be designed based on these findings to sensitize parents, teachers, and caregivers regarding the aversive effects of physical abuse on children. These efforts would encourage non-violent disciplinary techniques along with the awareness that adolescents need specific mental health support to help them reframe their experiences and lessen their sense of guilt. While campaigning and legislative changes are crucial for safeguarding children and dismantling cultural norms that support physical punishment, schools and community programs should concentrate on fostering emotional resilience and offering good coping mechanisms.

Respectively, the findings also contribute to the theoretical understanding by supporting cognitive and attributional models of trauma indicating that self-blame serves as a key mechanism for emotional distress through the lens of adverse childhood experiences. this suggests that cognitive appraisal processes are central to explaining the psychological consequences of physical abuse adolescence.

Limitations and Recommendations

Even though, this research has positive outcomes and could further guide the academicians and practitioners to assess public perception of discipline, it is not without its limitations. The current research relied solely on quantitative assessment of physical abuse and therefore, chances of bias cannot be eliminated. Moreover, recollection bias or social desirability bias are going to interfere with the responses provided. Further studies could employ longitudinal methods and larger samples to shed more light on the causative pathways and improve the usefulness of the findings. Additionally, the result of the current study substantiates that abuse is a prominent contributor towards emotional difficulties among adolescents, therefore must be examined considering resilience and coping mechanisms across different cultures.

Conclusion

The present research highlights the psychological impact of physical abuse on adolescents, by demonstrating that experiences of abuse are strongly related with emotional distress through cognitive strategies which are maladaptive in nature such as self-blame. The findings highlight the fact that adolescents who experience physical abuse are at a heightened risk of internalizing their traumatic experiences, that makes them vulnerable to shame, guilt, and emotional distress. More importantly, self-blame was found to mediate

the relationship between physical abuse and emotional distress, indicating that the manner in which adolescents cognitively process, label and interpret the abusive experiences plays a pivotal role in determining their well-being. These findings further emphasize the importance of designing early psychological interventions that specifically addresses the maladaptive cognitive patterns and promotes adaptive coping strategies, emotional regulation, and positive self-perception among survivors of abuse. Culturally responsive and trauma-informed mental health services need to designed in collectivistic societies like Pakistan, where social stigma surrounding abuse, rigid family values, power hierarchies and limited psychoeducation and access to sensitive psychological services may risk the internalization of trauma and discourage help-seeking behaviors.

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Perceived Mattering, Resistance to Peer Influence, and Personal Growth Initiative Among Older Adolescents in Pakistan

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Abstract

Background. This study examined the relationships among perceived mattering, resistance to peer influence, and personal growth initiative (PGI) among older adolescents in Pakistan.

Method. A sample of 472 adolescents aged 16 to 20 years (249 males, 223 females) completed the Personal Growth Initiative Scale–II (PGIS-II; Robitschek et al., 2012), the Mattering to Others Questionnaire (MTOQ; Marshall, 2001), and the Resistance to Peer Influence Scale (RPI; Steinberg & Monahan, 2007). Data were collected using an online survey during the COVID-19 pandemic.

Results. Correlation analyses revealed that perceived mattering was positively and significantly associated with PGI, while resistance to peer influence was positively but non-significantly related to PGI. Further, regression analyses indicated that perceived mattering significantly predicted PGI, although the proportion of variance explained was modest. Subgroup analyses comparing adolescents with higher and lower levels of peer resistance showed consistent results, suggesting that the sense of being valued by others contributes to adolescents' motivation for self-directed growth, regardless of their susceptibility to peer pressure.

Conclusion. These findings emphasize the developmental relevance of social belonging and self-determination in adolescent identity formation. The study also highlights the value of examining adolescent development in underrepresented cultural contexts. Implications for intervention programs and identity development models are discussed, along with study limitations and directions for future research.

Keywords. Personal Growth Initiative, Perceived Mattering, Resistance to Peer Influence, Adolescence, Identity Development

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Introduction

Adolescence represents a pivotal stage in human development characterized by increased autonomy, identity exploration, and sensitivity to social relationships (Belsky et al., 2020; Steinberg, 2014). During this transitional period, adolescents begin to form a coherent sense of self, which involves the integration of personal goals, values, and relational experiences. Erikson's (1968) psychosocial theory positions adolescence as the developmental crisis of "identity vs. role confusion," where individuals explore multiple roles to arrive at a stable identity. Central to this process is the adolescent's interaction with the social world, especially their relationships with peers and perceptions of how much they matter to others (Roy, 2024; Schachter & Galliher, 2018; Tonini et al., 2025).

The concept of perceived mattering, or the belief that one is significant and valued by others, has gained increasing attention in adolescent developmental research. According to Marshall (2001), mattering encompasses the feeling of being noticed, important, and relied upon. Research suggests that adolescents who feel they matter to others experience higher self-esteem, lower levels of depression, and more adaptive psychosocial outcomes (Dixon & Tucker, 2008; France & Finney, 2009; Paradisi et al., 2024). Mattering also serves as a protective factor against social exclusion and internalizing problems, especially during a developmental period where peer validation becomes central to one's self-concept (Flett et al., 2022). Recent work has also emphasized the protective role of perceived mattering and social connectedness in promoting adolescent psychological well-being (Levkovich & Shinan-Altman, 2022).

Mattering plays a critical role in the development of identity and agency. Marcia's (1980) identity status model posits that adolescents actively explore and commit to different roles and values to form a stable identity. Mattering can be seen as a social scaffold that supports this identity formation by reinforcing self-worth and purpose (Dixon & Tucker, 2008; France & Finney, 2009; Paradisi et al., 2024). Moreover, when adolescents perceive that they matter, they are more likely to develop a sense of relatedness, one of the three fundamental psychological needs outlined in Self-Determination Theory (SDT) (Deci & Ryan, 2000). Relatedness, alongside autonomy and competence, is essential for optimal development and self-motivated behavior. Thus, perceived mattering may enhance adolescents' intrinsic motivation to engage in personal development (Sheldon e & Gunz, 2009; Martela, 2020).

Personal Growth Initiative (PGI) refers to an individual's active, intentional engagement in the process of personal development (Robitschek, 1998, 1999). PGI is not merely a reflection of positive affect or well-being but a goal-directed orientation toward self-improvement. The PGI construct is composed of four interrelated subdimensions (Robitschek et al., 2012), each of which reflects a critical skill set for adolescent self-development. *Readiness for change* captures an adolescent's openness to growth opportunities, while *planfulness* reflects the ability to strategize and set achievable goals. *Using resources* measures the capacity to seek support and information, and *intentional behavior* assesses the follow-through required to act on self-improvement goals. These subscales reflect both cognitive and behavioral competencies that are central to adaptive development during adolescence, particularly as youth face decisions related to academic transitions, peer relations, and future identity roles.

Adolescents high in PGI tend to approach life's challenges as opportunities for growth, demonstrating proactive coping, emotional regulation, and strategic decision-making (Weigold et al., 2013; 2020). While PGI has been examined in relation to mental health, academic performance, and self-efficacy, its intersection with social experiences like mattering and peer influence has received limited attention. Given the importance of both autonomy and social validation during adolescence, examining PGI through these lenses offers a more integrative perspective on adolescent development.

Another critical social variable is resistance to peer influence (RPI), the ability to act autonomously despite peer pressure. Adolescents are particularly susceptible to peer norms, which can be either prosocial or deviant. According to Steinberg and Monahan (2007), resistance to peer influence increases with age but varies widely across individuals. High resistance is associated with self-discipline, goal orientation, and lower

engagement in risky behaviors (Laursen & Faur, 2022). Furthermore, longitudinal studies suggest that balancing peer influence and personal agency plays a pivotal role in shaping identity development during adolescence (Lee & McLean, 2022). Conversely, adolescents with low resistance may engage in behaviors that contradict their personal values in order to gain social acceptance, potentially undermining identity formation and personal growth (Bell & Baron, 2015).

The balance between peer conformity and autonomy is culturally nuanced. In collectivist cultures like Pakistan, where social harmony and interdependence are emphasized, peer conformity may be viewed positively (Triandis, 2001; Han & Balabanis, 2024).

Adolescents in such societies often navigate competing demands: to fulfill collective expectations while developing personal goals. Consequently, resistance to peer influence might not always be interpreted as a sign of maturity but rather as social deviation. Likewise, the perception of mattering in collectivist societies may derive more from fulfilling group obligations than from personal validation, making it crucial to study these constructs in non-Western contexts.

Despite the centrality of mattering and peer influence in adolescence, few studies have examined their joint role in shaping PGI. Flett et al. (2022) recently called for more research into how social experiences impact personal initiative, particularly in culturally diverse populations. The Positive Youth Development (PYD) framework also emphasizes that youth thrive when provided with both personal agency and supportive relationships (Lerner et al., 2015, 2025).

Pakistan is a traditional culture. Like other South Asian societies, adolescence in Pakistan is also marked by strong family and societal expectations regarding academic achievement, gender roles, and social behavior (Siddiqui & Durrani, 2020). These expectations may interact with individual traits like PGI and perceived mattering, influencing the way adolescents set and pursue goals. For example, a highly goal-oriented adolescent who lacks social validation or is highly susceptible to peer norms may struggle to sustain motivation for self-driven development. Conversely, adolescents who perceive strong social support and maintain autonomy from peer pressure may demonstrate greater resilience and initiative.

Given these considerations, the present study aimed to investigate how perceived mattering and resistance to peer influence relate to personal growth initiative among adolescents in Pakistan. Specifically, the study examined whether these variables predict PGI and its subcomponents. Adolescents aged 16 to 20 years were selected, representing a developmental period referred to as late adolescence, during which identity consolidation and long-term goal formation become especially salient. By situating this study within a collectivist cultural context, it seeks to contribute to the global understanding of adolescent development and identity formation.

Method

Objectives

The present study aimed to examine how perceived mattering and resistance to peer influence relate to personal growth initiative (PGI) among older adolescents in Pakistan.

Specifically, the study explored the following objectives:

1. To examine the association between perceived mattering and personal growth initiative.
2. To assess whether perceived mattering and resistance to peer influence significantly predict personal growth initiative and its subcomponents.

Hypotheses

Based on developmental theory and existing literature, the study tested the following hypotheses:

1. Perceived mattering will be positively associated with personal growth initiative among adolescents.
2. Resistance to peer influence will be positively associated with personal growth initiative among adolescents.
3. Perceived mattering and resistance to peer influence will significantly predict personal growth initiative and its subdimensions.

Study Design

This study employed a cross-sectional, correlational design using standardized self-report instruments to assess perceived mattering, resistance to peer influence, and personal growth initiative among adolescents.

Participants

The sample comprised 472 adolescents (249 males, 223 females) aged 16 to 20 years (M = 1.75, SD = 0.43), recruited from multiple cities across Pakistan through online convenience sampling. Participants were eligible if they were currently enrolled in secondary or higher secondary education and fell within the defined age range representing late adolescence.

Operational Definitions

Personal Growth Initiative

Personal growth initiative is defined as a person's ability to change and develop as a person. It includes skills like planning, utilizing of resources, intentional behavior and readiness for change. For the present research PGI is defined as the score obtained on PGIS-II (Robitschek et al., 2012). High scores indicate a conscious effort to enhance one's capability for personal change, self-development, and achieving personal goals.

Mattering to Others Questionnaire

Mattering to others is a subjective evaluation that a person is important, valued, and cared for by important people in one's life. Mattering to others is explained as scores conducted on the Mattering to Others Questionnaire (Marshall, 2001). High scores indicate a strong perception that a person is important for significant others in their lives and feels valued, loved and appreciated.

Resistance To Peer Influence

Resistance to peer influence is defined as a person trait to maintain a sperate identity and mode of action despite pressure from one's peer; this includes friends and agemates. For the present research resistance to peer influence is measured by scores on the Resistance to Peer Influence Scale (Steinberg & Monahan, 2007). High scores indicate their capacity to resist peer pressure.

Measures

Personal Growth Initiative Scale-II (PGIS-II)

The PGIS-II (Robitschek et al., 2012; Weigold et al., 2013) is a 16-item self-report measure assessing active, intentional involvement in personal development. Items are rated on a 6-point Likert scale (0 = *Strongly Disagree* to 5 = *Strongly Agree*). The scale comprises four subscales: (a) Readiness for Change, (b) Planfulness, (c) Using Resources, and (d) Intentional Behavior. Higher scores reflect greater personal growth initiative. Cronbach's alpha in this sample was .79 for the total scale.

Mattering to Others Questionnaire (MTOQ)

The MTOQ (Marshall, 2001) consists of 11 items measuring the perceived importance of the self to others. Participants rate each item on a 5-point Likert scale (1 = *Not at all to* 5 = *A lot*). Higher scores indicate stronger perceived mattering. Internal consistency in the current sample was .86.

Resistance to Peer Influence Scale (RPI)

The RPI scale (Steinberg & Monahan, 2007) includes 10 forced-choice items presented in paired format, allowing participants to choose between opposing statements and rate how true each is for them. Scores range from 1 to 4 per item, with higher scores indicating greater resistance to peer influence. Cronbach's alpha in this sample was .86.

Procedure

Data were collected via Google Forms between July and August 2020, during the COVID-19 pandemic. Participants were informed about the voluntary nature of participation, confidentiality of responses, and the purpose of the study. Informed consent was obtained electronically before survey access. Efforts were made to ensure that online administration of the scale was as valid as possible. For this reason, the questions were randomized, so that a response se does not occur while answering the questions, the respondents were limited to one-time response only and data was cleaned after the stated time period of data collection was completed. The

presentation of data was checked on different devices like the computer, laptops and mobiles (Salama, 2020). Of the 605 initial responses, 133 were excluded due to age mismatch or incomplete data, resulting in a final sample of 472 valid cases. Ethics approval was obtained from the host institution's research committee prior to data collection. This committee consists of PHDs in Psychology.

Results

The results section is organized around the three study hypotheses. All analyses were conducted using SPSS 26. Descriptive statistics, reliability coefficients, Pearson correlations, and multiple regression analyses were computed to evaluate the relationships among perceived mattering, resistance to peer influence, and personal growth initiative (PGI).

Table 1

Descriptive Statistics and Reliability of Study Variables (N = 472)

Variable	*k*	α	*M*	*SD*	Range	Skewness	Kurtosis
Personal Growth Initiative	16	.79	59.15	10.18	31–80	-.25	-.30
Readiness for Change	4	.56	15.21	3.22	6–20	-.47	-.30
Planfulness	5	.66	19.09	3.99	8–25	-.46	-.42
Using Resources	3	.59	8.72	3.64	0–15	-.32	-.62
Intentional Behavior	4	.53	16.12	2.90	7–20	-.65	-.22
Mattering to Others	11	.86	39.88	9.06	15–55	-.53	-.28
Resistance to Peer Influence	10	.86	22.17	7.42	10–40	.43	-.52

Note. α = Cronbach's alpha; *M* = Mean; *SD* = Standard Deviation.

Table 1 presents the descriptive statistics, internal consistency (Cronbach's alpha), and distribution characteristics for all study variables. Skewness and kurtosis values were within acceptable ranges (±1), indicating normal distribution of the data. All measures demonstrated acceptable to high internal consistency. PGI and MTO were slightly negatively skewed, typical for psychological well-being constructs.

Table 2

Correlations Among Study Variables (N = 472)

Variable		1	2	3
1.	Personal Growth Initiative	-		
2.	Mattering to Others	.21**	-	
3.	Peer Resistance	.02	-.05	-

**$p < .01$.

To test Hypotheses 1 and 2, Pearson product-moment correlations were computed. As shown in Table 2, perceived mattering (MTO) was positively and significantly associated with personal growth initiative (PGI), supporting H1. However, resistance to peer influence (RPI) was not significantly correlated with PGI, offering limited support for H2. These findings indicate that adolescents who feel they matter to others are more likely to engage in self-directed growth, while peer resistance alone is not strongly associated with PGI. Table 3 presents the regression coefficients for the overall PGI score. To address Hypothesis 3, a multiple regression analysis was conducted with personal growth initiative (PGI) as the outcome and perceived mattering (MTO) and resistance to peer influence (RPI) as predictors. This model tested the joint explanatory power of these two social constructs.

Table 3

Multiple Regression Predicting PGI from MTO and RPI (N = 472)

Predictor	B	SEB	β	*t*	*p*
Mattering to Others	0.23	0.05	.20	4.61	.00
Resistance to Peer Influence	0.06	0.04	.07	1.41	.16
Model Summary					
$R = .22$					
$R^2 = .05$					
$F(2, 469) = 12.67$, $p < .00$					

The overall regression model was statistically significant, $R = .22$, $R^2 = .05$, $F(2, 469) = 12.67$, $p < .00$, indicating that the combination of perceived mattering and peer resistance accounted for 5% of the variance in PGI. However, only perceived mattering emerged as a significant unique predictor ($\beta = .20$, $p < .00$), while resistance to peer influence did not ($\beta = .07$, $p = .16$). These results partially support Hypothesis 3: while the model as a whole was significant, the predictive value was largely driven by mattering. The relatively low R^2 indicates that additional factors likely contribute to PGI beyond the two predictors examined. Nevertheless, the model shows that social validation (mattering) plays a more consistent role than autonomy (peer resistance) in predicting adolescent self-development.

Table 4

Multiple Regression Predicting PGI Subscales from MTO and RPI (N = 472)

PGI Subscale	Predictor	B	SEB	β	*t*	*p*
Readiness for Change	Mattering to Others	0.09	0.06	.08	1.50	.16
	Resistance to Peer Influence	0.03	0.05	.04	0.65	.52
Planfulness	Mattering to Others	0.17	0.05	.17	3.32	.00
	Resistance to Peer Influence	0.04	0.04	.05	1.12	.26
Using Resources	Mattering to Others	0.07	0.06	.06	1.19	.23
	Resistance to Peer Influence	0.01	0.05	.01	0.18	.86
Intentional Behavior	Mattering to Others	0.21	0.05	.20	4.42	.00
	Resistance to Peer Influence	0.05	0.04	.06	1.24	.217

To further explore Hypothesis 3, separate regression analyses were conducted using each PGI subscale, Readiness for Change, Planfulness, Using Resources, and Intentional Behavior, as dependent variables, with MTO and RPI entered as predictors. Table 4 presents the regression coefficients for each PGI subscale as predicted by MTO and RPI. Mattering to others significantly predicted Planfulness ($\beta = .17$, $p < .01$) and Intentional Behavior ($\beta = .20$, $p < .00$), while its predictive effects on Readiness for Change and Using Resources were weaker and non-significant. Resistance to peer influence did not significantly predict any of the PGI subscales. These results suggest that the effect of mattering is strongest in domains involving planning and intentionality, which are crucial for adolescent goal-setting and follow-through.

Subgroup Analyses by Peer Resistance Level (Exploratory)

Although not a formal hypothesis, participants were categorized into two groups based on median split of RPI scores: "lower peer resistance" ($n = 269$) and "higher peer resistance" (n = 203). Regression analyses were conducted separately for both groups.

- **Low resistance group ($n = 269$):**
  MTO → PGI: $\beta = .13$, $p = .02$, $R^2 = .01$
- **High resistance group ($n = 203$):**
  MTO → PGI: $\beta = .33$, $p < .00$, $R^2 = .11$

Discussion

The present study explored the relationships among perceived mattering, resistance to peer influence, and personal growth initiative (PGI) in a sample of older adolescents in Pakistan. Guided by developmental theories and grounded in the Positive Youth Development framework, the study tested three hypotheses. The findings offer important insights into how social validation and peer dynamics interact with adolescents' motivation for intentional self-development in a collectivist cultural context.

The research is grounded in the Positive Youth Development (PYD) framework, which shifts attention away from adolescent problems and deficits and instead emphasizes their strengths, skills, and

developmental resources. Within this framework, perceived mattering serves as a relational resource that helps young people feel a sense of belonging, worth, and connection to others. Resistance to peer influence reflects an adolescent's ability to think and act independently, even when facing pressure from friends. And PGI captures a person's tendency to actively pursue self-improvement and personal development (Robitschek, 1998; Burkhard, 2019). According to PYD theory, healthy development emerges from the interplay between supportive social environments and an individual's own strengths and capacities.

Keeping this point in consideration, the present research focused on factors that affect the self-concept of adolescence and how they function under peer pressure and how it shapes their motivation and capacity to pursue personal growth. The results are meaningful and give an insight into how social relationships and individual qualities work together to support positive development among adolescents in a collectivist cultural setting. These findings are discussed in detail below.

Perceived mattering was found to be positively and significantly associated with PGI. This result aligns with prior research suggesting that feeling valued by others enhances adolescents' confidence, goal setting, and willingness to engage in self-growth (France & Finney, 2009; Flett et al., 2022). As theorized by self-determination theory, mattering satisfies the basic psychological need for relatedness, which is essential for intrinsic motivation (Deci & Ryan, 2000; Ryan & Deci, 2020).. In collectivist societies like Pakistan, where adolescents are often socialized to prioritize familial and communal bonds (Siddiqui & Durrani, 2020), the sense of mattering may be especially influential in shaping self-directed development. This finding is consistent with the first hypothesis of the research.

In contrast, it was surprising to find that the second hypothesis of the study received limited support. The study hypothesized that resistance to peer influence would be related to PGI. However, it was found that Resistance to Peer Influence was not significantly associated with PGI, neither in the bivariate correlations nor in the regression model. This result diverges from some prior findings suggesting that peer resistance is associated with greater autonomy and positive adjustment outcomes (Steinberg & Monahan, 2007). A possible explanation may lie in cultural context. In collectivist cultures, peer conformity may be normative and even valued, and resisting peer norms might not translate directly into self-growth (Triandis, 2001). However, as an additional analysis, an exploratory subgroup analyses was conducted to compare the impact of mattering to others on PGI in two groups that contrasted with peer pressure. Among adolescents with higher resistance to peer influence, mattering was a significantly stronger predictor of PGI compared to those with lower peer resistance. This finding suggests a potential interaction effect: adolescents who are socially autonomous may benefit more from perceived validation, as they are better positioned to act on internalized self-worth and pursue meaningful goals. Such interactions align with the Positive Youth Development framework, which highlights the synergy between internal strengths and external supports (Lerner et al., 2015; 2025). Therefore, the construct of RPI may have different developmental implications in Western vs. non-Western societies. Future studies may benefit from assessing culturally adapted measures of autonomy or peer influence that better reflect local norms.

Regarding Hypothesis 3, the regression model showed that perceived mattering and resistance to peer influence jointly predicted PGI, although the effect was modest (R^2 = .05). Notably, only mattering emerged as a significant individual predictor. These findings partially support Hypothesis 3 and reinforce the conclusion that mattering plays a stronger and more consistent role in fostering adolescents' intentional growth than resistance to peer pressure. While the overall model reached statistical significance, the small effect size (R^2 = .05) indicates that perceived mattering and peer resistance account for only a modest portion of the variance in PGI. This suggests that additional psychological, relational, and contextual factors such as emotional regulation, family support, or academic motivation may also play important roles in predicting adolescent self-growth. This underscores the centrality of relational factors in adolescent development, particularly in settings where identity is shaped within interconnected social systems.

Collectively, these results contribute to the growing literature on adolescent personal growth by highlighting the importance of social connectedness over autonomy in promoting PGI within collectivist cultures. This study contributes to recent calls for greater inclusion of underrepresented cultural contexts in adolescent development research (Lee & McLean, 2022; Levkovich & Shinan-Altman, 2022). While the role of autonomy remains relevant, especially in Western frameworks, these findings suggest that relational factors like mattering may be more universally foundational for adolescent self-development. Further cross-cultural research is needed to clarify the interplay of autonomy, relatedness, and initiative across diverse populations.

Implications

The present findings hold meaningful implications for both research and practice. First, they underscore the critical role of perceived mattering in fostering adolescents' personal growth initiative. This suggests that interventions targeting adolescent developmentwhether in school counseling, youth programs, or community settingsshould prioritize strategies that enhance youths' sense of being valued and significant to others. Educators and mental health professionals working in collectivist societies may particularly benefit from culturally sensitive programming that cultivates relational connectedness alongside self-development.

Additionally, the study's results point to the limited standalone value of resistance to peer influence in predicting self-directed growth. While peer autonomy is still important, fostering a strong sense of social belonging may be more immediately actionable in shaping adolescents' motivational pathways. This insight can inform Positive Youth Development (PYD) programs that aim to balance individual agency with supportive relational contexts.

Limitations and Future Directions

Despite its contributions, this study has several limitations. First, the cross-sectional design prevents any claims about causality. Longitudinal studies are needed to assess how mattering and peer resistance influence personal growth over time. Second, self-report measures may be subject to social desirability or self-perception biases, especially in collectivist cultures where conformity and impression management are valued. Third, while the sample was diverse in terms of geography, it may not fully represent the range of socioeconomic, religious, or linguistic backgrounds present in Pakistan. Future studies should aim for more representative sampling and include contextual variables such as family support, school climate, and peer relationship quality. Lastly, while this study focused on Pakistani adolescents, replication across other non-Western and Western societies is necessary to assess cultural generalizability and refine theoretical models. Future research may also explore mediators or moderators such as gender, academic pressure, or emotion regulation that could explain the pathways from social experiences to self-development. A mixed-methods approach may provide richer insight into how adolescents understand and interpret mattering and peer influence in their daily lives.

Conclusion

This study provides empirical evidence that perceived mattering is a key predictor of personal growth initiative among older adolescents in Pakistan, while resistance to peer influence plays a more limited role. These findings suggest that adolescents' motivation for self-improvement is more strongly linked to feeling valued and recognized by others than to the capacity to resist peer pressure. The significance of mattering was further amplified among adolescents with greater peer resistance, indicating that social validation and autonomy may interact in complex ways to influence adolescent growth.

From a practical standpoint, the results support the value of fostering inclusive, affirming environments in schools, families, and peer networks to enhance adolescents' personal growth. Intervention programs that emphasize belongingness and relational affirmation may be particularly effective in collectivist cultures. Educational institutions and mental health practitioners should recognize that helping adolescents feel valued can be a powerful driver of resilience and motivation.

Future research should explore additional mediators and moderatorssuch as gender, family

structure, and academic stressto better understand the pathways from social experiences to personal development. Longitudinal and culturally comparative studies are also recommended to track how these relationships evolve over time and across sociocultural settings.

Declarations

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Ethical Approval: This study was approved by the Ethical Review Committee of the National Institute of Psychology, Quaid.i.Azam University Islamabad Pakistan.

Data Availability: The data that support the findings of this study are available from the corresponding author, upon reasonable request. Data will be shared in anonymized form to protect participant confidentiality and in accordance with institutional ethics guidelines.

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Meaning in Life and Existential Anxiety among University Students: Mediating Role of Resilience

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Abstract

Background. Young adults often face existential concerns due to increasing academic pressures and life uncertainties that negatively affect their psychological wellbeing. Despite the significant influence of meaning and resilience on existential concerns, the interrelation of these factors remains underexplored in context of Pakistani youth. The current study aimed at finding out the relationship among meaning in life and existential anxiety mediated by resilience among young adults university students.

Method. The research was carried out in universities situated in Rawalpindi and Islamabad, Pakistan. Data collection was performed using three standardized instruments: the Existential Anxiety Questionnaire (Weems, 2004), the Meaning in life Questionnaire (Steger et al. 2006), and the Brief Resilience Scale (Smith et al., 2008).

Results. The results indicated a negative correlation between meaning in life and existential anxiety (r = -0.273, $p < .01$) and positive correlation with resilience (r = 0.157, $p < .01$). Furthermore, resilience was negatively correlated with existential anxiety (r = -0.316, $p < .01$). Females reported higher existential anxiety than males, whereas males showed greater resilience and a stronger sense of meaning in life as indicated by independent sample t-test. The relationship between meaning in life and existential anxiety was found to be partially mediated by resilience, while the direct effect of meaning in life on existential anxiety remained significant.

Conclusion & Implications. The findings highlight the protective role of meaning in life and resilience against existential anxiety in promoting psychological well-being among young adults. This study supports Sustainable Development Goal 3 (Good health and well-being) and Goal 4 (Quality Education) by promoting youth mental health and emotional resilience in higher education contexts.

Keywords. Existential anxiety, meaning in life, resilience, young Adults, sdgs

Introduction

Issues with life meaning, existential anxiety, and adaptive capacity are among the particular challenges faced by university students that have a big influence on their psychological health (Alshehri et al., 2024). These existential and psychological elements are crucial in determining living standards and psychological wellness outcomes. A person's feeling about their life as meaningful, worth living, and coherent can be referred to as meaning in life (Steger, 2012). It can be an episodic feeling or a chronic stable outlook toward one's life. It has a variety of sources including personal relationships, employment, spirituality, and personal development. Significant life purpose has been found to provide a shield against life's challenges and is linked to improved psychological health. It has been estimated that a high percentage of the world population, particularly young adults, experience challenges regarding questions of meaning and purpose. Unjust circumstances, surroundings, educational responsibilities, economic instability, and social exclusion may result in a feeling of drift and indirection among numerous individuals. Such a condition is particularly prevalent among the younger generation who are experiencing a period of identity formation (Schwartz et al., 2011). Those with superior meaning are also likely to perceive that they have control over their life's narrative, something that can increase their psychological health. Alternatively, a low life meaning has been linked to lower mental well-being (Steger & Kashdan, 2007) and higher incidence of distress and depression (Brassai et al., 2011)

The concept of resilience broadly encompasses various aspects of an individual's capacity to recover from life's stressors and regain well-being (Richardson, 2002). Psychological and physical well-being are strongly associated with resilience processes (Masten & Barnes, 2018). A meaningful outlook on life is theoretically understood to increase resilience by giving people a sense of direction and motivation, thereby strengthening effective coping with stress and uncertainty. Psychological factors such as active coping mechanisms, intellectual functioning, self-regulation, optimism, and secure attachment contribute to resilience (Richardson, 2002)

Existential anxiety refers to a form of anxiety that arises when individuals confront the fundamental issues of human existence. It is based on four human concerns: The awareness about death being inevitable and one's mortality, the responsibility of making autonomous choices, the experience of isolation, and feelings of emptiness (Yalom, 1980). It is different from clinical anxiety which is typically caused by external stressors such as workplace stress, adjustment, health, and finances or neurotic anxiety which originates from internal conflicts. Existential anxiety is rooted in the idea of existentialism which emphasizes that there is no inherent life meaning and every individual is free to create their own meaning. While in today's world individuals have an abundance of options and the fear of making the right choice generates anxiety which leads to existential crisis (Schwartz, 2005). Moreover, the theory of logotherapy emphasizes that looking for a meaning is an important driving force in homo sapiens. In this context, we can understand lack of meaning as a key contributor to existential concerns, whereas the sense of life being meaningful serves as a safeguard that helps individuals interpret and manage existential concerns more effectively. As previous studies proposed, those who find significance in their lives are more likely to demonstrate psychological resilience even under the most extreme and inhumane conditions (BAno, 2014; Steger, 2013). A study found 71.1% prevalence of existential worry among Saudi students and had high correlations with depression and stress (Alshehri et al., 2024) both of which are mitigated by meaningful life (Hashmi et al., 2024). This illustrates the point that absence of meaning is a major contributor to existential anxiety. Elaborating on this, the theory of Meaning Management(Wong, 2008) suggests that living with a sense that life matters serves as a protection, it facilitates coping with uncertainty, adversity, and loss by providing individuals with cognitive and emotional frameworks to understand and accept these experiences. This concept is especially relevant to youth and young adults, who are in a developmental phase marked by existential questioning and emotional fluctuation.

According to a past research, university students are more likely than people who are not involved in challenging academic setting to experience psychological, emotional, social, and behavioral

challenges (Auerbach et al., 2016). Despite the fact that existential concerns have become more common among young adults, the amount of empirical research examining the psychological factors that may lessen this form of distress is very low in Pakistan. Most of the local studies have primarily focused on generalized anxiety, trauma, depression, and stress, often ignoring the unique existential problems that contribute to psychological burden. According to a recent study, 44% of people experiences anxiety as a result of lack of purpose (Hashmi et al., 2024). In particular, the interplay between existential anxiety, life meaning, and resilience remains underexplored in the Pakistani context.

Current study is carried out with the intention to add valuable insights in the existing knowledge by studying the connections among existential anxiety, meaning in life, and resilience in Pakistani youth. Results from this research will be used to guide targeted strategies and interventions to improve the psychological health of university scholars.

Hypotheses

1. Existential anxiety will be negatively correlated to meaning in life and resilience, while resilience will be positively correlated to life meaning.
2. Resilience will significantly mediate the relationship among meaning in life and existential anxiety, such that higher meaning in life will be associated with higher resilience, which in turn will be associated with lower existential anxiety
3. There are gender differences in levels of existential anxiety, life meaning, and resilience.

Method

Research Design

This study employed a correlational study design to examine the relationship among life meaning, existential anxiety, and resilience. Data were collected by administering standardized Questionnaires.

Study Area and Population

The target population consisted of 300 young adults and the sample was selected using convenient sampling method, from both public and private sector universities in Rawalpindi/Islamabad Pakistan,. The sample size was determined based on Roscoe's (1975) rule of thumb for behavioral research, which recommends a minimum of 10 observations per variable/item for multivariate analyses. Accordingly, the total number of items (29) was multiplied by 10, yielding a required sample of 290 participants. Finally, a sample of 300 respondents was deemed adequate as it falls within the acceptable range suggested by Roscoe (1975).

Assessment tools

The following standardized questionnaires were used to gather data.

Meaning in Life Questionnaire (MLQ). Developed by Steger et al., (2006) is a 10-item Questionnaire, which assesses two distinct aspects: the longing and effort to discover significance in life known as "Search for meaning" and the extent to which people believe their lives have a meaning known as "Presence of Meaning". Participants respond to questions on a seven-point Likert scale that goes from "Absolutely True" to "Absolutely False". Scores for both subscales are calculated separately, and item 1, 4, 5, 6, and 9 are reverse-scored prior to analysis. Cronbach's alpha ranging from 0.86 to 0.88 reported in earlier investigations, the scale has shown great internal consistency and high reliability. Since its first validation on American undergraduate samples, the MLQ has been widely applied in various cultural contexts, including Asian and other student populations. It is appropriate for research with young adults and university students because it is generally suitable for people 16 years of age and older.

Existential Anxiety Questionnaire (EAQ). Created by Weems et al., (2004) is a 13-item Existential Anxiety Questionnaire to assess the emotional and mental distress associated with basic existential concerns, such as mortality, autonomy, free will, and meaningless life. The scale uses a dichotomous True/False response format, with items scored as 1 for "Yes" and 0 for "No". Responses to item 2, 4, 7, 9, 12 and 13 must be reverse scored before analysis in order to reduce response bias. Higher overall scores indicate greater levels of

existential anxiety. For research purposes, the EAQ has a reported internal consistency of .71, which is considered acceptable. The scale has been used in a variety of cultural context, particularly in studies focusing on anxiety and psychological distress but it was first validated on western teenage and young adult sample.

Brief Resilience Scale (BRS). It is a 6-item instrument created by Smith et al., (2008) that provides a quick and reliable assessment of resilience as a dispositional trait. A five point Likert scale which ranges from 'strongly agree' to 'strongly disagree' is used to score items. Items on the scale have both positive and negative wording, and items 2, 4 and 6 must be scored in reverse. To obtain the overall resilience score, all six items must be averaged. With Cronbach's alpha values in the range of .80 to .91 the scale has shown excellent reliability. The scale was first validated on adult samples in the United States, including both clinical and non-clinical groups, and it has been widely used in multicultural research, including studies carried out in Asian and developing countries. Although it has also been used with older adolescents, it is usually acceptable for individuals aged 18 years and above.

Procedure

The internal consistencies of the scales used within Pakistani culture was evaluated through a pilot research (*n=50)*, all scales showed acceptable reliabilities and exhibited normal distribution. Afterwards, main study was conducted to evaluate the proposed hypotheses. 300 university students who expressed interest in participating were given a comprehensive information sheet which included details regarding significant ethical considerations and the objectives of the research. Before taking part, all participants provided signed informed consent form. The obtained data was cleaned and incomplete responses from questionnaires were eliminated (Chu et al., 2016) to reduce the chances of misinterpretation and strengthen the credibility of study results. Thereafter, only 293 complete responses were included in the main study. Once the data was cleaned, descriptive analyses were conducted including frequencies for categorical and demographic variables. The relationship between study variables was calculated through Pearson correlation, and Model 4 of PROCESS macro for SPSS was used to carry out the mediation analysis (Hayes, 2022).

Ethical Consideration

The relevant institutional review board provided ethical approval prior to conducting the research. Every subject gave their informed consent, and participation was entirely voluntary. Participants were recruited through student representatives who facilitated the circulation of the study invitation and were not involved in data collection to minimize potential coercion. All data were securely stored to ensure confidentiality and anonymity.

Results

Table 1: *Demographic characteristics, Frequencies, and Percentage of Participants (N=293)*

Characteristics	Groups	*f*	%age
Gender	Male	122	41.6
	Female	171	58.4
Family Structure	Joint	108	36.9
	Nuclear	171	58.4
	Missing	14	4.8
Birth Order	First/Eldest/Only Child	84	28.7
	Second	44	15.0
	Middle/Third	61	20.8
	Youngest/Last	55	18.8
	Fourth-Tenth	16	5.5
	Missing	33	11.3
Residence	Day Scholar	205	70.0
	Hostelite	83	28.3
	Missing	5	1.7

Table 1 summarizes the analysis of data from 293 participants using descriptive statistics. Descriptive statistics were measured using frequency and percentage in order to comprehend the sociodemographic features of the sample.

Table 2

Reliability Estimates and Descriptive Analysis of Study Variable in Main Study (N=293)

	Subscale	*α(k)*	*M*	*SD*	95%CI		*Skew*	*Kurt*
					LL	*UL*		
Age		-	20.76	1.63	20.59	21	0.33	-.55
Meaning in life Questionnaire	Presence of Meaning	0.61(5)	21.97	4.64	21.41	22.49	-.42	-.06
	Search for Meaning	0.81(5)	15.16	6.7	14.43	16.00	.75	0.16
Existential Anxiety Questionnaire		0.51(13)	6.35	2.96	6.02	6.72	1.31	7.70
Brief Resilience Scale		0.59(6)	19.64	4.21	19.16	20.15	8	3

The measurement properties of the questionnaires used in primary study are reported in Table 2. Cronbach's alpha coefficient for all instruments indicates acceptable reliability (Taber, 2018). The data was normally distributed as in showed by Skewness and kurtosis values which are within the normal range *(±2 for Skewness and ±7 for kurtosis)* (George & Mallery, 1999).

Table 3

Correlation analysis of the study variables (N=293)

	Variables	*M*	*SD*	1	2	3
1	Meaning in Life	37.6	7.20	-		
2	Existential Anxiety	6.35	2.96	-.27**	-	
3	Resilience	19.64	4.21	.16**	-.32**	-

*Note. *p < .05, **p < .01*

Table 3 indicates a significantly inverse correlation among meaning in life and existential anxiety. Likewise, a significantly inverse association can be seen between resilience and existential anxiety. Moreover, there is a positive correlation of meaning in life with resilience. At the 0.01 level (2-tailed), all reported correlations were significant.

Table 4

Mean Gender Differences among the study variables (N=293)

	Gender Differences					
	Male (*n*=122)		Female (*n*=171)			
Variables	*M*	*SD*	*M*	*SD*	*t (df)*	*p*
Meaning in Life	38.26	6.79	36.38	7.40	2.19(286)	0.029
Existential Anxiety	5.68	2.48	6.83	3.18	-3.35(285.07)	0.001
Resilience	21.18	4.39	18.54	3.72	5.53(289)	0.001

Table 4 presents gender differences across the three variables. Females reported higher existential anxiety scores compared to males. In contrast, high resilience scores were seen in male participants than females, and on meaning in life compared to females. The range of effect sizes was minimal to large(Cohen, 1988).

Table 5

Regression Analysis for Mediation of Resilience between Meaning in Life and Existential Anxiety (N=293)

Variables	Resilience		Existential Anxiety		95% CI	
	Model 1		Model 2		*LL*	*UL*
	B	*SE*	*B*	*SE*		
Constant	16.33	1.31	13.77	1.06	11.68	15.87
Meaning in Life	0.09*	0.03	-0.11**	0.02	-0.14	-0.05
Resilience	-	-	-0.02**	0.04	-0.27	-0.12
R^2	0.02		0.15			
F	6.70*		25.24**			

Table 5 provides a summary of the study variables' direct and indirect effects. Life meaning negatively predicted existential anxiety both directly and indirectly via resilience, indicating partial mediation.

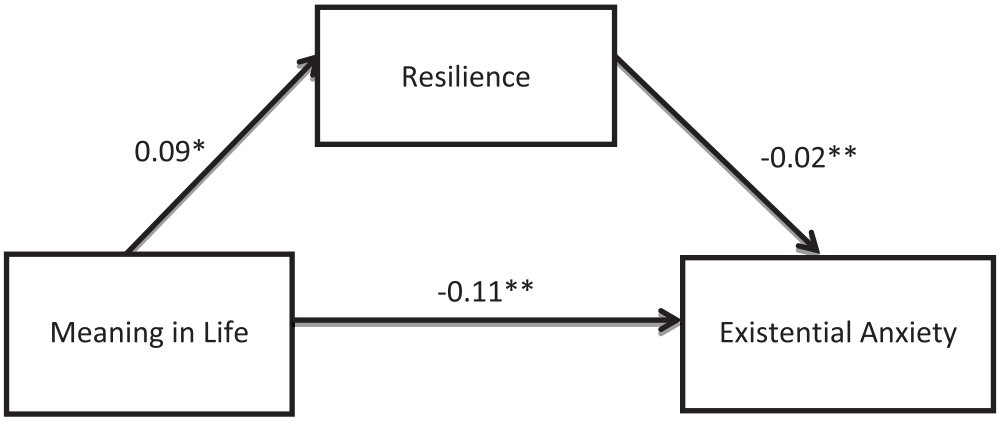

Fig 1. Conceptual model of the direct and indirect effect of Meaning in life and Resilience on Existential Anxiety

Discussion

The findings strongly support the proposed relationships, conforming to the existing literature while also adding new perspectives within cultural context of Pakistan. The discussion that fllow ties these findings to the goals, hypothesis, and importance of the study in light of previous research. According to the results higher life meaning was liked with reduced existential anxiety and greater resilience, which is in line with prior researches that suggests that young adults who actively seek for meaning in life are protected against existential anxiety because doing so gives them stability and direction in uncertain circumstances (Hashmi, 2024; Inayat Ur Rahman et al., 2025). Taking important life decisions is challenging for young adults in Pakistan due to number of structural issues, including social inequalities, unstable economy, and lack of opportunities. According to studies these difficulties contribute to unresolved internal conflicts, which can lead to chronic anxiety that shows up as existential anxiety, which is characterized by a fear of living or uncertainty about the future (Haqqani et al., 2024).

Resilience plays a role in mediating the relationship between existential anxiety and meaning in life, as indicated by results, demonstrating that leading a meaningful life both reduces existential concerns and improves coping. When paired with a purposeful existence resilience is a trait that helps individuals face major challenges more bravely and adaptively. Research shows resilience increases the positive effects of meaning on well-being and reduces psychological issues in young adults (Heintzelman

et al., 2014; Arslan et al., 2021; Lara-Cabrera et al., 2021).

Males showed higher resilience and deeper sense of purpose, while females reported higher level existential anxiety.(McLean & Anderson, 2009). Gender disparities in Pakistan may be a reflection of the roles expected to be played by men and women based on sociocultural and religiously beliefs. It can be stated that males often experience a clearer sense of purpose rooted in cultural and Islamic norms, such as being providers, guardians and protectors of the family, which motivates goal-directed behaviors and reduces existential worries. In contrast, Women face multiple, sometimes conflicting, expectations such as pursuing education, building a career, fulfilling marital roles, child bearing, and nurturing a family. Increase existential discomfort n females can be a result of the abundance of possibilities, which can lead to confusion about their existential purpose. A local research involving university students has documented similar trends, female students exhibited higher psychological distress and male students demonstrated higher presence of meaning and lower distress, reflecting the varying impact of cultural and social pressures (Shrivastav et al., 2025).

In general, resilience and existential meaning in life are two important factors in lowering existential distress among Pakistani young adults. This study establishes a framework for culturally adapting western based interventions to the South Asian environment, which can help Pakistani young generation to cope better, develop a sense of meaningfulness and improve their mental well-being.

Limitation and suggestions

Although this study provides valuable insights about the significance of resilience and life meaning in reducing existential anxiety, there are still certain limitations. Because the sample was only taken from Rawalpindi and Islamabad the generalizability of results is limited. The correlational design prohibits drawing conclusions regarding causality and self-report data may be vulnerable to bias. Therefore, it is suggested for future researchers to use a variety of data sources, longitudinal approaches and larger and more diverse populations.

Implications

The results of this study emphasize the demand for interventions addressing the sociocultural determinants of meaninglessness. The interventions can be more relevant and effective if they incorporate Pakistani sociocultural and Islamic interpretations of life and its purpose. Educational institutions can plan and implement purposes-oriented programs with resilience-building exercises, life skills training, and activities that encourage young adults to ponder upon their goals and values in order to help them crystallize their objectives and overcome challenges.

Declaration

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Ethical approval: Ethical approval was taken from institutional review board and informed consent was obtained from participants prior to data collection.
Data availability: The data is available on request from the author

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Psychosomatic Complaints among Married Women of Gilgit-Baltistan

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Abstract

Objective: The present study aims to explore the contributing factors to psychosomatic complaints, the prevalence of such complaints, and the coping mechanisms associated with them among married women in Gilgit-Baltistan.

Method. This research employed a qualitative descriptive design by thematic analysis of in-depth interviews with 16 participants. Moreover, a purposive sampling design was used to select married women aged 18 to 50 years from various districts of Gilgit-Baltistan. The study's inclusion criteria required that the participant score at least moderately on the Psychosomatic Symptom Scale.

Results. the findings of this study highlight some common psychosomatic complaints that married women of Gilgit-Baltistan are facing, such as fatigue, muscle discomfort, stomach pain, sleep disturbance, and headache. Furthermore, these complaints were intensified by contributing factors such as financial challenges, social isolation, marital conflicts, and lack of emotional support. Moreover, limited healthcare access and social stigma discouraged women from getting professional medical treatment, which leads to a reliance on self-medication. This research further explains the coping mechanisms adopted by married women to deal with psychosomatic complaints.

Conclusion. This study underscores the importance of targeted mental health campaigns for married women in rural areas, promoting couple therapy and counselling to reduce spousal conflict and foster healthy relationships, and creating community support networks. This research provides a beneficial insight into the complex association between emotional distress and physical symptoms, which helps in broader discourse on married women's mental and physical health in such remote areas and in a conservative society.

Keywords. Psychosomatic complaints, mental health, psychological distress, physical health, and symptoms, married women, and Gilgit-Baltistan.

Introduction

The concept of psychosomatic is a combination of two words: psyche, meaning mind or soul, and soma, meaning body (Chandrasekhar et al., 2006). It is defined as physical symptoms that are influenced by psychological components such as anxiety or stress. Such symptoms or complaints are real and can impair daily functioning and cause substantial distress. However, they may not be adequately explained by medical conditions. (Simonsson et al., 2008). The history of psychosomatic complaints can be traced back to ancient Greek times when physicians such as Hippocrates proposed that emotional imbalance can lead to physical ailments (Brill et al., 2001). Furthermore, the phenomenon of psychosomatic complaints evolved rapidly in the early 20th century. Psychologists like Sigmund Freud suggested in this psychoanalytic theory that repressed emotions lead to somatic symptoms. Despite that, in the mid-20th century, research on psychosomatic concepts highlighted that chronic stress may lead to impaired bodily function and is expressed in the form of psychosomatic complaints (Afari et al., 2014).

Objective

1. To determine the prevalent psychosomatic complaints encountered by married women in Gilgit-Baltistan.
2. To investigate the impact of socio-cultural factors on the perception and management of psychosomatic illnesses in married women.
3. To investigate the coping mechanisms utilized by married women to address psychosomatic issues.

Methodology

Sample

The data for this study were collected through purposive sampling, involving 16 married females. Due to data saturation, the number of participants was kept at 16. The present study's inclusion criteria were based on the Somatic Symptom Scale, adapted from the Patient Health Questionnaire-Physical Symptoms (PHQ). Participants who exhibited moderate to severe symptoms on the scale were eligible for inclusion in this study. On the other hand, individuals with no symptoms or mild symptoms were excluded from this research.

Assessment Measures

Inform consent

Participants received a written informed consent form to verify their voluntary participation in this study. Moreover, they were assured of their right to withdraw at any time and ensure the confidentiality of their data. Permission was obtained to audio-record their interview.

Demographic sheet

A demographic sheet was used to collect participants' relevant personal details, including age, Qualification, marital status, occupation, area of residence, monthly family income, number of children, living situation, and any diagnosed physical or mental disorder.

Questionnaire

A standardized somatic symptom scale adapted from the Patient Health Questionnaire Physical Symptoms (PHQ), which includes 10 items, and the cut-off score is minimal 0-4, low 5-9, medium 10-14, and high 15-30. There were three response options: 0, not bothered at all; 1, bothered a little; and 2, bothered a lot. This scale was used as an inclusive criterion. Participants who scored medium or high on this scale were included in the study.

Interview question

A semi-structured interview was conducted with the participants. There were eight main questions in the interview, each with the same follow-up questions. The questions were based on several main points, including types of physical symptoms, marital and family relationships, emotional and psychological stressors, health-seeking behavior, social and cultural pressures, and, lastly, coping strategies. Example questions are written below,

1. How has your mental and physical health been, especially after your marriage?
2. What strategies do you use to cope with your symptoms?

Two psychologists reviewed the guide for cultural relevance.

Procedure

Eligible participants were invited to a one-on-one in-depth interview held in a comfortable, private setting, such as a community space or a home. Each interview lasted 30-40 minutes. Participants were asked a series of questions about their psychosomatic complaints and the factors contributing to their severity and frequency. The interview was conducted in Shina and Urdu. The Shina language transcripts were translated into Urdu, and for accuracy, they were cross-checked with a bilingual reviewer. All interviews were audio-recorded and transcribed verbatim.

Results

Thematic analysis

Theme 1: Physiological complaints after marriage

This theme explores the persistent onset of physical pain and discomfort after marriage, which are associated with daily stressors. Additionally, this theme emphasizes participants' perceptions of medical consultation.

Physiological pain and discomfort - This sub-theme highlights the frequently occurring physiological pains, such as stomach pain and joint and back pain, which are exacerbated by daily stressors. Moreover, this physiological discomfort proposed a tangible relationship between physiological responses and marital status.

Participant 1 (34yr, rural, 2 child)

'Shadi k baad matlb phly ma sihadmand thi a shadi k baad mare andr boht kamzoriyan b peda hui hai. Mare ziada ter hadiyun ma dard hora hai back ma aur tangu ma.'

Participant 2 (28yr, rural, three children)

'Shadi k baad mare kamar ma dard hai aur sare jodun ma b dard hota neend kbi ati kbi nai ati aur khakawat b ziada ati. hazmai ma b dard hai.'

Medical consultation and perception. This sub-theme examined participants' perceptions of the medical consultation, including whether their concerns are taken seriously and whether the doctor can identify the root cause of their illness. This sub-theme also highlights the gap between available medical consultation and perceived physiological needs.

Participant1 (25yr, urban, 5 children)

"*Han doctor k ps jati hun usy kuch pata hi nai hai sirf ian killers aur vitamins ki medinies deta us se koi fark nai pdta meri bemari py .mera sahi checkup nai krty na hi mare symptoms k hisab se treatment krty."*

Participant 2 (30yrq, urban, 2 children)

"Ma nai jati doctor k pas mjy nai pasnd jana wesy b doctor mera masla mamlum hi nai kr pata, agar ziada dard ho toh idr kahi se pain killer kha leti hun jis se suni sunayi kisi k pas hai toh wahan se utha k khayi doctor k ps boht km jati mjy aisa lgta ki wahan humare lia elaj nai."

2nd Theme: Psychological Health after marriage

This theme identifies the mental health and emotional challenges faced by the participants, which are mainly linked to their family dynamics, marital status**, stress, and emotional distress.** This sub-theme explicitly focuses on the emotional distress, which includes anxiety, depression, and stress caused by various stressors in their environment. These stressors include financial conditions and family dynamics. This theme also highlights how emotional distress worsened or triggered their physiological and mental well-being.

Participant 1 (28yr, urban 3 children)

"ma boht pareshan hoti hun, achank ankhy bdi hoti, ma koshih b krti ki ziada a sochun phir b b ho jata .pata nai bs aisy hi befazul sochai ati ak soch nikalti toh dusri a jati—jab parshan hoti toh aisa lgta ki mera sar path jayre ga.

Participant 2 (25yr, rural, five children)

"Zidada ter mare sar ma sham ko dard hota. Jab ma pareshan hoti tab zidada dard hota hai. Ziada tension leti tab b hota. Ziada ter sar k back ma dard hota. Han aisa feel hota hai ki jab koitension nai hoti sar ma b dard nai hota aur zehen b fresh hoti. han jis dan ma tension leti un din ma uth b nai skti itna dard hota kamar ma aur sar ma".

Coping with stress. This sub-theme explores various stress-coping strategies participants practice,

including praying, talking with family and friends, or doing both. These practices provide participants with a sense of temporary relief from the psychosomatic symptoms.

Participant 1 (40yr, rural, 5 children)

" *ab boht ziada tension hota toh akely rehti hun soti hun ya phir mobile use krti hun.aur Jab ma pareshan hoti hunt oh idr hamsayun k ps jati hun kbii reshtedarun k ps jati hun."*

Participant 2 (26yr, urban, one child)

"han mera dil khush hota hai jab ma namaz pdhti .jab ma namaz nai pdhti tasbihaat nai nikalti tab mjy neend b nai ati ma bechan rehti . tension lia toh ma so jati us se ma fresh rehti hun ziada namaz se ma khush rehti."

3rd Theme; social support & psychosomatic complains.

This theme focuses on two main points: first, the influence of spousal support on women's mental health. The second point is the social support the woman receives from her surroundings, especially from her in-laws.

Spousal support. This sub-theme, spousal support, defines the impact of spousal emotional and practical support on psychosomatic complaints among women. In contrast, a lack of such social support leads to an increase in psychosomatic complaints.

Participant 1 (35yr, urban, no children)

"Jab abi abi ayi thi toh itni attachment nai thi us k sth na Matlab na wo mare sth betha than a ma us k sth bethi thi ziadatr alg ya bahr betha tha gar py chutiyun py ho k b bahr betha tha dusre gar ma ja k betha tha is tarha hota tha tab ma b khush nai thi ma b .matlb mjy b farq nai pdhta tha jo b ho wo apny lia hai mai apny lia hun. lekin ab ma ziada feel krti hun."

Participant 2 (40yr, rural, 3 children)

"Nai kbi nai kehta chute si bt ho bachai achy hain ap nai ho bolta toh is waja se ma b stress leti hun ak bt toh zindage ma thk hogi na meri shadi k itnai saalun ma, financial support puri deta bs emotional support nai deta ".

Family dynamics. This sub-theme explores the effect of family dynamics, which includes social and emotional support from their family, especially the in-laws, on the participants' psychosomatic symptoms. Positive family interactions alleviate somatic complaints, and negative family dynamics intensify emotional distress and psychosomatic complaints.

Participant 1(27, urban, 2 children)

"Shadi k baad se ma stress ma rehti shadi se phly ma khush khush rehti thi. Nai mera gar mare lia sahi jaga nai hai mera husband b humesha gusy ma rehtai. Ma joint family ma rehti hun yahan koi cooperative nai hai. Jab gar waly tang krty aur husband support nai krty tab stress hota hai—us ki waja se meri tabiyat thk nai rehti.

4th Theme: Aggravation of physiological symptoms due to stress.

This theme identifies various stressors, including emotional challenges, social pressure, and financial instability. These stressors intensify the perception of pain. These stressors are associated with the onset of ailments such as headaches and body aches.

Financial crisis. This sub-theme financial crisis explores how economic hardship, husbands' unemployment, and content worry about household expenses are linked to worsening stress levels in females.

Participant 1(33yr, urban, 4children)

"Husband ki koi job nahi hai, kabhi mazdoori milti hai kabhi nahi. Ghar ke kharchey nahi poore hote is wajah se tension hoti hai. Jab doctor ke paas nahi ja sakti toh painkiller kha leti hoon."

Participant 2(38, rural, 3 children)

Ziada ter in bachun k baap ki waja se pareshan rehti un ki koi kamayi nai nokari q nai milti ye soch soch k sar ma dard shuru hota us k sth joodun ma b dard hota.

Emotional crisis. This sub-theme of emotional crisis includes family conflicts, marital relationships, and a lack of social support. These practices lead to feelings of isolation, neglect by spouse, irritability, and aggression. Participants' physiological and

emotional well-being simultaneously deteriorate.

Participant 1(29, rural, 1 child)

"Nai kbi nai shadi k baad bs ak dafa ak qisa sunaya hai bs us k baad ma daily bolti hun kuch qisay kro ma b bore hoti hun bs humesha apny mobile k sth betha hai is lia ma b kuch nai bolti bs ma b apny lia alag se bethi Na ma ne apny batai discuss ki hain hum humesha batai krty b nai hain".

Participant 2 (29yrs, urban, no child)

"Shohr acha hai pr us k gusai k pata nai jalta achnak gusa ajata agr ma kuch bol dun to samne se boht ziada gusa krta is lia ma ziada bt nai krti us se aur wo b sirf zrurt ki bt krta bs. Aur is k gar waly b is jesy hain is lia humari nai bnti ziada."

5th Theme: Social and financial strain as a factor of psychosomatic complaints.

This theme explains how social expectations and comparison pressure affect participants' mental and physiological health, and how financial stability is a key factor in this.

Social expectation and comparison pressure. This sub-theme explains how women in Gilgit Baltistan face pressure to meet social expectations, including maintaining a social image, managing the household, and caregiving. Moreover, comparison with others dealing with sigma leads to versions of mental and physical health.

Participant 1 (38yrs, rural, 2 children)

"But kbi kbr aisa hota hai ki sahi chizu ma b thk nai deta matlb sab chizu ma matlb ap achy ho ap achy ho ye buri hai ye buri hai is tarha kaha toh ma depression ma rehti hun. KBI mjy ap achi ho nai kaha hai chahy meri galti na b ho na bs mjy ap galt ho bolta. Han mera mental aur physical health disturb hota."

Participants 2 (40yr, rural, 5 children)

"Han as pas k logun ki batun py koi tension leti hun humari qareebi py mazaq udaty hain . ma apny bachun ko b bahr nai chodti" .

Financial stability and health care access. This sub-theme highlights that financial instability is one of the factors that act as a barrier to healthcare access, which exacerbates their ongoing mental and physical health issues. Such practice leads to enduring, untreated pain and relies on self-medication.

Participant 1 (44yrs, urban, 3 children)

"Ak toh aisa hai ki us ki job nai hai phir person ka issue hota hai phir pesay na ho toh doctor k ps nail y ja skta hai. Is waja se .agr wo doctor k p sly gy aur checkup kraya toh bs thoda sa thk hoti hun nai ly gya toh mazeed tension ly k us k sth b ladhti hun.

Participants 2 (47yrs, rural, 5 children)

"Husband hospital nai ly jaty bs yahan dawayi laty hain kehty hainhospital ma kitne sare test karaty hain uthne pesy nai hain mare ps is lia pain killer kha k gar bet jao jis din kamayi achi hogi tab ly jaonga".

6th Theme: Adaptive and maladaptive coping mechanisms.

His theme focuses on multiple coping mechanisms employed by participants to manage mental and physiological health issues. These coping strategies are categorized into adaptive and maladaptive coping mechanisms.

Adaptive coping mechanisms. This subtheme defines healthy and positive ways to deal with psychosomatic complaints, such as spiritual practices, seeking social support, and using problem-solving techniques.

Participant 1 (45yrs, rural, 3 children)

"jab stress zoada leti thi tab namaz nai pdhti thi ab jab se ma apny lia ak routine bnaya na aur namaz pdhna start kia apny ap ko busy rakha hai tab se ma thodi thk hun. han mera dil khush hota hai jab ma namaz pdhti. Jab ma namaz nai pdhti tasbihaat nai nikalti tab mjy neend b nai ati ma bechan rehti. Tension lia toh ma so jati us se ma fresh rehti hun ziada namaz se ma khush rehti"..

Participant 2 (27yr, rural, 1 child)

"Friends k sth relationship acha hai un k sth rehti hunt oh ziada fresh rehti hun islia jab b ziada pareshan hoti to idr pas ma ak sehali hai us k ps chali jati hun ya phir usy bula leti hun bachun k sth a jati hai toh time kesy chala jata pata b nai chalta".

Maladaptive coping mechanisms. This sub-theme explores the temporary relief strategies participants practice, which may lead to adverse outcomes over time. Such maladaptive techniques include emotional suppression, avoidance, and overworking.

Participant 1(36, urban, 4 children)

"Jab gusa ata hai toh bachun py utarti hun ya phir so jati. Jab bachun ko marti toh sahi ho jati q ki gar walun ko kuch keh nai keh skti toh bs ye bachy hi mare hain inhi py apna gusa nikalti aur ak br Dard k aram k lia ak br tumar kraya tha bs thoda asar hua us ne bola tha ki isy utarna nai aur wo mjh se gum gya hai ab is waja se dard phir se shuru hua hai".

Participant 2 (26, urban,2children)

"Ma jab tension leti toh mobile dekhti hun koshih krti hun ki ziada time dekhun taki mera zehen convert ho busy ho us ma.ya phir so jati hun kisi se nai milti kohih krti hun ki akeli rahun ".

Discussion

This study aimed to provide vital inSights into psychosomatic complaints among married Women in Gilgit-Baltistan by examining the prevalence of these ailments, the psychosomatic and socio-cultural influences on their management and perception, and the adaptive and maladaptive coping mechanisms used by married women in Gilgit-Baltistan.

Furthermore, this study highlights some common psychosomatic complaints, including back pain, headaches, fatigue, and gastrointestinal discomfort. Married women's experiences. Participant verbatim: *'Shadi k baad Matlab poly ma sihadmand thi a Shadi k baad mare and both kamzoriyan b peda hui hai Mare ziada ter hadiyun ma dard hora hai back ma aur tangu ma b dard rehta '. This* concept, along with research done by Nakao et al. (2001)the authors analyzed the characteristics of 1,132 outpatients (848 women and 284 men, reveals that married women experience a higher level of somatic complaints as compared to unmarried women because of the additional stressors that lead to sleep disturbance, digestive issues, and muscle pain.

The First and second themes of the studies, which are physical complaints after marriage and psychological health after marriage, are also linked with the first objective. Research by Pereira et al. (2022) on physical health after marriage reveals that married women report higher rates of physical health problems. Participants verbatim:' *Shadi se phly meri tabiyat thk thi kbi itna bemar nai hoti thi shadi k baad se bemar rehne lgti hun tangu ma, hazmai aur peet ma b dard hota hai'*.

On the other hand, the result of this study reveals that emotional distress emerged as a massive contributor to psychosomatic complaints. Moreover, a sample of this study reported overthinking, feelings of anxiety, and loneliness associated with marriage conflict and financial instability. *Participant verbatim 'g bas pareshan toh hai husband ki koi job nai hun tab ziada bemar rehti hun tab hazmat ma b halka sa dard hota hai. Jab boht ziada tension hota toh akely rehti hun sot i hun. Align with the verbatim and the research objective*. (2018) concluded that there is a relationship between marital dissatisfaction and distress.

Another objective of this study is to explore the effect of socio-cultural pressure on married women in Gilgit-Baltistan. The third theme is the role of social support in psychosomatic complaints, including financial and emotional crises. The fourth theme of the study is Social and financial strain as a factor in psychosomatic complaints, including social expectations and comparison pressure, as well as financial stability and healthcare access.

The results of this study reveal that financial crisis, limited emotional support, and family dynamics exacerbate these complaints. Participant verbatim: "*Ziada ter in bach k baap ki waja se pareshan rehti un ki koi kamayi nai nokari q nai milti ye soch soch k sar ma dard shuru hota us k sth joodun ma b dard hota".*Aligns with the objective and verbatim research done by Shafiq (2024), who reported that minimal emotional support and unresolved spousal conflicts lead to stress-induced physical symptoms. Another participant verbatim *hour acha hai pr us k gusai k pata nai jalta achnak gusa ajata agr ma kuch bol dun to samne se boht ziada gusa krta is lia ma ziada bt nai krti us se aur wo b sirf zrurt ki bt krta bs. Aur is k gar waly b is jesy hain is lia humari nai bnti ziada.*

The last objective of this study is to explore

adaptive and maladaptive coping mechanisms used by married women in Gilgit-Baltistan, and the fifth theme also addresses these mechanisms. However, the thematic analysis of this study revealed that participants engage in both adaptive and maladaptive coping mechanisms. The adaptive coping mechanisms participants practiced included seeking social support, praying, and relaxing. Participants' verbatim related to adaptive coping mechanism:' *Friends k sth relationship acha hai un k sth rehti hunt oh ziada fresh rehti hun islia jab b ziada pareshan hoti to idr pas ma ak sehali hai us k ps chali jati hun you phir usy bula leti hun bachun k sth a jati hai toh time kesy chala jata pata b nai chalta'*.Hussain et al. (2020)associated risk factors, and its impacts on women's mental health in Gilgit-Baltistan (GB explain that relaxation and mindfulness reduce the intensity of musculoskeletal issues.

Despite the adaptive coping mechanisms, participants also report some maladaptive coping mechanisms of psychosomatic symptoms; these strategies include isolation, reliance on painkillers, practice of enchantment, and emotional suppression. Participants' verbatim regarding the maladaptive practice aligns with the participant's words '*Jab gusa ata hai toh bachun py utarti hun ya phir so jati. Jab bachun ko marti toh sahi ho jati q ki gar walun ko kuch keh nai keh skti toh bs ye bachy hi mare hain inhi py apna gusa nikalti aur ak br Dard k aram k lia ak br tumar kraya tha bs thoda asar hua us ne bola tha ki isy utarna nai aur wo mjh se gum gya hai ab is waja se dard phir se shuru hua hai'*. Align with participants verbatim, this research suggested that Löwe et al. (2024)

Limitation and Recommendations

Though the present study fulfills a significant literature gap, it still has several limitations. Firstly, the data for this study rely on participants' narratives, which can lead to the risk of symptom exaggeration or memory biases. Secondly, to align with social norms, participants may have altered their responses, which leads to social desirability bias. On the other hand, based on the findings of this study. Various recommendations are suggested to explore psychosomatic complaints among married women of Gilgit-Baltistan. Firstly, there should be an Implementing focused mental health awareness programs in rural regions is crucial for educating women regarding psychological health and its correlation with physical symptoms. Enhancing understanding of mental health treatment by confronting cultural stigmas can promote acceptance.

Community support initiatives must be established, and healthcare professionals must be trained to recognize and manage psychosomatic complaints effectively. Furthermore, facilitates local support groups, enabling women to exchange experiences, obtain emotional support, and reduce social isolation.

Conclusion

This study explores the significant effect of psychosomatic complaints among married women in Gilgit-Baltistan. Additionally, emotional distress, cultural expectations, and financial stability were highlighted as major contributors to psychosomatic illnesses. This research further identified the maladaptive coping mechanisms, which include reliance on painkillers, emotional suppression, and social withdrawal. On the other hand, Adaptive techniques such as seeking social support, relaxation techniques, and prayer were found to reduce symptom intensity. Moreover, to address these challenges, a multidimensional approach that includes stronger social support systems, greater mental health awareness, and improved healthcare access is needed. Moreover, conduct more research on this concept. Lastly, implementing these recommendations can reduce psychosomatic complaints, foster healthier family dynamics in the region, and improve overall well-being.

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Coping with Burnout: The Emotional Burden on Healthcare Professionals in Maternity Services

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Abstract

Background. Those healthcare professionals working in the field of maternity are very much exposed to miscarriage and other trauma related with it and holds an emotional burden on them, yet this area remains underexplored. This research helps in uncovering the coping mechanisms of Gynecologists and nurses and how this affects their mental wellbeing and job with a focus on emotional burden and coping responses.

Method. For data collection, semi structured interviews were conducted including (*n*=5) gynecologists and (*n*=3) nurses. This was done through purposive sampling. Following the approach of Braun and Clark (2006,2021) thematic analysis was performed to identify the data patterns.

Results. As a result, following themes were identified: (1) Emotional Burden of working with reproductive loss, (2) Coping Strategies and personal resilience, (3) Collective support and workplace solidarity and (4) Systematic gaps and need for institutional support. Data from participants highlighted emotional pressure can be increased due to continuous exposure with miscarriage related trauma, which exceeds work related stress. Taking small breaks, engaging in recreational activities and connecting with supportive people shows great effort towards emotional regulation, however depending mainly the individual coping also reveals some of the gap formal institutional support. Emotional expression was appeared as one of the critical methods by which the participants were able to manage distress, furthermore highlighting the role of social relationships in lightening psychological strain. Personal anxieties of the participants were also reported due to ongoing exposure to reproductive loss, they showed concern of their own pregnancies which shows a mixture of professional and personal boundaries highlighting the deep effect of miscarriage exposure.

Discussion. These findings showcase the impact of social and cultural factors in Pakistani settings with respect to gynecologists and nurses working in maternity settings highlighting the emphasize on both personal coping strategies and institutional assistance.

Conclusion. This research highlights the necessity for context specific support system to enhance the wellbeing of healthcare professionals and the quality of care they deliver.

Keywords. Miscarriage care, gynae staff, burnout, emotional strain, coping strategies, qualitative research

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Introduction

The gynae staff in the maternity department assume a very special role in any healthcare system because they are constantly subjected to life-affirming and highly traumatic events. Although childbirth is usually linked to happiness and celebration, maternity care providers especially gynecologists and maternity nurses are constantly faced with pregnancy loss, miscarriage, stillbirth and other complications. Such events filled with emotions put these professionals at high risk of psychological distress and burnout when they are repeated (Beck & Gable, 2012; Leinweber et al., 2017).

Burnout is an occupational phenomenon and is multidimensional and is accompanied by emotional exhaustion, depersonalization and diminished personal accomplishment (Maslach, Schaufeli & Leiter, 2001). Burnout in healthcare professionals has been associated with such adverse effects as anxiety, depression, decreased job satisfaction, empathy impairment, and diminished quality of patient care (Shanafelt et al., 2015; West, Dyrbye & Shanafelt, 2018). The gynae staff who deal with trauma-intensive patients, including maternity and obstetric care, are especially susceptible to prolonged emotional labour and empathic connection with patients who have suffered a loss (Figley, 1995; Stamm, 2010).

There are also high psychological demands for the gynecologists and nurses, such as providing bereavement care to families experiencing a loss Ravaldi et al, (2022) or the lasting impact of being involved in critical workplace incidents (Buhlmann, Ewens & Rashidi, 2021).

Miscarriage, specifically, is a complicated clinical and emotional phenomenon that has a very significant meaning to patients and families. It has been proposed in research that healthcare delivery professionals in the event of pregnancy loss are prone to secondary traumatic stress, compassion fatigue, and moral distress when dealing with the grief of patients and having to suppress their own feelings (McCreight, 2005; Goldbort et al., 2011). Furthermore, studies also highlight that maternity healthcare providers frequently experience secondary traumatic stress and moral injury due to repeated exposure to traumatic birth events, which can significantly impact their psychological wellbeing (Kendall-Tackett, 2022). The necessity to be calm and professional even during recurrent loss may add emotional pressure and burnout in the long run (Hunter & Warren, 2014).

Although there is increasingly more awareness of burnout in the healthcare setting, there is a lack of research into emotional experiences and coping strategies of maternity professionals, specifically in the context of miscarriage care, especially in low- and middle-income nations. The literature has concentrated mostly on workload, staffing, and systemic pressures, and relatively little has been done on the emotional and psychological impact of reproductive trauma on practitioners themselves (Leinweber & Rowe, 2010). Such experiences are also culturally contextual because societal expectations, miscarriage stigma, and inadequate mental health care of institutions can contribute to the stress experienced by healthcare personnel (Koenig, 2012; Shanafelt & Noseworthy, 2017).

Strategies of coping are important in reducing burnout. The transactional model of stress and coping developed by Lazarus and Folkman (1984) emphasizes the way individuals deal with stress using both emotion-oriented and problem-oriented approaches. Social support, emotional expression, spirituality, and engagement in restorative activities have been related to adaptive coping among healthcare professionals (Folkman & Moskowitz, 2004; West et al., 2016). However, when individual efforts in coping remains limited without sufficient institutional support, its effectiveness in lowering burnout and psychological distress could notably be reduced.

With these gaps established, the present study will investigate the emotional strain, coping mechanisms, and perceived support needs for gynecological and nurses staff, particularly related to experiences of miscarriage and reproductive loss. Using a qualitative methodology, this study seeks to understand the lived experiences of gynecologists and nurses while also offering contextually relevant information that can be applied in creating trauma-informed and supportive care practices.

Objectives of the study

1. To explore the emotional experiences of gynae staff working in miscarriage and pregnancy loss settings.
2. To explore the coping strategies to manage work related emotional strain and psychological distress.
3. To identify the role of social and peer support systems, particularly among colleagues in alleviating emotional burden.
4. To explore the perceived impact of institutional support (counselling services, workload management) on reducing burnout and emotional distress.
5. To understand how repeated exposure to pregnancy loss influences healthcare professionals, their perception and anxieties including those related to their own reproductive experiences.

Research questions

1. How do gynae staff experience and interpret emotional strain while managing miscarriage and pregnancy loss cases?
2. What coping strategies do healthcare professionals employ to manage emotional distress associated with their work?
3. How do peer relationships and workplace social support contribute to coping and emotional regulation?
4. What role do institutional structures and policies play in supporting or limiting healthcare professionals' wellbeing?
5. How does professional exposure to miscarriage influence healthcare professionals' personal beliefs, fears, and psychological wellbeing?

Method

Research Design

The current research used the qualitative research design based on semi-structured interviews to investigate the emotional experiences, the burnout, and coping strategies of the the gynae staff working in maternity services. Qualitative approach was suitable because it is possible to explore subjective experiences, meanings, and emotional processes in-depth (Creswell & Poth, 2018). The data analysis was based on the thematic analysis model of Braun and Clarke (2006, 2021).

Participants

The sample was (N=8) healthcare professionals who work in maternity services, (n=5) gynecologists, and (n=3) nurses who are working in maternity services. Purposive sampling was used to recruit the participants as they were all professionals who had a first-hand experience of miscarriage care and experienced reproductive trauma.

Inclusion Criteria

- At least 5 years of experience in the field of gynecologists or maternity nurses.
- Had direct experience in giving care to women who had miscarriage or pregnancy related complications.

Data collection

The collection was done using semi-structured, in-depth interviews, which was flexible to enable us to cover personal experiences and consistent in all interviews. Data collection was guided by the principle of thematic saturation, whereby interviews were conducted until no substantially new patterns were identified in the data.

The interviews were conducted using either the Urdu or English language, depending on the language of choice of each participant, thus providing ease and sincerity in their expression. The interviews were conducted individually and scheduled according to participants' availability, including their preferred time and mode of communication. The interview time lasted between 25 to 35 minutes.

The interviews were conducted by the primary researcher, **participants were informed about the voluntary nature of participation, assured of confidentiality, and encouraged to share their experiences openly. The researcher adopted a neutral and non-judgmental approach during interviews to reduce response bias and facilitate honest disclosure.** The interviews were recorded on tape with the express consent of the interviewees and transcribed word-to-word. In order to preserve confidentiality, identifying information was eliminated and members were given role-based identifiers (e.g., G1, N2).

Ethical Considerations

The study received ethical consent of the concerned institutional ethics review committee. The participants were told the objective of the study, that they could pull out at any point and that the study was voluntary. During the research, confidentiality and anonymity were guaranteed. Since the matter is sensitive, the participants were also told that they could take a break or cancel the interview in case they felt emotionally uncomfortable.

Data Analysis

Thematic analysis was used to analyze data through the six phases proposed by Braun and Clarke (2006, 2021), following a reflexive and interpretive approach. Transcripts were read and re-read to ensure familiarity with the data, while actively engaging with emerging meanings and patterns. Initial notes and significant segments were identified, reflecting early interpretive insights. At the second stage, initial codes were generated inductively using the data, with the support of NVivo to organize the coding process. Initially coding was introduced at semantic level with focus on its latent explanation. In contrast to NVivo coding, initially the transcripts were marked manually to assure a deep insight to grip subtle interpretations. The main purpose of the coding was to unveil the patterns of mutual meanings which provided the base for possible themes. The next goal was to enhance the themes to understand and further clear to make sure internal coherence and uniqueness with intention to get the detail of impact on full story. This process of identifying and labelling themes included iterative refinement to ensure that each theme represented a consistent pattern in the data. Final themes were reviewed against the dataset to ensure the accuracy in reflecting participant's experiences.

Throughout the analysis, the researcher remained reflexive of their interpretive role and positionality, particularly within the hierarchical and cultural context of the Pakistani healthcare system, which may have influenced both data collection and interpretation. Reflexive engagement was maintained throughout the research process to ensure that participants' voices were represented authentically.

Results

Table 1

Participants Characteristics *(N=8)*

Participant	Role	Age	Experience	Average MC handled	work setting	Training in mental health
G1	Gynecologist	38	12 years	7-8 per month	Semi Government/ Maternity Clinic	No
G2	Gynecologist	46	10 years	7-8 per month	Semi Government/ Maternity Clinic	1 course
G3	Gynecologist	36	7 years	7-8 per month	Semi Government/ Maternity Clinic	1 course
G4	Gynecologist	46	20 years	2% per month	Private	No
G5	Gynecologist	38	8 years	5-6 per month (can vary)	Semi Government/ Maternity Clinic	No
N1	Nurse	33	6 years	Many	Public	No
N2	Nurse	50	18 years	8-10 per month or less	Public	No
N3	Nurse	33	6 years	5-6 per month	Public	1 course

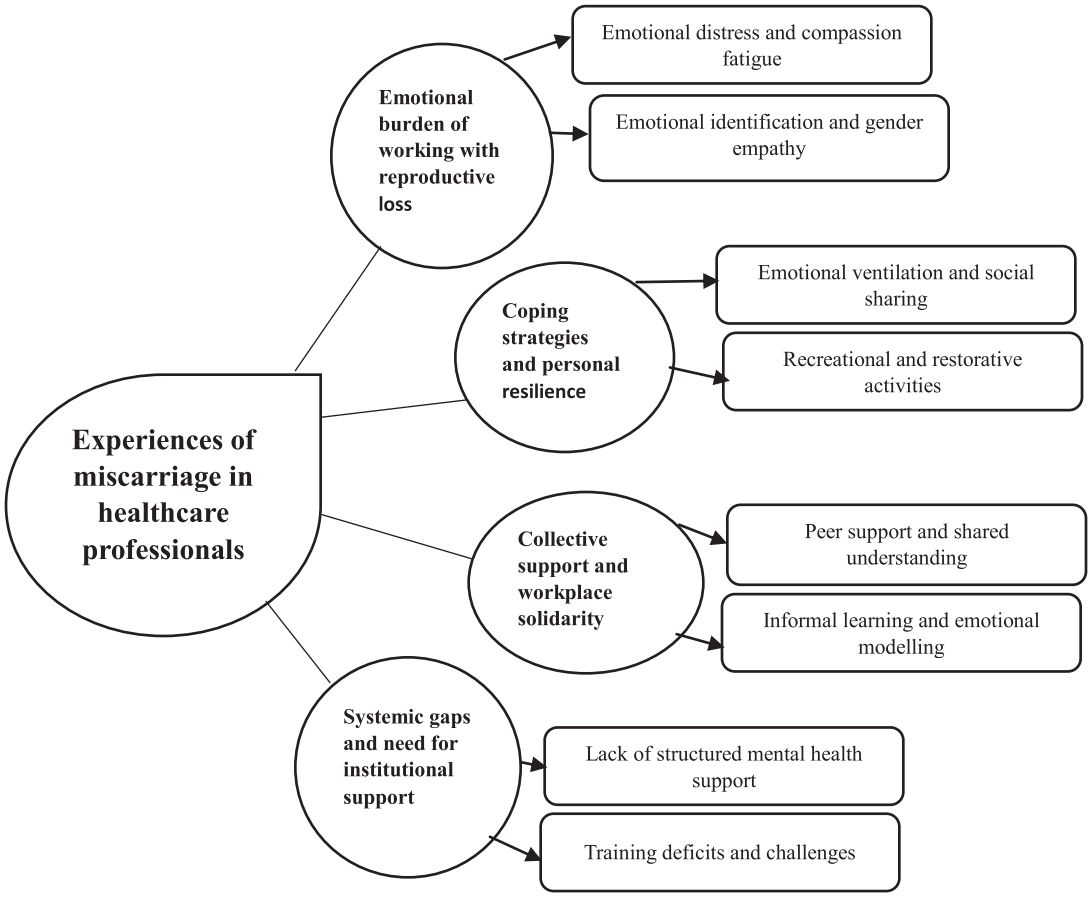

Figure 1: Thematic map illustrating the gynae staff's experiences of miscarriage related work in maternity services.

The figure depicts four interrelated themes and associated subthemes identified through reflexive thematic analysis, highlighting the emotional burden, coping strategies, collective support and systematic challenges experienced by healthcare professionals working in maternity services.

Theme 1: Emotional burden of Reproductive loss

This theme reflects the reflective emotional effect of recurrent exposure to miscarriage, trauma, and patient suffering, and how the role as a professional overlap with the emotional reaction to it.

Emotional Distress and Compassion Fatigue

Respondents said that they were sometimes deeply disturbed by their job and that they often felt emotional overload that came in tears, sadness and exhaustion. Professional training notwithstanding, recurrent experience of loss was reported to be an emotionally demanding experience: "*It is at times so disturbing that I sit down and cry and this is the truth*." (G1). Nurses also indicated emotional load especially when patients are in pain: *"I myself also feel very burdened at times. I feel deeply sad"*. These stories imply the existence of compassion fatigue, where repeated caregiving in trauma-related facilities burns out emotional strength.

Gender Empathy and emotional identification

Female medical workers, particularly nurses, emphasized a feeling of emotional attachment to the patient based on the sense of common womanhood and reproductive vulnerability: "*being women we empathize strongly*" (N2). This empathy which is gender-based, increases the emotional involvement which sometimes makes it harder to maintain professional boundaries and increases the risk of burnout.

Furthermore, it was reported by participants that their work is emotionally demanding, which shows noticeable emotional reactions. This

recommends that being into this miscarriage related trauma on daily basis contributes to increasing emotional strain, extending beyond routine occupational stress. Due to such experiences, where indirect exposure to patient's grief fallouts in psychological burden that may also reflect the foundations of secondary traumatic stress. This emphasize the need to understand the emotional exhaustion shall not only be recognized as personal reaction, but as something which is influenced by demanding nature of maternity care work.

Theme 2: Coping and Personal resiliency

This theme reflects how gynae workers manage with burnout using individual methods, emotional burnouts and changes in lifestyle.

Social sharing and emotional ventilation

The participants stressed the significance of sharing and experiencing with trusted people as one of the key coping mechanisms: *"Telling and letting out what you are feeling and letting out emotions is a huge relief."* (G3). Close friends and spouses were often recognized as the safe sources of emotions: "*I tend to share my routine and everything with my husband... I am very close to him."* (G3).

Leisure and Rehabilitation Events

Activities like reading, driving, vacations and spending time with family were reported to be an important source of dealing with emotional distress and emotional recovery: "*Vacations, I like to read books and going on drives is very good*" (G4). The need of purposeful rest was also emphasized by doctors: "*Doctors need to relax during weekends, once a month they should go somewhere*" (G1). These actions were also found to be a protective measure towards emotional exhaustion.

Coping methods such as seeking support from friends and engaging in recreational activities were reported by participants. This helps in demonstrating how individuals try to manage emotional difficulties through practical actions and support.

Theme 3: Workplace Solidarity and Collective Support

This theme highlights the role of interpersonal relationships that exists in a workplace that helps in reducing the effect of burnout.

Shared Understanding and Peer support

While interviewing the participants, the nurses especially reported that they support each other and used to express their emotions with colleagues "we sit together and discuss with each other" (N2). This feeling of being with each other and sharing the commo experiences helps in minimizing the emotional burden.

Informal Learning and Modelling of Emotions

Participants highlighted that they learned managing their emotions and communication skills through their senior's experiences. Watching them how they handle everything helped grooming their professional life which was an informal mean of learning. "*We learned watching how our seniors coped with the situation*" (G1). In this regard experiential learning is focused more as compared to institutional learning.

Peer support was found to be an important aspect, which proposes that this kind of support systems function as an important barrier against emotional strain. Role of shared professional skills in nurturing emotional validation and reducing the isolation in high-stress clinical environment were also reflected.

Theme 4: Systematic Gaps and Need for Institutional Support

This theme shows the perceptions of the participants of the systemic failures that cause burnout and emotional stress.

Absence of Organized Mental Health Care

The respondents repeatedly stressed the lack of official mental health services among the medical workers: *"Mental health is not really paid much attention here."* (N3). Doctors and nurses both supported counselling services, frequent check-ups, and emotional support systems.

Training Shortcomings and Communication Problems

Some doctors stated that they were exposed to counselling workshops and how to break bad news, how to treat the patient ant this hard time

but there were some who emphasized that there was no formal training in skills: *"there should be basic training in skills enhancement."* (G2). The participants emphasized the significance of such training as bad news breaking, patient counselling and emotional self-regulation.

Fear and Individual Vulnerability

The male professionals were affected by miscarriage as well, as they experienced personal anxieties especially when it came to female employees: "*when I became pregnant, I felt so much fear in my heart*." (N3). This is how work experiences invade personal life, making them more stressful and emotionally fragile.

All in all, the results indicate that maternity service healthcare professionals are exposed to a high rate of emotional burden and burnout as a result of repetitive exposure to reproductive trauma. Though people have their own coping styles, and they have their informal peer supports, there are no formal institutional systems to support them thus they are exposed to emotional burnouts.

Emotional stress is not just a personal concern but it has its roots within the organizations and the participants highlighted the need for support in this context. These concerns mark the importance of systematic measures in handling the burnout and helping maternity healthcare workers.

Discussion

The current study investigated the emotional load and coping strategies of healthcare workers working in the maternity department, especially those working with miscarriage and reproductive trauma regularly. In line with the available literature, the results show that burnout in gynae staff goes beyond physical workload to deep-rooted emotional labour, frequent exposure to loss, and emotional involvement with patients (Maslach, Schaufeli, & Leiter, 2001; Figley, 1995). Using a reflexive thematic analysis (Braun & Clarke, 2006,2021), four themes in relation to each other were identified, which, in totality, shed light on the psychological toll of providing care in trauma-prone maternity environments.

The emotional burden of working with reproductive loss is the first theme, which is highly similar to the literature on compassion fatigue and secondary traumatic stress in healthcare workers. The descriptions of emotional distress, tearfulness and exhaustion by the participants are similar to the findings by Figley (1995) and Stamm (2010) who reported the effect of chronic exposure to the trauma of others in draining emotional resources even in the highly trained professionals. The expression of gendered empathy is the reflection of the previous research which has suggested that the similar gendered and reproductive identity can raise the emotional response towards the miscarriage and infertility experiences of patients (Beck & Gable, 2012; Leinweber et al., 2017). Although empathic engagement will be the core of quality maternity care, the results indicate that without proper emotional protective measures, empathic engagement can make nurses more vulnerable to burnout.

Participants' accounts of emotional exhaustion and, at times, visible distress reflect the impact of sustained empathetic engagement with patients experiencing miscarriage. This corresponds with the idea of compassion fatigue, where extended caregiving in emotionally challenging environment results in a gradual emotional exhaustion (Charles Figley, 2002; Stamm, 2010). This further indicated that the emotional strain faced by gynae staff stems not only from their workload but also from continuous indirect exposure to trauma (Bride, 2007).

The second theme, coping strategies and personal resilience, shows that the healthcare professionals primarily utilize coping skills at personal level which is manifested as emotional expression, communal sharing, spiritual traditions and leisure pursuits. This result aligns with the research that have indicated that emotion-focused coping such as expressing feelings, looking for social support and process of finding meaning are the factors that can help reduce occupational stress in a healthcare setting (Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984). The emphasize on prayer, faith and spirituality among the participants as a means of solace aligns with findings from research carried out in culturally and religiously contextual environment where spiritual coping has been demonstrated to facilitate and manage stress and assist the participants in adapting (Koenig, 2012).

The reliance on self-managed coping resources also reveals a systemic gap, as past research indicates that individual resilience alone cannot control high stress and burnout in high intensity clinical environment (West et al., 2016).

The third theme, focusing on collective support and solidarity in the workplace, emphasizes the importance of peer relationship in reducing emotional stress. Research indicate that collegial support is significant protective element against emotional burnout and fatigue which is also reflected in participant's descriptions that emotional support and shared comprehension helps in mitigating the stress caused by exposure to reproductive loss (Shanafelt et al., 2015; Halbesleben, 2006). The learning by observing the experienced colleagues exemplifies the hidden curriculum in medical education where skills in emotional management are not explicitly taught but acquired through indirect means (Hafferty, 1998). While the peer solidarity provides an important buffer against emotional strain, its sustainability is restricted by the lack of formal debriefing process and supervisory frameworks, particularly for less experiences staff.

Systematic gap and institutional support which is the fourth theme, underscores the structural nature of burnout within the health care settings. The concern that participants highlighted regarding the inadequate mental health provision, limited/ no access to counselling services and insufficient preparation for emotionally intensive news breaking were highlighted as the institutional shortcomings. This aligns with the work of Shanafet and Noseworthy (2017), who were explained burnout not as individual weakness but it is a consequence of organizational and workplace circumstances. Their findings further suggested that female workers during their pregnancy gets more effected by repeated professional exposure which can be even beyond their workplace. Such increased fear and exposure, being alert all the time and huge emotional sensitivity in their personal life were also highlighted in a study conducted by Mealer et al. 2012.

Strong emotional distress was reported by participants, where keeping distance from miscarriage related experiences was reported as one of the copings methods they used which further emphasizes that different people responds to repeated trauma in multiple ways. The present study findings are in line with the previous literature which suggests that coping is a multifaceted and diverse process. Transactional model of stress and coping recommends that it depends on how the person perceives challenging situations and what coping resources are available for them. Some rely on avoidance or withdrawal while some express their emotions openly.

Findings of the present study, must also be interpreted by keeping in view the cultural context of Pakistan, and with reference to our culture where this phenomenon is usually responded with silence and stigma. According to participants, especially in clinical environment, emotional suppression and the need to sustain the professional composure was reflected which prevails in our cultural norms where open expression about distress is discouraged. Relying on informal support like family and colleagues underscores the collectivistic aspect of Pakistani culture where personal connections are important in handling emotional difficulties.

These findings can also be understood through the lens of Transactional model of stress and coping which emphasizes the role of coping strategies and cognitive appraisal in managing stress. Participant's narratives showcased both emotion-focused coping methods, like expressing emotions and seeking social support, as well as problem-focused coping methods, such as taking breaks and participating in restorative activities. These responses indicate the gynecological staff evaluate miscarriage related experiences as emotionally demanding and utilize coping strategies to manage distress. Nonetheless, the results also show that when coping is primarily personal and lack organized institutional support, its effectiveness might be reduced. As this relationship between individual coping and environmental resources is also suggested in transactional model, where both personal and contextual elements influence stress results.

Trauma-informed polices, such as mental health check ins, access to professional counselling, structured debriefing and adequate rest, should be implemented within the healthcare institutions as also highlighted in the previous research (West et al., 2016; Shanafelt & Noseworthy, 2017). To support healthcare worker's wellbeing and sustaining high

quality compassionate maternity care it is very important that burnout shall be addressed at both individual and organizational level.

Limitations and suggestions

The generalizability of findings to the broader population of gynecological staff gets limited due to small sample size and purposive sampling. However, it aligns with the requirement of qualitative research methods where depth is more valued. The research reached thematic saturation, as no additional themes appeared in the concluding analysis phase, indicating that the data adequately reflected the main patterns sufficient to capture key patterns relevant to the research questions. Additionally, the sample was chosen exclusively from urban centers in Punjab, which may not accurately reflect the situation in rural or inadequately equipped healthcare settings. Self-reported information can lead to social desirability bias, particularly in cultural contexts, where there is a stigma related to mental health problems. The cross-sectional qualitative approach also does not capture the long term or evolving nature of burnout and coping overtime.

Future researches should include larger and more diverse sample across different provinces and healthcare settings in Pakistan to enhance the contextual relevance of findings. Healthcare institutions should establish formal mental health support systems for maternity staff that must include counselling services and structured peer debriefing. In addition, medical and nursing staff curriculum should be revised to incorporate training in emotional coping, trauma-informed care and effective communication. To ensure high quality maternal care and promotion of wellbeing of maternal staff it is very crucial to recognize burnout as an occupational hazard at the policy level.

Implications

This research highlights that emotional burnout among maternity healthcare staff is not only a personal issue but it is also an interpersonal and systemic concern. The findings of this study hold importance and relevance for medical practice, policy and workplace wellness of maternity staff. It also highlights the need for trauma informed workplace culture, that recognizes the psychological consequences of dealing with reproductive loss on daily basis. The gaps identified in training and communication further suggest the need to combine emotional competence, grief care and self-care strategies into medical curriculum. Multi-level approach is required that integrate coping on individual level and responsibility of institution to promote mental wellbeing of maternity staff.

Conclusion

The present study highlights the importance of emotional burden experienced by maternity healthcare staff that works in miscarriage care. Emotional exhaustion is caused by repeated exposure to pregnancy loss, while strategies such as social support and peer solidarity helps in reducing the distress. Findings suggests further that institutional support is hugely required, where individual coping cannot work alone and the need for culturally relevant support system to promote staff wellbeing and care quality was emphasized.

Declaration

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Conflict of Interest. Authors of this study have no conflict of interest.

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Validation of the Mental Toughness Scale: An Exploratory Factor Analytic Approach

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Abstract

Objective. The purpose of this study was to explore the mental toughness scale's structure while also investigating the relationship between mental toughness and academic fit among students, as well as academic burnout.

Method. Convenience sampling of 470 adolescents was conducted in the city of Islamabad and Rawalpindi. The researchers used the Mental Toughness Scale developed by Clough et al. (2002), the Academic Fit Scale developed by Schmitt et al. (2008) and the Burnout Assessment Tool developed by Schaufeli, Witte, & Desart (2020).

Results. The study revealed that mental toughness is actually made up of two dimensions. The first is 'mental toughness', the second is 'mental fragility'. The research also found that there was a positive correlation between Academic fit and Mental toughness. In addition, there was a negative correlation between mental toughness and academic burnout in adolescents.

Conclusion. The study is useful to both teachers and mental health professionals. The study can help inform interventions to improve academic engagement in students. The study can also contribute to interventions to improve mental toughness in adolescents to combat academic burnout.

Keywords. Mental toughness, academic fit, academic burnout, adolescents

Foundation University Islamabad

Introduction

Adolescence is a critical time of development characterized by intense changes in thinking, emotions, and social life. During these developmental years, students face increased academic pressure and competition to succeed in tests and plan their future. The academic demands and pressure to succeed can affect a student's emotional health and ease of socialization in school life. Among the many psychology-related barriers related to school life and academic demands, academic burnout is a phenomenon that has recently received a lot of attention due to its impact on motivation and mental health. Academic burnout is a three-component construct: emotional exhaustion, cynicism about academic demands, and reduced feelings of efficacy, which result from prolonged academic pressure (Maslach et al., 2001). Burnout was originally a product of occupational stress research but is now commonly used to investigate student stress and its management in academic life.

Academic burnout among teenagers is characterized by real-life manifestations such as a decline in grades, loss of interest in learning, emotional distress, and an increased risk of mental health issues (Tang et al., 2021). If the never-ending school life coupled with mounting pressure is not matched with an emotionally secure support system or a nurturing environment, students may succumb to the reality of burnout characterized by a sense of detachment from academic activities. The literature has consistently highlighted the fact that too much academic pressure is one of the leading causes of burnout among students (Gao, 2023). Teenagers are particularly at risk of burnout as they are still developing the skills required to confront academic challenges.

In recent times, there has been a move towards finding psychological protective factors that will help students cope better with academic stress. One of these is mental toughness, which is the capacity to be resilient, confident, and determined when faced with challenges and adversity. Mental toughness is also a state that allows individuals to keep their focus and push through adversity. Mental toughness originated in sport psychology, but it has become very popular in education and is used to explain how students cope with academic stress. Students who have a high level of mental toughness are able to cope better with a stressful learning environment and are able to stay motivated when faced with challenges (Ni et al., 2024).

Research suggests that mental toughness may also have a crucial protective function to prevent academic burnout from happening in the first place. Students who exhibit high levels of mental toughness are likely to view challenging situations as opportunities for growth and development, making it easier for them to deal with academic demands and pressure. Students who exhibit mental toughness are also likely to exhibit perseverance, optimism, and stability of emotions, which can also contribute to a lower risk of experiencing academic burnout. Research studies have also revealed that students who exhibit high levels of mental toughness experience lower levels of academic exhaustion and disengagement compared to students who exhibit lower levels of mental toughness (Cheung & Li, 2019). Overall, it is suggested that mental toughness is important for helping teenagers cope better with academic pressure and stay positively engaged in their studies.

Beyond the realm of psychology itself, the setting and circumstances in which we learn has just as significant an impact on the academic lives of students as any other factor. A part of this equation is the concept of academic fit, or the extent to which the capabilities and interests of the individual align with the academic setting in which the individual learns. This construct is based on the person-environment fit theory, which argues that the more that the individual aligns with the environment in which they find themselves, the more content and satisfied the individual will be. This means that if the individual believes that their capabilities and interests align with the academic setting in which they find themselves, then they will be more inclined to be motivated and have academic satisfaction.

When the demands of the school do not match up with what the student is capable of, the level of frustration and stress can build up quickly, leading to feelings of inadequacy. All of this can take an emotional toll on the student, kill the desire to study, and increase the chances of falling into an academic burnout. According to studies, if the student feels out of sync with the learning environment or if they

feel like they are not capable of what is expected of them academically, then the chances of burnout increase (Salmela-Aro & Upadyaya, 2014). The level of how well the student fits into the academic setting is important because it will affect how well they adjust to the setting and how well they will fare psychologically.

Despite the expansion of the literature on academic burnout, there is a paucity of studies on the joint role of psychological resiliency factors and environmental compatibility on the academic experiences of adolescents. Most previous studies on the academic experiences of adolescents have focused on the role of single factors, such as academic stress, resiliency, or engagement, rather than how psychological resiliency factors interact with contextual factors like academic compatibility. Teens are a special time of development when factors of psychological resiliency and environmental compatibility combine to shape academic experiences.

Understanding mental toughness, compatibility with school, and academic burnout is vital to understanding the way that adolescents adapt to school. Mental toughness is an essential factor that helps students overcome academic challenges. The compatibility of students with school is also an essential factor that reduces academic burnout. Therefore, when mental toughness and compatibility with school are considered, academic burnout is minimized. With academics pulling on teens like never before, and the concern for student mental health growing, it is important to examine the relationship between the two. Examining the role of mental toughness and academic fit on student burnout has the potential to provide useful insights for teachers, educators, and policymakers. This type of understanding has the potential to provide useful interventions to build mental resiliency, assist students with the transition to the academic environment, and reduce the prevalence of burnout within the academic setting (Khurshid et al., 2025).

Past research has looked at how mental toughness, fit and academic burnout are connected. It has shown that mental toughness helps students deal with problems be more resilient and have less psychological distress. Academic fit is also important for how students adjust to school and feel about themselves. At the hand academic burnout may have detrimental effects on students' education and mental health. Although much has been learned from these studies they have concentrated more on the correlation of these than on ensuring the tests measuring them are good and accurate. In particular, very little has been done to determine whether the Mental Toughness Scale is a test, particularly across various schools and cultures. The Mental Toughness Scale has not been rigorously assessed, and statistically tested for its validity in measuring the construct it was designed to measure. The validity of the test for all population groups is also a concern, as results have not been consistent across the various groups.

So it's necessary to do some research to ensure that the Mental Toughness Scale is a valid measure of mental toughness. This is a study to examine the Mental Toughness Scale, that is, to see what it measures and whether it is a good test, by means of statistics. The Mental Toughness Scale is important because it can help us understand toughness, academic fit and academic burnout better. This study will help us know if the Mental Toughness Scale is reliable and accurate which means it can be used in studies about the Mental Toughness Scale and its relationship, to academic fit and academic burnout.

Hypotheses

According to the literature mentioned above, the following hypotheses have been formulated:

1. There is a positive relationship between mental toughness and academic fit among adolescents.
2. There is a negative relationship between mental toughness and academic burnout among adolescents.

Method

Sample

In this study, the researchers collected data from 470 respondents between the ages of 13 and 19 years (average age 16.48; *SD* 1.29). The respondents were 202 boys and 268 girls from various colleges, schools, and evening academies. The researchers employed purposive, convenient, and snowball sampling methods for this study. The respondents

were selected based on the following criteria: between the ages of 13 and 19 years, pursuing secondary education (9th and 10th grade) or higher education (1st and 2nd year), O' and A' levels, and receiving any form of evening tuition. Age was classified into three categories: early adolescence (10-14 years), middle adolescence (15-17 years), and late adolescence (18 up to the mid-20s), as suggested by Elliott and Feldman (1990).

Assessment Measures

Mental Toughness Scale – Adolescents. The Mental Toughness Scale (MTQ-10) is a scale to assess mental toughness as the ability to remain focused, bounce back and persevere when facing challenges. The construct employed by Clough and his research team (2002) has four main components of mental toughness: Challenge, Commitment, Control and Confidence (Clough & Strycharczyk, 2012).

The Mental Toughness Scale for adolescents is a measure consisting of 10 items, aiming to measure five underlying factors: Challenge, Interpersonal Confidence, Ability Confidence, Emotional Control, and Commitment. This test takes approximately 10 minutes to complete, and consists of three items per factor with some positively worded and some negatively worded items (Clough et al., 2002). MTQ-10 contains three items from each of Challenge, Commitment, five items from Control and seven items from Confidence, all of which are based on the MTQ-48. Items are positively and negatively worded, and rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Sample items might include: "I am more likely to be in control," which is scored on the same Likert scale as above. The total score is the sum of the scores of all the items, except for the negative score items. The overall score is a true indication of the test-takers mental hardiness, the higher the score the higher the mental hardiness. The test has a good reliability of approximately 0.82 (Cronbach's alpha).

Academic Fit Scale. Schmitt et al. (2008) proposed an Academic Fit Scale to measure the degree of match between the academic context in which a person functions and the person's needs. Academic fit is determined by the alignment of an individual's academic environment and individual's needs. Academic fit refers to the degree of congruence between the academic context of a person, and the person's need. The Academic Fit Scale consists of six questions. The degree of congruence between the academic environment of a person and his/her needs is measured by each item on the scale. The following items on the scale are: "I feel the courses I'm taking align with my interests;" "I feel prepared academically for the courses I am taking;" and many others. The items of the scale have been rated on a 5-point Likert scale from 1 to 5. The scale has shown good reliability since the alpha coefficient is 0.75. This means that this scale is a very good predictor of academic fit, rather than academic goals.

Burnout Assessment Tool (BAT). In 2020, Schaufeli, Witte and Desart developed the Burnout Assessment Tool (BAT), a self-reported tool for measuring burnout. The tool is designed to assess the psychological syndrome of burnout, which is chronic stress in the workplace or other settings, such as sports, involving prolonged high and sustained activity. Burnout symptoms include feelings of exhaustion, distancing or disconnection from work, impaired functioning and emotional numbness. Burnout is a concept that concerns emotional and cognitive fatigue as a result of an excess of work. The Burnout Assessment Tool focuses on primary symptoms and secondary symptoms of burnout, such as psychosomatic and psychological symptoms. This provides a wide and comprehensive understanding of the effect of burnout on an individual's emotions and physical well-being.

The Burnout Assessment Tool has 32 items grouped into 6 dimensions. The four aspects of burnout are Exhaustion, Mental Distance, Cognitive Impairment, and Emotional Impairment. Psychological Complaints and Psychosomatic Complaints are the two secondary dimensions. There are 23 primary dimensions of the burnout syndrome that are addressed in the first 23 questions. The questions are answered on a likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The first 23 questions are summed to get the total burnout score. The secondary subscales of the test address the areas of psychosocial and psychosomatic complaints. The test is very reliable. The overall scale has a high Cronbach's alpha of 0.92. Test is very consistent. The test was tested for reliability by

the test creators. The tests yielded a high Cronbach's alpha of 0.92.

Research Design

This research has employed the purposive and snowball sampling technique, where the data has been collected through survey method.

Procedure

The research has been done at different educational institutions in Rawalpindi and Islamabad. These schools are private, public and evening tuition schools and colleges. The students whose relatives/friends are working in O' & A' levels are approached by the snowball sampling method and a questionnaire is being given to them. The snowball sampling method was used due to the private educational institutions offering O' and A' level education not allowing the research team to go into them. The research team gained permission of the principal of the educational institutions before visiting the institutions. Ethical considerations in the research was achieved by providing informed consent form and the questionnaire. The research team went to the educational institutions to collect data, while the purpose of the study was explained to the students in the various classrooms while they were put up to display their hands to clarify any question in the questionnaire.

Result

Exploratory Factor Analysis (EFA) of The Mental Tough Scale (Adolescents)

We started with the CFA on the Mental Toughness Scale, but the model did not fit well (*GFI* = .90; *IFI* = .67; *CFI* = .67; *RMSEA* = .11; *SRMR* = .08), hence, we then decided to perform an Exploratory Factor Analysis (EFA) to assess whether this variable was to be considered unidimensional or multidimensional in our cultural group and target population. The EFA was conducted on our sample of 470 and analyzed with SPSS software version 25. The inter-item correlations ranged from .42 to .59.

Table 1

Item Total Correlation and Corrected Item Total Correlation for Mental Toughness Scale (N = 470)

Sr No.	Item No.	Item Total Correlation	Corrected Item Total Correlation
1	1	.46**	.27
2	2	.59**	.43
3	3	.57**	.41
4	4	.49**	.34
5	5	.42**	.25
6	6	.51**	.33
7	7	.55**	.38
8	8	.50**	.34
9	9	.55**	.39
10	10	.36**	.18

*$p < .05$. ** $p < .01$.

The sample size exceeded ten times the total number of items, which makes it suitable for an exploratory factor analysis. To confirm whether the data set could undergo factor analysis based on a sample size of 470, it was necessary to determine the Kaiser-Maiser-Olkin (KMO) measure of sampling adequacy as well as Bartlett's test of sphericity. Items with low commonality, low loading (.30), high cross-loading, and items that were independent were deleted. Initially, we used the eigenvalue greater than one method to establish the number of factors to be retained in CFA. It was not feasible to have the required factor structure since the third factor had high cross-loadings, leaving less than three items after eliminating the cross-loadings. Thus, a two-factor solution was decided upon.

The KMO value was found to be .71 that falls into better to fair category that allows conducting the exploratory factor analysis. Furthermore, Bartlett's Test of Sphericity was also significant $\chi^2(45)= 648.61$, $p = .000$. This indicates that the sample is suitable for the factor analysis (Field, 2005). The Mental Toughness Scale consists of both mental fragility and mental toughness. Nonetheless, the Mental Toughness is a multidimensional construct (Gucciardi, Gordon, & Dimmock, 2009; Nicholls, Levy, & Perry, 2019). Thus, Varimax (orthogonal rotation) and principal component analysis were conducted on the basis of the Mental Toughness

Scale (Costello & Osborne, 2005; Fabrigar et al., 1999; Sana & Batool, 2017; Tabachnick & Fidell, 2007). There were used several criteria and methods of the extraction that allowed determining how many factors should be retained in order to conduct the factor analysis. It should be noted that there are several approaches to the number of the factors' retention (Williams, Brown, & Onsman, 2010).

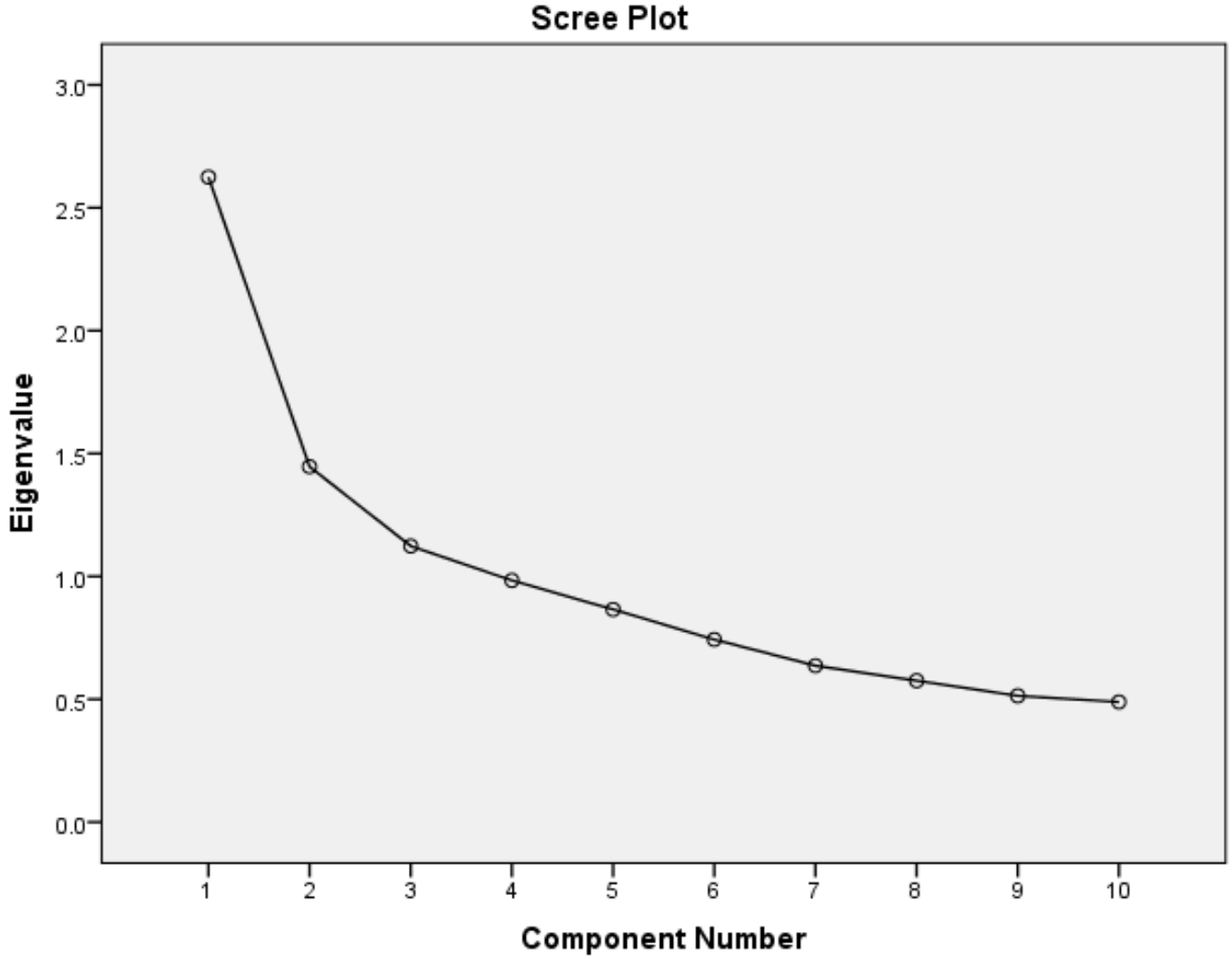

Figure 1
Scree plot for Factors Extraction

This is demonstrated by Figure 1, which depicts the use of the scree plot technique to extract factors. The principle of choosing factors lies in the eigenvalue of the factors chosen, which has to be greater than 1. Based on this principle, two factors were used to explain the concept of mental toughness in the current population sample. Two factors explained 40.71% of the variation in the 10 items selected. Initially, three factors were used; however, some of the items were seen to have high cross-loading, whereas one had low loading.

Table 2

Two-Factor Solution using Principal Component Extraction with Varimax (N = 470)

Sr.no.	Items	Factors	
		I	II
1	1	.09	**.60**
2	2	**.67**	.17
3	3	**.67**	.12
4	4	.12	**.62**
5	5	-.00	**.62**
6	6	**.70**	-.04
7	7	**.73**	-.01
8	8	.18	**.58**
9	9	**.48**	.29
10	10	-.00	**.46**
	Eigen Value	2.62	1.44
	Variance explained (%)	26.24	14.46
	Cumulative Variance explained (%)	26.24	40.71

Note. Boldface letters indicate high factor loadings on a particular factor. Factor I = Mental Fragility; Factor II = Mental Toughness

As can be seen from Table 2 above, the factor loadings of each item on the specified factor are more than 0.40. Even though the factor loadings of items 9 and 10 are 0.48 and 0.46, respectively, it is decided to retain the two items due to the fact that they have factor loadings above 0.45. There are at least three items whose factor loadings are above 0.40 on each factor. The SMEs were asked to give their opinion about the extracted factors through assessing the content validity of the factors.

Labelling of Factors. Three SMEs with a qualification of a PhD were consulted: one with a qualification in English, two with a qualification in Psychology, one being a psychometrician. The researcher was added to the committee, and the SMEs were tasked with giving the factors a name by identifying the underlying traits that the questions had in common, identifying any questions that were conceptually faulty (based on statistical value) or irrelevant. No questions were identified as conceptually faulty within the group that the researcher was allocated to work with. The decision was made by census, giving Factor I the name *Mental Fragility*, Factor II the name *Mental Toughness.*

However, when looking at the item content in light of these two factors, it became apparent that there is a better factor structure in the case being analyzed. The items concerning mental fragility made up the first factor, whereas the items relating to optimism, self-control, and good self-concept comprised the second factor, thus creating mental toughness. It has been noted from this study that it is possible to compute a total score as well as subscale scores for each of the two factors identified using EFA.

The items under Mental Fragility were items 2, 3, 6, 7, and 9, while the items under Mental Toughness were items 1, 4, 5, 8, and 10. The final questionnaire was composed of 10 items, with a rating scale of 1 to 5, where 1 corresponds to strongly disagree and 5 corresponds to strongly agree, according to the Likert Scale rating method. Mental fragility is the ability to feel anxious during critical moments, being overwhelmed by stiff competition, and feeling less capable than others (Lin et al., 2017). A range of scores for the overall scale ranges from 5 to 25, and a higher score reflects an increased capacity for coping with stressful conditions. Mental toughness, on the contrary, is defined as an ability to remain composed, concentrate, and overcome difficulties despite the presence of any obstacles due to lack of disruption caused by stress (Clough

et al., 2002). A range of scores for the overall scale is identical, ranging from 5 to 25, and a higher score indicates a greater capacity to resist, bounce back, and succeed under pressure, stress, or adversities. Composite and subscale scoring may be used to calculate overall scores from testing. In composite scoring, items from the negatively worded section of Mental Fragility are reverse-scored, which leads to the fact that higher scores reflect higher mental toughness. Further analysis will be based on the Mental Toughness subscale.

Psychometrics Properties of Study Instruments

After the validity of study instruments, all valid psychometric properties of instruments have been re-estimated and presented in Table 3.

Table 3

Descriptives for the Pilot Study Variables after Construct Validation (N = 470)

				Actual Range		Potential Range			
Variables	*k*	α	*M (SD)*	Min	Max	Min	Max	Skewness	Kurtosis
Mental Toughness Scale	10	.70	3.35(0.61)	1	5	1	5	-.38	.75
Mental Fragility	5	.70	3.46(0.83)	1	5	1	5	-.27	-.11
Mental Toughness	5	.69	3.25(0.70)	1	5	1	5	-.19	.06
Academic Fit	5	.77	3.34(0.92)	1	5	1	5	-.17	-.48
Academic Burnout	12	.88	3.37(0.88)	1	5	1	5	-.25	-.29
Exhaustion	3	.79	3.42(1.11)	1	5	1	5	-.38	-.62
Mental Distance	3	.69	3.34(1.02)	1	5	1	5	-.22	-.55
Cognitive Impairment	3	.76	3.35(1.07)	1	5	1	5	-.22	-.68
Emotional Impairment	3	.78	3.38(1.14)	1	5	1	5	-.34	-.71

*$p < .05$. ** $p < .01$.

Based on the results gathered using the information contained in Table 3, it can be seen that Cronbach's Alpha Reliability values for both the scales and sub-scales are acceptable since reliability falls within the acceptable range for all the tests. In addition, the values of skewness and kurtosis in relation to total score and scales fall within the acceptable range of +1 to -1 as recommended by Hayduk (2009).

Association among Study Variables

In order to understand the relationship between the variables under investigation, we used Pearson's correlation coefficient *r* as depicted in Table 4. From the findings, it is clear that academic burnout and mental toughness are negatively related although the relationship is weak.. This implies that adolescents who exhibit high levels of mental toughness experience less academic burnout.

Table 4

Correlation Matrix on Study Variables (N = 470)

Sr. No.	Variables	1	2	3
1	Mental Toughness	-	.25**	-.16**
2	Academic Fit		-	.03
3	Academic Burnout			-

*$p < .05$. **$p < .01$.

Additionally, results showed that mental toughness is positively associated with academic fit. Showing that students with higher levels of mental toughness are more academically fit. Lastly, there was no significant relationship to be found between academic fit and academic burnout.

Discussion

The purpose of this study was to explore the structure of the mental toughness scale and to investigate the association between mental toughness

and academic fit and academic burnout in young people. The results of this study are significant in several ways.

The exploratory factor analysis revealed that the scale of mental toughness has two dimensions: mental toughness and mental fragility. This is logical because the mind has the capacity to have contradictory elements. Mental toughness generally refers to the capacity to remain confident, persistent, and focused when faced with stressful, pressuring, or difficult situations (Clough et al., 2002). On the other hand, mental fragility refers to the level of vulnerability to stressful situations, the emotional instability of a person, and the difficulty of coping with stressful situations.

There are two opposing forces that align with the ideas of modern psychology, with mental toughness being part of a larger spectrum of resilience and vulnerability. Individuals high in mental toughness are associated with being confident, persistent, and emotionally composed, whereas individuals low in mental toughness are more likely to experience feelings of hopelessness, avoidance, and have fewer resources to cope with stressful situations. This has been supported by studies, where adolescents high in mental toughness have been found to exhibit better adaptability and more stable psychological functioning when exposed to academic stressors (Ni et al., 2024). Additionally, previous psychometric studies have revealed that psychological constructs have bright and challenging sides, where factor analyses have identified adaptive strengths and vulnerability traits within the same construct.

Furthermore, when looking at these two factors from the perspective of the concept of protective and risk factors in adolescent development, it is easy to understand why both factors exist. Mental toughness is a protective factor because it enhances ability to be resilient, motivated and persistent when facing challenges. On the other hand, mental fragility can be considered a psychological risk factor since it is associated with stress sensitivity and low coping resources. The literature indicates that the MT of the teenager plays a role in stress management and psychological adaptation, with those high in the construct having a better capacity than those low to deal with stress and adapt to the psychological situation (Gerber et al., 2015). Therefore, the two-factor solution found in the present study seems to be theoretically sound and in congruence with the previous studies which supported the dual nature of psychological functioning.

The study revealed that there are two aspects in Pakistani teenagers, mental toughness and mental fragility. That makes perfect sense, given their culture and environment. Other research also indicates that mental toughness can be manifested in different ways in locations. For instance in some regions being tough and being fragile could be considered related, while other regions might consider them separate. In some societies, such as Pakistan, where school is very competitive and family needs are emphasized, mental toughness may manifest itself in different ways. Studies on teens and mental toughness have revealed that it can differ greatly from one environment to another and from one culture to another (Anthony et al., 2020).

Teens are under a lot of stress in school in Pakistan. They must study and live up to their parents' expectations. Competition to secure good grades in board exams is high. For many students, grades are an indicator of their future prospects for employment and improved life situations. Some teens may learn how to cope in this type of environment, such as being persistent, confident and controlling of their emotions. Some may feel helpless, emotionally unstable or withdraw from challenges on the hand. These responses tend to group into two categories: strengths and vulnerabilities. Studies of teens have yielded the same conclusions. From these research studies, it is evident that the psychological measures can act differently in populations. The way people think and feel can be influenced by their culture and language. There are unique factor solutions in measures amongst Pakistani adolescents. The context and language play a role, in shaping their thoughts and behaviors. Culturally distinct factor solutions have been reported for studies with adolescents. The results emphasize the need to take account of contexts and linguistic influences (Dagnall et al., 2019).

Some studies indicate that psychological stress is a major issue in Pakistan for the teenagers due to school and social pressures. This stress can make them more likely to have health issues.

Being strong and being vulnerable are very distinct in environments where students value and are conscious of their performance and opinions. For teenagers in these places doing well in school is not about getting good grades it is about making their family proud and being accepted by their friends and community. The pressure to do well in school can be really overwhelming for teenagers. School and social pressures can be very hard, on them. This can affect their mental health. Pakistani teenagers have to deal with a lot of stress because of school and social pressures (Hussain, Rohail, & Ghazal, 2017).

Additionally studies on -cultural psychology show that exploratory factor analysis can be affected by many factors. These factors include the context, how questions are translated, norms and how people express emotions. The fact that we found a two-factor structure in our sample does not necessarily mean it contradicts models. It actually reflects the cultural realities and psychological experiences of teenagers in Pakistan. The appearance of a two-factor structure, in our sample is reflective of the realities and psychological experiences of Pakistani adolescents. Earlier multidimensional models and our findings can coexist as they reflect aspects of the same issue. The two-factor structure we found is a reflection of the context of Pakistani adolescents (Jabeen & Maqsood, 2023).

The results also revealed that there is a connection between mental toughness and academic fit in teenagers. Academic fit refers to the level of compatibility students perceive to exist between their skills and interests and the academic setting. When students have a high level of academic fit, they tend to become more engaged, motivated, and comfortable in the academic setting.

A positive relationship was found to exist between the variables of the study, where teenagers with higher mental toughness tend to report a sense of being in touch with the school environment. This is understandable since mentally tough teenagers tend to demonstrate traits of persistence, goal-orientation, and effective coping skills to deal with academic challenges. In fact, mental toughness is often associated with favorable educational outcomes such as motivation, involvement, and performance (McGeown et al., 2016). Teenagers who report higher mental toughness tend to concentrate better on academic challenges, persevere with academic obstacles, and remain motivated despite encountering obstacles.

Mental toughness is closely associated with self-confidence and emotional regulation, which enables students to navigate school-life challenges more smoothly. If students manage to remain calm and optimistic despite challenges, they are more likely to believe that academic challenges are manageable. This is likely to enhance a sense of belonging or a good fit in the school context. This is supported by previous research findings, which indicate that mental toughness increases students' engagement in class, which is likely to enhance a positive learning experience for students (Crust & Swann, 2013; Meggs et al., 2019).

Another major point to take away from this study is that mental toughness and academic burnout among adolescents seem to have an inverse relationship. Academic burnout is a psychological state characterized by emotional exhaustion, cynicism or detachment from academic work, and reduced efficacy or effectiveness in academic work. This burnout is becoming a major cause of worry among students because of rising pressure and expectations in academic life.

The negative link indicates that students who are mentally tougher tend to avoid academic burnout. This is consistent with the concept of mental toughness as a mental resource to cope with pressure or stress at school. If students are mentally tough, they remain resolute, confident, and composed even when the courses become tough. In other words, they avoid academic burnout.

Similar findings have been obtained by previous studies. For example, previous studies on teenagers found that students who had higher mental toughness showed reduced burnout, particularly when the level of stress was high (Gerber et al., 2015). In the same context, other studies found that mental toughness acts as a protective mechanism to shield the negative effects of stress on psychological health and academic performance (Cheung & Li, 2019). In conclusion, the importance of mental toughness in building student resilience to burnout cannot be overemphasized.

What is interesting is the fact that there was no significant relationship between the teens'

adjustment to the academic setting and the level of academic burnout. While previous studies have indicated a relationship between students' adjustment to the school setting and academic burnout, the current study failed to demonstrate the same. There are a number of reasons for this.

First, it's important to note that burnout in academia does not occur due to a single factor but is the result of a combination of psychological and situational factors, including academic stress, students' ability to manage their emotional responses, their self-efficacy, and the support provided by others. According to research, stress and anxiety associated with academic activities have a stronger, more direct relationship with burnout than the student's fit with their environment (Gao, 2023). Therefore, it is not enough to match the student with their environment to determine their burnout unless other factors are taken into consideration.

Second, it's important to note that a student might feel that they are a good fit academically with their environment, but still, the pressure associated with their workload might lead to burnout regardless of their fit with the environment. This pressure has a strong relationship with burnout, even more so than the student's perceived fit with the academic setting. Adolescence is a crucial piece to this. This time when psychological and social life changes are most dynamic in affecting the emotional reactions of the youths to school pressure. Therefore, the relationship between the feeling of academic alignment and burnout is complicated by other personal and situational factors.

Implications of the Study

In general, this study highlights the importance of mental toughness as one of the psychological assets in the school as experienced by adolescents. The mental toughness and mental fragility difference offers a more profound understanding of how young people deal with school stress. The correlation between mental toughness and a good fit to the academic setting, and the inverse relationship with academic burnout, highlights the importance of mental toughness in helping to facilitate a smooth adjustment to the academic climate and preventing academic burnout. The bottom line is that schools may benefit from programs aimed at developing mental toughness through the development of psychological skills, managing stress, and so on. By promoting mental toughness, students may be able to cope with academic pressure better and avoid burnout..

Limitations and Future Research Directions

Although this study has made a contribution in some aspect, there are some limitations to discuss. A limitation is that the study has a cross-sectional design. This design is difficult to draw infer conclusions about cause and effect relationships and to ascertain whether the Mental Toughness Scale is stable across time. One other constraint is the use of non-probability sampling. This method may not be reflective of the opinion of a population. Self-report measures also were used in the study. These measures may be influenced by the biases, including giving socially acceptable answers and answering questions subjectively. Also the sample was restricted to specific area and institutions of Rawalpindi and Islamabad. This restricts the ability of the results to be generalizable across culture and demographics. When interpreting the results, the Mental Toughness Scale and its limitations should be taken into account. The study findings have limitations, in terms of the Mental Toughness Scales applicability.

The Mental Toughness Scale needs to be studied in the future. It is important for researchers to consider it over a period of time, to determine if it is stable and consistent. Also, studies need to be conducted to ensure that the scale measures what we believe it measures (confirmatory factor analysis). Academicians and researchers should examine the Mental Toughness Scale with various groups and types of people to determine if it is equally effective across all groups. It is recommended to test the Mental Toughness Scale outside of the education settings to determine if it fits in all settings. Future research examining the Mental Toughness Scale could also consider the predictive nature and whether the scale can predict outcomes. For example, can the Mental Toughness Scale predict how well someone will do in school or experience burnout. This study may also help in predicting the resilience and performance of students. More research is required to examine mental toughness to determine its ability to predict these key factors, such as academic fit, academic

burnout, resilience, and performance.

Declaration

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Conflict of Interest. The authors have no competing interests to disclose.

Availability of Data. The datasets remain confidential and are not publicly accessible due to privacy agreements.

Ethical Approval. The study received ethical clearance from the appropriate institutional review board and informed consent was obtained from the participant before data collection.

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