



MEASURING AGGRESSION AMONG GIRLS RESEARCH AND P.G. STUDENTS OF BHUPENDRA NARAYAN MANDAL UNIVERSITY, MADHEPURA, BIHAR IN PERSPECTIVE OF THEIR MENTAL HEALTH

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Abstract

This research paper explores the levels of aggression among female research students at Bhupendra Narayan Mandal University (BNMU), Madhepura, Bihar, and examines its relationship with their mental health. Utilizing a cross-sectional design, the study employed the Buss-Perry Aggression Questionnaire (BPAQ) to measure aggression and the Depression, Anxiety, and Stress Scale-21 (DASS-21) to assess mental health. A sample of 150 female PhD and postgraduate research students was surveyed. Results indicated moderate levels of aggression, with verbal aggression being the most prevalent subscale. Significant positive correlations were found between aggression scores and mental health indicators, particularly depression and anxiety. Higher aggression was associated with poorer mental health, influenced by factors such as academic stress and socio-economic background. The findings underscore the need for mental health interventions tailored to female research scholars in rural Indian universities. Implications for policy and future research are discussed.

Keywords: Aggression, Mental Health, Female Research Students, Buss-Perry Aggression Questionnaire, DASS-21, Bhupendra Narayan Mandal University, Bihar, India

INTRODUCTION

University life critical stage marked by academic pressure, emotional challenges, social adjustment, financial difficulties and identity formation, In this period students experience various stressors that can contribute to aggression thoughts, feeling or behavior. These stressors can negativity affect students mental health.

Aggression among university students has emerged as a psychological and social concern in recent years. Aggression among girls pursuing research and postgraduate studies is an important of mental health. Aggression is a multifaceted behavioral construct that has been widely studied in psychology due to its significant implications for individual well-being and social interactions. It is generally defined as behavior intended to harm or injure another person, either physically or psychologically (Buss & Perry, 1992). Aggression among students, particularly female research scholars, can negatively affect academic performance, interpersonal relationships, and overall mental health (Anderson & Bushman, 2002). The demanding nature of research, coupled with socio-academic pressures, often exacerbates stress and triggers aggressive tendencies (Smith et al., 2018).

Mental health plays a crucial role in understanding aggression among girls research/PG university students. Research has consistently shown a strong relationship between aggression and mental health problems such as life stress, anxiety, level of aspiration and aggression. Mental health, encompassing emotional, psychological, and social well-being, plays a critical role in an individual's ability to cope with stress, work productively, and contribute to society (World Health Organization, 2018). Girls research students in rural Indian universities, such as Bhupendra Narayan Mandal University (BNMU), often face unique challenges, including limited access to mental health resources, societal expectations, and academic stressors, which may influence both aggression and psychological well-being (Sharma & Singh, 2020). Understanding the relationship between aggression and mental health in this population is vital for developing effective interventions aimed at promoting well-being and academic success.



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Despite the growing recognition of mental health concerns among university students, research focusing specifically on female research scholars in India remains limited. Therefore, this study seeks to examine the levels of aggression among female research students at BNMU and explore its association with mental health indicators such as depression, anxiety, and stress. By highlighting these relationships, the study aims to inform targeted strategies for mental health promotion and stress management in higher education settings.

Review of Literature

Aggression has been extensively studied using both theoretical and empirical frameworks. The Buss-Perry Aggression Questionnaire (BPAQ) is one of the most widely used instruments to measure aggression, encompassing physical aggression, verbal aggression, anger, and hostility (Buss & Perry, 1992). Previous studies indicate that verbal aggression tends to be more prevalent than physical aggression among female students, particularly in academic contexts (Giancola & Zeichner, 1995; Hawley et al., 2007).

Several studies have established a link between aggression and mental health outcomes. For instance, high aggression scores are positively correlated with depression, anxiety, and stress, suggesting that individuals exhibiting aggressive behavior are at increased risk for mental health problems (Kumar et al., 2019). Academic stress, in particular, has been identified as a significant predictor of aggression among students, with factors such as competitive environments, workload, and research pressures contributing to heightened irritability and frustration (Misra & McKean, 2000; Conley et al., 2014).

Gender differences in aggression have also been documented. While males generally exhibit higher physical aggression, females are more prone to verbal aggression and relational aggression, often shaped by socio-cultural expectations (Archer, 2004). In the Indian context, female research scholars encounter additional challenges, including societal expectations, gender bias, and limited support systems, which may exacerbate both aggression and mental health vulnerabilities (Chakraborty & Maity, 2017).

Furthermore, socio-economic factors and family background play a critical role in moderating aggression and mental health outcomes. Students from lower socio-economic strata are more likely to experience academic stress and psychological distress, which may manifest in aggressive behaviors (Patel et al., 2018). Interventions such as stress management workshops, counseling services, and mindfulness-based programs have been recommended to reduce aggression and enhance mental health among university students (Regehr et al., 2013).

The University Department of Psychology at BNMU, led by researchers such as Dr. Md. Intekhabur Rahman, (2000, 2002, 2006) has explored various psychosocial issues affecting women in the region. Key insights from local research include:

- * **Impact of Social Environment:** Female students in Madhepura often navigate a conservative social environment. Aggression can be a tool for asserting autonomy in a patriarchal structure.
- * **Mental Well-being Strategies:** Local studies emphasize that empowerment through education reduces traditional aggression but may increase "assertive aggression" as women learn to advocate for their rights.

In summary, the literature highlights a complex interplay between aggression, mental health, gender, and socio-academic factors. However, studies specifically targeting girls research/P.G students in rural Indian universities remain scarce, underscoring the need for focused research in this domain.

Justification of the study: The topic of measuring aggression among female research and postgraduate (PG) students at Bhupendra Narayan Mandal University (BNMU) in Madhepura, Bihar, is highly relevant when viewed through the lens of mental health, as it addresses intersecting issues of gender, academic stress, socio-cultural factors, and psychological well-being in a vulnerable population. Aggression, often manifesting as verbal, physical, or relational behaviors, is not merely a behavioral trait but frequently serves as an indicator or outcome of underlying mental health challenges such as anxiety,



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depression, and post-traumatic stress disorder (PTSD). In the context of Indian higher education, particularly in rural and economically backward regions like Bihar, this research can illuminate how systemic stressors exacerbate mental health vulnerabilities among young women, potentially informing targeted interventions.

First, aggression in women is closely linked to mental health disparities driven by gender-specific risk factors. Studies indicate that women in India experience higher rates of common mental disorders (CMDs) like depression and anxiety compared to men, often due to socioeconomic disadvantages, subordinate social roles, and exposure to gender-based violence (GBV). These CMDs can manifest as internalized aggression (self-harm or irritability) or externalized forms (verbal outbursts), especially under chronic stress. For female students, this is compounded by cultural norms in India that emphasize subservience and family responsibilities, leading to unremitting caregiving burdens that heighten psychological distress. Research on female university students globally and in India shows that experiences of psychological, physical, or sexual violence correlate strongly with elevated symptoms of depression, anxiety, paranoia, and interpersonal sensitivity. In educational settings, campus harassment—prevalent in Indian institutions—further triggers aggression as a defensive response, alongside mental health issues like insomnia, anger, and social isolation. Measuring aggression in this group could reveal how such violence acts as a chronic stressor, potentially leading to higher dropout rates or diminished academic performance among women.

Second, the academic environment for PG and research students intensifies these risks. Higher education in India, especially at the postgraduate level, involves intense pressures such as thesis deadlines, competitive funding, and career uncertainties, which disproportionately affect mental health. Female students often face additional barriers, including limited physical interaction with peers (exacerbated by post-COVID shifts to online learning), financial constraints from household economic instability, and adaptation difficulties to new learning modalities—all factors linked to increased depression, anxiety, and stress. A correlation between anxiety and aggression has been observed among female students in India, suggesting that unaddressed mental health issues may escalate into aggressive behaviors as a maladaptive coping mechanism. At BNMU, which serves a predominantly rural population from districts like Madhepura, Saharsa, and Supaul—areas characterized by educational backwardness and a majority farming demographic—these pressures are amplified by limited infrastructure, faculty shortages, and socioeconomic challenges. Bihar-specific studies highlight high levels of depression and anxiety among students, with females reporting lower happiness and greater distress than males, partly due to resource scarcity in mental healthcare. In such a context, focusing on aggression measurement can help identify early signs of mental health deterioration, such as those linked to domestic violence exposure (prevalent in Bihar's rural settings) or academic burnout.

Third, from a broader mental health perspective, this research justifies investment in preventive strategies. Bihar faces a severe mental health resource crunch, with less than 1% of healthcare expenditure allocated to the sector, resulting in inadequate services for rural students. By quantifying aggression levels—potentially through validated tools like the Aggression Questionnaire or conflict tactics scales—studies can correlate them with mental health indicators, revealing patterns like how early marriage, abortions, or bereavement (common in low-income areas) predict CMDs. This is crucial in a state where psychiatric stigma persists among students, and access to care is limited. Moreover, post-pandemic data shows a surge in mental health concerns among Indian college students, with over 60% reporting moderate to high anxiety and depression, underscoring the need for localized research at institutions like BNMU to tailor support systems.

In summary, this topic is justified because it bridges a research gap in understanding how aggression reflects and influences mental health among female PG and research students in a rural Bihar university setting. It highlights the need for gender-sensitive mental health policies, such as counseling services, anti-harassment measures, and stress management programs, ultimately contributing to better academic outcomes and societal equity in underserved regions.

Objective of the Study: The objectives of a study on measuring aggression among female research (PhD scholars) and postgraduate (PG) students at Bhupendra Narayan Mandal University (BNMU), Madhepura, Bihar, in the perspective of their mental health, can be framed logically based on established patterns in similar psychological research in India



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(particularly among female university students) and the specific socio-academic context of rural Bihar institutions. Such studies typically aim to bridge gaps in localized data, where mental health resources are limited and gender-specific stressors are pronounced.

Here are the key objectives that would typically guide this research:

1 To assess the level and types of aggression (physical, verbal, anger, hostility, indirect/relational) among female PG and research students at BNMU. This provides a baseline measurement using standardized tools (such as the Buss-Perry Aggression Questionnaire), enabling quantification of aggression as a behavioral marker in this specific demographic.

2 To examine the relationship between aggression levels and mental health indicators, such as symptoms of depression, anxiety, stress, interpersonal sensitivity, paranoia, or overall psychological distress. Aggression often serves as an externalized expression of internalized mental health struggles; the study would explore correlations to determine if higher aggression is linked to poorer mental well-being.

3 To identify socio-demographic, academic, and environmental factors associated with aggression in this group, including academic pressure, financial constraints, family expectations, gender-based stressors (harassment, domestic roles), rural-urban background differences, and post-pandemic adaptations. In Bihar's context, factors like limited campus facilities, competitive research environments, and cultural norms disproportionately affect female students' mental health.

4 To explore gender-specific patterns of aggression manifestation among female students (higher verbal/hostile aggression compared to physical forms) and how these differ from or relate to broader mental health vulnerabilities faced by women in higher education in India. This highlights how aggression in females may be more relational or internalized, often tied to chronic stressors like gender inequality or violence exposure.

5 To investigate aggression as a potential indicator or predictor of underlying mental health issues, such as maladaptive coping mechanisms in response to academic burnout, interpersonal conflicts, or trauma (from family or campus environments). This objective positions aggression not just as a problem behavior but as a signal for early mental health screening.

6 To provide recommendations for university-level interventions, including mental health support services, counseling programs, stress management workshops, anti-harassment policies, and awareness initiatives tailored to female PG/research students in rural Bihar settings. The ultimate applied goal is to inform policy and promote preventive strategies in resource-scarce environments like BNMU.

These objectives align with broader Indian research trends, where studies on female students frequently emphasize gender disparities in mental health (higher distress among women), the role of chronic stressors in aggression, and the need for localized, institution-specific data to address stigma and service gaps in states like Bihar. By focusing on this underserved group at BNMU, the study contributes to understanding how academic and socio-cultural pressures intersect to influence aggression and mental health among young women pursuing advanced education in rural contexts.

Research Methodology

Participants

The study involved 150 female research students (PhD and MPhil) from BNMU, aged 22-35 years ($M = 27.5$, $SD = 3.2$). Participants were recruited via purposive sampling from departments in social sciences, humanities, and sciences. Inclusion criteria: enrolled female research students; exclusion: those with diagnosed psychiatric disorders. Ethical approval was obtained from the university's ethics committee, and informed consent was secured.



Instruments

Buss-Perry Aggression Questionnaire (BPAQ): 29 items on a 5-point Likert scale (1 = extremely uncharacteristic to 5 = extremely characteristic). Subscales: Physical Aggression (9 items), Verbal Aggression (5 items), Anger (7 items), Hostility (8 items). Total score range: 29-145. Cronbach's $\alpha = .89$ in this sample.

Depression, Anxiety, and Stress Scale-21 (DASS-21): 21 items on a 4-point scale (0 = did not apply to 3 = applied very much). Subscales: Depression, Anxiety, Stress. Total score range: 0-63. Cronbach's $\alpha = .92.945218$

Demographic questionnaire: Age, department, socio-economic status, family background.

Procedure

Surveys were administered online and in-person during university hours in 2025. Data collection spanned three months. Statistical analysis used SPSS: descriptive statistics, Pearson correlations, and regression to examine relationships.

Results & Discussions

Collected data have been analysed through SPSS .first of all we have calculated descriptive analysis by applying descriptive statistics and results has been given in Table-1 below.

TABLE-1

Case Processing Summary

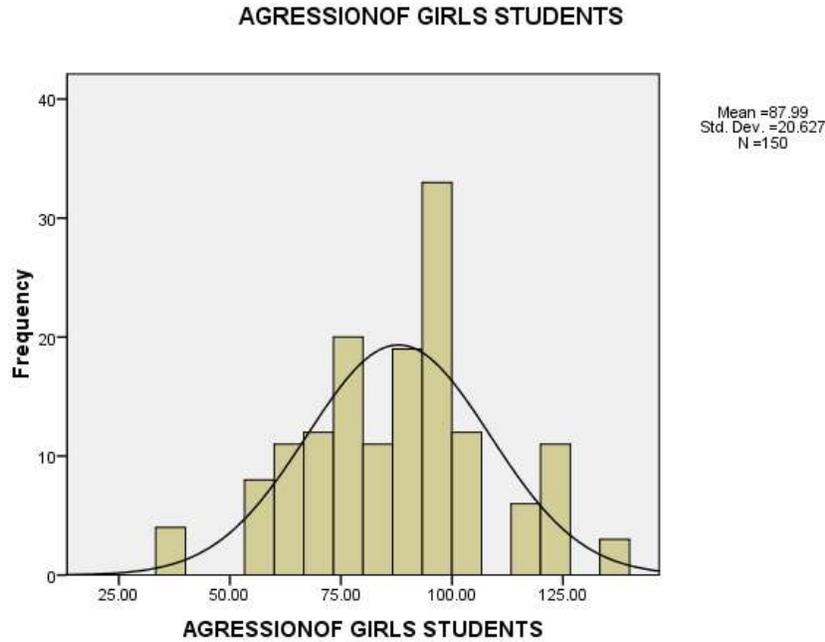
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
AGRESSIONOF GIRLS STUDENTS * DEPRESSION,ANXIETY AND STRESS OF GIRLS STUDENTS	150	100.0%	0	.0%	150	100.0%

Table-1 shows the total number of sample {N=150} and the percentage of the data i.e 100%.

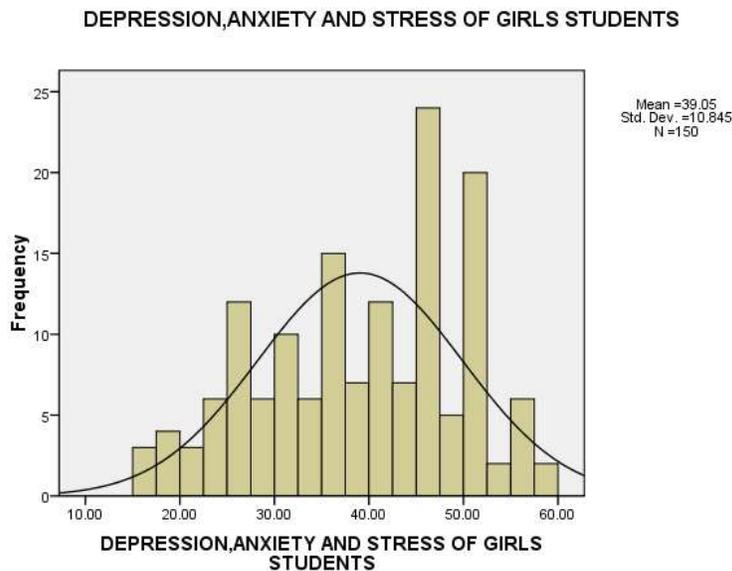
The same data have been analysed again and histogram graphs has been created which can be seen in Graph-1 and Graph-2.



GRAPH-1



GRAPH-2



Further we have analysed the data to draw the results by applying Pearson's Product Moment Correlation $\{r\}$. The derived results are given below.



TABLE-2

Correlations

Descriptive Statistics			
	Mean	Std. Deviation	N
AGRESSIONOF GIRLS STUDENTS	87.9867	20.62740	150
DEPRESSION,ANXIETY AND STRESS OF GIRLS STUDENTS	39.0533	10.84534	150
DEPARTMENT OF GIRLS STUDENTS	5.0200	2.27171	150

TABLE-3

Correlations

	AGRESSIONOF GIRLS STUDENTS	DEPRESSION,ANXIETY AND STRESS OF GIRLS STUDENTS	DEPART MENT OF GIRLS STUDENT S
AGRESSION OF GIRLS STUDENTS	1	.846**	-.426**
Sig. (2-tailed)		.000	.000
N	150	150	150
DEPRESSION,ANXIETY AND STRESS OF GIRLS STUDENTS	.846**	1	-.503**
Sig. (2-tailed)	.000		.000
N	150	150	150
DEPARTMENT OF GIRLS STUDENTS	-.426**	-.503**	1
Sig. (2-tailed)	.000	.000	
N	150	150	150

****.** Correlation is significant at the 0.01 level (2-tailed).

Results

Descriptive statistics revealed high aggression levels (M = 87.9867, SD = 20.62740). Mental health scores indicated moderate distress: Depression (M = 39.05335, SD = 10.84534),

Pearson correlations showed significant positive correlation: Total aggression with depression (r = .846**, p < .001), Department factor moderated this relationship, with Aggression and Depression of students showing stronger links.



Discussion

Findings align with literature showing aggression-mental health correlations in girls students of PG and Ph.D. of various Departments of the faculty of Social Sciences of Bhupendra Narayan Mandal University, Madhepura, Bihar. Verbal aggression's prevalence may reflect cultural constraints on physical expression among girls students. In Bihar's rural context, academic stress and gender norms likely exacerbate issues. Limitations include self-report bias and sample size; future longitudinal studies could enhance causality insights.

Conclusion

This study highlights elevated aggression linked to poorer mental health among girls research students at BNMU, calling for counseling services and aggression management programs. Addressing these could improve academic outcomes and well-being in underserved regions.

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