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Trauma resilience and mental health promotion tailored to Gujjar/Bakarwal communities

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Abstract
The Gujjar and Bakarwal tribes are the third largest ethnic groups in Jammu & Kashmir making up about 11.9% of the population. However, they also rank as one of the most economically deprived and psychosocially vulnerable populations within India. Due to their nomadic pastoral lifestyle and geographic isolation, coupled with their high exposure to armed conflict and socio-economic deprivation, this community faces a unique combination of traumatic events with little to no access to culturally sensitive mental health services. This study used a cross-sectional descriptive survey methodology to assess trauma exposure, psychological resiliency and overall mental health status of 160 adult Gujjars & Bakharwals (80 from Rajouri district; 80 from Poonch district). Three standard tools were utilized: the Trauma Screening Questionnaire (TSQ); the Connor-Davidson Resiliency Scale (CD-RISC-25); and the General Health Questionnaire-12 (GHQ-12). A significant number of participants (62.5%) reported significant trauma exposure; however, the mean resilience score (M= 58.47, SD = 14.32) was significantly lower than the means found in previous studies involving Indian populations. GHQ-12 results indicated that 54.4% of participants had probable psychological distress as per the scale. Gender differences were noted in that females experienced greater psychological distress and demonstrated lower levels of resiliency compared to males. These findings highlight an immediate need for culturally grounded community-based mental health programs designed to meet the specific socio-cultural and environmental needs of the Gujjar/Bakarwal populations.

Keywords: Trauma resilience, mental health promotion, gujjar, bakarwal, jammu & kashmir, tribal mental health, conflict zone, nomadic communities

Introduction

The impact of armed conflict, forced migration, and chronic socio-economic disadvantage on an individual's mental health is one of the greatest unmet public health needs of our generation. People affected by war and political violence experience greatly increased rates of post traumatic stress disorders (PTSD), depression and anxiety when compared to non-violent populations. In the Kashmir Valley a large-scale population-based survey (n=5,519) identified that 41% of all adults experienced probable depression; 26% probable anxiety; and 19% probable PTSD. This places the civilian population of Kashmir amongst those who suffer the highest levels of psychological distress worldwide; however there are no adequate mental health services available in relation to the scale of the need for such services within this already stressed population. Further compounding this level of distress is the position of the Gujjar and Bakarwal tribes which are the most vulnerable populations in this already strained environment. The Gujjars and Bakarwals are a historically pastoral and semi-nomadic people, believed to have migrated to the Jammu and Kashmir region from Gujarat via Rajasthan centuries ago. They are the largest Schedule Tribe in the region, with a population of over 1.4 million (as per the 2011 census), located mainly in the districts of Rajouri, Poonch, Kishtwar, Doda, Kupwara and Baramulla. Traditionally, their livelihoods are based on the seasonal transhumance of livestock — moving from the lower Himalayas during the winter months to the high altitude alpine grazing areas (dhoks) in the summer months — a lifestyle that although well-suited to the natural environment limits their ability to access education, healthcare, and other institutional support mechanisms.

The socioeconomic profile of the Gujjar/Bakarwal tribe highlights the extreme level of deprivation they face. TRCF research indicated that 66% of nomadic Gujjar-Bakarwals are living below the poverty line. Education rates (particularly among women) are significantly lower than both state and national averages. Most housing is made up of simple temporary wooden/mud huts or seasonal shelters. Access to sanitation, electricity and healthcare facilities are described as being at a very low sub-standard in comparison to the rest of the population. Historically the Gujjar/Bakarwal community has had limited political socialization and therefore has limited representation and advocacy in decision making structures.
This study aimed to address some of the gaps in knowledge related to this population by providing a systematic and quantitative evaluation of trauma exposure, psychological resilience and overall mental health status among adult Gujjar/Bakarwals residing in two of the districts in Jammu & Kashmir that have been most impacted by conflict. The study will provide the first empirical benchmark data for these constructs for this population and will provide culturally relevant recommendations for improving mental health through promotion strategies.

Review of Literature

Housen *et al*., (2017) [13] performed the most extensive population-based mental health assessment in the Kashmir Valley to date, and they interviewed 5,519 adults utilizing the Hopkins Symptom Checklist and Harvard Trauma Questionnaire. Their results indicated that approximately 41% of those assessed demonstrated symptoms consistent with probable depression; 26% had symptoms indicative of probable anxiety; and 19% demonstrated symptoms

consistent with probable post-traumatic stress disorder (PTSD); and that being exposed to the conflict events were strong predictors of each of the three outcomes. Bhat and Rangaiah (2015) [6] identified that approximately 49.81% of young adults in Northern Kashmir scored at or above the screening threshold for PTSD; and their findings also identified the key risk factors as: 1) having a family member dead or missing; 2) experiencing direct personal death threats; and 3) being exposed to disturbing media coverage. Dar and Deb (2021) determined that one-third of Kashmir youth had high traumatic exposure and nearly a quarter experienced very high traumatic exposure; and their findings further established that both were significantly related to psychological morbidity.

Studies on measuring resilience in Indian populations have also validated the use of the Connor-Davidson Resilience Scale (CD-RISC-25). Singh and Yu (2010) [20] investigated the psychometric properties of the CD-RISC-25 scale with a sample of 256 Indian college students. Their results supported the reliability of the measure (a=. 89) and identified four factors: 1) hardiness; 2) optimism; 3) resourcefulness; and 4) purpose. Their research also found that resilience was inversely correlated with neuroticism and directly correlated with life satisfaction. Sidheek *et al*. (2017) [19] developed a Kannada version of the CD-RISC and administered it to a sample of 606 adolescent girls from a low-income community. Their analysis revealed that there was a significant inverse relationship between psychological distress and resilience. Deiveegan *et al*. (2016) [8] applied the CD-RISC to a sample of individuals affected by disaster in the state of Uttarakhand. Their findings established that lower levels of resilience were associated with increased rates of PTSD after flood events.

Concerning tribal mental health in India, Seema and Rajeswari (2020) [16] completed a qualitative review on the topic and noted that, despite government programs, the problems of mental health remain underaddressed within Indian tribal communities. Thakur *et al*. (2024) [21] discussed a telemedicine project in the tribal areas of Chhattisgarh and reported that there remains an ongoing lack of mental health facilities in indigenous regions. Shaji and Baidya (2024) [17] studied the cultural dimensions of mental health among Indian tribal populations and found that mental health is deeply embedded in religion and social environment, with women in particular occupying a complex position.

As concerns the Gujjar/Bakarwal population specifically, Bilal and Gul (2014) [7] documented that women's health, including mental health, is heavily impacted by a lack of education, limited knowledge about available health programs, and the demands of a nomadic lifestyle. Dwivedi (2018) [10] wrote about the social organization and concluded that seasonal migration eliminates access to institutions including health care. No study to date has measured trauma exposure, psychological resilience or mental health screening outcomes specifically in this population.

Objectives of the Study

1. To assess the level of trauma exposure among adult members of Gujjar/Bakarwal communities in Rajouri and Poonch districts of J&K.
2. To measure the psychological resilience of Gujjar/Bakarwal adults using a standardized resilience scale.
3. To evaluate the general mental health status (psychological distress) of the study population.
4. To examine the relationship between trauma exposure, resilience, and mental health outcomes.
5. To investigate whether significant differences exist across demographic variables (gender, age, education, settlement type, and district) in trauma exposure, resilience, and mental health.
6. To derive culturally relevant recommendations for mental health promotion tailored to Gujjar/Bakarwal communities.

1. Hypotheses

- **H_1:** There is a significant negative correlation between trauma exposure and psychological resilience among Gujjar/Bakarwal adults.
- **H_2:** There is a significant positive correlation between trauma exposure and psychological distress (GHQ-12 scores).
- **H_3:** There is a significant negative correlation between psychological resilience and psychological distress.
- **H_4:** There are significant gender differences in trauma exposure, resilience, and psychological distress.
- **H_5:** There is a significant difference in trauma exposure, resilience, and mental health between respondents from Rajouri and Poonch districts.

Methodology

1. Research Design

The study employed a cross-sectional descriptive survey design. This non-interventional design was chosen as appropriate for establishing baseline prevalence estimates and examining associations among key psychological variables in a population for which no prior empirical data exists.

2. Study Area

The study was conducted in two districts of the Jammu division of the Union Territory of Jammu & Kashmir:

- **Rajouri District:** Located in the Pir Panjal range with a substantial Gujjar/Bakarwal population. The district lies proximate to the Line of Control and has experienced sustained conflict-related events.

- **Poonch District:** Shares a border with Pakistan-administered Kashmir and has one of the highest concentrations of Gujjar/Bakarwal populations in J&K, with similarly high exposure to conflict.

Both districts were selected purposively because they contain the largest concentrations of Gujjar/Bakarwal populations and lie in active conflict zones along the LoC.

3. Population and Sample

Target Population: Adult members (18 years and above) of Gujjar and Bakarwal communities residing in Rajouri and Poonch districts.

Sample Size: 160 respondents (80 from each district).

Sampling Technique: A multi-stage purposive-cum-convenience sampling strategy was employed:

Stage 1: Two districts (Rajouri and Poonch) were purposively selected.

Stage 2: From each district, four villages/settlements with predominant Gujjar/Bakarwal populations were identified

through consultation with the District Tribal Welfare Office and local tribal leaders (total: 8 villages).

Stage 3: From each village, 20 respondents meeting inclusion criteria were selected through convenience sampling, ensuring approximate gender balance.

Inclusion Criteria: (a) Self-identified Gujjar or Bakarwal tribal member; (b) Age ≥ 18 years; (c) Resident of the selected district for at least 2 years; (d) Willing to provide informed consent.

Exclusion Criteria: (a) Diagnosed severe psychiatric illness; (b) Inability to comprehend the survey instruments even with assistance; (c) Refusal to consent.

4. Tools and Instruments

Three standardized instruments were administered alongside a socio-demographic information schedule:

1. **Socio-Demographic Information Schedule (SDIS):** A researcher-developed proforma collecting data on age, gender, marital status, education level, occupation, type of settlement (settled/semi-nomadic/fully nomadic), family type, monthly household income, and district.

2. **Trauma Screening Questionnaire (TSQ; Brewin *et al*., 2002):** A 10-item self-report screening measure for PTSD symptoms, including five re-experiencing items and five arousal items. Each item is scored dichotomously (Yes/No). A score of ≥6 indicates significant trauma symptoms. The TSQ has demonstrated sensitivity of 0.86 and specificity of 0.93 in civilian populations exposed to traumatic events.

3. **Connor-Davidson Resilience Scale (CD-RISC-25; Connor & Davidson, 2003):** A 25-item scale measuring resilience on a 5-point Likert scale (0 = Not true at all to 4 = True nearly all the time). Total scores range from 0 to 100, with higher scores reflecting greater resilience. The scale has been validated in Indian populations with reliability α = 0.89. For interpretation, scores were categorized as: Low Resilience (0–33), Moderate Resilience (34–66), and High Resilience (67–100).

4. **General Health Questionnaire-12 (GHQ-12; Goldberg & Williams, 1988)** [12]**:** A widely used 12-item screening instrument for detecting non-psychotic psychiatric morbidity and general psychological distress. Using the GHQ scoring method (0-0-1-1), scores range from 0 to 12, with a threshold of ≥3 indicating probable psychological distress. The GHQ-12 has been extensively validated cross-culturally including in Indian community settings.

All instruments were administered in Gojri/Urdu through trained bilingual research assistants from the local community who received two days of standardized training on instrument administration and ethical protocols. For illiterate respondents, items were read aloud and responses recorded by the research assistant.

5. Data Collection Procedure

Data was collected over a period of three months (October–December 2024). The research team visited each selected village, established rapport with community elders and panchayat members, and obtained community-level permission before approaching individual respondents. Individual informed consent was obtained in Gojri/Urdu. Questionnaires were administered in a private setting ensuring confidentiality. Each administration took approximately 25–35 minutes. Respondents showing acute distress were provided basic psychosocial support and referral information for the District Hospital mental health unit.

6. Ethical Considerations

The study received ethical clearance from the Institutional Ethics Committee. Informed consent was obtained from all participants. Participation was voluntary, and respondents were informed of their right to withdraw at any stage without consequence. Confidentiality and anonymity were maintained throughout. No monetary compensation was offered, but respondents were provided a small token of appreciation (a health information pamphlet in Gojri).

7. Statistical Analysis

Data was analyzed using SPSS Version 26.0. The following statistical procedures were employed:

- Descriptive statistics (frequency, percentage, mean, standard deviation)
- Pearson's product-moment correlation coefficient (for relationships among continuous variables)
- Independent samples t-test (for gender and district comparisons)
- One-way ANOVA (for comparisons across education levels and settlement types)
- Chi-square test (for categorical variable associations)
- The significance level was set at $p < 0.05$.

Data Analysis and Results

1. Socio-Demographic Profile of Respondents

Table 1: Socio-Demographic Characteristics of the Sample (N = 160)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	82	51.25
	Female	78	48.75
Age Group	18–25 years	38	23.75
	26–35 years	44	27.50
	36–45 years	42	26.25
	46 years and above	36	22.50
Marital Status	Unmarried	34	21.25
	Married	112	70.00
	Widowed/Separated	14	8.75
Education Level	Illiterate	58	36.25
	Primary (up to 5th)	40	25.00
	Middle (6th–8th)	28	17.50

	Secondary & above	34	21.25
Occupation	Livestock rearing/Pastoral	68	42.50
	Agriculture	36	22.50
	Daily wage labor	30	18.75
	Government service/Other	26	16.25
Settlement Type	Fully nomadic	42	26.25
	Semi-nomadic (seasonal)	64	40.00
	Settled	54	33.75
Monthly Household Income	Below ₹5,000	52	32.50
	₹5,001–₹10,000	58	36.25
	₹10,001–₹20,000	34	21.25
	Above ₹20,000	16	10.00
District	Rajouri	80	50.00
	Poonch	80	50.00

The sample comprised approximately equal proportions of males (51.25%) and females (48.75%). Over one-third (36.25%) were illiterate, and 42.50% were engaged in traditional livestock rearing. A majority (66.25%) had semi-nomadic or fully nomadic lifestyles. Nearly one-third (32.50%) had monthly household incomes below ₹5,000, consistent with the documented poverty levels of 66% BPL in this community.

2. Trauma Exposure

Table 2: Distribution of Respondents by Trauma Screening Questionnaire (TSQ) Scores (N = 160)

TSQ Score Category	Score Range	Frequency (n)	Percentage (%)
No significant trauma symptoms	0–2	24	15.00
Mild/subclinical symptoms	3–5	36	22.50
Significant trauma symptoms (screen-positive)	6–10	100	62.50
Total		160	100.00

Statistic	Value
Mean TSQ Score	6.18
Standard Deviation	2.74
Median	6.00
Range	0–10

Table 3: Item-Wise Endorsement of Trauma Symptoms on TSQ (N = 160)

Item No.	Symptom Description	Endorsed "Yes" n (%)
1	Upsetting thoughts or memories about the event	118 (73.75)
2	Upsetting dreams about the event	92 (57.50)
3	Acting or feeling as though the event is happening again	84 (52.50)
4	Feeling upset by reminders of the event	108 (67.50)
5	Bodily reactions when reminded of the event	88 (55.00)
6	Difficulty falling or staying asleep	104 (65.00)
7	Irritability or outbursts of anger	96 (60.00)
8	Difficulty concentrating	90 (56.25)
9	Heightened awareness of potential dangers	112 (70.00)
10	Being jumpy or startled at sudden noises	98 (61.25)

A striking 62.50% of respondents screened positive for significant trauma symptoms (TSQ ≥ 6). The most commonly endorsed symptoms were intrusive upsetting thoughts (73.75%), heightened awareness of danger/hypervigilance (70.00%), feeling upset by reminders (67.50%), and sleep difficulties (65.00%). This pattern is consistent with a population living in a chronic conflict zone along the LoC, where reminders of threat are omnipresent.

3. Psychological Resilience

Table 4: Distribution of Respondents by CD-RISC-25 Resilience Levels (N = 160)

Resilience Level	Score Range	Frequency (n)	Percentage (%)
Low Resilience	0–33	30	18.75
Moderate Resilience	34–66	92	57.50
High Resilience	67–100	38	23.75
Total		160	100.00

Statistic	Value
Mean CD-RISC Score	58.47
Standard Deviation	14.32
Median	59.00
Range	12–94

The mean resilience score of 58.47 (SD = 14.32) falls below the general Indian population mean of approximately 70–75 reported in validation studies. The majority (57.50%) exhibited moderate resilience, with roughly equal proportions at low (18.75%) and high (23.75%) levels. The below-average resilience scores may reflect the cumulative erosion of psychological resources by chronic conflict exposure, poverty, and structural marginalization.

4. General Mental Health (Psychological Distress)

Table 5: Distribution of Respondents by GHQ-12 Scores (N = 160)

GHQ-12 Category	Score Range	Frequency (n)	Percentage (%)
No distress (below threshold)	0–2	73	45.63
Probable psychological distress	3–6	54	33.75
High psychological distress	7–12	33	20.63
Total		160	100.00

Statistic	Value
Mean GHQ-12 Score	3.86
Standard Deviation	2.91
Median	3.00
Range	0–11

Over half the sample (54.38%) crossed the GHQ-12 threshold for probable psychological distress, with 20.63% in the high distress range. These rates are substantially elevated relative to general Indian community populations but consistent with the broader mental health burden documented in Kashmir.

5. Correlational Analysis

Table 6: Pearson Correlations among TSQ, CD-RISC, and GHQ-12 Scores (N = 160)

Variable	TSQ Score	CD-RISC Score	GHQ-12 Score
TSQ Score	1.00	−0.41**	0.52**
CD-RISC Score	−0.41**	1.00	−0.47**
GHQ-12 Score	0.52**	−0.47**	1.00

**p < 0.01

All three hypothesized correlations were confirmed at the p < 0.01 level:

- Trauma exposure (TSQ) was significantly negatively correlated with resilience (CD-RISC): r = −0.41, supporting H_1.
- Trauma exposure was significantly positively correlated with psychological distress (GHQ-12): r = 0.52, supporting H_2.

Resilience was significantly negatively correlated with psychological distress: r = −0.47, supporting H_3.

These correlations are consistent with the theoretical model in which resilience serves as a buffer between trauma exposure and mental health outcomes. The moderate strength of these correlations suggests that while the relationships are robust, additional factors (social support, cultural identity, religious coping) likely also mediate the trauma-distress pathway.

6. Gender Differences

Table 7: Gender-Wise Comparison on TSQ, CD-RISC, and GHQ-12 (N = 160)

Variable	Male (n = 82) Mean ± SD	Female (n = 78) Mean ± SD	t-value	p-value	Significance
TSQ Score	5.68 ± 2.62	6.71 ± 2.78	2.42	0.017	Significant*
CD-RISC Score	62.34 ± 13.18	54.41 ± 14.56	3.62	0.001	Significant**
GHQ-12 Score	3.24 ± 2.68	4.52 ± 3.02	2.86	0.005	Significant**

*p < 0.05, **p < 0.01

Significant gender differences emerged across all three measures, supporting H_4. Women reported significantly higher trauma symptoms (M = 6.71 vs. 5.68), lower resilience (M = 54.41 vs. 62.34), and greater psychological distress (M = 4.52 vs. 3.24). These findings align with documented patterns of gender vulnerability in conflict zones and with the specific conditions of Gujjar/Bakarwal women, who face the dual burden of conflict exposure and severe gender-based restrictions including limited mobility, early marriage, low educational access, and heavy domestic labor during migration.

7. District-Wise Comparison

Table 8: District-Wise Comparison on TSQ, CD-RISC, and GHQ-12 (N = 160)

Variable	Rajouri (n = 80) Mean ± SD	Poonch (n = 80) Mean ± SD	t-value	p-value	Significance
TSQ Score	5.84 ± 2.68	6.52 ± 2.76	1.58	0.116	Not Significant
CD-RISC Score	60.12 ± 13.88	56.82 ± 14.64	1.46	0.146	Not Significant
GHQ-12 Score	3.56 ± 2.82	4.16 ± 2.98	1.31	0.192	Not Significant

No statistically significant differences were found between the two districts on any measure, failing to support H_5. Poonch respondents showed marginally higher trauma scores and distress, and marginally lower resilience, but these differences were non-significant. This suggests a relatively uniform pattern of psychological burden across the two LoC-proximate districts.

8. Comparison by Settlement Type

Table 9: One-Way ANOVA for Settlement Type on TSQ, CD-RISC, and GHQ-12 (N = 160)

Variable	Fully Nomadic (n = 42) Mean ± SD	Semi-Nomadic (n = 64) Mean ± SD	Settled (n = 54) Mean ± SD	F-value	p-value
TSQ Score	7.02 ± 2.34	6.14 ± 2.68	5.48 ± 2.92	4.18	0.017*
CD-RISC Score	53.86 ± 14.96	58.24 ± 13.78	62.44 ± 13.42	4.52	0.012*
GHQ-12 Score	4.78 ± 2.86	3.82 ± 2.94	3.18 ± 2.72	3.86	0.023*

*p < 0.05

Significant differences by settlement type emerged on all three measures. Fully nomadic respondents reported the highest trauma exposure (M = 7.02), lowest resilience (M = 53.86), and greatest psychological distress (M = 4.78), while settled respondents showed the most favorable scores across all domains. This gradient directly implicates the nomadic lifestyle as a compounding vulnerability factor, likely operating through mechanisms of social isolation, disrupted institutional access, and chronic environmental stressors during migration.

9. Comparison by Education Level

Table 10: One-Way ANOVA for Education Level on TSQ, CD-RISC, and GHQ-12 (N = 160)

Variable	Illiterate (n = 58) Mean ± SD	Primary (n = 40) Mean ± SD	Middle (n = 28) Mean ± SD	Secondary+ (n = 34) Mean ± SD	F-value	p-value
TSQ Score	6.88 ± 2.52	6.24 ± 2.78	5.82 ± 2.64	5.18 ± 2.86	3.42	0.019*
CD-RISC Score	53.46 ± 14.82	57.68 ± 13.56	61.14 ± 12.92	65.72 ± 12.48	6.84	<0.001**
GHQ-12 Score	4.64 ± 2.92	3.88 ± 2.86	3.42 ± 2.74	2.94 ± 2.58	3.68	0.013*

*p < 0.05, **p < 0.01

Education demonstrated a clear and consistent protective gradient. Illiterate respondents had the highest trauma scores, lowest resilience, and greatest distress, while those with secondary education or above fared best on all measures. The effect was most pronounced for resilience ($F = 6.84$, $p < 0.001$), suggesting that education operates as a powerful resilience-enhancing factor—perhaps by expanding coping resources, improving access to information, and enabling greater agency.

10. Comparison by Age Group

Table 11: One-Way ANOVA for Age Group on TSQ, CD-RISC, and GHQ-12 (N = 160)

Variable	18–25 yrs (n = 38) Mean ± SD	26–35 yrs (n = 44) Mean ± SD	36–45 yrs (n = 42) Mean ± SD	46+ yrs (n = 36) Mean ± SD	F-value	p-value
TSQ Score	5.42 ± 2.86	6.08 ± 2.72	6.56 ± 2.58	6.82 ± 2.64	2.42	0.068
CD-RISC Score	61.24 ± 13.46	59.36 ± 14.28	57.18 ± 14.52	55.84 ± 14.86	1.56	0.201
GHQ-12 Score	3.28 ± 2.76	3.72 ± 2.88	4.12 ± 2.96	4.42 ± 3.04	1.68	0.174

Age differences showed a consistent trend—older respondents reported more trauma, lower resilience, and higher distress—but these differences did not reach statistical significance. The trend likely reflects cumulative lifetime exposure to conflict events in older cohorts who have lived through

11. Summary of Hypothesis Testing

Table 12: Summary of Hypothesis Testing Results

Hypothesis	Statistical Test	Result	Decision
H_1: Negative correlation between TSQ and CD-RISC	Pearson r	$r = -0.41$, $p < 0.01$	Supported
H_2: Positive correlation between TSQ and GHQ-12	Pearson r	$r = 0.52$, $p < 0.01$	Supported
H_3: Negative correlation between CD-RISC and GHQ-12	Pearson r	$r = -0.47$, $p < 0.01$	Supported
H_4: Gender differences in TSQ, CD-RISC, GHQ-12	Independent t-test	Significant on all three measures	Supported
H_5: District differences in TSQ, CD-RISC, GHQ-12	Independent t-test	Not significant on any measure	Not Supported

Discussion

The present study provides the first empirical data on trauma resilience and mental health among the Gujjar/Bakarwal communities of Jammu & Kashmir, and the findings paint a portrait of a population in significant psychological distress. The 62.50% trauma screen-positive rate and 54.38% probable psychological distress rate place this community among the most affected subpopulations in an already heavily burdened region.

These prevalence estimates are notably higher than those documented in the general Kashmir population. Housen *et al*. (2017) [13] found 19% probable PTSD in a representative Kashmir Valley sample. The substantially higher rates among Gujjar/Bakarwal respondents likely reflect the additional risk conferred by LoC proximity, nomadic displacement, and socioeconomic deprivation—factors largely absent from Valley-dwelling populations sampled in previous studies.

The mean resilience score of 58.47 is significantly lower than the general Indian population norms of 70–75 reported by Singh and Yu (2010) [20] and lower than the score of 59.30 found among transgender persons in India, a group noted for their extreme social marginalization. This positions the Gujjar/Bakarwal sample as one of the lowest-resilience populations measured using the CD-RISC in India to date.

The robust negative correlation between resilience and distress ($r = -0.47$) confirms that resilience operates as a psychological buffer in this population, consistent with findings in other trauma-affected communities. This has direct implications for intervention design: programs that strengthen resilience may attenuate distress even without addressing the underlying conflict and structural conditions that generate trauma exposure.

The significant gender gap—with women reporting higher trauma, lower resilience, and greater distress—demands targeted attention. Gujjar/Bakarwal women face a particularly harsh intersection of conflict exposure, patriarchal restrictions, limited education (many are illiterate), early marriage, high fertility, and the physical demands of nomadic migration while bearing primary childcare responsibilities. Mental health promotion for this population must address these gendered structural vulnerabilities.

The settlement type gradient—with fully nomadic respondents faring worst—is among the study's most striking findings. It suggests that while transhumance is culturally significant, it extracts a measurable psychological toll by disrupting social supports and institutional access. This finding has important policy implications for designing mobile mental health services that accompany migrating communities.

The non-significant district differences suggest that the psychological burden is widespread across the LoC belt rather than concentrated in specific localities, pointing to the need for region-wide rather than district-specific interventions.

Conclusions and Recommendations

1. Conclusions

The Gujjar/Bakarwal communities of Rajouri and Poonch districts exhibit alarming levels of trauma exposure, with nearly two-thirds of the adult population screening positive for significant trauma symptoms.

Psychological resilience in this population falls significantly below Indian population norms, suggesting a depletion of psychological coping resources under the cumulative weight of conflict, poverty, and marginalization.

Over half the population crosses the threshold for probable psychological distress, a rate higher than that documented in the general Kashmir population, reflecting the compound vulnerabilities unique to this tribal group.

Resilience functions as a significant buffer against psychological distress, confirming its relevance as a target for mental health promotion interventions.

Women, illiterate individuals, and fully nomadic community members are the most vulnerable subgroups, requiring prioritized and tailored intervention.

The mental health burden is distributed broadly across the LoC districts rather than concentrated in one area.

2. Recommendations

Based on the findings, the following culturally tailored recommendations are proposed:

Establish mobile mental health units that travel with nomadic and semi-nomadic Gujjar/Bakarwal groups during their seasonal migration. Fixed-facility models of mental health care are structurally inaccessible to transhumant populations. Mobile units staffed by trained community health workers who speak Gojri could provide screening, basic psychosocial support, and referral services.

Integrate mental health screening into existing tribal welfare programs. The District Tribal Welfare Office conducts regular outreach for welfare schemes—adding brief mental health screening (e.g., GHQ-12 or TSQ) to these contacts would enable detection without requiring separate infrastructure.

Develop resilience-building programs centered on existing cultural strengths. Gujjar/Bakarwal communities possess strong kinship networks, religious faith (predominantly Sufi Islam with its emphasis on inner peace and acceptance), oral storytelling traditions, and collective identity. Interventions should leverage these assets rather than imposing external frameworks. Community-based resilience circles organized through existing social structures (e.g., elder councils, women's self-help groups) could serve as platforms for peer psychosocial support.

Design gender-specific mental health promotion programs targeting Gujjar/Bakarwal women. Given the significant gender gap in distress and resilience, women-only groups facilitated by trained female community workers, incorporating culturally relevant psychoeducation, stress management, and peer support, should be a priority. The integration of folklore-based psychoeducation and traditional healing circles has shown promise in other Indian tribal contexts.

Conduct longitudinal research tracking mental health outcomes across the seasonal migration cycle to determine whether psychological distress fluctuates with transhumance or is stable year-round.

Develop and validate culturally adapted mental health instruments in Gojri language to improve the

3. Limitations of the Study

The cross-sectional design precludes causal inference about the direction of relationships among trauma exposure, resilience, and distress.

Convenience sampling limits the generalizability of findings to the broader Gujjar/Bakarwal population.

The use of screening instruments rather than clinical diagnostic interviews means that the "probable distress" and "significant trauma symptoms" identified are estimates, not confirmed diagnoses.

Self-report measures may be subject to recall bias and social desirability effects.

The study was conducted during the settled season (October–December); mental health status during active migration may differ.

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