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FACTORS INFLUENCING YOUTH VULNERABILITY TO EXTREMIST IDEOLOGIES IN PUNJAB: A QUANTITATIVE STUDY OF UNIVERSITY STUDENTS

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Abstract

This quantitative study, grounded in the positivist paradigm, examined factors influencing university students' vulnerability to extremist ideologies in Punjab, Pakistan. A correlational survey design was used to collect data from 500 undergraduate and postgraduate students (252 public, 248 private) drawn from fifteen purposively selected universities across Punjab, with the sample size determined using Krejcie and Morgan's formula. A self-developed, 42-item, five-point Likert-scale questionnaire was designed for this study, covering socio-economic deprivation, educational factors, psychological/identity factors, media and social media exposure, religious-social influence, and vulnerability to extremism. The instrument's content validity was established through expert review by specialists in Peace and Counter-Terrorism Studies and refined through pilot testing on 40 students, while its reliability was confirmed through Cronbach's alpha, with all subscales ranging from 0.80 to 0.90 and an overall scale reliability of 0.96, indicating excellent internal consistency. Data were analyzed using Pearson correlation, independent-samples t-tests, and multiple linear regression. Findings showed that all five factors were significantly and positively linked to vulnerability, with psychological/identity issues and religious-social influence showing the strongest connection. Together, the five factors explained about 64% of the differences in students' vulnerability scores, and psychological/identity factors along with religious-social influence stood out as the most important predictors. Students from private universities showed noticeably higher vulnerability than those from public universities. Based on these results, the study recommends setting up university-based Peace and Counter-Terrorism centers, strengthening student counselling services, and promoting media literacy along with inclusive student engagement to reduce vulnerability.

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1. Introduction

With the largest population and the largest higher education sector of Pakistan, Punjab was a major hub for higher education. The size and fast growth of the student body has placed university campuses in the center of Pakistan's larger war against violent extremism. University students, neither adolescents nor adults, remained particularly vulnerable to ideological influences as they dealt with concerns of identity, belonging and purpose outside of direct parental supervision (Ahmed & Jafri, 2020). Pakistan's experience of terrorism and sectarian bloodshed over the last two decades had often called attention to the involvement of educated youth in extremist activity, contradicting the long-held idea that radicalization is confined to poverty and illiteracy (Rahman et al., 2025). The incidences of university students accused of extremist activity, coupled with the recurrent reporting of hate material, sectarian polarization and militant recruitment on campuses, suggested that higher education institutions were not immune to, nor adequately equipped to counter, extremist influences (Ismail et al., 2022). There is growing evidence that socio-economic distress, poor educational quality, unchecked exposure to extremist content on social media and the influence of radical religious narratives interacted to mould students' vulnerability to extremist ideologies (Akram & Nasar, 2023)

Despite the increased interest in the scholarship, most of the current Pakistani research in this area had focused on qualitative, case-study or single-institution methods, leaving a dearth of large-scale, quantitative, province-level evidence (Rahman et al., 2025). This difference was most prominent in Punjab, the region with the highest population of university students in the country. This study is therefore aimed at generating systematic, quantitative evidence on the socio-economic, educational, psychological, media-related and religious-social factors that contributed to youth vulnerability to extremist ideologies among university students in Punjab and to compare the manifestation of this vulnerability across public and private sector institutions.

2. Problem Statement

Despite a significant amount of literature on young radicalization in Pakistan, the literature was predominantly qualitative, descriptive or limited to one campus (Ahmed & Jafri, 2020). Thus, there was no quantitative evidence at the provincial level to identify the particular characteristics that rendered the university students of Punjab more exposed to extremist ideas and the strength of association of each of these factors with this vulnerability. Without such evidence, policy measures, educational reforms and counter-radicalization programs risked being poorly targeted, generic and detached from the underlying determinants of vulnerability among Punjab's student population. This study bridged this gap by experimentally gauging the association of socio-economic, educational, psychological, media-related, and religious-social aspects with the vulnerability of students to extremist beliefs at public and private colleges in Punjab.

3. Objectives

1. To determine the major factors affecting the youth sensitivity to extremism ideology among the students of universities of Punjab.
2. To explore the strength of the association between these characteristics and students' vulnerability scores.
3. To compare vulnerability levels and factor influences of public and private sector universities in Punjab.
4. To provide evidence-based suggestions to universities, politicians and civic society to lessen youth's vulnerability to extremist beliefs.

4. Research Questions

RQ1: What socio-economic, educational, psychological, media-related and religious-social elements made university students in Punjab susceptible to extremist ideologies?

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RQ2: What was the strength of association between these factors and students' vulnerability scores?
RQ3: Is there a substantial difference in the level of vulnerability and effect of these factors among public and private sector university students in Punjab?
RQ4: What evidence-based interventions can be implemented by universities, policy makers, and civil society to lessen vulnerability of adolescents to extremist ideologies?

5. Significance of the Study

Theoretical, methodological and practical value of the work was proved. Theoretically, it added to the scarce quantitative literature on radicalization in Pakistan by validating the existing socio-economic and media-exposure models of susceptibility in the unique setting of the higher education sector of Punjab. From a methodological perspective, the use of a large, multi-university sample and a validated Likert-scale instrument made it possible to make statistically robust comparisons between public and private institutions, thus filling a void left by mostly qualitative or single-campus studies (Ahmed & Jafri, 2020; Ismail et al., 2022). Practically, the findings were meant to provide empirical evidence to university administrations, the Punjab Higher Education Commission, relevant counter-terrorism authorities and civil society organizations to design targeted, evidence-based counter-radicalization and student-support programs instead of generic awareness campaigns. The findings of the study were also applicable for the replication of policies in other provinces of Pakistan as Punjab had the highest number of students.

6. Literature Review

Research was increasing on the reasons why some young Pakistanis were open to extremist ideology while others in similar circumstances were not. The research focused on a limited number of recurrent explanatory elements: from socio-economic circumstances, to the quality and type of schooling, to psychological and identity demands, to exposure to media and social media content, and to the influence of religious and social networks. At the same time the literature was broad in scope and approach, from commentary at the national level to intensive single-campus case studies, and provided limited direct information on the university sector in Punjab in particular. Literature was then assessed for each facet in turn, contextualized within the broader Pakistani and where necessary, worldwide scholarship on youth radicalization before going to the theoretical and conceptual framework that underpinned the present study.

6.1 Vulnerability of Socio-Economic

Much of the Pakistani study pointed to economic hardship, strain from unemployment, and experiencing relative deprivation as linked to greater vulnerability to extremist recruiting. Rahman et al. (2025) notes "poverty, unemployment and lack of quality education were significant drivers of youth radicalization in Pakistan but rarely worked in isolation. In a similar vein, Ismail et al. (2022) pointed to structural issues such as high young unemployment, corruption, and lack of meritocracy as significant push factors that rendered educated youth susceptible to extremist ideologies offering meaning and community. But several scholars have warned against the temptation to think of militancy simply as a matter of poverty. It has been asserted that a large proportion of those active in militancy in Pakistan are university educated folks revealing that economic deprivation is a factor leading to susceptibility but not the major cause (Ismail et al., 2022).

This particular link seemed particularly important for university students, who occupied a very peculiar socio-economic position — educated and aspirational, but sometimes worried about work prospects, career mobility and how to translate a degree into economic security. But according to Rahman et al. (2025), it was not real hardship but the gap between academic achievement and

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economic opportunity that created a particular form of anger among the Pakistani youth, a hatred based on disappointed expectations. Such expectation gaps were likely to be pervasive especially within Punjab, where large scale higher education enrolment has raised competition for limited formal-sector employment. This also gave weight to the inclusion of socio-economic deprivation as a core element in the instrument of the present investigation.

6.2 Quality of Education and Critical Thinking

Education-related variables, in particular the perceived quality of higher education and the extent to which curricula promoted critical thinking, had also been involved in youth vulnerability. Ahmed and Jafri (2020) found that the institutional environment, the availability of hate material on campus, and the presence of politically/religiously motivated student groups differed among two public sector universities of Pakistan and affected the students' exposure to extremist material. They found that the less monitoring colleges exercised over student politics and religious organizations and the less the curriculum actively contributed to the development of critical thinking or media literacy skills, the more vulnerable students were to radical narratives. Shahbaz and Rauf (2025) also showed that students' ability to engage critically with contentious material, which peacebuilding and conflict-resolution content in higher education can partly permit, was associated with improved resilience to extremist framing.

The results imply that education might be a double-edged sword. While formal schooling is often thought to offer basic protection against radical influence, the quality and content of that education seem to matter more than years of schooling alone. Ahmed and Jafri (2020) found significant differences in the supervision and control of extra-curricular religious and political activities on campus by institutions, with administrative oversight being a major intervening variable in the relationship between educational exposure and vulnerability. Similarly, Shahbaz and Rauf (2025) showed that clearly including peacebuilding, tolerance and conflict-resolution information in curriculum proved to boost students' ability to critically examine polarizing or extremist content, rather than passively consuming it. All of these studies suggested that Punjab's universities were not going to be consistently protective or uniformly permissive environments but differed in ways that a province-wide quantitative study was well-placed to capture.

6.3 Exposure to Extremist Propaganda on Social Media

Exposure to extremist and hate information on social media was one of the most commonly researched criterion in recent studies. Akram (2025) in Pakistan observed that social media has become a strong channel for the dissemination of religiopolitical misinformation. The high level of online participation among the youth makes them more susceptible to radical propaganda in a media environment where the mainstream outlets are usually considered as untrustworthy. Akram and Nasar (2023) also found in a comprehensive review that algorithm-driven amplification of content and online echo chambers increased young users' exposure to emotionally charged extremist narratives that normalized radical ideas. In particular, the absence of digital media literacy and low levels of critical engagement with online content were acknowledged as significant factors via which political and religious extremism became popular among educated youth within Pakistan.

A recurrent aspect of this body of studies was the finding that university students, with their relatively high levels of formal education, were not necessarily in possession of the digital media literacy needed to critically examine the material they encountered online. Akram and Nasar (2023) found that algorithmic curation tended to reward emotionally provocative and identity-affirming content, suggesting that students who engaged even briefly with polarizing material were often

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served increasingly extreme content over time, largely without their active searching. Akram (2025) also remarked that in a media context where faith in mainstream news was declining, social media platforms have become not just supplemental but also primary and sometimes uncontested sources of political and religious framing for many young Pakistanis. Algorithmic amplification combined with little faith in institutions meant that exposure on social media was a particularly obvious and measurable element to include in a quantitative study of university students in Punjab.

6.4 Religious Narratives and Peer/Institutional Influence

Another well-documented concern was the impact of extreme religious narratives propagated through peer networks, student religious groups and certain religious institutions. Campuses with more madrassa educated students and more religiously orientated student organizations had significantly higher exposure to sectarian hate material and recruitment than campuses with primarily politically motivated student groups rather than religiously motivated student groups (Ahmed and Jafri, 2020). This is good news for the enormous variety in religious-social influence not only between private and public institutions, but also within public colleges, depending on the student demographic mix and the prominence of religious student politics on campus.

This trend indicated that it was not religion per se that induced vulnerability, but the specific social channels by which religious content was delivered and reinforced. Peer networks and student groups seemed to act as amplifiers, providing social credibility and a sense of collective belonging to narratives which may be ignored by a solo student (Ahmed & Jafri, 2020). This distinction was relevant for the design of the present study, as it suggested that religious and social influence should be measured not as personal religiosity or belief, but as exposure and embeddedness in peer and institutional networks that actively promoted radical religious framing – a distinction the instrument of the study was developed to capture.

6.5 Differences between the Public and Private Sector

Comparative but thin, albeit intriguing, was the information on differences between students at public and private institutions. Research shows that public sector universities, which typically had a more socio-economically diverse student body and more active religious and political student organizations, tended to report higher levels of exposure to hate material and extremist recruitment attempts than private institutions with relatively tighter administrative oversight and more homogenous, higher-income student populations (Ahmed & Jafri, 2020). This pattern initially reinforced the assumption that pupils of public sector in Punjab would be having considerably higher vulnerability ratings than those of private sector. This pattern had not been solidly quantitatively validated at the province level until recently.

There are a number of likely reasons for this expected sector difference. Public universities in Punjab were characterized by a broader socio-economic mix of students, including many from lower-income families with greater economic precocity, and were relatively less strict about administrative control over student political and religious participation than private universities, which tended to have stricter codes of conduct and campus security protocols (Ahmed & Jafri, 2020). If indeed socio-economic disadvantage, weak institutional supervision and strong religious-peer networks would be more likely to converge in the public sector context, then these results are consistent with the higher vulnerability scores expected under hypothesis H5. Private universities, however, were not assumed to be immune, as factors like social media exposure operated largely outside of campus administrative structures, suggesting that sector differences were likely to be differences of degree rather than of one sector being vulnerable and the other unaffected.

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6.6 Theoretical Framework

The study was primarily based on Significance Quest Theory as well as its 3N model of radicalization (Kruglanski et al., 2014), which conceptualized violent extremism as an outcome of the interaction of three forces: the psychological need for personal significance, a radical narrative that defined extremist action as a legitimate means to the restoration of significance, and a social network that validated and reinforced the narrative. Thus, the socio-economic deprivation and psychological/identity variables examined in this study were consistent with the need component of the model, as poverty, unemployment anxiety, and threatened identity provided an enhanced motivational impetus for significance restoration (Kruglanski et al., 2014; Rahman et al., 2025). The side of the narrative was the lack of quality of education, critical thinking and exposure to radical religious tales. The students' lack of critical engagement rendered them more vulnerable to ideological narratives that make extremist violence seem relevant or justifiable (Ahmed & Jafri, 2020; Shahbaz & Rauf, 2025). Finally, social media and religious influence of peers or institutions served as social channels for transmission, validation and normalization of radical narratives among students (Akram, 2025; Akram & Nasar, 2023).

In the study, two classical socio-psychological theories were included to improve the explanatory logic of the 3N model. The socio-economic pathway was also theoretically grounded in Relative Deprivation Theory (Gurr, 1970) which posited that political violence and radical attitudes were less a function of absolute poverty, and more a function of a perceived gap between what individuals thought they deserved and what they actually had. This dynamic was consistent with evidence that university-educated youth, despite relatively higher status, were nonetheless susceptible to extremist appeals (Ismail et al., 2022). Social Identity Theory (Tajfel & Turner, 1979) extended the psychological/identity and religious-network dimensions of vulnerability, proposing that those suffering identity threat or marginalization were driven to seek belonging and self-esteem through strong identification with in-groups, a need radical religious or political groups were well placed to fulfil. The 3N model, Relative deprivation theory and Social identity theory together offered a theoretically integrated framework of convergence of socio-economic, educational, psychological, media and religious-social factors for shaping youth susceptibility to extremist ideologies among university students in Punjab.

6.7 Conceptual Framework of the Study

The conceptual framework for this study was developed to investigate the interrelationship of five factors (socio-economic deprivation, educational factors, political and ideological frustration, media and social media exposure, and religious and social influence) and university students' susceptibility to extremist ideologies. The five criteria were viewed as independent variables while susceptibility to extreme ideology was the dependent variable. The model hypothesized that each of the five independent variables had strong relationships with students' susceptibility to extremist ideas and that the five factors together accounted for variation in susceptibility scores. The framework was thus consistent with the quantitative correlational design of the study and focused on investigating relationships and predictive associations rather than establishing causal effects.

University sector (public versus private) was included as a grouping variable to examine whether students' vulnerability levels and the relationships between the identified factors and vulnerability differed across public and private sector universities. It was not treated as a moderator unless a formal moderation analysis was conducted. Accordingly, the conceptual framework comprised five direct paths from the independent variables to vulnerability to extremist ideologies, while university sector provided the basis for comparison between public and private

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university students. Figure 1 presents the conceptual framework of the study.

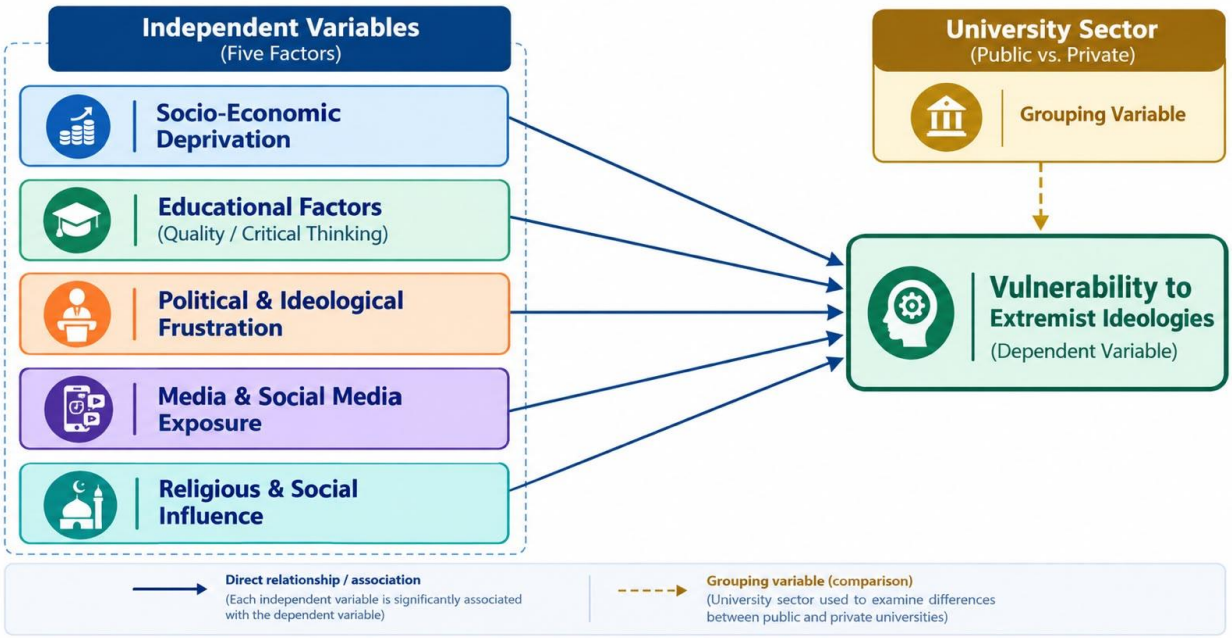


Figure 1. Conceptual framework of the study

7. Research Design and Methodology

The study adopted a quantitative approach grounded in the positivist research paradigm. A correlational survey design was employed to measure the extent of university students' vulnerability to extremist ideologies in Punjab and to examine its relationship with a set of socio-economic, educational, psychological, media-related, and religious-social factors. The target population comprised all undergraduate and postgraduate students enrolled in universities located in Punjab, Pakistan. According to the Punjab Higher Education Commission (2026), the province hosted 88 universities (51 public and 37 private), with a total enrollment of 563,025 students. Given the size of this population, a purposive sampling strategy was adopted to select a manageable subset of universities: ten public sector universities were purposively selected from the 51 public universities, and five private sector universities were purposively selected from the 37 private universities, yielding a total of fifteen universities. The sample size was calculated using the Krejcie and Morgan (1970) formula for finite populations with a 95% confidence level, 5% margin of error, and a hypothesized proportion (P) of 0.5 to produce the maximum sample size. Krejcie & Morgan (1970) said that for a population of 563,025, a minimum sample size of 384 respondents is necessary. The sample size was increased to 500 pupils to deal for missing data and non-response. Approximately 33 participants were chosen from each of the fifteen designated colleges. Participants' inclusion criteria were (a) they should be enrolled in a university in Punjab at the time of the study, (b) they should be between 16 and 30 years of age, and (c) they should agree to do the online questionnaire.

A systematic questionnaire based on five point Likert type scale was designed for this inquiry. The instrument consisted of two pieces. Section A featured demographic data and the key components of the study operationalized as variables or indicators in section B. The factors

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extracted from the literature were socio-economic deprivation, educational factors, psychological and identity-related factors, media and social media exposure, religious and social influence. Also included was a secondary measure of sensitivity to extreme ideology (the outcome variable). Items within each category were constructed based on current research on radicalization and extremism in Pakistan, ensuring that they reflected the contextual realities of Punjab. The instrument comprised of 42 statements. Each of the 6 variables contained 7 items. The items were measured using a 5-point Likert scale from "Strongly Disagree" (1) to "Strongly Agree" (5). The last set of assertion was confirmed by pilot-testing and experts' assessments.

Content validity was constructed based on previous studies of youth radicalization, extremist ideology and associated socio-psychological variables in Pakistan. The instrument was then subjected to assessment by two specialists from the School of Peace and Counter-Terrorism Studies to determine the items on the basis of relevance, clarity and appropriateness. A pilot research was conducted on 40 students from one university to test the clarity of the questionnaire and find ambiguities. The instrument was further modified based on pilot findings and expert feedback prior to full-scale deployment. Reliability of each factor, as well as the entire scale, was tested using Cronbach's alpha coefficient. Reliability of 0.96 and above was regarded satisfactory, demonstrating appropriate internal consistency. The table below shows the reliability of the constructs.

Table 1 Reliability of Instrument

Constructs	No. of Items	Cronbach's Alpha
Socio-Economic Deprivation (SED)	7	0.80
Educational Factors (EF)	7	0.89
Psychological & Identity (PIF)	7	0.90
Media & Social Media Exposure (MSME)	7	0.88
Religious & Social Influence (RSI)	7	0.87
Vulnerability to Extremist Ideologies (VEI)	7	0.90
Overall Scale	42	0.96

The Cronbach's alpha values for all constructs range from 0.80 to 0.90, indicating well to excellent internal consistency and confirming that the items within each construct reliably measure the intended concept. The overall scale demonstrates excellent reliability ($\alpha = 0.96$), indicating a very high level of internal consistency across all 42 items.

Data was collected through the online Google Form questionnaire distributed across the fifteen selected universities. Permission was sought from relevant university authorities (VCs), prior to sharing the questionnaire link. The link was disseminated through university email lists, student social media groups (including Facebook and WhatsApp), and cooperating faculty members who shared it with their classes. The response rate was monitored throughout the duration of data collection.

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8. Data Analysis and Interpretation

The collected data was analyzed in a methodical manner by employing relevant statistical data analysis techniques. The analysis was performed according to the objectives of the study and the research questions and included an evaluation of the factorability of the questionnaire, demographic and descriptive statistics, Pearson correlation analysis, independent samples t-tests and multiple linear regression. Results are reported in the tables below and discussed in relation to the study objectives and research topics.

Assessment of Factorability

Prior to the major analyses, the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy and Bartlett's Test of Sphericity were used to examine the acceptability of the data for factor analysis.

Table 2 Assessment of Sampling Adequacy and Factorability of the Questionnaire

Tests	Value
Kaiser-Meyer-Olkin (KMO) Measure	.922
Bartlett's Test of Sphericity – Approx. χ^2	18393.4
df	861
Sig.	.000

The Kaiser-Meyer-Olkin (KMO) value of sampling adequacy was .922, indicating that sampling adequacy for factor analysis was excellent. Bartlett's Test of Sphericity was significant, $\chi^2(861) = 18,393.40$, $p < .001$, indicating that the correlation matrix was considerably different from an identity matrix. The results supported the strength of the inter-item correlations and the acceptability of the data for factor analysis.

Demographic Characteristics of the Respondents

The below table shows the demographic characteristics of the respondents.

Table 3 Demographic Characteristics of the Respondents

Demographic Variable	Category	f (%)
Gender	Male	218 (43.6%)
	Female	282 (56.4%)
Age	16–18 years	51 (10.2%)
	19–21 years	154 (30.8%)
	22–24 years	172 (34.4%)
	25–30 years	123 (24.6%)
Current Level of Study	Undergraduate (Bachelor's)	269 (53.8%)
	Postgraduate (Master's/MPhil)	231 (46.2%)
Type of University	Public sector	252 (50.4%)
	Private sector	248 (49.6%)
Father's/Guardian's Occupation	Government employee	83 (16.6%)
	Private employee	162 (32.4%)
	Businessman	89 (17.8%)

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Demographic Variable	Category	f (%)
	Farmer	100 (20%)
	Unemployed	39 (7.8%)
	Other	27 (5.4%)
Monthly Family Income (PKR)	Less than 100,000	126 (25.2%)
	100,001–200,000	134 (26.8%)
	200,001–300,000	178 (35.6%)
	Above 300,000	62 (12.4%)
Exposure to Content Promoting Violence	Yes	353 (70.6%)
	No	147 (29.4)%

The demographic profile shows that the sample was composed of 500 university students with a slight predominance of females (56.4%) over boys (43.6%). The highest percentage of the respondents belonged to the age group of 22-24 years (34.4%). 53.8% were undergraduate and 46.2% were postgraduates students. The sample was nearly evenly split between public universities (50.4%) and private universities (49.6%). The socio-economic features of the guardians indicated that private employment was the most common occupation (32.4%) and 35.6% of respondents had a monthly family income of PKR 200,001–300,000. 70.6 percent of pupils reported exposure to content inciting violence in the name of religion or politics.

Table 4 Descriptive Statistics of the Constructs

Constructs	M	SD	Min	Max
Socio-Economic Deprivation (SED)	28.58	3.76	7	35
Educational Factors (EF)	27.56	5.35	7	35
Psychological & Identity (PIF)	27.51	5.73	8	34
Media & Social Media Exposure (MSME)	27.29	4.40	7	35
Religious & Social Influence (RSI)	28.04	4.91	7	33
Vulnerability to Extremist Ideologies (VEI)	26.06	5.59	7	34

The descriptive data showed that Socio-Economic Deprivation (M = 28.58, SD = 3.76) was the highest mean score of the five factors studied, followed by Religious and Social Influence (M = 28.04, SD = 4.91). The mean scores for Educational Factors, Psychological and Identity Factors and Media and Social Media Exposure were 27.56, 27.51 and 27.29 respectively. The mean score of Vulnerability to Extremist Ideologies was 26.06 (SD = 5.59) These findings give a first hint on the existence of socio-economic, religious-social, educational, psychological-identity and media associated characteristics at different levels among university students, responding to the descriptive part of RQ1. But their real correlations with vulnerability are explored in later inferential analyses.

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Correlation among Variables

Table 5 Pearson Correlation Matrix

Variables	SED	EF	PIF	MSME	RSI	VEI
Socio-Economic Deprivation (SED)	1	.593**	.632**	.582**	.598**	.510**
Educational Factors (EF)	.593**	1	.695**	.685**	.711**	.564**
Psychological & Identity Factors (PIF)	.632**	.695**	1	.657**	.776**	.781
Media & Social Media Exposure (MSME)	.582**	.685**	.657**	1	.724**	.570
Religious & Social Influence (RSI)	.598**	.711**	.776**	.724**	1	.719
Vulnerability to Extremist Ideologies (VEI)	.510**	.564**	.781**	.570**	.719**	1

p < .01 (2-tailed); N = 500

Pearson correlation analysis showed statistically significant positive connections between all five parameters and students' susceptibility to extremist views. Psychological and Identity Factors had the largest positive link with vulnerability (r =.781, p <.01) followed by Religious and Social Influence (r =.719, p <.01). Significant positive correlations were also identified between susceptibility and Media and Social Media Exposure (r = .570, p < .01), Educational Factors (r = .564, p < .01), and Socio-Economic Deprivation (r = .510, p < .01). The data suggest that the more pupils showed the criteria under study, the higher their vulnerability ratings were. Overall, the results provide empirical evidence for research question 2. The level of relationships ranged from moderate to substantial.

Table 6 Comparison of Study Variables by University Type (Independent Samples t-Test)

Study Variables	Public (n = 252) M ± SD	Private (n = 248) M ± SD	t	*df*	p
Socio-Economic Deprivation	28.32 ± 4.42	28.85 ± 2.92	-1.59	435.57	.112
Educational Factors	26.83 ± 5.88	28.32 ± 4.66	-3.14	476.43	.002
Psychological & Identity Factors	26.51 ± 6.52	28.53 ± 4.61	-4.01	451.85	< .001
Media & Social Media Exposure	27.15 ± 5.47	27.44 ± 2.95	-0.73	387.05	.468
Religious & Social Influence	26.95 ± 5.28	29.15 ± 4.23	-5.13	478.39	< .001
Vulnerability to Extremist Ideologies	24.86 ± 5.90	27.29 ± 4.99	-4.98	486.81	< .001

Note: M = Mean; SD = Standard Deviation; ± = Mean ± SD. Equal variances not assumed results are reported due to significant Levene's tests (p < .001). p < .05 indicates a statistically significant difference.

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The independent-samples t-test showed statistically significant differences between public- and private-sector university students in Educational Factors, Psychological and Identity Factors, Religious and Social Influence, and Vulnerability to Extremist Ideologies. Private-sector students reported higher mean scores for Educational Factors (M = 28.32 vs. 26.83), Psychological and Identity Factors (M = 28.53 vs. 26.51), Religious and Social Influence (M = 29.15 vs. 26.95), and Vulnerability to Extremist Ideologies (M = 27.29 vs. 24.86), with all differences statistically significant ($p \leq .002$). In contrast, the differences in Socio-Economic Deprivation ($p = .112$) and Media and Social Media Exposure ($p = .468$) were not statistically significant. These findings address RQ3 by showing that vulnerability scores differed significantly by university sector, with private-sector students having higher observed vulnerability scores in this sample, alongside significant sector-level differences in three of the examined factors.

Table 7 Multiple Linear Regression Predicting Vulnerability to Extremist Ideologies

Predictor	B	SE	β	t	p	VIF
Constant	2.467	1.219	—	2.023	.044	—
Socio-Economic Deprivation	−.021	.055	−.014	−.387	.699	1.881
Educational Factors	−.067	.045	−.064	−1.495	.136	2.554
Psychological & Identity Factors	.571	.046	.586	12.531	< .001	3.032
Media & Social Media Exposure	.016	.054	.012	.295	.768	2.495
Religious & Social Influence	.353	.056	.310	6.304	< .001	3.352

Model: $R = .802$, $R^2 = .644$, Adjusted $R^2 = .640$, $F(5, 494) = 178.711$, $p < .001$.

Note: B = unstandardized coefficient; SE = standard error; β = standardized coefficient; VIF = variance inflation factor.

Multiple linear regression was performed to investigate the amount to which socio-economic deprivation, educational characteristics, psychological and identity factors, media and social media exposure and religious and societal impact predicted students' sensitivity to extremist ideas. The total regression model was statistically significant, $F(5, 494) = 178.711$, $p < .001$, and explained 64.4% of the variance in the outcome variable ($R^2 = .644$, adjusted $R^2 = .640$). Thus, these five variables accounted for 64.4% of the variance in vulnerability ratings. The most significant positive predictor was Psychological and Identity Factors ($\beta = .586$, $p < .001$), followed by Religious and Social Influence ($\beta = .310$, $p < .001$). Conversely, Socio-Economic Deprivation ($\beta = -.014$, $p = .699$), Educational Factors ($\beta = -.064$, $p = .136$), and Exposure to Media and Social Media ($\beta = .012$, $p = .768$) did not significantly and uniquely predict vulnerability when all predictors were entered together. The VIF values were from 1.881 to 3.352, suggesting no signs of serious multicollinearity.

9. Findings

Below the findings of the statistical analysis with their substantive interpretation are presented.

1.The data were deemed appropriate for factor analysis, with a KMO value of.922 and a

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significant Bartlett's Test, p <.001. This showed that the data were adequate for further study.

2. The descriptive results showed that Socio-Economic Deprivation had the highest mean (M = 28.58) followed by Religious and Social Influence (M = 28.04). The mean score for Vulnerability to Extremist Ideologies was 26.06. Generally, the study variables had high observed scores among the respondents.

3. The correlation analysis demonstrated strong positive connections between all five characteristics and vulnerability to extremist ideology. Correlations varied from r = .510 to r =.781 (p < .01) and the largest association was between Psychological and Identity Factors (r =.781) followed by Religious and Social Influence (r =.719).

4. Educational Factors, Psychological and Identity Factors, Religious and Social Influence and Vulnerability to Extremist Ideologies indicated significant difference between public and private sector students (p < .05). Students in the private sector had higher mean scores on these variables. Socio-Economic Deprivation and Media and Social Media Exposure were not significantly different.

5. The regression analysis showed that the five predictors together explained 64.4% of the variance in vulnerability (R 2 =.644, p <.001). The predictor variables of psychological and identity factors (β = .586) and religious and social influence (β = .310) were significant unique predictors of susceptibility. The other three covariates did not provide significantly distinctive variance in the regression model.

10. Discussion

The findings of the present study mostly confirm earlier literature suggesting that young sensitivity to extremist ideology is multidimensional and moulded by interrelated socio-economic, educational, psychological, media-related and religious-social elements. The strong positive correlations between the five qualities and vulnerability are consistent with the literature reviewed in the current study that demonstrated similar dimensions as significant to youth radicalization in Pakistan.

The strongest result was the one of Psychological and Identity Factors which had the highest connection with susceptibility and also had the most unique contribution in the regression model. This finding is in line with the Significance Quest Theory and the 3N model of radicalization that emphasize the relevance of threatened identity and psychological drive for personal significance in creating sensitivity to extremist narratives. This research also supports Social Identity Theory, which suggests that threat to identity and need for belongingness may lead to increased reliance on strong in-group identities. The literature reviewed in this study also identified identity, belonging and psychological needs as key features of youth vulnerability.

In the current study, religious and social influence played a significant role in both the regression model and susceptibility. This result is consistent with the findings of Ahmed and Jafri (2020), who emphasized how the campus environment, peer networks, and religiously motivated student organizations influence students' exposure to sectarian and extremist content. Their claim that religion has an impact through social channels rather than only religion is especially pertinent to the results shown here. The result is in line with the 3N paradigm's network component, which maintains that ideological narratives can be embraced and amplified by social networks.

Socioeconomic hardship Social media and media in education although exposure was significantly correlated with vulnerability at the correlation level, it was not a significant unique predictor in the regression model. This tendency is mostly in line with the research, suggesting that sensitivity may be influenced by a variety of conditions, although usually not in isolation. Rahman et al. (2025) and Ismail et al. (2022), for instance, proposed that structural grievances and economic hardship interact with other factors rather than influencing radicalism on their own. Similarly,

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rather than focusing just on exposure, the literature on education and social media stresses media literacy, critical thinking, the institutional setting, and the larger social context.

This finding that students in the private sector reported higher vulnerability scores, is contrary to what earlier literature would suggest, that public sector universities might be more exposed and vulnerable due to a wider socio-economic diversity and more active political or religious student organizations (Ahmed & Jafri, 2020) found higher exposure to hate content and recruitment attempts inside public sector contexts. The present study adds an important empirical dimension to the literature in that it shows that the expected sector pattern was not observed in this sample from Punjab. This discrepancy would suggest that university-sector characteristics alone may not be enough to explain vulnerability and that psychological, identity and religious-social factors may traverse institutional contexts.

The overall results are mainly in line with the theoretical framework and previous research, but also indicate that the relative importance of distinct elements change when they are evaluated together. The results highlight especially the need for psychological and identity factors, and religious-social influence. It confirms the idea that the vulnerability of youth should be explained in terms of the interplay of individual requirements, social networks and ideological narratives and not in terms of a single cause. Thus, the present study adds to the existing literature by giving quantitative evidence from university students across Punjab which has been mentioned in the literature as lacking province-wide empirical evidence.

11. Conclusion

The present quantitative correlational study investigated the nexus between selected social, emotional, political, media related and relative deprivation characteristics and vulnerability of university students to extremist ideology in Punjab. Based on the answers of 500 university students, the results demonstrated substantial correlations between the parameters studied and predisposition to extremist ideas. Further, the regression analysis demonstrated that the combined set of predictors was strongly associated with students' susceptibility and explained a substantial amount of variance in students' vulnerability. The findings indicate that student susceptibility is linked to many interlinked characteristics of their social and psychological environment, not to a single issue. However, due to the cross-sectional correlational nature of the study, the data reveal correlations and predicted associations and should not be construed as evidence of direct causal effects. Thus, the study underscores the need to take into account social inclusions, emotional experiences, political and ideological perspectives, influences of media and social media and emotions of relative lack for the comprehension of sensitivity to extremist ideologies among university students. The findings offer an empirical foundation for subsequent research and for the development of evidence-informed preventive and resilience-building activities in higher education settings. Future studies using longitudinal or mixed-method designs may further explore the interaction of these characteristics across time, providing greater understanding of the processes involved with juvenile vulnerability to extremist ideas.

12. Recommendations

1. Universities may establish centers for Peace and Counter-Terrorism to enable research, raise awareness, provide peace education, refer for counselling and design preventive measures against extremist beliefs.
2. These centers may be a continuous source of training in awareness, conversation programs and digital/media literacy activities for the kids.
3. Higher education institutions may strengthen processes of student counselling and grievances for social isolation, emotional pain and other vulnerabilities identified in the research.

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4. Universities may encourage inclusive student participation, civic engagement and inter-group discussions for social cohesion and resilience.
5. Higher education institutes may develop institutional linkages and data driven preventive initiatives with the required government agencies and academic institutions.

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