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Editor



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Exploring the Relationship between Childhood Trauma and Adult Depression

Dr. Ramuday Singh*
Dr. Barishter Yadav**

Abstract:

Childhood trauma has emerged as one of the most significant predictors of adult depression, exerting profound and lasting effects on mental health across the lifespan. Experiences of abuse, neglect, and household dysfunction disrupt developmental processes and increase vulnerability to depressive disorders, often in a dose–response manner. This review synthesizes epidemiological, biological, psychological, and social evidence to examine the mechanisms linking early adversity to adult depression. Epidemiological studies consistently report that individuals exposed to childhood maltreatment are two to three times more likely to develop depression, with emotional abuse and neglect showing the strongest associations. Biological mechanisms include dysregulation of the hypothalamic–pituitary–adrenal (HPA) axis, neurostructural changes, inflammatory processes, and epigenetic modifications. Psychological pathways highlight the role of insecure attachment, maladaptive cognitive schemas, and impaired emotion regulation, while social mechanisms emphasize socioeconomic disadvantage, revictimization, and weak support systems. Collectively, these findings suggest that depression arises from the complex interplay of biological vulnerabilities, psychological disruptions, and adverse social contexts established during childhood. Despite robust evidence, gaps remain in understanding trauma-type-specific mechanisms, cross-cultural variability, and protective factors such as resilience and supportive relationships. Future research should adopt longitudinal, cross-cultural, and multi-level designs integrating biomarkers and psychosocial assessments. Clinically, trauma-informed care and interventions targeting biological, psychological, and social domains simultaneously are essential. Public health strategies that prevent child maltreatment and address structural inequalities hold promise for reducing the long-term burden of depression. Understanding this multifactorial relationship provides critical insights for prevention, treatment, and policy development.

Keywords: Childhood trauma, Adult depression, Adverse Childhood Experiences (ACEs), HPA axis, Attachment, Resilience, Trauma-informed care, Mental health.

Introduction

Childhood trauma has been consistently identified as a significant risk factor for a range of adverse psychological outcomes, with adult depression being among the most prevalent and debilitating consequences. Experiences such as physical, emotional, or sexual abuse, neglect, and household dysfunction can profoundly disrupt developmental processes and have lasting effects on mental health across the lifespan. The landmark Adverse Childhood Experiences (ACE) study provided robust evidence that exposure to early life adversity is strongly associated with an increased likelihood of developing depression and other psychiatric disorders in adulthood, often in a dose–response manner (Felitti et al., 1998). Subsequent research has reinforced these findings, underscoring the long-term public health implications of childhood trauma (Norman et al., 2012).

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Depression itself is a leading cause of disability worldwide, affecting over 280 million people and contributing significantly to global disease burden (World Health Organization, 2021). It is characterized by persistent low mood, loss of interest or pleasure, and impaired daily functioning, with recurrent and chronic forms leading to substantial personal and societal costs. Understanding the pathways through which childhood trauma contributes to adult depression is therefore critical, as it informs both preventive strategies and the development of trauma-informed treatment approaches.

While multiple studies and meta-analyses demonstrate a robust association, the mechanisms underlying this link are complex. Biological pathways, including hypothalamic–pituitary–adrenal (HPA) axis dysregulation, chronic inflammatory responses, and structural brain changes, interact with psychological processes such as attachment difficulties, maladaptive cognitive schemas, and emotion regulation deficits (Heim & Binder, 2012; Baumeister et al., 2016). At the same time, protective factors such as resilience, supportive relationships, and early intervention can buffer against these risks, highlighting the importance of contextual influences.

The purpose of this review is to synthesize existing literature on the relationship between childhood trauma and adult depression, with three specific objectives:

- (1) To assess the strength and consistency of the association between different forms of childhood trauma and adult depression,
- (2) To explore the biological, psychological, and social mechanisms that mediate this relationship, and
- (3) To identify gaps in the literature and suggest directions for future research.

Review of Literature

Epidemiological Evidence

Childhood trauma, including physical, emotional, and sexual abuse as well as neglect and other adverse childhood experiences (ACEs), has been extensively studied in relation to adult psychopathology, particularly depression. Epidemiological research has sought to establish the prevalence of childhood trauma, its distribution across populations, and its association with major depressive disorder and depressive symptoms in adulthood.

Prevalence estimates indicate that childhood trauma is common in general adult populations. Meta-analyses of ACEs suggest that a majority of adults report at least one ACE, with a considerable proportion experiencing multiple ACEs (Hughes et al., 2017). Within clinical populations, particularly individuals diagnosed with depression, the prevalence of reported childhood maltreatment is notably higher. Meta-analytic evidence indicates that approximately 40–46% of depressed patients report histories of at least one type of childhood maltreatment (Nelson et al., 2017). This highlights both the pervasiveness of childhood adversity in the general population and its overrepresentation among individuals with depression.

Epidemiological studies consistently demonstrate a strong association between childhood trauma and subsequent depression. Meta-analytic syntheses reveal that individuals exposed to any form of maltreatment are approximately two to three times more likely to develop depression in adulthood compared to those without such histories. For example, pooled odds ratios (ORs) indicate that childhood maltreatment increases the risk of adult depression by roughly 2.5–3.0, with emotional abuse demonstrating even stronger associations (OR \approx 3.7). Moreover, exposure to multiple forms of maltreatment significantly elevates the risk, with ORs often exceeding 3.5 (Nelson et al., 2017).

A dose–response relationship has been consistently observed across epidemiological studies. Individuals with multiple ACEs face a markedly elevated risk of depression relative to those with none. Hughes et al. (2017) reported that mental health outcomes, particularly depression, fall into the category of strong associations (ORs $>$ 3) when four or more ACEs are present. This underscores the cumulative impact of early adversity on long-term mental health trajectories.

Beyond onset, childhood trauma has implications for the course and severity of depression. A meta-analysis by Nanni, Uher, and Danese (2012) demonstrated that individuals with maltreatment histories experience earlier onset of depressive episodes, greater chronicity, and reduced treatment

responsiveness. These findings highlight that childhood trauma not only elevates risk but also contributes to more severe and treatment-resistant trajectories of illness.

At the population level, recent analyses have quantified the burden of depression attributable to childhood trauma. Grummitt et al. (2024) estimated that approximately 21% of depression cases in Australia could be attributed to childhood maltreatment, illustrating the substantial preventable fraction of illness linked to early adversity. Such findings emphasize the importance of preventive interventions targeting child maltreatment as a strategy to reduce the population-level burden of depression.

While these associations are robust, several limitations temper causal interpretation. Retrospective recall bias in self-reported trauma, heterogeneity in measurement across studies, and potential confounding factors such as socioeconomic adversity must be acknowledged. Nevertheless, converging evidence from prospective cohorts, twin designs, and dose–response patterns lends support to a partly causal relationship between childhood trauma and adult depression (Kessler et al., 2010).

Types of childhood trauma and their differential impact

Childhood trauma—commonly operationalized in epidemiological work as child maltreatment (physical, sexual, emotional abuse; physical and emotional neglect) and broader adverse childhood experiences (ACEs) including household dysfunction—has a well-established and robust relationship with later psychopathology, most notably depression. Large population and clinical studies consistently report that exposure to one or more ACEs is common in adult samples and is markedly overrepresented among people with depressive disorders (Felitti et al., 1998; Hughes et al., 2017). Meta-analytic syntheses focused specifically on depression indicate that childhood maltreatment is not only associated with greater odds of later depressive episodes but is also linked to earlier age at onset, greater symptom severity, more recurrent or chronic courses, and poorer response to standard treatments (Nelson et al., 2017; Nanni et al., 2012). These findings have been replicated across cross-national surveys and prospective cohorts, suggesting that the association is robust across settings (Kessler et al., 2010).

Different types of childhood trauma show partially distinct patterns of association with later outcomes. Emotional abuse and emotional neglect, which directly target developing self-concept and emotion-regulation capacities, have emerged repeatedly as especially potent predictors of adult depression and internalizing disorders; meta-analytic work reports larger effect sizes for emotional maltreatment on depressive outcomes compared with some forms of physical abuse (Nelson et al., 2017; Hughes et al., 2017). Sexual abuse is strongly associated with posttraumatic stress disorder, suicidality, and severe clinical courses of mood disorders, often co-occurring with high levels of shame, dissociation, and interpersonal difficulties that complicate treatment (Teicher & Samson, 2016). Physical abuse, while consistently linked to increased risk for multiple psychiatric outcomes including mood disorders, shows particularly strong ties to externalizing problems, substance misuse, and aggression, especially when occurring in chaotic family environments (Felitti et al., 1998; Kessler et al., 2010). Neglect—especially emotional neglect—correlates with deficits in cognitive, social, and attachment-related functioning and is increasingly recognized as a driver of depressive presentations characterized by anhedonia, social withdrawal, and impaired psychological resilience (Teicher & Samson, 2016).

An important and consistent epidemiological observation is dose–response: both the number of different ACEs (poly-victimization) and the severity/chronicity of maltreatment are associated with progressively higher odds of depression and worse clinical outcomes (Hughes et al., 2017). Population-level analyses that combine effect-size estimates with national prevalence data indicate that a substantial share of depression—and other mental-health burdens—may be attributable to childhood maltreatment; for instance, a recent Australian analysis estimated that roughly one-fifth of depression cases could be attributable to prior child maltreatment, highlighting the potential public-health impact of prevention (Grummitt et al., 2024). Mechanistically, distinct trauma types likely

operate through partially separable pathways: threat-based abuses (physical/sexual) preferentially perturb salience and threat-processing circuits and HPA-axis responsivity, whereas deprivation/neglect affects cortical and prefrontal development and cognitive-emotional regulation networks; emotional abuse appears to shape maladaptive cognitive schemas and interpersonal expectations that predispose specifically to depressive cognitions (Teicher & Samson, 2016; Nelson et al., 2017).

Despite the convergent evidence, several methodological issues moderate interpretation. Much epidemiological work relies on retrospective self-report of childhood events, which can introduce recall bias and affect effect-size estimates; however, prospective cohort studies and administrative-record analyses generally replicate the major patterns, increasing confidence in the associations (Kessler et al., 2010). Heterogeneity in exposure measurement (different instruments, thresholds, and definitions), residual confounding by socioeconomic and familial factors, and publication bias are persistent concerns; genetically informed designs (e.g., sibling/twin comparisons) and studies that jointly model genetic liability and environmental exposures are helping to clarify causal pathways but are still less common (Baldwin et al., 2023; Grummitt et al., 2024). Clinically, the epidemiological pattern argues for routine assessment of childhood trauma in depression services because type, timing, and multiplicity of exposures inform prognosis and suggest different therapeutic emphases (e.g., trauma-focused interventions for PTSD-related sequelae versus schema- and attachment-focused approaches for emotional maltreatment).

Mechanisms

Childhood trauma becomes biologically embedded in ways that plausibly increase vulnerability to depression across the life course. Neurodevelopmental studies show that maltreatment and deprivation alter the structure and function of brain systems central to mood regulation: maltreated individuals exhibit morphological and functional differences in the hippocampus, amygdala, anterior cingulate, prefrontal cortex, corpus callosum and striatal reward circuitry, with heightened amygdala reactivity to threat and blunted striatal responses to reward—changes plausibly linked to affective dysregulation, hypervigilance, and anhedonia seen in depression (Teicher & Samson, 2016). At the endocrine level, childhood adversity perturbs hypothalamic–pituitary–adrenal (HPA) axis regulation: both hyper- and hypo-cortisolemic patterns have been observed in different samples and developmental windows, and epigenetic modification of stress-regulatory genes provides one mechanistic route. For example, increased cytosine methylation of the glucocorticoid receptor gene (NR3C1) in postmortem hippocampus and peripheral tissues has been associated with histories of childhood abuse, which plausibly reduces receptor expression and alters glucocorticoid feedback, thereby changing stress responsivity across the lifespan (McGowan et al., 2009; Perroud et al., 2011). Immune and inflammatory processes provide another biological conduit: multiple studies and reviews report that childhood maltreatment predicts a proinflammatory phenotype in adulthood (elevated CRP, IL-6 and related markers) and that, among maltreated individuals, depression is more likely to co-occur with elevated inflammation—suggesting that chronic low-grade inflammation may mediate part of the link between early adversity and later mood disorder as well as somatic comorbidity (Danese et al., 2008; Miller, Chen, & Parker, 2011). Finally, these biological pathways interact: biologically embedding models propose that early stress programs immune cells, neural circuits, and endocrine setpoints (through epigenetic and other molecular changes), and over time behavioral patterns and further exposures amplify these biological tendencies to produce sustained risk for depression and related illnesses (Miller et al., 2011).

Psychological mechanisms link early maltreatment to depression through alterations in attachment, cognition, emotion regulation, and trauma-specific symptomatology. Children who experience emotional abuse, neglect or inconsistent caregiving frequently develop insecure attachment styles, negative internal working models, and maladaptive beliefs about the self and others; these patterns increase susceptibility to hopelessness, low self-worth, and cognitive biases (e.g., negative attributional styles) that characterize depressive disorders (Beck's cognitive model

historically maps onto these processes). Repeated maltreatment also impairs the development of emotion-regulation capacities—diminishing tolerance for distress, increasing rumination and experiential avoidance—and increases the risk of dissociation and shame, particularly after sexual abuse, which can complicate recovery and elevate the risk of chronic or recurrent depression (Teicher & Samson, 2016; Nelson et al., 2017). Beyond intrapersonal processes, the stress-generation model describes a transactional psychological process whereby maladaptive interpersonal styles and cognitive vulnerabilities stemming from early adverse experiences increase the likelihood that individuals will encounter dependent stressful events (conflicts, relationship losses) that in turn precipitate or sustain depressive episodes; meta-analytic and systematic reviews of stress generation provide robust support for this bidirectional process (Hammen, foundational; Liu & Alloy, 2010). In short, psychological sequelae of childhood trauma (insecure attachment, maladaptive schemas, poor emotion regulation, and stress-generation tendencies) create proximal cognitive-emotional pathways that mediate the impact of early adversity on subsequent depressive phenomenology.

Social pathways operate at multiple levels: family, peer, community, and socioeconomic context. Household dysfunction (parental mental illness or substance use, caregiver instability, poverty) both co-occurs with direct maltreatment and independently increases exposure to chronic stressors, deprives children of buffering supports, and models maladaptive coping—all of which raise risk for later depression. Social learning and the accumulation of adversities mean that early maltreatment frequently sets in motion trajectories of social disadvantage (educational disruption, low socioeconomic attainment, unstable relationships) that themselves are upstream determinants of depression. Moreover, childhood victimization increases the likelihood of revictimization in adolescence and adulthood—through pathways including impaired risk recognition, constrained options, and engagement in risky relationships—so that early trauma raises the probability of subsequent traumatic exposures that further elevate depressive risk (Widom, Czaja, & Dutton, 2008). Peer-related social mechanisms (chronic bullying, social exclusion) and community violence amplify interpersonal threat signaling and social defeat—a social-psychobiological process increasingly implicated in depression—while weak social support diminishes recovery potential. These social mechanisms frequently operate additively and synergistically with biological and psychological processes: for example, socioeconomic stressors can potentiate inflammatory responses, while ongoing interpersonal stress can maintain maladaptive cognitive styles and HPA dysregulation.

Importantly, the mechanisms above do not act in isolation; current integrative models emphasize multi-level, dynamic interactions (biological \times psychological \times social) across development. Epigenetic and immune alterations may predispose an individual to exaggerated stress reactivity, making negative cognitions and interpersonal difficulties more likely to precipitate depressive episodes; conversely, ongoing social stressors and maladaptive behavioral choices (e.g., substance use, social withdrawal) can further dysregulate biology, creating self-reinforcing cycles. Genetically informed and prospective longitudinal studies are beginning to clarify which pathways are likely causal, which are moderators, and how timing, chronicity, and type of trauma shape mechanistic cascades (Baldwin et al., 2023). Nevertheless, methodologic limitations—heterogeneity in exposure measurement, reliance on retrospective reports in many clinical samples, and the complexity of separating correlated social risks from direct maltreatment effects—mean that continued longitudinal, multi-modal research (combining imaging, molecular, physiological, and rich psychosocial measurement) is needed to map precise causal chains.

Clinically and for public health, mechanism-focused evidence suggests concrete targets: interventions that reduce chronic inflammation, restore adaptive stress regulation (psychopharmacologic and behavioral), strengthen emotion regulation and secure attachments (trauma-informed psychotherapies), and alter adverse social contexts (family supports, poverty reduction, prevention of revictimization) are likely to be most effective when combined. In sum, childhood trauma contributes to adult depression through interlocking biological (neural circuitry, HPA-axis dysregulation, epigenetic change, immune activation), psychological (attachment

disruption, maladaptive cognitions, emotion-regulation failure, stress generation), and social (household dysfunction, revictimization, socioeconomic disadvantage, peer/community adversity) pathways. The best current evidence supports a multi-level, developmental causal model in which early exposures instantiate biological vulnerabilities that interact with psychological processes and social environments across the lifespan to produce, sustain, and amplify risk for depressive illness.

Discussion

The literature on childhood trauma and adult depression provides strong evidence that early adverse experiences exert enduring effects through interconnected biological, psychological, and social pathways. Collectively, the findings suggest that no single mechanism can fully explain the association; rather, depression emerges as the outcome of a complex interplay between vulnerabilities created in childhood and stressors encountered later in life.

Biological studies underscore the lasting imprint of trauma on neurobiological systems. Dysregulation of the hypothalamic–pituitary–adrenal (HPA) axis, as reported in longitudinal and neuroimaging research, highlights how early stress “programs” the stress-response system, leading to either hyper- or hypo-reactivity in adulthood (Heim & Nemeroff, 2001; Teicher & Samson, 2016). Such alterations are compounded by structural and functional changes in brain regions central to mood regulation, such as the hippocampus, amygdala, and prefrontal cortex. These biological vulnerabilities may prime individuals for maladaptive responses to subsequent stress, creating a heightened risk for depressive episodes.

At the psychological level, trauma often distorts core cognitive schemas, leaving individuals with persistent feelings of worthlessness, guilt, or hopelessness (Beck, 2008). Maladaptive coping styles, such as avoidance or rumination, may further entrench depressive symptomatology. Importantly, trauma disrupts the development of secure attachment patterns, increasing vulnerability to relationship difficulties and emotional dysregulation later in life (Briere & Rickards, 2007). These psychological processes not only exacerbate the impact of biological changes but also help explain why some individuals continue to struggle with depression even in the absence of ongoing external stressors.

Social pathways provide an equally critical lens. Individuals exposed to trauma are disproportionately likely to encounter socioeconomic disadvantage, discrimination, or revictimization (Hughes et al., 2017). Such stressors both trigger depressive episodes and limit access to protective resources, including supportive social networks and healthcare. The social context may also amplify biological and psychological vulnerabilities, illustrating how systemic and interpersonal factors interact with individual-level processes.

Taken together, the evidence points to a multifactorial model in which early adversity sensitizes biological stress systems, shapes maladaptive cognitions and coping styles, and increases exposure to ongoing social disadvantage. This integrated perspective underscores the need for interventions that target multiple levels simultaneously. For instance, biological interventions (e.g., pharmacological treatments addressing HPA dysregulation) may be most effective when paired with psychotherapeutic strategies aimed at restructuring maladaptive beliefs and strengthening coping skills, alongside social policies that reduce inequality and support trauma survivors.

Future research should prioritize longitudinal designs to better disentangle causal pathways and identify protective factors that may buffer the long-term impact of trauma. Additionally, examining how mechanisms vary across trauma types, cultural contexts, and developmental stages can refine our understanding and guide more tailored interventions. Ultimately, recognizing the interwoven biological, psychological, and social sequelae of childhood trauma offers the most comprehensive framework for addressing its profound impact on adult depression.

Future Directions

Although the literature has established a robust link between childhood trauma and adult depression, several important gaps remain. First, much of the evidence is drawn from retrospective self-report data, which are prone to recall bias and may underestimate or overestimate exposure to

adversity (Hardt & Rutter, 2004). Longitudinal studies with objective markers of trauma and biological stress responses are still limited. Second, while the majority of research demonstrates associations, causal mechanisms remain insufficiently delineated. For instance, it is not yet clear how specific types of trauma (e.g., emotional neglect vs. physical abuse) differentially influence neurobiological pathways or psychological processes leading to depression (Teicher & Samson, 2016).

Another gap lies in the cultural and contextual diversity of samples. Most studies have been conducted in Western, high-income countries, raising questions about the generalizability of findings across societies with different family structures, cultural meanings of trauma, and health system capacities (Kessler et al., 2010). Similarly, gender differences are understudied, despite evidence suggesting that women may be more vulnerable to depression following certain forms of trauma, such as sexual abuse (MacMillan et al., 2001). The interaction of trauma with other social determinants, including poverty, discrimination, and migration, also warrants deeper exploration.

In terms of recommendations, future research should prioritize large-scale, longitudinal, and cross-cultural designs that can disentangle causal pathways and identify protective factors. Incorporating biomarkers, neuroimaging, and ecological momentary assessment could improve precision in measuring trauma exposure and its effects. Moreover, studies should examine resilience processes — why some individuals thrive despite severe adversity — to inform strengths-based interventions.

Intervention research should also adopt a multi-level approach. At the individual level, trauma-informed psychotherapies, such as cognitive-behavioral and attachment-based interventions, have shown promise in addressing psychological sequelae (Shalev et al., 2019). At the biological level, exploring adjunct treatments that target HPA axis dysregulation or inflammation may enhance therapeutic outcomes. At the societal level, public health strategies aimed at early identification of at-risk children, prevention of maltreatment, and provision of supportive environments are crucial. Policies reducing structural inequalities that exacerbate the impact of trauma could serve as powerful preventive measures.

In sum, advancing the field requires integrating diverse methodologies, cross-disciplinary perspectives, and culturally sensitive frameworks. By bridging current gaps and broadening intervention strategies, future research can better illuminate how childhood trauma shapes mental health trajectories and how targeted interventions can mitigate its long-term burden on adult depression.

Conclusion

The evidence from epidemiological, neurobiological, and psychological research clearly demonstrates that childhood trauma is a significant and pervasive risk factor for adult depression. Different types of trauma—including emotional, physical, and sexual abuse, as well as neglect and household dysfunction—exert differential effects on depressive outcomes through interrelated biological, psychological, and social pathways. Biological mechanisms, such as alterations in neural circuits, HPA-axis dysregulation, epigenetic modifications, and inflammatory processes, interact with psychological sequelae, including maladaptive cognitive schemas, insecure attachment, and impaired emotion regulation. Social pathways, encompassing family instability, peer victimization, socioeconomic disadvantage, and revictimization, further compound vulnerability and influence the persistence and severity of depressive illness.

Current research underscores that the impact of childhood trauma is not only widespread but also cumulative: exposure to multiple trauma types, chronicity, and early timing amplify risk and worsen clinical outcomes. However, significant gaps remain, including limited longitudinal and cross-cultural data, inadequate examination of trauma-type-specific mechanisms, and underexplored moderators such as gender, resilience factors, and social context. Addressing these gaps through methodologically rigorous studies and integrating biomarker, psychological, and social measures can deepen understanding of causal pathways and inform targeted interventions.

From a clinical and public health perspective, the findings highlight the necessity of trauma-informed care, early detection, and multi-level prevention strategies. Interventions should be tailored to the type and severity of trauma, targeting biological dysregulation, psychological vulnerabilities, and social risk factors simultaneously. Moreover, public policies that reduce child maltreatment, enhance family and community support, and address structural inequalities have the potential to substantially reduce the burden of depression in adulthood. In sum, understanding the complex interplay of biological, psychological, and social mechanisms linking childhood trauma to adult depression provides a foundation for effective prevention, intervention, and policy strategies aimed at mitigating the long-term mental health consequences of early adversity.

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Investigating Psychological Conformity in Digital Spaces

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Abstract:

Psychological conformity refers to the tendency of individuals to align their attitudes, beliefs, and behaviors with those of a group. With the rapid expansion of digital platforms, conformity has increasingly manifested in online environments, where social media, virtual communities, and algorithm-driven content shape individual behavior. The present empirical study investigates the nature and extent of psychological conformity in digital spaces and examines the factors influencing such conformity. Using a descriptive and analytical research design, primary data were collected from respondents actively engaged in digital platforms through a structured questionnaire. Statistical tools such as mean, standard deviation, correlation, and t-test were employed for data analysis. The findings reveal a significant relationship between online peer influence and psychological conformity, highlighting the role of social approval indicators such as likes, comments, and shares. The study contributes to the understanding of online behavioral dynamics and offers insights for researchers, educators, and digital platform designers.

Keywords: Psychological conformity, digital spaces, social media, online behavior, peer influence

1. Introduction

Psychological conformity is a fundamental concept in social psychology, referring to the process by which individuals modify their behavior, attitudes, or beliefs to align with group norms or expectations. Classic studies by Asch and later scholars established that individuals often conform due to social pressure, even when group opinions conflict with personal judgments. Traditionally, conformity was examined in face-to-face group settings; however, the emergence of digital technologies has transformed the nature and context of social interaction.

Digital spaces such as social networking sites, online forums, and virtual communities have become integral to daily life. These platforms provide constant exposure to others' opinions, behaviors, and feedback, often quantified through metrics such as likes, shares, and comments. Such features intensify social comparison and normative pressure, thereby fostering conformity in subtle yet powerful ways. Individuals may conform online to gain social approval, avoid criticism, or maintain group membership.

In contemporary society, digital conformity influences a wide range of behaviors, including political opinions, consumer choices, lifestyle trends, and self-presentation. Despite its growing relevance, empirical research examining psychological conformity specifically within digital environments remains limited. This study seeks to address this gap by investigating psychological conformity in digital spaces and identifying the key factors that influence online conformity.

2. Review of Literature

2.1 Psychological Conformity: Concept and Theory

Psychological conformity has been widely examined within social psychology as a mechanism through which individuals align their attitudes and behaviors with group norms. Early experimental work by **Sherif (1936)** demonstrated how individuals rely on group consensus in ambiguous situations, laying the foundation for conformity research. **Asch's (1951)** line judgment experiments further revealed that individuals often conform to majority opinions even when those opinions are clearly incorrect. These findings highlighted the powerful influence of group pressure on individual judgment. **Deutsch and Gerard (1955)** expanded this understanding by differentiating between normative social influence, driven by the desire for acceptance, and informational social influence,

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driven by the desire to be correct. Later studies by **Kelman (1958)** identified compliance, identification, and internalization as key processes underlying conformity.

2.2 Conformity in Digital Environments

With the proliferation of digital technologies, conformity has increasingly shifted from physical groups to virtual communities. **Kaplan and Haenlein (2010)** noted that social media platforms foster continuous social interaction and collective opinion formation. According to **Boyd and Ellison (2007)**, online social networking sites provide visible indicators of group norms, which intensify conformity pressures. Research by **Cialdini and Goldstein (2004)** suggests that consensus cues and social proof significantly influence individual behavior, a phenomenon amplified in digital environments. **Bond and Smith's (1996)** meta-analysis confirmed that conformity persists across cultures, supporting its relevance in global digital spaces. Recent studies indicate that anonymity in online environments does not necessarily reduce conformity; instead, algorithmic filtering and popularity metrics may strengthen it (**Sunstein, 2018; Pariser, 2011**).

2.3 Factors Influencing Online Conformity

Several scholars have identified specific factors that promote conformity in digital spaces. Social approval indicators such as likes, shares, and comments function as normative signals that guide user behavior (**Sherif, 1936; Cialdini & Trost, 1998**). Influencer culture further reinforces conformity by positioning certain individuals as opinion leaders whose views are widely adopted (**Katz & Lazarsfeld, 1955**). According to **Festinger's (1954)** social comparison theory, individuals evaluate their opinions by comparing them with others, a process that is intensified on social media platforms. Additionally, fear of missing out (FOMO) and fear of social exclusion motivate users to conform to dominant online trends (**Przybylski et al., 2013**). Algorithm-driven content curation also contributes to echo chambers, reinforcing conformity by repeatedly exposing users to similar viewpoints (**Sunstein, 2018**).

2.4 Research Gap

Although extensive theoretical literature exists on conformity, much of the empirical research has focused on offline settings or controlled laboratory experiments. Studies specifically examining psychological conformity using primary data in digital contexts remain limited, particularly in developing and digitally emerging societies. Moreover, existing research often emphasizes platform-specific behavior rather than broader psychological mechanisms. Therefore, there is a clear need for empirical investigation into psychological conformity in digital spaces, which the present study seeks to address.

3. Objectives of the Study

1. To examine the extent of psychological conformity in digital spaces.
2. To analyze the influence of online peer interaction on psychological conformity.

4. Research Hypotheses

- **H1:** Online peer interaction has a significant influence on psychological conformity in digital spaces.
- **H2:** Psychological conformity differs significantly across selected demographic variables.

5. Research Methodology

The study adopts a descriptive and analytical research design to empirically examine psychological conformity in digital spaces. The population comprises individuals actively using digital platforms. The present study was conducted on a sample of 250 respondents, selected using the convenience sampling technique. The respondents were individuals actively engaged in digital spaces, particularly social media platforms, online forums, and virtual communities. The respondents comprised students, working professionals, and general digital users, ensuring diversity in terms of age, educational background, and digital engagement levels. Participation was restricted to individuals who reported regular use of digital platforms (at least one hour per day), as consistent online exposure was essential for examining psychological conformity in digital environments.

Respondents belonged primarily to the age group of 18–35 years, representing the most active segment of digital users. The sample included respondents of different genders to ensure balanced representation. Participants ranged from undergraduate students to postgraduates and professionally qualified individuals. All respondents reported frequent engagement with social media platforms such as Instagram, WhatsApp, Facebook, X (Twitter), or similar digital spaces.

Primary data were collected using a structured questionnaire consisting of statements measured on a five-point Likert scale. The questionnaire assessed online behavior, peer influence, and conformity tendencies. The study examines psychological conformity in digital spaces as the dependent variable. Psychological conformity refers to the extent to which individuals align their opinions, attitudes, and behaviors with those prevalent in online groups or communities. The independent variables of the study include online peer interaction, social media usage intensity, and exposure to social approval indicators such as likes, comments, and shares. These variables were selected based on prior theoretical and empirical studies suggesting their significant influence on conformity-related behavior in digital environments.

To analyze the data collected from the respondents, appropriate descriptive and inferential statistical tools were employed. Descriptive statistics such as mean and standard deviation were used to assess the overall level of psychological conformity and to understand the distribution of responses. Pearson’s correlation was applied to examine the relationship between online peer interaction and psychological conformity. In addition, the t-test was used to identify significant differences in psychological conformity across selected demographic variables. These statistical tools were chosen to ensure accurate interpretation and meaningful empirical conclusions.

6. Data Analysis and Interpretation

The data collected from 250 respondents were systematically analyzed using descriptive and inferential statistical techniques in order to examine psychological conformity in digital spaces. The analysis was carried out in alignment with the objectives and hypotheses of the study. Appropriate tables have been presented to support interpretation and empirical validation of results.

6.1 Demographic Profile of Respondents

The demographic analysis was undertaken to understand the background characteristics of the respondents. Variables such as age, gender, educational qualification, and frequency of digital platform usage were analyzed using frequency and percentage distribution. The demographic profile indicates that the respondents largely belonged to the age group of 18–35 years and were active users of digital platforms, making them suitable for the present study.

Table 1: Demographic Profile of Respondents (N = 250)

Demographic Variable	Category	Frequency	Percentage
Age	18–25 years	120	48.0
	26–35 years	90	36.0
	Above 35 years	40	16.0
Gender	Male	130	52.0
	Female	120	48.0
Education	Undergraduate	110	44.0
	Postgraduate & above	140	56.0

6.2 Descriptive Analysis of Psychological Conformity

Descriptive statistics were used to examine the overall level of psychological conformity among respondents in digital spaces. Mean and standard deviation values indicate a moderate to high level of conformity, suggesting that respondents tend to align their opinions and behaviors with online group norms and peer expectations.

Table 2: Mean and Standard Deviation of Psychological Conformity

Variable	Mean	Standard Deviation
Psychological Conformity	3.72	0.64

The mean score of 3.72 reflects a relatively high tendency toward conformity in digital environments, while the standard deviation indicates moderate variability among respondents.

6.3 Correlation Analysis

Pearson’s product-moment correlation analysis was conducted to examine the relationship between online peer interaction and psychological conformity.

Table 3: Correlation between Online Peer Interaction and Psychological Conformity

Variables	Online Peer Interaction	Psychological Conformity
Online Peer Interaction	1	0.58**
Psychological Conformity	0.58**	1

Note: p < 0.01

The correlation coefficient (r = 0.58) indicates a strong and positive relationship between online peer interaction and psychological conformity. This result supports Hypothesis H1, suggesting that increased interaction with peers in digital spaces significantly influences conformity behavior.

6.4 t-test Analysis

An independent samples t-test was employed to examine whether psychological conformity differed significantly across gender.

Table 4: Gender-wise Comparison of Psychological Conformity

Gender	Mean	Standard Deviation	t-value	p-value
Male	3.65	0.61	2.14	0.03
Female	3.80	0.66		

The t-test results reveal a statistically significant difference in psychological conformity between male and female respondents (p < 0.05). Therefore, Hypothesis H2 is accepted, indicating that psychological conformity varies across demographic variables.

6.5 Interpretation of Findings

The findings of the study provide strong empirical evidence that psychological conformity is a significant behavioral phenomenon in digital spaces. The demographic analysis confirms that the respondents were predominantly young and active digital users, which strengthens the relevance of the findings, as this group is most exposed to online social influence. Their frequent engagement with digital platforms increases the likelihood of encountering peer opinions, social validation cues, and dominant online narratives, all of which contribute to conformity.

The descriptive analysis indicates a moderate to high mean score for psychological conformity, suggesting that respondents often align their online opinions, preferences, and behaviors with those of their peers. This tendency reflects the pervasive influence of digital group norms and supports earlier theoretical assertions that individuals conform to gain acceptance and avoid social disapproval. The relatively low standard deviation further implies that conformity behavior is consistently observed across the sample, rather than being limited to a few individuals.

The correlation analysis reveals a strong and positive relationship between online peer interaction and psychological conformity. This finding implies that as individuals engage more frequently with peers in digital environments—through commenting, sharing, and reacting to content—their likelihood of conforming to prevailing opinions increases. The result empirically validates normative social influence theory in the context of digital spaces, where peer presence is

continuous and highly visible. The acceptance of Hypothesis H1 confirms that peer interaction serves as a key driver of conformity behavior online.

The t-test analysis demonstrates a statistically significant difference in psychological conformity across gender, indicating that demographic variables play a meaningful role in shaping conformity behavior. This finding suggests that individuals may experience and respond to online social pressure differently based on their demographic characteristics. The acceptance of Hypothesis H2 highlights the importance of considering demographic diversity when examining online behavioral patterns.

7. Results

The results of the present study are derived from the analysis of data collected from 250 respondents who were actively engaged in digital platforms. Descriptive and inferential statistical techniques were employed to examine the extent of psychological conformity in digital spaces and to test the proposed research hypotheses. The findings are presented in accordance with the study objectives and provide comprehensive empirical evidence regarding online conformity behavior.

7.1 Demographic Characteristics of Respondents

The demographic analysis indicates that the majority of respondents belonged to the age group of 18–35 years, representing the most active users of digital platforms. Nearly equal representation of male and female respondents ensured gender balance in the sample. A substantial proportion of respondents possessed undergraduate and postgraduate qualifications, suggesting a relatively informed and digitally literate sample. This demographic composition enhances the reliability and relevance of the findings, as frequent exposure to online interactions is essential for examining psychological conformity in digital environments.

7.2 Level of Psychological Conformity in Digital Spaces

To assess the overall level of psychological conformity, descriptive statistics were computed using mean and standard deviation. The results reveal a mean score of 3.72 with a standard deviation of 0.64, indicating a moderate to high level of conformity among respondents.

This finding suggests that individuals frequently adjust their opinions, preferences, and behaviors in response to dominant views expressed in digital spaces. The relatively low standard deviation implies that conformity behavior is consistently observed across the sample rather than being confined to a small subgroup. These results clearly indicate that digital environments exert a considerable influence on individual psychological processes, encouraging alignment with perceived group norms.

7.3 Relationship between Online Peer Interaction and Psychological Conformity

To examine the influence of online peer interaction on psychological conformity, Pearson's product-moment correlation analysis was conducted. The analysis revealed a strong and positive correlation ($r = 0.58$, $p < 0.01$) between online peer interaction and psychological conformity.

This statistically significant relationship indicates that increased interaction with peers—such as commenting on posts, sharing content, participating in discussions, and reacting to others' opinions—significantly enhances conformity tendencies. Respondents who reported higher levels of peer engagement were more likely to conform to prevailing online opinions and behaviors.

The strength of the correlation suggests that peer interaction is a key determinant of conformity in digital spaces. Accordingly, Hypothesis H1, which stated that online peer interaction has a significant influence on psychological conformity in digital spaces, is empirically supported and accepted.

7.4 Demographic Differences in Psychological Conformity

An independent samples t-test was employed to examine whether psychological conformity differed significantly across selected demographic variables, specifically gender. The results indicate a statistically significant difference ($p < 0.05$) in conformity levels between male and female respondents.

Female respondents reported a slightly higher mean conformity score ($M = 3.80$) compared to male respondents ($M = 3.65$). This finding suggests that gender plays a meaningful role in shaping conformity behavior in digital environments. The observed difference may reflect variations in social orientation, sensitivity to social approval, or patterns of online engagement.

Based on these findings, Hypothesis H2, which proposed that psychological conformity differs significantly across demographic variables, is accepted. This result emphasizes the importance of incorporating demographic considerations when analyzing psychological behavior in digital contexts.

7.5 Summary of Hypothesis Testing

The hypothesis testing results are summarized as follows:

H1: Online peer interaction has a significant influence on psychological conformity in digital spaces – Accepted

H2: Psychological conformity differs significantly across selected demographic variables – Accepted

7.6 Overall Interpretation of Results

The comprehensive analysis of results demonstrates that psychological conformity is a prominent and measurable phenomenon in digital spaces. The findings indicate that individuals are strongly influenced by peer presence and interaction in online environments, leading to alignment with group norms and opinions. The role of demographic factors further highlights that conformity is not uniform across all individuals but varies based on personal and social characteristics.

8. Discussion

The findings of the study offer important insights into the nature of psychological conformity within digital spaces. The observed moderate to high level of conformity supports classical and contemporary theories of social influence, which emphasize individuals' tendency to align with group norms to gain social acceptance and avoid rejection. In digital environments, this tendency appears to be intensified due to constant exposure to peer opinions, visible approval indicators, and algorithm-driven content.

The strong positive correlation between online peer interaction and psychological conformity corroborates earlier research on normative social influence and social proof. Digital platforms amplify these influences through features such as likes, comments, shares, and follower counts, which act as continuous normative cues. The acceptance of Hypothesis H1 reinforces the argument that frequent engagement with peers in online spaces significantly shapes individual attitudes and behaviors, making conformity more likely.

The significant gender difference identified in the study aligns with prior literature suggesting that socialization patterns and communication styles may influence how individuals respond to social pressure. Female respondents exhibiting higher conformity may reflect greater sensitivity to relational and social approval cues commonly emphasized in online interactions. The acceptance of Hypothesis H2 highlights that conformity in digital spaces is not uniform and varies across demographic characteristics.

Overall, the findings validate the applicability of traditional conformity theories in modern digital contexts while also emphasizing the unique role of technology-mediated social influence. Digital spaces do not merely replicate offline conformity processes but intensify them by increasing visibility, immediacy, and frequency of peer feedback.

9. Conclusion

The present study concludes that psychological conformity is a significant and prevalent phenomenon in digital spaces. Individuals actively engaged in online platforms demonstrate a clear tendency to align their opinions and behaviors with those of their peers. The study empirically establishes that online peer interaction plays a crucial role in fostering conformity, thereby confirming the continued relevance of social influence theories in digital environments.

Both research hypotheses proposed in the study were accepted. The findings confirm that online peer interaction significantly influences psychological conformity, and that conformity varies

across demographic variables. These results underscore the importance of considering social and demographic factors when examining online behavior.

The study contributes to the growing body of literature on digital psychology by providing empirical evidence from primary data. It has practical implications for educators, mental health professionals, and digital platform designers, who must recognize the powerful influence of online social environments on individual behavior. Encouraging critical thinking, digital literacy, and awareness of social influence mechanisms may help users navigate digital spaces more consciously.

Despite its contributions, the study is limited by the use of convenience sampling and self-reported data. Future research may employ longitudinal designs, larger and more diverse samples, or experimental methods to further explore causal relationships and platform-specific dynamics of conformity.

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The Impact of Memory and Perception on Eyewitness Testimony: An Empirical Study

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Abstract:

Eyewitness testimony has long been considered a powerful form of evidence in criminal investigations and judicial proceedings. Courts often rely heavily on the accounts provided by eyewitnesses, assuming that individuals can accurately perceive, store, and recall events they have witnessed. However, psychological research has consistently demonstrated that human memory is reconstructive and highly susceptible to error. Perception at the time of an event, emotional arousal, stress, and post-event information can significantly distort eyewitness recall. The present empirical study examines the impact of memory and perception on the accuracy and confidence of eyewitness testimony. Using a quantitative experimental research design, 240 participants were exposed to a simulated crime scenario under varying stress and information conditions. Recall accuracy and confidence levels were measured using structured questionnaires. Statistical analyses included descriptive statistics, t-tests, analysis of variance, and regression analysis. The findings reveal that high stress, perceptual limitations, and exposure to misleading post-event information significantly reduce eyewitness accuracy while often increasing subjective confidence. The study highlights the inherent fallibility of eyewitness testimony and emphasizes the need for caution in its use within legal contexts.

Keywords: Eyewitness testimony, memory, perception, stress, misinformation, recall accuracy, confidence, empirical research

1. Introduction

Eyewitness testimony plays a crucial role in the criminal justice system. Statements provided by individuals who claim to have directly observed a crime often carry substantial weight in police investigations, courtroom trials, and jury deliberations. Jurors and judges frequently regard eyewitness accounts as compelling and trustworthy, believing that a person who witnessed an event firsthand is well positioned to provide an accurate account of what occurred. This belief is rooted in the common assumption that human memory functions like a video recorder, capturing events exactly as they happen and storing them for later retrieval.

However, extensive research in cognitive and forensic psychology challenges this assumption. Human memory is not a passive or objective recording system; rather, it is an active, reconstructive process influenced by perception, attention, emotions, expectations, and social factors. What an eyewitness reports is not necessarily a faithful reproduction of the original event but a reconstruction shaped by both internal cognitive processes and external influences.

Errors in eyewitness testimony have serious consequences. Numerous cases of wrongful convictions have been linked to mistaken eyewitness identification and inaccurate recollections. Innocent individuals have been convicted, sometimes spending decades in prison, based largely on confident but erroneous eyewitness accounts. These cases underscore the urgent need to understand the psychological mechanisms underlying eyewitness memory and perception.

Perception determines what information is initially noticed and encoded during an event. Factors such as lighting, distance, duration of exposure, stress, and divided attention can severely limit perceptual accuracy. Memory processes, including encoding, storage, and retrieval, further influence how information is retained and recalled over time. Additionally, post-event factors such as

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questioning techniques, media exposure, and discussions with others can alter or contaminate memory.

The present study aims to empirically examine the impact of memory and perception on eyewitness testimony. Specifically, it investigates how stress during a witnessed event, exposure to misleading post-event information, and perceptual limitations affect recall accuracy and confidence. By employing an experimental design, this study seeks to provide empirical evidence that can inform legal practices and promote a more scientifically grounded evaluation of eyewitness evidence.

2. Review of Literature

2.1 Concept and Nature of Eyewitness Testimony

Eyewitness testimony refers to an individual's account of an event that they have personally observed and later report, often within legal contexts. Traditionally, such testimony has been considered highly persuasive and credible, particularly when delivered confidently. Early psychological work, however, challenged the assumption that memory operates as a literal recording of events. **Bartlett (1932)** demonstrated that memory is reconstructive in nature, meaning that individuals actively reconstruct past experiences rather than retrieve exact replicas of them. This reconstruction is influenced by schemas, expectations, and prior knowledge.

Loftus (1979) further emphasized that eyewitness testimony is especially vulnerable to distortion because it often involves recalling unfamiliar, stressful, and rapidly unfolding events. As a result, eyewitness accounts may contain omissions, inaccuracies, or additions that feel subjectively real to the witness but do not accurately reflect the original event. **Wells and Olson (2003)** argued that eyewitness errors are not random but systematic, arising from predictable cognitive processes.

2.2 Perception and Attention in Eyewitness Situations

Perception plays a foundational role in eyewitness testimony, as only information that is perceived can be encoded into memory. Crimes typically occur under poor perceptual conditions, such as inadequate lighting, brief exposure, distance, and rapid movement. **According to Goldstein (2014)**, perceptual accuracy is constrained by the limitations of the human sensory system and attentional capacity.

Attention is selective, and individuals cannot attend to all aspects of a complex scene simultaneously. During threatening situations, attentional resources are often directed toward central elements of the event, such as a weapon or aggressive behavior, at the expense of peripheral details. This phenomenon, commonly referred to as attentional narrowing or the weapon-focus effect, has been widely documented in eyewitness research (**Loftus, Loftus, & Messo, 1987**). Consequently, eyewitnesses may recall central actions vividly while providing inaccurate or incomplete descriptions of faces, clothing, or surroundings.

2.3 Memory as a Reconstructive Process

Memory consists of three interrelated processes: encoding, storage, and retrieval. Errors can arise at each stage. During encoding, information may be inaccurately perceived or only partially processed due to divided attention or stress. During storage, memory traces may decay or become integrated with other experiences. During retrieval, individuals reconstruct memories using available cues and contextual information (**Bartlett, 1932**).

Loftus and Palmer (1974) demonstrated that the wording of questions can significantly alter eyewitness memory. Their research showed that subtle linguistic changes could influence participants' estimates of speed and their recollection of non-existent details. These findings illustrate that memory is malleable and susceptible to post-event influence, raising serious concerns about the reliability of eyewitness testimony.

2.4 Stress, Emotion, and Eyewitness Memory

Eyewitnesses to crimes are often exposed to high levels of stress and emotional arousal. The relationship between stress and memory is complex. According to the Yerkes–Dodson law, moderate levels of arousal may enhance performance, whereas excessive arousal impairs cognitive functioning

(Yerkes & Dodson, 1908). High stress can disrupt attentional control and interfere with the encoding and consolidation of memory.

Research has consistently shown that extreme stress negatively affects eyewitness recall accuracy, particularly for peripheral details (Deffenbacher et al., 2004). Stress hormones such as cortisol influence brain regions involved in memory, including the hippocampus, often resulting in fragmented or incomplete recollections. Despite this impairment, highly stressed eyewitnesses may still report high levels of confidence in their memories.

2.5 Post-Event Information and the Misinformation Effect

After witnessing an event, individuals are frequently exposed to post-event information through police interviews, media coverage, or discussions with others. Loftus (2005) described the misinformation effect as a phenomenon in which misleading post-event information becomes integrated into an individual's memory, altering their recollection of the original event.

Studies have demonstrated that eyewitnesses often have difficulty distinguishing between information they actually perceived and information they learned after the event (Loftus & Hoffman, 1989). This source-monitoring failure leads witnesses to confidently report details that were suggested rather than observed. The persistence of misinformation effects highlights the vulnerability of memory long after the event has occurred.

2.6 Confidence and Accuracy in Eyewitness Testimony

Eyewitness confidence is frequently used as an indicator of credibility in legal proceedings. However, empirical research consistently demonstrates that confidence and accuracy are only weakly related. Wells and Bradfield (1998) showed that confirming feedback can inflate eyewitness confidence without improving accuracy. Repeated questioning and social reinforcement further strengthen confidence while leaving memory accuracy unchanged.

This dissociation poses a serious challenge for the legal system, as jurors often interpret confident testimony as reliable. Psychological research suggests that confidence reflects subjective belief rather than objective accuracy, underscoring the need for caution when evaluating eyewitness accounts.

3. Objectives of the Study

The present study was conducted with the following specific objectives:

1. To examine the influence of stress and perceptual conditions on the accuracy of eyewitness testimony.
2. To assess the effect of misleading post-event information on eyewitness memory.
3. To analyze the relationship between eyewitness confidence and recall accuracy.

4. Research Hypotheses

1. H1: Eyewitnesses exposed to high-stress conditions and misleading post-event information will demonstrate significantly lower recall accuracy than those exposed to low stress and neutral information.
2. H2: Eyewitness confidence will not be a reliable predictor of recall accuracy.

5. Research Methodology

The present study adopted a quantitative experimental research design with a between-subjects framework to examine the effects of stress and post-event information on eyewitness testimony. A total of 240 undergraduate students aged between 18 and 30 years were selected using random sampling techniques from various university departments. All participants had normal or corrected-to-normal vision and reported no history of neurological or psychological disorders.

Participants were randomly assigned to one of four experimental conditions based on stress level (low stress or high stress) and type of post-event information (neutral or misleading). Each condition consisted of 60 participants. Stress was manipulated through two versions of a simulated crime video, with the high-stress version containing aggressive behavior, loud noises, and rapid action, while the low-stress version depicted the same event in a calm manner.

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Following a brief distractor task, participants were exposed to either neutral or misleading post-event information presented as a summary of the event. Eyewitness memory was assessed using a structured recall questionnaire measuring both central and peripheral details. Confidence ratings were obtained using a 7-point Likert-type scale. Data were analyzed using descriptive statistics, independent sample t-tests, Pearson correlation, and multiple regression analysis.

6. Data Analysis and Results

**Table 1
Descriptive Statistics of Recall Accuracy**

Condition	Mean	Standard Deviation
Low Stress	18.45	3.20
High Stress	13.10	3.85

Interpretation

The descriptive statistics reveal a substantial difference in recall accuracy between participants exposed to low-stress and high-stress conditions. Eyewitnesses in the low-stress condition recalled a significantly greater number of correct details, indicating that reduced emotional arousal and better perceptual conditions facilitate more accurate encoding and retrieval of information. In contrast, high stress appears to impair attention and memory consolidation, resulting in fewer accurately recalled details.

**Table 2
Effect of Post-Event Information on Recall Accuracy**

Information Type	Mean	Standard Deviation
Neutral	17.90	3.40
Misleading	13.65	3.75

Interpretation

Participants exposed to misleading post-event information demonstrated significantly lower recall accuracy compared to those who received neutral information. This finding indicates that misleading information was incorporated into participants' memory reports, replacing or distorting original memories. The results clearly illustrate the misinformation effect and highlight the vulnerability of eyewitness memory to external influence.

**Table 3
Independent Sample t-test for Stress Conditions**

t-value	p-value
12.84	<0.001

Interpretation

The statistically significant t-value indicates a meaningful difference in recall accuracy between low-stress and high-stress eyewitnesses. The results confirm that stress significantly reduces eyewitness accuracy, supporting the argument that emotionally charged situations compromise perceptual clarity and memory performance.

**Table 4
Correlation Between Confidence and Accuracy**

r-value	p-value
0.12	>0.05

Interpretation

The weak and non-significant correlation demonstrates that eyewitness confidence is largely unrelated to actual recall accuracy. This suggests that confident testimony should not be

automatically interpreted as accurate, as confidence may be influenced by factors such as repetition, feedback, or belief rather than true memory strength.

Table 5
Regression Analysis Predicting Eyewitness Errors

Predictor	Beta	R ²	p-value
Stress	-0.48	0.42	<0.001
Misinformation	-0.39		<0.001

Interpretation

Regression analysis indicates that stress and exposure to misleading information are significant predictors of eyewitness memory errors. Together, these variables account for a substantial proportion of variance in recall accuracy, demonstrating that eyewitness errors are systematic and predictable rather than random.

6.1 Overall Interpretation of Results

The overall interpretation of the findings provides strong empirical support for the central assumptions of the present study. Hypothesis 1 proposed that eyewitnesses exposed to high stress and misleading post-event information would demonstrate lower recall accuracy than those exposed to low stress and neutral information. The results consistently supported this hypothesis. Participants in high-stress conditions recalled significantly fewer correct details, and exposure to misleading information further distorted their recollections. This confirms that perceptual limitations and memory reconstruction jointly impair eyewitness accuracy.

Hypothesis 2 stated that eyewitness confidence would not be a reliable predictor of recall accuracy. Correlational analysis revealed a weak and non-significant relationship between confidence and accuracy, leading to the acceptance of this hypothesis. Participants often expressed strong confidence in both accurate and inaccurate memories, indicating that confidence reflects subjective conviction rather than objective correctness.

Taken together, the acceptance of both hypotheses demonstrates that eyewitness errors are systematic outcomes of normal cognitive processes rather than exceptional failures. Stress, perceptual constraints, and post-event information interact to shape what eyewitnesses remember and report. These findings reinforce the psychological view that eyewitness testimony is inherently fallible and must be interpreted within the broader context of human memory functioning.

7. Discussion

The present study aimed to empirically examine the impact of memory and perception on eyewitness testimony, with particular emphasis on stress, perceptual conditions, post-event misinformation, and eyewitness confidence. The discussion below explicitly addresses the acceptance or rejection of each research hypothesis in light of the obtained findings, while integrating relevant psychological theory and prior research.

Hypothesis 1, which stated that eyewitnesses exposed to high stress and misleading post-event information would demonstrate significantly lower recall accuracy than those exposed to low stress and neutral information, was accepted. The results clearly showed that participants in high-stress conditions recalled fewer correct details and committed more errors than those in low-stress conditions. Furthermore, exposure to misleading post-event information significantly distorted recall accuracy. This finding supports the reconstructive view of memory proposed by **Bartlett (1932)** and the misinformation effect demonstrated by **Loftus and Palmer (1974)**. High stress likely produced attentional narrowing, reducing perceptual encoding of peripheral details, while misleading information altered memory during the reconstruction process.

The acceptance of Hypothesis 1 is also consistent with the **Yerkes–Dodson law (1908)**, which explains how excessive emotional arousal impairs cognitive performance. Under stressful eyewitness conditions, attentional resources are diverted toward threat-related stimuli, resulting in fragmented encoding and weakened memory consolidation. When misleading information is later introduced,

these memory gaps are filled with externally suggested details, leading to confident but inaccurate testimony.

Hypothesis 2, which proposed that eyewitness confidence would not be a reliable predictor of recall accuracy, was also accepted. Correlational analysis revealed a weak and non-significant relationship between confidence and accuracy, indicating that high confidence does not necessarily reflect accurate memory. Many participants expressed strong confidence in incorrect responses, demonstrating a dissociation between subjective certainty and objective correctness.

The acceptance of Hypothesis 2 aligns with earlier findings by **Wells and Bradfield (1998)**, who showed that post-identification feedback can inflate eyewitness confidence without improving accuracy. Confidence appears to be influenced by social reinforcement, repetition, and belief systems rather than by the strength of the original memory trace. This finding has critical implications for legal contexts, where confident testimony is often perceived as more credible.

Overall, the acceptance of both hypotheses demonstrates that eyewitness errors are not random or exceptional but predictable outcomes of normal cognitive functioning under stress and uncertainty. The findings reinforce the argument that eyewitness testimony must be interpreted cautiously and evaluated within a scientifically informed framework that acknowledges the limitations of human memory and perception.

8. Conclusion

The present empirical study examined the impact of memory and perception on eyewitness testimony using a controlled experimental design. The findings clearly demonstrate that eyewitness testimony is highly fallible and shaped by cognitive, emotional, and perceptual factors. Stress during the witnessed event significantly impaired recall accuracy, while exposure to misleading post-event information distorted memory reports. Importantly, eyewitness confidence was found to be an unreliable indicator of accuracy.

The acceptance of both research hypotheses provides strong empirical support for the reconstructive view of memory. Eyewitness errors emerged as systematic and predictable consequences of normal cognitive processes rather than isolated failures. These results challenge the long-standing legal assumption that confident eyewitness testimony is inherently reliable.

From an applied perspective, the study highlights the urgent need for reform in the collection and evaluation of eyewitness evidence. Investigative procedures should minimize leading questions, control exposure to post-event information, and recognize the limitations of human memory. Courts would benefit from incorporating psychological expertise to contextualize eyewitness testimony and reduce the risk of wrongful convictions.

In conclusion, while eyewitness testimony can offer valuable insights into criminal events, it must be interpreted with caution. A scientifically informed understanding of memory and perception is essential for ensuring justice and protecting individuals from the consequences of erroneous eyewitness evidence. Integrating psychological research into legal practice represents a critical step toward a more reliable and equitable justice system.

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Effect of Internet Addiction on Personality among College Students

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Abstract

This research investigates that “effect of internet addiction on personality among college students”. Internet addiction refers to a persistent and compulsive involvement in an activity that adversely affects an individual’s physical, social, mental, spiritual, and financial well-being. Internet addiction is considered an impulse-control disorder similar to pathological conditions, although it does not involve the use of intoxicating substances. Personality refers to the consistent patterns of behavior, emotions, and thoughts that develop through the interaction of biological influences and environmental factors. Present study was conducted in Varanasi, total sample comprised of 400 college students of and 200 internet addicted college students were screened by internet addiction test. Age range of sample was 19 years to 21 years. Internet addiction test scale NEO Big five factor inventories were used in this present research. Objective of the present research was “To explore internet addiction and personality factor among college students”. “To assess and compare the personality of internet addict and non- addict college students”. “To find out correlation between personality factors and internet addiction among college students”. The results of the present study indicate a significant relationship between internet addiction and specific personality traits, namely Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Neuroticism showed a significant positive correlation with internet addiction, whereas Extraversion, Openness, Agreeableness, and Conscientiousness were significantly negatively correlated with it. The findings reveal varying levels of internet use among college students, highlighting its importance as a key factor in understanding the influence of internet addiction on personality. Furthermore the results emphasize the need for early identification and intervention, including setting appropriate boundaries and seeking professional support, as well as recognizing early warning signs of potential underlying psychopathological conditions. Conclusively we can say psycho education, scheduled and mindful internet use, CBT, emotional regulation, offline activity and friendship, campus level program and family involvement can improve the personality factor of College students.

Key words: internet addiction, college students, internet addiction test, NEO Big Five Personality Inventory.

Introduction

Internet addiction is defined as the habitual compulsion to engage in an activity on the individual’s Physical, social, spiritual, mental and financial well-being. Addiction includes psychological and physical components; if one person is more addicted to particular things; that means he will be psychologically or physically addicted. Internet addiction is an impulse-control disorder like pathological disorders but does not involve an intoxicant. The effect of Internet addiction on physiological and psychological health is tremendous. Various studies have reported it from time to time. The effect on psychological health in these crucial years of life definitely inhibits productivity and scholastic performances of young adults / adolescents.

According to Shaw & Blank (2008): Internet addiction is characterized by a compulsive need to remain online, where individuals derive greater satisfaction and happiness from internet use than from real-life relationships with family and close friends. It encompasses various forms,

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including cyber relationships, cyber-sexual activities, net compulsive behaviors, and excessive web surfing.

Effect of Internet Use on Personality:

Using the internet too much can harm a person's personality. It can increase anxiety (neuroticism), reduce social engagement (extraversion), and lower responsibility (conscientiousness). This may lead to emotional problems, trouble interacting socially, and using the internet as a way to escape negative feelings.

Personality and Internet Addiction

The five main personality traits – neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness – affect internet addiction. High neuroticism is linked to emotional instability and mental distress. Extraverts are more social and enjoy new experiences.

Open individuals are curious and like new ideas. Agreeable people are trusting and cooperative. Conscientious people are disciplined and responsible. People addicted to the internet, games, or social media tend to score higher in neuroticism and lower in conscientiousness and agreeableness than those who are not addicted. They often feel more negative emotions and have trouble reaching their goals. Because they struggle to cope in real life, they may turn to the virtual world to feel safe and avoid judgment. The virtual world feels safer and more anonymous, making it easier for those with anxiety or low self-esteem to escape. High neuroticism and traits like shyness fear of rejection, or lack of social skills can increase the risk of internet addiction.

These individuals may crave social connection but lack the confidence or skills to build real-life relationships. People who struggle with self-control, high social anxiety, and differences between their real and ideal self-image (such as creating a better version of themselves online) may be more prone to addiction. This is often linked to impulsive behavior and poor decision-making, which increase their chances of becoming addicted—not just to the internet, but to other things as well. According to the concept of addictive personality, such individuals are more likely to develop addictions, regardless of what the addiction is.

There are five factors of personality that given below:-

1. **Neuroticism:** Neuroticism is a measure of emotional stability. People who score high on neuroticism are more likely to experience negative emotions such as anxiety, worry, and sadness. They are also more likely to be reactive and impulsive in their behaviour. People who score low on neuroticism are more likely to be emotionally stable and calm. They cope well with stress and adversity effectively.
2. **Extraversion:** Extraversion is a measure of outgoingness and sociability. People who score high on extraversion are more likely to enjoy being around other people and to seek out new experiences. They are also more likely to be assertive and talkative. People who score low on extraversion are more likely to be introverted and reserved. They may prefer to spend time alone or with a small group of close friends.
3. **Openness to Experience:** Openness to experience is a measure of intellectual curiosity and creativity. People who score high on openness to experience are more likely to be interested in new ideas and experiences. They are also more likely to be tolerant of ambiguity and uncertainty. People who score low on openness to experience are more traditional and conventional. They prefer to stick to familiar routines and to avoid new situations.
4. **Agreeableness:** Agreeableness is a measure of trust and cooperation. People who score high on agreeableness are more likely to be trusting and helpful. They are forgiving and to avoid conflict. People who score low on agreeableness are more likely to be cynical and suspicious. They may also be more likely to be assertive and competitive.
5. **Conscientiousness:** Conscientiousness is a measure of orderliness and responsibility. People who score high on conscientiousness are more likely to be organized and efficient. They are hardworking and reliable. People, who score low on it, are more likely to be disorganized and impulsive. They may also be more likely to procrastinate and to avoid responsibility.

Review of Literature

Paul T. Costa Jr., Antonio Terracciano, and Robert R. McCrae (2001) analyzed data from 26 cultures (23,031 people) and found that gender differences in personality traits are small but consistent. Women scored higher in traits like Neuroticism, Agreeableness, Warmth, and Openness to Feelings. Men scored higher in Assertiveness and Openness to Ideas.

Hardie & Tee (2007) studied how personality, loneliness, and social support relate to internet addiction in adults. They found 52% were problematic internet users, and 8% had severe addiction. Neuroticism and lack of social support were major predictors of excessive internet use. In general, excessive internet users tend to be younger and less skilled in computer use than average users.

Ahmed (2011) explored how personality traits, proactive behavior, and social factors influence how newcomers adjust. Openness to experience helped with task performance. Individual differences and Big Five personality traits played a key role in successful adjustment.

Mark & Ganzach (2014): They studied how personality traits relate to internet use. Extraversion and neuroticism were found to be strong predictors of internet usage. The study pointed out that students use digital media excessively, making them more prone to internet addiction and its harmful effects. Overuse of the internet can hurt academic performance by distracting students and wasting their time.

Methodology

Objectives

1. To explore internet addiction and personality factors among college students.
2. To assess and compare the personality of internet addict and non-addict college students.
3. To find out correlation between internet addiction and personality factors among college students.

Hypothesis

1. There is significant number of internet addict and personality factor among college students.
 - (a) Internet addict students will score high on neuroticism factor of personality in comparison to non-addict students.
 - (b) Internet addict student will score low on extraversion factor of personality in comparison to the non-addict college students.
 - (c) Internet addict student will score high on openness factor of personality in comparison to non-addicts college students.
 - (d) Internet addict students will score low on agreeableness factor of personality in comparison to non-addict college students.
 - (e) Internet addict students will score low on conscientiousness factor of personality in comparison to non-internet addict college students.
2. There is significant correlation between internet addiction and personality factor among college students.

Sample

Sample consisted of 400 college students of both gender from rural and urban colleges of Varanasi and 200 internet addicted college students were screened by internet addiction test in this present research. The age range of the sample was 19 to 21 years.

Measures

For this present study to measure the variables following psychological variable was used:-

1. **Internet Addiction Test (IAT)** developed by Kimberly young (1998) which consists of 20 items that measures normal, mild, moderate and severe level of internet addiction. The 20 items covers six dimensions of internet addiction such as salience, excessive use, neglect work, anticipation, lack of control and neglect social life. Items are randomized and each statement is weighted along a Likert scale. The internet addiction test total score ranges the maximum score is 100 points. Total scores that range from 0 to 30 considered reflecting normal level of internet uses; scores of 31 to 49 indicate the presence of mild level of internet addiction; 50 to 79 reflect

the presence of a moderate level; and score of 80 to 100 indicate the severe dependency upon the internet.

Reliability: Good test-retest reliability of this test is (r=0.88).

Validity: Face validity of the scale is very high. Value of coefficient of correlation (r=.83) between score on these two measures reveals high validity of the present scale.

Big five Personality inventory:-

Developed and standardized by Costa and McCrae (1992). It is used for measuring five factors of personality i.e. neuroticism, extraversion, openness, agreeableness, and conscientiousness. It consists of 60 items each item is provided with five alternatives. The test re-test reliability of the NEO- five factor inventory is N = 0.87, E=0.91, O = 0.86.

Design : Ex – post facto design was followed.

Result & discussion

Table 1 : Anova Results of Internet Addiction and Personality Factor among College Students

Personality Factor	Internet Addiction								F-value (F)
	Normal		Mild		Moderate		Severe		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Neuroticism	19.23	4.78	21.71	4.42	19.64	5.49	26.74	2.35	89.16**
Extraversion	33.58	3.04	33.42	2.33	34.36	1.08	23.59	4.50	274.58**
Openness	32.38	2.16	33.42	1.81	32.91	1.46	23.59	3.32	421.22**
Agreeableness	36.38	3.40	34.75	3.11	35.09	2.45	28.53	3.59	143.84**
Conscientiousness	37.03	3.83	37.29	3.86	38.54	2.25	36.05	4.29	114.60**

** Significant at 0.01 levels

Table 1 presents the mean, standard deviation and ANOVA results of internet addiction among college students. The analysis of variance (ANOVA) examining internet addiction, the NEO Big Five personality traits, and mental health revealed that the F-value showed a significant difference across all five personality factors- Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C)—which were significantly related to internet addiction ($p < 0.01$).

These results indicate that internet addiction is strongly associated with specific personality factors. The descriptive analysis further suggests that internet addiction adversely affects both personality traits among college students. Hence, these findings support the first hypothesis of the present research, which stated that there is a significant number of internet addicts and personality factor among college students.

Table 2 : Mean, Standard Deviation (SD) and T-Value of Internet Addicted and Non-Addicted College Students on Neo Big Five Personality Measure

Personality factor	Group	N	Mean	SD	t-ratio	P - value
Neuroticism	Addicted	200	25.17	4.44	10.15**	0.01
	Non addicted	200	20.48	4.78		
Extraversion	Addicted	200	25.99	6.00	15.71**	0.01
	Non addicted	200	33.40	2.93		
Openness	Addicted	200	25.69	4.89	18.34**	0.01
	Non addicted	200	32.76	2.39		
Agreeableness	Addicted	200	30.01	4.33	14.00**	0.01
	Non addicted	200	35.51	3.45		
Conscientiousness	Addicted	200	31.95	5.27	10.99**	0.01
	Non addicted	200	37.07	3.94		

** Significant at 0.01 levels (p<0.01)

Table 2 presents the t-test results of personality factors based on internet addiction among college students. The results indicate that there are significant differences in Neuroticism,

Extraversion, Openness, Agreeableness, and Conscientiousness between internet-addicted and non-addicted students.

The mean score for Neuroticism among internet-addicted students (Mean = 25.17, SD = 4.44) was higher than that of non-addicted students (Mean = 20.48, SD = 4.78), suggesting that internet-addicted students exhibit higher levels of neuroticism. These findings confirm hypothesis 2(a) of the present research, which stated that internet-addicted students would score higher on the Neuroticism (N) factor compared to non-addicted students.

In terms of Extraversion, addicted students (Mean = 25.99, SD = 6.00) scored lower than non-addicted students (Mean = 33.40, SD = 2.93). This indicates that internet-addicted students tend to be less extroverted than their non-addicted counterparts, thereby supporting hypothesis 2(b), which proposed that internet-addicted students would score lower on the Extraversion (E) factor.

Similarly, the results for Openness show that addicted students (Mean = 25.69, SD = 4.89) scored lower than non-addicted students (Mean = 32.76, SD = 2.39). This finding suggests that internet addiction is associated with lower openness among students, thus not supporting hypothesis 2(c), which predicted that internet-addicted students would score higher on the Openness (O) factor of personality.

Regarding Agreeableness, addicted students (Mean = 30.01, SD = 4.33) scored lower than non-addicted students (Mean = 35.51, SD = 3.45). This result indicates that internet-addicted students are less agreeable, confirming hypothesis 3(d), which stated that they would score lower on the Agreeableness (A) factor compared to non-addicted students.

Finally, for Conscientiousness, addicted students (Mean = 31.95, SD = 5.27) scored lower than non-addicted students (Mean = 37.07, SD = 3.94), revealing that internet-addicted students tend to be less conscientious. These findings confirm hypothesis 2(e) of the research, which predicted that internet-addicted students would score lower on the Conscientiousness (C) factor compared to non-addicted students.

Table 3 : Correlations between Personality Factors and Internet Addiction

Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness	IAT
1	-.503**	-.519**	-.357**	-.428**	.487**
	1	.792**	.674**	.631**	-.610**
		1	.696**	.669**	-.649**
			1	.607**	-.564**
				1	-.476**

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

Tables 3 present the correlation between the NEO Big Five personality factors, mental health and internet addiction. The results show that neuroticism ($r = .487$), extraversion ($r = -.610$), openness ($r = -.649$), agreeableness ($r = -.564$), conscientiousness ($r = -.476$), and mental health ($r = -.664$) are all significantly correlated with internet addiction. Neuroticism demonstrates a positive correlation with internet addiction, whereas extraversion, openness, agreeableness, conscientiousness, and mental health show significant negative correlations with internet addiction.

These findings indicate that higher levels of neuroticism are associated with greater internet addiction. In contrast, positive personality traits such as extraversion, openness, agreeableness, and conscientiousness are strongly linked to lower levels of internet addiction. Students with lower scores on these healthy personality traits tend to exhibit higher internet addiction while those with higher score on neuroticism are more prone to internet addiction.

Conclusion

Summarizing the findings of this research work it may concluded that internet addiction is significantly correlated with the personality factors such as neuroticism, extraversion, openness,

agreeableness, and conscientiousness. Neuroticism was positively correlated with internet addiction where as extraversion, openness, agreeableness, and conscientiousness were also negatively correlated with internet addiction Means higher neuroticism leads to greater dependency upon internet. The study revealed that internet dependency affects the personality factors. strategies for awareness and psycho education would help them identity pattern and take corrective action, self monitoring, encourage students to track- daily screen time, mood before and after use of internet, triggers for excessive use, apps live digital well being, forest or journaling can help. In other way behavioral strategies such as scheduled internet use fixed internet hours, no phone rule before sleep, replace online activities with healthy offline activity such as encourage to student's sports, exercise, volunteering, reading, hobbies etc. Cognitive and emotional strategies such as cognitive behavior therapy, behavior therapy other way mindfulness, relaxation, emotion regulation, skills support to manage academic pressure, poor relationship, loneliness, social and peer support strategies such as peer group program, healthy social interaction encourage face to face engagement, family level support. Family can help by maintaining supportive communication, avoiding criticism, understanding the students stress. Over all we can say psycho education, scheduled and mindful internet use, CBT, emotional regulation, offline activity and friendship, campus level program and family involvement can improve the personality of internet addict College going students.

Limitation of the research:

Every research has its own limitations. In the context of present study following limitations has been identifying by researcher.

- ❖ Socio economic, limited variables, inter correlation and demographic variables may add significantly to get rich inputs.
- ❖ Larger sample size representing in different geographical areas, different age groups may strengthen the validity of the present findings.

Suggestion for future research:

- ❖ Internet dependency specific scale may provide better insight into understanding the internet effect of such students.
- ❖ Internet addiction in different age and type of addiction may provide better insight into understanding the internet effect of such students.
- ❖ Cross validation and Meta analysis findings is needed the understanding the effect of internet in students.
- ❖ Longitudinal studies may facilitate to drive more information for psychological intervention and management of the students.

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Comparative Analysis of Hygiene and Sanitation Practices of Public and Private School Children in Sonebhadra District, Uttar Pradesh, India

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Abstract:

Malnutrition is a worldwide public health problem affecting both developing and developed countries. Malnutrition has to be faced by people due to their irresponsible activities like garbage spreading randomly in the surroundings, poor drainage, poor cleanliness at home, personal hygiene, open defecation, poor hand wash or no handwash. Proper hygiene among students decreases the spread of infectious diseases, enhances attendance, and fosters learning. Socioeconomic status (SES) affects access to WASH (water, sanitation, and hygiene) resources and can impact the knowledge, attitudes, and practices (KAP) regarding hygiene in children. Hygiene habits among school children—such as handwashing with soap at essential moments, personal and oral hygiene are crucial for avoiding respiratory and diarrhoeal infections, skin issues, and school absences. Safe wash services in educational institutions are broadly acknowledged as crucial for children's health, dignity, and academic performance. Children of school age are particularly susceptible to diseases related to hygiene. Their knowledge, attitudes, and practices (KAP) related to hygiene significantly influence their vulnerability to infections and general health. Socio-economic status (SES) affects the access to hygiene resources and the health behaviors of children. The present study was a cross-sectional study for assessing the hygiene practices among primary school children (5-9 years) of Sonebhadra District, Uttar Pradesh (India). This study was done for determining knowledge, attitude and practices about hygiene among school going children. Survey work conducted for the study between March 2023 to May 2024 in the government schools of Sonebhadra District. 325 students were taken from different type of government school as well as private public schools of Sonebhadra District.

Key Words: Health, Hygiene and Sanitation, Socio-economic status (SES), knowledge, attitudes, and practices (KAP) Children.

Introduction:

Proper personal hygiene is crucial for the health and academic success of school-aged children, particularly in rural regions where availability of sanitation facilities and health education may be restricted. This study seeks to assess the personal hygiene practices of children enrolled in government schools located in rural regions. It emphasizes essential hygiene practices like handwashing, oral care, bathing, nail care, and wearing clean clothes, along with hygiene habits, and the influence of socio-economic conditions, parental knowledge, and school interventions. The nutritional condition of children was adversely impacted by physical factors. Both poor oral hygiene and tooth decay would restrict the amount and kind of food intake. A decrease in mobility might prevent the child from accessing food when leprosy-related amputations and other barriers arise (NFHS; 2015). Every child is entitled to a healthy life, education, and a safe childhood with all the essential opportunities that lead to a successful and prosperous adulthood; however, millions of children globally are deprived of their rights and everything necessary for healthy and strong development. This may primarily result from their birthplace, gender, family background, disability, and financial hardship. Basic rights and resources are accessible to everyone equally, but when these provisions are removed from children, inequality emerges. These elements result in children's malnutrition and various other consequences (UNICEF; 2016).

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Material and Method:

The present study was a descriptive cross-sectional study for assessing the hygiene practices among primary school children (5-9 years) of Sonebhadra District, Uttar Pradesh (India). This study was done for determining knowledge, attitude and practices about hygiene among school going children. Survey work conducted for the study between March 2023 to May 2024 in the government schools of Sonebhadra District. 325 students were taken from different type of government school as well as 325 students were taken from private public schools of Sonebhadra District.

Results:

Table- 1. Distribution of Children According to Personal Hygiene:

Variables	Type of School		Total (n=650)	Chi-Square (χ^2)	p- value
	Govt. School (n=325)	Private School (n=325)			
Bath Daily:					
Yes	176(54.2%)	225 (69.2%)	401(61.7%)	15.630	<0.001***
No	149(45.8%)	100 (30.8%)	249(38.3%)		
Brushing Teeth Daily:					
One Time	163(50.2%)	171 (43.3%)	334 (51.4%)	12.221	0.002**
Two Time	38 (11.6%)	64 (19.5%)	102(15.7%)		
No	124(38.2%)	90 (27.2%)	214(32.9%)		
Comb Hair Daily:					
Yes	164(50.5%)	223 (68.6%)	387(59.5%)	22.231	<0.001***
No	161(49.5%)	102 (31.4%)	263(40.5%)		
Clean Nails Regularly:					
Yes	76 (23.4%)	172 (52.9%)	248(38.2%)	60.087	<0.001***
No	249(76.6%)	153 (47.1%)	402(61.8%)		

(** p<0.01, *** p<0.001)

Inference: Table-1. showed a significant association between type of school children and personal hygiene of children like bath daily, brushing teeth, combing hair and cleaning nails pattern. In government school 54.2% children took bath daily, 50.2% children were brushing teeth one time/day, 11.6% children were brushing teeth two time/day and 38.2% children had irregular brushing teeth pattern, 50.5% children combed hair regularly and 23.4% children were cleaning nails regularly, whereas in private school, 69.2% children took bath daily, 43.3% children were brushing teeth one time/day, 19.7% children were brushing teeth two time/day and 27.2 % had irregular brushing pattern, 68.6% children combed hair regularly and 52.9% children were cleaning nails regularly.

Table- 2. Distribution of Children According to Eating Habit:

Eat Food Yourself	Type of School		Total (n=650)	Chi-Square (χ^2)	p- value
	Govt. School (n=325)	Private School (n=325)			
Yes	325(100%)	313(96.3%)	638 (98.2%)	12.226	<0.001***
No	0 (0.0%)	12 (3.7%)	12 (1.8%)		

(*** p<0.001)

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Inference: Table 2. showed a significant difference of eating pattern among children of different type of schools. In this study it was observed that 100% of children from government schools were eating themselves, while 96.3% of the private school children were eating by themselves.

Table- 3. Distribution of Children According to Handwash Pattern:

Variables	Type of School		Total (n=638)	Chi-Square (χ^2)	p- value
	Govt. School (n=325)	Private School (n=313)			
Wash Your Hand Before Taking Meal:					
Yes	42 (12.9%)	76 (24.3%)	118(18.5%)	13.645	<0.001***
No	283(87.1%)	237(75.7%)	520(81.5%)		
Hand Wash Material:					
Soap	31 (9.5%)	171(54.6%)	202(31.6%)	151.214	<0.001***
Ash	149(45.8%)	81 (25.9%)	230(36.1%)		
Soil/Mud	145(44.7%)	61 (19.5%)	206(32.3%)		

(*** p<0.001)

Inference: Table 3. showed a significant difference of hand wash pattern before taking meal and hand wash materials among children of different type of school. Only 12.9% of the government school children washed their hands before taking meal, while 24.3% of the private school children washed their hands before taking meal. In government school 9.5% children were using soap, 45.8% were using ash and 44.7% were using soil/mud for cleaning hands, whereas in private school 54.6% children were using soap, 25.9% were using ash and 19.5% were using soil/mud for cleaning hands.

Table- 4. Distribution of Children According to Environmental Hygienic Condition:

Variables	Type of School		Total (n=650)	Chi-Square (χ^2)	p- value
	Govt. School (n=325)	Private School (n=325)			
Household Cleanliness:					
Good	113(34.5%)	186 (57.2%)	299(46%)	33.005	<0.001***
Poor	212(65.5%)	139 (42.8%)	351(54%)		
Drainage System:					
Good	93 (28.6%)	181 (55.7%)	274(42.1)	48.859	<0.001***
Poor	232(71.4%)	144 (44.3%)	376(57.9%)		
External Surrounding:					
Hygienic	83 (25.5%)	178 (54.8%)	261(40.1%)	57.779	<0.001***
Unhygienic	242(74.5%)	147 (45.2%)	389(59.9%)		

(*** p<0.001)

Inference: Table-4 stated about household cleanliness, drainage system and external surrounding. There was a significant association observed between these variables with type of school children. In government school among 34.5% children had good household cleanliness, 28.6% children had a good drainage system and 25.5% children had hygienic external surroundings whereas in private school among 57.2% children had good household cleanliness, 55.7% children had good drainage system and 54.8% children had hygienic external surrounding.

Discussion:

In the present study, 57.69% of total school children depended on hand pump water. About 56.92% of government school children depended on pump water, while 58.46% of private school children depended on hand pump water. In this study, it was observed that 66.3% of total children used direct tap water, 33.7% of total children used boiled or filtered water for drinking. In

government school it was observed that 79.7% of children used direct tap water, 11.1% filtered and 9.2% boiled water for drinking, while in private school children 52.9% used direct tap water and 48.2% used different from tap water in which 41.3% filtered and 5.8% boiled water used for drinking. Similar finding also obtained by Korlakunta (2022), in which 85% of children used direct tap water for drinking and this water may contaminate and that may a causative factor for infection in digestive system.

In the present study, 61.7% of total school children took bath daily. About 54.2% of government school children took bath daily, while 69.2% of private school children took bath daily. In the study, 67.1% of total children used to brush daily. About 50.2% of government school children used to brush once a day and only 11.6% used to brush twice a day, while 43.3% of private school children used to brush once a day and only 19.7% used to brush twice a day.

In this study, 59.5% of total school children combed hair daily. About 50.5% of government school children combed hair daily, while 68.6% of private school children combed their hair regularly. Only 38.2% of total school children had a tendency to clean nails regularly. About 23.4% of government school children cleaned nails regularly, while 52.9% of private school children cleaned nails regularly.

In the present study, 98.2% of children were found eating food by themselves, 81.5% of total school children did not wash their hands before taking meals. About 87.1% of children from government school did not wash their hands before taking meals, while 75.7% of children from private school did not wash their hands before taking meals.

In this study, 31.6%, 36.1% and 32.3% of total school children used soap, ash and soil/mud for cleaning their hands. About 9.5%, 45.8% and 44.7% of children from government school used soap, ash and soil/mud for cleaning their hands, while 54.6%, 25.9% and 19.5% of children from private school used soap, ash and soil/mud for cleaning their hands. Similar study conducted by Vijayalakshmi et al. (2023) in which 50.9% urban school children, 30% semi-urban school children and 19.9% rural children washed their hands before taking meal. As contrast a study conducted by Sarkar (2013) among 104 primary school children in slum area of Kolkata in which 84.62% children washed their hands before eating, 48.08% children combed their hair regularly, 42.3% children took bath daily, 50% children brushed their teeth regularly, 76.92% children trimmed their nails properly. Similar study conducted by Almiya et al. (2022) in which children had very low awareness regarding personal hygiene only 12% students washed hands with soap and water and 5% of the students brushed their teeth twice a day.

Environmental and Hygienic Factors of School Going Children:

In the present study, it was observed that 54% of total school children had a poor household cleanliness. About 65.5% of children from the government school had poor household cleanliness, while 42.8% of children from private school had poor household cleanliness. About 57.9% of total school children were facing poor drainage system. About 71.4% of government school children had poor drainage system, whereas 44.3% of children from private school were facing poor drainage system. In this study, 59.85% of total school children had unhygienic external surrounding. About 74.5% of government school children had unhygienic external surroundings, whereas 45.2% of children from private school were facing unhygienic external surroundings. Similar findings reported in a cross-sectional study by Edward et al (2023) at Ulanga District, Tanzania among 914 children, finding of the study was 82.7% of children were found to be malnourished due to poor method of water purification, personal hygiene, poor surrounding and improper sanitation of drinking water. Another study conducted by Jain et al. (2018) among 600 children in Ambala District, Haryana, which also revealed that 99% of the children had a poor drainage system.

Conclusion:

Present study revealed that hygiene and sanitation practices occurred higher among public school children. In the present study it was also seen that government school children had poorer

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environmental factor like poor household cleanliness, poor drainage and unhygienic external surroundings than public school children.

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Evolution of Student Activism in Northeast India: 1947–Present

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Abstract

Student activism in Northeast India has been a critical socio-political force since India's independence, influencing regional identity, political discourse, and governance. From postcolonial assertions of ethnic and linguistic identity to contemporary mobilizations on human rights, migration, and environmental concerns, student organizations have consistently acted as catalysts for change. This article traces the evolution of student activism in Northeast India from 1947 to the present, examining historical foundations, major movements, state-level and regional unions, and contemporary issues. The study situates these movements within broader theoretical frameworks of social mobilization, ethnicity, and political participation, highlighting their role in shaping regional politics and policy-making.

Keywords: Student Activism, Northeast India, Regional Identity, AASU, AAPSU, NESO, Ethnic Movements

1. Introduction

Student activism refers to organized efforts by students to address political, social, or cultural concerns, often involving protests, advocacy, and participation in decision-making processes. In Northeast India, student movements have historically been interwoven with ethnic identity, indigenous rights, and political assertion, reflecting the region's unique socio-political landscape (Baruah, 2005; Hazarika, 1994). The Northeast, comprising eight states Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Meghalaya, Tripura, and Sikkim is characterized by ethnolinguistic diversity, complex colonial legacies, and peripheralization in national politics. These factors have rendered student activism a significant avenue for articulating grievances, asserting regional identity, and negotiating with state and central governments (Bhattacharjee, 2019).

Since 1947, student organizations in Northeast India have evolved from local cultural associations to influential political actors. They have shaped policy debates, mediated between insurgent groups and governments, and mobilized mass movements on issues such as migration, citizenship, land rights, education, and governance. While mainstream scholarship often emphasizes insurgency and armed conflict, the nonviolent dimension of student activism and its contributions to democratic participation remain underexplored.

This article aims to provide a comprehensive analysis of the evolution of student activism in Northeast India from 1947 to the present. It examines historical foundations, state-level and regional movements, organizational structures, and contemporary activism, situating these phenomena within theoretical frameworks of social movements, ethnicity, and political mobilization.

2. Historical Foundations of Student Activism in Northeast India (Pre-1950)

Student activism in Northeast India has roots in pre-independence anti-colonial and social reform movements. Educational institutions became centers of political awareness and regional consciousness. Students participated in nationwide movements such as the Quit India Movement (1942), but regional grievances including economic marginalization, limited educational opportunities, and cultural suppression shaped localized forms of activism (Sharma, 2006).

- **Nagaland:** The *Naga Students' Federation (NSF)*, established in 1947, became a platform for political discourse among Naga youth, advocating for cultural preservation and political autonomy (Jamir, 2012). NSF functioned as a mediator between emerging Naga political movements and civil society, fostering leadership skills among young Naga elites.

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- **Assam:** Student associations were formed in colleges to address educational inequalities, demand representation in governance, and articulate concerns over land rights and ethnic marginalization (Sarma, 2004).
- **Tripura and Manipur:** Early student groups focused on social reform, literacy campaigns, and anti-colonial activism, providing organizational experience that later translated into political mobilization.

During this period, student activism was largely cultural and educational, but it laid the groundwork for post-independence political engagement by creating networks of organized youth and cultivating leadership.

3. Early Post-Independence Period (1950s–1960s)

The post-independence era witnessed the consolidation of student organizations across the Northeast. Students were increasingly concerned with political representation, educational access, and preservation of ethnic identity.

- **Nagaland:** NSF continued to advocate for political recognition and cultural preservation amid the growing insurgency. It facilitated dialogue between local leaders and the Indian government, positioning students as mediators in conflict zones (Jamir, 2012).
- **Assam:** Early student associations emphasized the protection of Assamese language and culture, reflecting anxieties over demographic changes and migration patterns (Baruah, 2005).
- **Mizoram and Manipur:** Student unions collaborated with religious institutions and community leaders to secure educational facilities and assert tribal rights (Hazarika, 1994).
- **Sikkim:** Students mobilized around the question of integration with India, reflecting the political sensitivity of statehood and ethnic identity (Bhattacharjee, 2019).

During this period, student activism was **primarily social and cultural**, with limited direct political engagement, but it provided the organizational foundation for later movements addressing ethnic autonomy and statehood demands.

4. Emergence of State-Level Student Movements (1960s–1970s)

The 1960s and 1970s marked a shift from cultural activism to political mobilization, with student organizations emerging as central actors in regional politics.

- **Assam:** The *All Assam Students' Union (AASU)* was formed in 1967, advocating for educational reform, protection of Assamese language, and regulation of immigration. AASU developed hierarchical leadership structures, published periodicals, and conducted mass mobilizations (Baruah, 2005).
- **Arunachal Pradesh:** The *All Arunachal Pradesh Students' Union (AAPSU)* also emerged in 1967, demanding indigenous representation, protection of land rights, and expansion of educational infrastructure (Goswami, 2011).
- **Nagaland:** NSF continued to play a dual role cultural preservation and mediation in insurgency conflicts.
- **Mizoram:** Student unions contributed to early political assertion that eventually led to statehood negotiations, emphasizing ethnic identity and local governance rights.
- **Meghalaya and Tripura:** Students engaged in campaigns for resource allocation, language recognition, and recognition of tribal autonomy (Hazarika, 1994).

These movements established a model of organized, hierarchical student activism, combining grassroots mobilization with policy advocacy.

5. The Assam Movement (1979–1985): A Case Study

The Assam Movement exemplifies the transformative impact of student activism in Northeast India. The movement arose from concerns about illegal immigration from Bangladesh, which threatened the demographic and cultural identity of Assamese people (Baruah, 2005).

5.1 Role of AASU

AASU coordinated mass protests, sit-ins, and civil disobedience campaigns. It engaged with political leaders, civil society, and media to highlight grievances, while maintaining a nonviolent ethos. Leadership figures such as Prafulla Kumar Mahanta emerged as influential actors, later translating student leadership into political authority.

5.2 Key Events

- Nationwide protests and highway blockades highlighted concerns over illegal migration.
- The Nellie massacre of 1983, where over 2,000 people were killed, underscored the intensity of ethnic tensions during the movement (Sharma, 2006).

5.3 Outcomes

The Assam Accord of 1985 formalized immigration controls and recognized Assamese identity, illustrating how student activism can influence national policy. The movement also inspired student-led mobilizations in neighboring states.

6. Expansion of Student Activism across the Northeast (1980s–1990s)

Following Assam, other Northeastern states experienced growth in student activism, often focusing on ethnic assertion, governance participation, and identity politics:

- **Arunachal Pradesh:** AAPSU led campaigns on land rights, education, and refugee settlement issues, particularly regarding Chakma-Hajong communities (Goswami, 2011).
- **Manipur:** AMSU became a platform for addressing youth unemployment, insurgency-related concerns, and participation in local governance.
- **Mizoram, Meghalaya, Tripura:** Student unions engaged in statehood, resource allocation, and tribal autonomy campaigns (Hazarika, 1994).

During this phase, student activism became increasingly politicized and institutionalized, serving as a bridge between civil society and formal political structures.

7. Regional Integration: The North East Students' Organisation (NESO)

NESO was established as an umbrella organization to coordinate student unions across the region, including AASU, AAPSU, NSF, AMSU, MZP, and others (Sentinel Assam, 2019). NESO's objectives included:

- Addressing cross-state migration and citizenship concerns
- Coordinating protests on ethnic rights and resource allocation
- Providing a unified platform for dialogue with state and central authorities

NESO exemplifies regional collaboration among student organizations, overcoming inter-ethnic and interstate divisions to present coordinated demands.

8. Contemporary Student Activism (2000s–Present)

Recent student activism addresses national policy, human rights, digital engagement, and environmental concerns:

- **Citizenship Amendment Act (CAA) Protests (2019):** Student unions mobilized against legislation perceived as threatening indigenous identity (NE News, 2019).
- **AFSPA and Human Rights:** Movements in Nagaland, Manipur, and Assam called for repeal of AFSPA and justice for victims of military operations (Times of India, 2022).
- **Digital Mobilization:** Social media enables rapid information sharing, protest coordination, and national/international visibility.
- **Identity and Land Rights:** Unions such as ATASU in Assam advocate for ST status and land rights (Times of India, 2025).

Contemporary activism demonstrates a shift from local protests to broader, multi-issue advocacy, integrating legal, political, and digital strategies.

9. Theoretical Perspectives on Student Activism

Student activism in Northeast India can be analyzed using social movement theory:

1. **Resource Mobilization Theory:** Student unions leverage organizational capacity, social networks, and leadership to sustain mobilization (McCarthy & Zald, 1977).
2. **Political Process Theory:** Shifts in political opportunity structures, such as state policy gaps and insurgency dynamics, facilitate student-led mobilization (Tarrow, 2011).
3. **Ethnic Identity and Mobilization:** Ethnic consciousness drives collective action, particularly in contexts of perceived cultural threat or marginalization (Horowitz, 1985).

These frameworks help explain why student activism in Northeast India has remained resilient and adaptive, balancing identity assertion with pragmatic engagement.

10. Themes across Decades

Several recurring themes characterize student activism:

- **Ethnic and Regional Identity:** Central to most movements, reflecting the Northeast's diversity.
- **Migration and Demography:** Immigration-related grievances, particularly in Assam and Arunachal Pradesh, fuel activism.
- **Political Participation:** Student unions act as pressure groups influencing policy and forming political parties (e.g., AGP in Assam).
- **Linkage with Insurgency:** Student activism often negotiates the boundary between nonviolent protest and conflict engagement.
- **Governance Transition:** Many leaders move from activism to formal politics, reflecting the institutional impact of student movements.

11. Conclusion

The evolution of student activism in Northeast India reflects the region's ethnically diverse, politically complex, and historically marginalized context. From early anti-colonial engagement to contemporary digital mobilization, student organizations have consistently acted as catalysts for social and political change. By advocating for ethnic identity, human rights, and governance reforms, they have influenced state and national policy while shaping regional consciousness.

Future challenges include navigating globalization, digital transformation, climate crises, and evolving governance structures. The Northeast experience demonstrates that student activism is not merely a transient phenomenon but a sustained instrument for political participation, regional advocacy, and societal transformation.

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Mentality of Hijabi and Non Hijabi Women : A Sociological Study

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Abstract

Dressing practices among Muslim women in India, particularly wearing the burkha, huar, and rida, are central to discussions of modesty, identity, social perception, and empowerment. These garments reflect religious interpretation, cultural norms, and personal choice. The concept of parda (modesty) underpins these clothing practices, aiming to balance visibility in public spaces with religious observance. While some women wear the veil as a symbol of faith and cultural identity, others choose not to follow this practice, negotiating their own autonomy in a diverse and evolving society. The veil, therefore, is not only a piece of clothing but also a lens through which issues of gender, power, religious belief, and social negotiation can be understood.

Introduction–

The status of Muslim women in Rewa and its surrounding villages has historically been shaped by a combination of cultural tradition. Muslim women in India face a variety of challenges, both social and economic, that shape their religious and personal experiences. Patriarchal structures, whether within the household or in society at large, often impose restrictions on mobility, decision-making, and professional opportunities. In conservative households, expectations of obedience, domestic labor, and adherence to religious dress codes can limit personal freedom. Social stereotypes, discrimination, and marginalization further compound these pressures, particularly in workplaces or educational institutions where Muslim women may face prejudice or biases based on religion, gender, or dress.

For many Muslim women, Islam provides a strong sense of identity, belonging, and purpose. Religious practices, including prayer, fasting, hijab, and participation in community rituals, offer spiritual fulfillment and psychological comfort. The religion's ethical framework shapes personal conduct, family relations, and community engagement. Muslim women often report that their faith instills moral discipline, resilience, and hope, serving as a source of emotional and social support during difficult times.

However, the experience of being Muslim is not uniform. Urban, educated women may interpret religious obligations flexibly, balancing personal goals with spiritual adherence. In contrast, women in conservative or rural settings may experience stricter enforcement of religious and cultural norms, which can sometimes create internal conflicts between autonomy and expectation. Despite these differences, a majority of Muslim women express strong attachment to their faith, valuing its moral guidance, spiritual grounding, and sense of community cohesion.

Research Review

Azizah al-Hibri (1997) - "CONTRADICTION FAITH OF MUSLIM WOMEN", She shed the light on the contradiction faith of Muslim Women-As per her research it is important to keep in mind that most Muslim women tend to be highly religious and would not want to act in contradiction to their faith.

CÉCILE LABORDE (2006) - "EMANCIPATION OF MUSLIM WOMEN FROM RELIGIOUS AND PATRIARCHAL OPPRESSION ", He discusses one of the motives behind the recent ban on the wearing of Muslim headscarves (hijab), He mentioned the belief that it assists the emancipation of Muslim women from religious and patriarchal oppression.

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MUHAMMAD AKBAR ZAHIDI (2012) - "DRESS CODE OF MUSLIM WOMEN IN PHYSICAL EDUCATION", His previous research suggests that Muslim women can experience particular problems when taking physical education (PE) lessons, for example with dress codes, mixed teaching and exercise during Ramadan and they can face restrictions in extra-curricular activities for cultural and religious reasons.

FATIMA (2010)" A COMPARATIVE STUDY OF THE SOCIO-CULTURAL STATUS OF MAPPILA MUSLIM WOMEN IN MATRILINEAL AND PATRILINEAL FAMILIES OF MALABAR", - In this she did the research on matriarchy and patriarchal influence on Muslim women and concluded Kinship and family support can act as an important social resource for women to enhance her status. In the present scenario, where women confront patriarchal rules of the family and society, gender egalitarian norms and ideologies can prove beneficial to them.

Study Area and Research Methodology: -

The present research study is based on primary and secondary data sources of information. It is further stated that most of the information is sought from the available literature and by examining and analyzing the data in a logical systematic way. Hence the researcher has taken into consideration the descriptive method to analyze it further. As Rewa is another name of the Narmada River which is located in the north-eastern part of Madhya Pradesh state in India. It is the administrative Centre of Rewa District and Rewa Division, as Rewa is a city known for its rich history, vibrant culture. We are going to take, Rewa District Religion Data of official census 2011 of Rewa district: **In which Muslim population was 85,414 Male population was 43,817 whereas Women was 41,597.** Hindus were 2,268,838, Christian population total 1,964, Total Sikh population in Rewa 832, Jain total population 655, Buddhist population 986, Other Religion 232.

Research design:

The whole study will be based on the comparative study of Muslim women in urban and rural area. The study further Analyse the Muslim women status in society and reason of their backwardness. The data collected will be analyzed by using an appropriate method. The research is expected to be completed within the time limit stated by the university.

Sample Technique:

The technique used for the research is purpose sampling. The sampling technique selected for the study is a simple random sampling technique.

Sample Size:

The samples are collected from the Primary and secondary sources. By using Purpose sampling, we will select the respondent who is above the age of 18. Rewa municipal corporation is divided into 45 wards, via this we collect the respondent from 5 wards in which Muslim population is highly present, from each ward 30 respondent data we collect by using random sampling.

Rewa district divided into 9 blocks with the help of purpose sampling we select 5 blocks in which Muslim population is highly present then with the help of random sampling we will collect 30 respondent data from each. So, at the end in total, we will be having 150 data from urban area and 150 from rural area in total 300 responded data will be collected

Tools:

Observation - technique used to classify and record in a planned manner the individual responses to real life situations.

Interview Schedules - an oral questionnaire through which the researcher can explain more explicitly the purpose of the investigation.

Islam is considered one of the fastest-growing religions globally, including in India, due to demographic trends, higher fertility rates, and active religious propagation. Muslim communities in India form a significant minority, with Muslim women representing a substantial portion of the population. Understanding how Muslim women perceive their religious identity is crucial for examining social integration, personal autonomy, and cultural negotiation. Religion is not only a system of beliefs but also a framework for ethical conduct, social norms, and personal identity. For

Muslim women, religion intersects with education, family, work, legal rights, and public perception. This chapter explores the experiences, challenges, and sentiments of Muslim women regarding their faith, happiness, potential interest in conversion, and adherence to religious practices.

The nature of Muslim Families in Rewa:

Rewa, Madhya Pradesh, also boasts a fully patriarchal family structure. The father holds the highest position in the family. Families are patrilocal. Women live in their husband's home after marriage. The father's authority and position are central to economic, social and religious matters. The family structure is highly organized. While the father's role is significant, his authority isn't based on overt or coercive measures the wife's role, along with that of the husband, is also crucial in household chores, the market, the economy, and religious activities.

We can divide families into two structural categories based on their nature. A comparative study of families reveals a distinct difference in the family structure. The conclusions obtained in this regard are presented in the following table –

Table No. – 01
Nature of Muslim Families

Nature	Rural		Urban	
	Frequency	Percentage	Frequency	Percentage
Nuclear	117	78	141	94
Joint	33	22	09	06
Total	150	100	150	100

In my study area, Rewa city has the highest percentage of nuclear families, with a 94% population, while the percentage of nuclear families in the rural areas is 78%. Interviews conducted in the present study reveal that the percentage of joint families in Rewa urban area is 06% and in rural areas, it is 22%. The predominance of joint families in rural areas is due to the simple lifestyle of people who depend on agriculture or other small businesses like beedi rolling.

In my study area, Rewa District the marital status of women in rural and urban areas is as follows –

Table No – 02
Marital status of Respondents

Marital status	Rural		Urban	
	Frequency	Percentage	Frequency	Percentage
Unmarried	03	02	06	04
Married	138	92	141	94
Divorced	06	04	03	02
Widow	03	02	00	00
	150	100	150	100

Thus, the data shows that in the study area, the number of rural married women is 92 percent and urban women is 94 percent. Rural unmarried women are 02 percent, urban unmarried women are 04 percent, divorced rural women are 04 percent, divorced urban women are 02 percent and rural widows are 02 percent.

This reveals the fact that the practice of divorce is considered a curse in Muslim society. Its impact is more pronounced in rural areas, where divorce is considered a minor issue in Muslim rural society. Due to the lack of religious and practical education in rural areas, people consider divorce a religious right.

However, they are unaware of the circumstances under which religion allows divorce. In my studies in rural areas, I found that if a woman converses with a man other than her husband a couple of times, or bumps into him on the street a couple of times, then talks of divorce begin. Divorces in

rural areas occur over trivial matters that a civilized person would not even think about. Divorce rules are relaxed for men in Muslim society, so women have to face such social evils, making their lives difficult.

Dressing Practices Among Muslim Women – Burkha, Huar, Rida (Veil)

The burkha, covering the entire body including the face with a mesh screen, is one of the most conservative forms of veil. It is often associated with rural, traditional, or highly conservative communities, though urban women also wear it for religious or personal reasons. The huar is a long loose dress covering the body, often accompanied by a headscarf, while the rida is a simpler cloak or veil, typically worn with modern clothes, allowing easier movement. These garments are chosen for a combination of religious obedience, cultural norms, protection, and personal comfort.

The choice of veil often reflects family influence, community pressure, and personal belief. Many women view it as a source of empowerment rather than restriction, framing modest dressing as a deliberate assertion of their identity. At the same time, in some conservative or patriarchal households, wearing the veil may be mandatory, limiting the degree of voluntary choice. This tension between autonomy and social expectation is a recurring theme in sociological studies of Muslim women in South Asia.

Cultural, Social, and Religious Dimensions

Veiling practices serve multiple functions. Culturally, they signal membership in the Muslim community, adherence to traditional norms, and respectability. Socially, veiled women may be perceived as morally upright and disciplined, earning community respect and protection. Religious interpretations often guide the style, extent, and circumstances of veiling, with emphasis on modesty and avoidance of unwanted attention.

The veil also influences mobility, education, and employment opportunities. Women who wear full burkhas may face stereotyping or exclusion in professional settings, whereas those who adopt lighter coverings (rida, huar) may balance religious observance with social participation. Furthermore, urbanization, globalization, and exposure to diverse ideologies have introduced variations in dressing, leading to dynamic negotiation between tradition and modernity.

Table No. – 03

Attitude of Respondents towards Purdah System

Respondent's View	Rural		Urban	
	Frequency	Percentage	Frequency	Percentage
supporters	114	76	39	26
not supporter	36	24	111	74
	150	100	150	100

The perspectives on the practice of purdah in the Rewa district clearly demonstrate that social change is occurring at a rapid pace. In Rewa city, 26 percent of women support purdah, while 74 percent oppose it. In rural areas, 76 percent support purdah, while 24 percent oppose it.

The main reason for strong opposition to the practice of purdah in urban areas and support for it in rural areas is the gap between religious and practical education. Urban women are ahead in both religious and practical education. The religious fanaticism prevalent in cities 15 – 20 years ago is decreasing over time. However, in rural areas, due to a lack of accurate religious knowledge and practical education, women consider purdah an integral part of the religion. Most of the women who expressed their support for the practice of purdah suggested that since purdah is a part of Islam and we are followers of Islam, it is necessary to maintain it.

Those who voted against the practice of purdah clarified that this is a materialistic era. It hinders progress in jobs, education etc. They believe that purdah is a veil of the eyes, it our thoughts are clean and mentality is right then this is the veil. Wearing a burqa is not mandatory for purdah. In today's scientific era when human life is dynamic and needs are increasing rapidly, if all the members

of the family remain dependent on one person then it can lead to family disintegration. In today's era, all the people, men and women, need to work shoulder to shoulder.

In conclusion, it can be said that in ancient times, human needs were limited, which is the main reason for the practice of purdah. It was implemented to conceal one's body and thus protect oneself from adultery. However, in the current changing environment, Muslim society's attitude towards purdah has changed. Girls are entering the fields of education, employment, and social service. It is hoped that practice of purdah, which has remained in principle in recent years, which has remained in principle in recent years, will no longer be seen in practice.

Challenges and Critiques

Veiling is sometimes critiqued as a mechanism of patriarchal control, particularly when enforced by family or societal pressure. In such cases, women may experience limitations on public engagement, employment, or education. Conversely, women who choose not to wear the veil may face social censure, family criticism, or marginalization within their communities. The negotiation of identity through dress, therefore, embodies complex interactions between personal belief, social expectation, and cultural conformity.

Table No. – 04
Respondent's attitude towards Wearing Hijab or Burqa

Wear Hijab or Burka	Rural		Urban	
	Always	39	26	24
Some times	57	38	69	46
Never	54	36	57	38
Total	150	100	150	100

It is clear that 26% Rural and 16% Urban Respondents always wear Hijab or Burka. 38% Rural and 46% Urban Respondents wear some times while 36% Rural and 38% Urban Respondents never wear Hijab or Burka. The Respondents opinion is that Religious belief, Family Expectation and Habit Due to which she wears Burka or Hijab. They think that Hijab represents dignity and modesty of women.

Dressing Practices Among Muslim Women

Aspect	Burkha	Huar	Rida	Non-Veiled Women
Coverage	Full body including face	Full body with headscarf	Body covered, face open	Modern clothing, headscarf optional
Religious Compliance	Strict interpretation	Moderate	Moderate	Liberal interpretation
Mobility & Comfort	Limited Mobility more restriction	Moderate Mobility	High Mobility	Maximum Mobility
Social Perception	Respected in conservative circles	Accepted traditionally	Modern-acceptable	Criticism from conservative communities
Choice/Autonomy	Sometimes imposed, sometimes chosen	Often chosen	Usually voluntary	High personal choice
Employment & Education	Potential barriers	Moderate	Fewer barriers	Minimal barriers

Mentality of Hijabi Muslim Women vs Non-Parda Women

Introduction

The mentality of hijabi Muslim women—those who observe *parda* by wearing hijab, burkha, huar, or rida—is shaped by religious belief, cultural identity, and personal conviction. These

women often view modesty, faithfulness, and discipline as central to their identity, reflecting an internalized value system that frames their behavior, social interactions, and self-perception. Conversely, Muslim women who do not follow the *parda* system adopt a different worldview, emphasizing autonomy, personal freedom, and pragmatic engagement with social, educational, and professional life. Understanding the mentality of these two groups sheds light on intra-community diversity, negotiation of gender norms, empowerment, and the complex interplay between religious adherence and modernity.

Hijabi Muslim Women

Hijabi women often report that wearing the veil strengthens self-identity, spiritual discipline, and moral consciousness. Their mental framework emphasizes patience, self-respect, and adherence to religious obligations. Studies show that hijabi women perceive their attire as empowering, providing psychological comfort and social legitimacy within conservative communities. However, this mentality can also entail self-regulation, cautious behavior in public spaces, and acceptance of certain social limitations. Hijabi women may consciously avoid situations perceived as compromising modesty or religious adherence. This approach cultivates resilience, moral agency, and internal locus of control but can also lead to social isolation in diverse or urban settings where modern norms dominate.

Non-Parda Muslim Women

Muslim women who do not observe *parda* often prioritize individual choice, educational and career goals, and social mobility over traditional interpretations of modesty. Their mental framework is typically shaped by pragmatic engagement with societal norms, emphasizing equality, self-expression, and negotiation of cultural expectations. Non-*parda* women may face familial or societal criticism but often employ strategies to assert autonomy and negotiate respect in both private and public spheres.

The mentality of non-*parda* women reflects a balance between personal freedom and cultural negotiation. While less constrained by traditional norms, these women may experience challenges in conservative households or communities, requiring assertiveness, resilience, and social acumen.

Mentality of Hijabi vs Non-Parda Muslim Women

Aspect	Hijabi Women	Non-Parda women
Religious Orientation	Conservative, faith-driven	Liberal, personal interpretation
Identity Expression	Modesty, spiritual discipline, cultural conformity	Autonomy, personal freedom, modern engagement
Social Perception	Accepted in traditional circles	Criticism of marginalization from conservatives
Mobility & Public Engagement	Sometimes restricted due to modesty norms	Higher mobility and public participation
Empowerment	Spiritual / moral agency	Social, educational, professional agency
Coping & Resilience	Internal locus of control, religious guidance	Negotiation skills, assertiveness in social / professional domains

Psychological and Social Implications

The mentalities of hijabi and non-*parda* women influence stress management, resilience, decision-making, and community interaction. Hijabi women may experience identity reinforcement and social acceptance in conservative environments but face limitations in modern workspaces or social circles. Non-*parda* women enjoy greater mobility and career participation but may confront judgment, stereotyping, or social friction in traditional settings.

The coexistence of these mentalities within the same community highlights the negotiation between faith, culture, and modernity. Both groups display agency in their chosen practices, whether

in conformity with religious prescriptions or in exercising personal freedom. Understanding these mental frameworks is essential for gender-sensitive policies, community engagement, and empowerment programs targeting Muslim women.

In conclusion Comprehensive understanding of dressing practices and mental frameworks among Muslim women, showing how individual choice, cultural norms, religious belief, and social pressures shape identity, autonomy, and empowerment.

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Impact of Moral Development on Reducing Caste-Based Prejudice in Adolescents

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Abstract:

The present study investigated the impact of moral development on caste-based prejudice among adolescents in the Gaya district of Bihar, India. A total of 200 college-going adolescents (100 Upper Caste [UC] and 100 Lower Caste [LC]) were selected using stratified random sampling. Moral development was assessed with the Defining Issues Test-2 (DIT-2), and caste prejudice was measured using an adapted Caste Prejudice Scale (CPS). Results indicated a significant negative correlation between moral development scores and caste prejudice, suggesting that higher levels of moral reasoning are associated with lower caste bias. Furthermore, upper caste adolescents exhibited significantly higher moral development and lower caste prejudice compared to lower caste peers. The findings underscore the importance of promoting moral reasoning and ethical reflection in adolescence as a means to reduce social bias and foster inclusive attitudes.

Keywords: Moral Development, Caste Prejudice, Adolescents, Ethical Reasoning, Social Bias, Gaya District

Adolescence is a critical period of cognitive, emotional, and social transformation. During this phase, youth refine moral judgment, develop complex reasoning about fairness, and establish social values that guide behavior. Moral development refers to the process through which individuals internalize ethical principles and form standards for evaluating right and wrong. Increasing moral maturity has been linked to greater empathy, perspective-taking, and fair treatment of others—qualities that are pivotal for reducing prejudice and promoting social justice.

In diverse societies like India, the enduring presence of the caste system poses unique challenges to social harmony and adolescent development. Caste prejudice refers to negative attitudes, stereotypes, and biases directed toward individuals or groups based on their caste identity. Although caste discrimination is legally prohibited, it continues to shape social interactions and opportunities. Adolescents, in particular, may internalize caste hierarchies through family norms, peer influences, and cultural traditions, making it essential to explore psychological mechanisms that might counteract bias.

Moral development theory provides a framework for understanding how adolescents evaluate social inequalities and ethical dilemmas. According to Kohlberg's stages of moral development, individuals move from self-interested reasoning in early stages to principled, justice-oriented reasoning in higher stages. Higher moral reasoning is characterized by an increased ability to recognize human rights, respect others' dignity, and reject arbitrary social hierarchies. Therefore, adolescents with advanced moral reasoning are more likely to resist prejudicial attitudes, including caste bias.

Caste Prejudice- Caste prejudice refers to a negative attitude, bias, or discriminatory belief directed toward individuals or groups based on their caste identity. It involves preconceived notions, stereotypes, or judgments about the social, intellectual, or moral worth of people from particular caste groups, often leading to unequal treatment or social exclusion.

Caste prejudice can manifest in social, educational, and occupational contexts, affecting interactions between individuals of different castes. It is deeply rooted in historical, cultural, and

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structural inequalities and is often reinforced by societal norms, traditions, and hierarchical beliefs within a caste system.

A characteristics of caste prejudice is:-

- (a). Stereotyping – Assuming that members of a caste share certain negative or positive traits.
- (b). Bias – Favoring one caste over another in judgment or decision-making.
- (c). Discrimination – Acting on biased beliefs, leading to unequal opportunities or treatment.
- (d). Internalized bias – When individuals from lower castes adopt negative societal views about their own caste.

Suppose, Believing that individuals from a “lower” caste are less capable academically or morally than those from an “upper” caste, regardless of their actual abilities or character, reflects caste prejudice. Scholarly perspective: Allport (1954) defines prejudice broadly as “an unjustified or incorrect attitude (usually negative) towards an individual based solely on the individual’s membership of a social group.” In the Indian context, when this attitude is directed specifically toward caste groups, it constitutes caste prejudice.

Research in moral psychology emphasizes that moral reasoning influences intergroup attitudes. Adolescents who demonstrate greater orientation toward fairness and ethical principles tend to show lower levels of stereotyping and prejudice across social categories such as race, gender, and ethnicity. However, there is limited empirical work directly linking moral development to caste-based prejudice, particularly within Indian youth populations. Given the sociocultural importance of caste, investigating how moral reasoning relates to caste attitudes among adolescents can inform interventions aimed at reducing social bias and promoting inclusion.

Singh & Rani (2010) examined the relationship between social identity and prejudice among Indian adolescents. The study found that stronger in-group identification predicted higher caste-biased attitudes, suggesting that adolescents who strongly identify with their caste are more likely to exhibit discriminatory behaviors toward out-groups. This highlights the role of group loyalty and identity in shaping bias.¹

Kumar (2012) investigated the association between self-esteem, moral reasoning, and intergroup attitudes. Results indicated that adolescents with higher self-worth and advanced moral reasoning were less likely to endorse prejudicial beliefs.² This study provides evidence that moral and psychological development can act as protective factors against social biases.

Sharma & Verma (2014) explored social dominance orientation and prejudice among youth in urban India. Their findings showed that adolescents with higher dominance orientation, which reflects a preference for hierarchical social structures, exhibited stronger caste-based prejudice. The study emphasized that personality and ideological variables influence moral judgment and intergroup attitudes.³

Gupta (2015) focused on empathy and perspective-taking in relation to caste prejudice among adolescents. The study demonstrated that adolescents with higher empathy levels were significantly less likely to hold caste-biased attitudes. These findings underscore the importance of moral development components, such as empathy, in reducing social prejudice.⁴

Chandra & Dixit (2017) examined the impact of school climate on moral development and prejudice. Adolescents in inclusive and supportive school environments displayed higher moral reasoning and lower caste prejudice. The study highlighted the role of contextual and environmental factors in shaping ethical reasoning and intergroup attitudes.⁵

Mehta & Singh (2018) investigated the predictive role of personality traits, including moral development, on intergroup attitudes among Indian adolescents. Their results indicated that higher moral reasoning, openness, and conscientiousness were associated with lower levels of caste-based prejudice, suggesting that moral development is a key determinant of ethical and egalitarian attitudes during adolescence.⁶

Rao & Joshi (2016) studied adolescent moral judgment and social biases in Bihar, finding that interventions designed to enhance moral reasoning—through discussions of fairness, justice, and

equality—were effective in reducing discriminatory attitudes toward lower caste peers.⁷ This provides empirical support for educational strategies targeting ethical development.

The current study explores two core questions:

- (1) To what extent is moral development associated with caste-based prejudice in adolescents? and
- (2) Do upper caste- (UC) and lower caste (LC) adolescents differ in their levels of moral reasoning and caste prejudice? By addressing these questions, the research aims to contribute to a deeper understanding of the psychological factors that can mitigate social bias during adolescence and inform educational practices that encourage moral reflection and ethical engagement.

Objectives- To examine the relationship between moral development and caste prejudice among adolescents.

Hypotheses

H₁: There will be a significant negative correlation between moral development and caste prejudice among adolescents.

H₂: Upper caste and lower caste adolescents will differ significantly in moral development and caste prejudice.

H₀: There will be no significant relationship between moral development and caste prejudice.

Procedure- After institutional approvals and parental consent, participants completed the DIT-2 and Caste Prejudice Scale in supervised sessions. Data were scored and analyzed using SPSS v25. Descriptive statistics, Pearson’s correlation, and independent samples t-tests were conducted with significance set at $p < 0.05$

Methodology

A. Sample- The study comprised 200 adolescents aged 15–18 years from colleges in the Gaya district, Bihar: 100 Upper Caste (UC) and 100 Lower Caste (LC). Stratified random sampling was used to ensure balanced representation across gender and socioeconomic background. Participants who reported neurological or psychological disorders were excluded.

B. Test and Tools

1. Defining Issues Test–2 (DIT-2) – A standardized measure of moral reasoning that assesses ethical judgment through real-life dilemmas. Higher scores indicate advanced moral development.

2. Caste Prejudice Scale (adapted) – 20 items rated on a 5-point Likert scale assessing bias, stereotypes, and discriminatory attitudes toward caste groups.

Results:-

In order to test the hypothesis that a significant Co-relation of the two variables: Moral Development (DIT-2) and Caste Prejudice (Upper Caste and Lower Caste college-going adolescents). The result was computed and calculate between r-bis on table-1 below:

Table-1

Significant Co-relation between Upper Caste and Lower Caste college-going adolescents

Variable	Mean	SD	r-bis	df	Sign. Value
Moral Development (DIT-2)	42.78	7.15	-0.52	2	p<0.01
Caste Prejudice	58.93	9.24			

In this table shows that Moral Development (DIT-2) has been higher Mean = 42.78, SD = 7.15 The mean score indicates that the adolescents, on average, demonstrated moderate levels of moral development. This suggests that most participants are capable of some degree of ethical reasoning and can evaluate social situations with fairness and justice, though they have room for further development toward higher-stage moral reasoning.

Caste Prejudice: Mean = 58.93, SD = 9.24 Pearson’s $r = -0.52$, $p < 0.01$. The findings suggest that moral development plays a protective role against caste-based prejudice in adolescence. Adolescents who are more capable of evaluating social situations ethically and applying justice-oriented reasoning are less prone to adopt discriminatory attitudes based on caste. However, the

moderate to high mean of caste prejudice also highlights that moral reasoning alone may not fully eliminate bias, and social, cultural, and contextual factors (such as family, peers, and school environment) also contribute to prejudiced attitudes.

In practical terms, these results emphasize the importance of promoting moral education and ethical reflection in schools as a strategy to reduce caste-based prejudice among adolescents.

Table-2
Moral Development

Group	Mean	SD	t	df	Sign. Value
Upper Caste	45.32	6.28	3.42	198	p<0.01
Lower Caste	40.24	7.89			

Table-2 shows that upper caste adolescents (Mean = 45.32) scored significantly higher on moral development than lower caste adolescents (Mean = 40.24). The t-value = 3.42, $p < 0.01$ indicates that this difference is statistically significant, meaning it is very unlikely to have occurred by chance. The higher moral reasoning among upper caste adolescents may reflect differences in access to resources, education, or social environment that support ethical reasoning development. The standard deviations indicate moderate variability within both groups, showing that not all individuals in a group have the same level of moral development.

Cast Prejudice

Group	Mean	SD	t	df	Sign. Value
Upper Caste	55.11	8.64	3.75	198	p<0.01
Lower Caste	62.75	9.28			

In table-2 shows that In table-2 shows that upper caste adolescents (Mean = 55.11) exhibited significantly lower caste prejudice than lower caste adolescents (Mean = 62.75). The t-value = 3.75, $p < 0.01$ confirms that this difference is statistically significant. This suggests that upper caste adolescents were more likely to reject caste-based bias, whereas lower caste adolescents reported higher prejudice, which may reflect internalized social hierarchies or experiences of discrimination. The relatively high standard deviations suggest considerable variability within each group, indicating that individual differences in prejudice exist despite group trends.

Upper caste adolescents in this study showed higher moral development and lower caste prejudice than lower caste adolescents. The significant inverse relationship between moral development and caste prejudice is evident not only in the overall correlation ($r = -0.52$) but also when comparing groups: the group with higher moral reasoning (UC) also demonstrates lower bias. These results emphasize that moral development is an important factor in reducing social prejudice, and that interventions aimed at enhancing ethical reasoning and justice-oriented thinking could help mitigate caste-based bias among adolescents.

Conclusion- The study found that moral development was significantly inversely related to caste prejudice among adolescents. Adolescents with advanced moral reasoning exhibited more egalitarian attitudes and lower bias against caste groups. Additionally, upper caste adolescents scored higher in moral reasoning and showed lower prejudice than lower caste adolescents, highlighting the complex interplay between social experience and cognitive-ethical development. These results suggest that fostering moral reasoning can be an effective leverage point for reducing caste-based prejudice.

Suggestions-

Integrate Moral Education Programs in school curricula to encourage ethical reflection and perspective-taking.

Classroom Discussions on Equity and Justice to challenge caste stereotypes and promote fairness.

Peer Interaction Activities across caste groups to build understanding, empathy, and respect.

Parental Workshops to reinforce moral reasoning and inclusive values at home.
Longitudinal Research to examine how changes in moral reasoning over time affect caste bias.

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Psychometric Properties of the Hindi Version of Geriatric Depression Scale-15 (HGDS-15)

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Abstract:

The current study reports the Hindi version of the Geriatric depression scale-15 (GDS-15) and its psychometric attributes. The Hindi version of the GDS-15 was developed following the contemporary methodology of cross-cultural adaptation of psychometric tools. The Geriatric depression scale, Mini Mental Status Examination and The Brief Assessment Schedule Depression Cards (BASDEC) were administered on a sample of 176 elderly in the age range of 60 to 90 years. The data were analyzed and tested on the basis of traditional test theory. The cross language equivalence of Hindi version of GDS-15 was ascertained by back translation method. Findings revealed a satisfactory subscale to total correlation as well as satisfactory reliability (Internal consistency assessed by Chronbach's alpha was 0.74). For ascertaining the convergent validity coefficient of HGDS-15, two criterion measure such as Brief assessment schedule card (BASDEC) and Hindi version of Mini Mental Status Examination (HMMS) were taken and found to be significant correlation between them. The findings suggest that the HGDS-15 is a reliable and valid tool for evaluation of depression in elderly population. The HGDS-15 provide a quick assessment of depression in elderly person and total score of this test reflects the gloomy mood in geriatric population.

Key words: Geriatric depression, elderly population, Hindi version

Elderly or old age consists of ages nearing or surpassing the average life span of human beings. The boundary of old age cannot be defined exactly because it does not have the same meaning in all societies. Government of India adopted 'National Policy on Older Persons' in January, 1999. The policy defines 'senior citizen' or 'elderly' as a person who is of age 60 years or above. The phenomenon of population ageing is becoming a major concern for the policy makers all over the world, for both developed and developing countries, during last two decades. But the problems arising out of it will have varied implications for underdeveloped, developing and developed countries. Ageing of population is affected due to downward trends in fertility and mortality i.e. due to low birth rates coupled with long life expectancies.

Age is an important determinant of mental health. Old age is a period of transition when one has to deal not only with the physical aging, but also with the challenges affecting the mental and social well-being. Due to normal aging of the brain, deteriorating physical health and cerebral pathology, the overall prevalence of mental and behavioral disorders tends to increase with age (Ingle GK and Nath A 2008). Disability arising due to various illnesses, loneliness, and lack of family support, restricted personal autonomy, and financial dependency are other important contributing factors for higher prevalence of mental and behavioral disorders. Among the various mental disorders, depression accounts for the greatest burden among elderly. Depression decreases an individual's quality of life and increases dependence on others. If depression is left untreated, it can have significant clinical and social implications in the lives of the elderly (Blanchard MR, Waterreus A and Mann AH 1994). Early recognition, diagnosis, and initiation of treatment for depression in older people present opportunities for improving their quality of life, preventing suffering or premature death, and maintaining optimal levels of function and independence. Early diagnosis and

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effective treatment of depression in old age can also lead to significant reduction in mortality due to suicide and medical illnesses, and health care costs.

In a review of world literature, Barua et al., (2011) evaluated the median prevalence rates of depression in elderly population of India and compared the same with the rest of the world. The median prevalence rate of depression among elderly was reported to be 18.2%, which was significantly higher than the rest of the world (5.4%). However, it is important to note that the comparison was based on only six relevant studies from India, which formed only 0.5% of total study sample evaluated, in contrast to the 68 studies from the rest of the world covering 99.5% of the participants. The largest community-based data arising from India come from the study on Global aging and adult health Wave-1 study (Anand A. 2015). This study was conducted from 2007 to 2010 in six countries (China, Ghana, India, Mexico, Russian Federation, and South Africa) across the world. Depression was diagnosed on the basis of reporting of one or more of three symptoms (1) had a sad, empty, or depressed feelings (2) lost interest in most things that they usually enjoy such as personal relationships, work, hobbies/recreation, and (3) decreased energy or feeling tired all the time for 2 weeks in 12 months. Multistage, stratified, random cluster sampling design was used and those above 18 years of age were recruited. Data of those above 50 years of age extracted from this study show that the prevalence of depression among those aged above 50 years is highest in India (27.1%) followed by Mexico (23.7%), Russia (15.6%), Ghana (11%), South Africa (6.4%), and least in China (2.6%). Prevalence of depression in clinic-based studies has ranged from 42.4% to 72%. The sample has varied from patients attending psychiatry units to multidisciplinary wards. Studies that have compared patients with specific medical illnesses with those without illnesses, in general, suggest that elderly patients with medical illnesses such as diabetes mellitus have a higher prevalence (42.4% versus 18%) of depression (R.S. Kaulgud et. al.2013).

Some of the studies have recruited subjects across different setting and have reported prevalence rates of depression. These studies suggest that the prevalence rate of depression is more in inmates of old age homes when compared with those either living in the community, affluent societies, and slums (Guha S and Valdiya PS 2000, Jariwala V et al. 2010 and AP Singh 2012). P. Tiple, S N Sharma, et al., 2006 did a study in Varanasi where they studied the psychological morbidity in four groups. Group A consisted of geriatric subjects who visited the Psychiatric Outpatient Department. Group B consisted of geriatric subjects suspected to have psychiatric illness and referred from the Geriatric Clinic. Group C consisted of householders living in Varanasi in the hope of attaining "moksha" and were paying for their boarding and lodging. They had occasional contact with their family members. Group D consisted of ascetics who had left their families earlier, and their daily living costs were borne by Mumukshu Bhavan (old age home). This study suggested that the prevalence of depressive disorders was highest among those suspected to have psychiatric disorders referred to geriatric clinics and least in ascetics.

In India with majority of its population aged less than 30, the problems and issues of its grey population has not been given serious consideration and only a few studies on them have been attempted in our country. To reap the advantage of demographic dividend, the focus is mainly on the children and the youth and fulfillment of their basic needs for proper development. Also the traditional Indian society and the age-old joint family system have been instrumental in safeguarding the social and economic security of the elderly people in the country. However, with the rapid changes in the social scenario and the emerging prevalence of nuclear family set-ups in India in recent years the elderly people are likely to be exposed to emotional, physical and financial insecurity in the years to come. This has drawn the attention of the policy makers and administrators at central and state governments, voluntary organizations and civil society. In view of the increasing need for intervention in area of old age welfare, Ministry of Social Justice and Empowerment, Government of India adopted 'National Policy on Older Persons' in January, 1999. The policy provides broad

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guidelines to State Governments for taking action for welfare of older persons in a proactive manner by devising their own policies and plans of action. The policy defines 'senior citizen' as a person who is 60 years old or above. It strives to ensure well-being of senior citizens and improve quality of their lives through providing specific facilities, concessions, relief, services etc. and helping them cope with problems associated with old age. It also proposes affirmative action on the part of Government Departments for ensuring that the existing public services for senior citizens are user friendly and sensitive to their needs. It provides a comprehensive picture of various facilities and covers many areas like financial security, health care, shelter education, welfare, protection of life and property etc. Although India is the second-most populous country in the world in terms of elderly population, there has been meager research on depression in elderly, and none of the effective screening tool has developed to compile the research. The most common instruments that have been used to diagnose depression include international classification of diseases (ICD), tenth revision (ICD-10) criteria, patient health questionnaire-9, Zung depression scale, and case detection schedule, etc. In most of the studies, the age cut-off which has been used to identify elderly patients is 60 or above. The sample size in community-based studies has ranged from as low as 70 to as high as 7150 and prevalence of depression has ranged from 8.9% to 62.16%. Some of the community-based studies have evaluated the prevalence of other psychiatric disorders too and have reported depression/affective disorders to be the most common psychiatric morbidity (Tiwari SC 2000, 2011, Sood, A. 2006). A study was conducted by the (Ukamaka Gloria Mgbeojedo et.al. 2022). In there study they find that the Igbo version of GDS-15 is a valid and culturally specific instrument and can be used for assessing depression among Igbo older adults in Nigeria. In this background, this article attempts to develop the Hindi version of geriatric depression scale for Indian elderly population.

Methods

Participants:

Data were collected from various places such as old age home, rural areas and urban areas. Participants were volunteers from the community and old age home and willing to participate in research. The sample of the study was comprised of 120 male and 56 females with the mean age 71.45, and SD=9.4 (Range 60-80⁺ years). The mother language of all participants was Hindi. The sample was drawn from the diverse education level, residential areas and socioeconomic conditions. Out of 176 participants, 120 were male (68%) and remaining were females (32%). Maximum participants belonging to middle class family (N=144) and had educational level of High school and middle. More than 90% respondents were married and had a more than 3 children. The occupation of participants is concern with pensioner and former. All participants had provided inform consent to their participation.

Tools:

1. The geriatric depression scale (Yesavage, 1983): This scale was first created by yesavage, et. al. (1983) has been tested and used extensively with the older population. The Geriatric Depression Scale-15 (GDS-15) is a self-report measure of depression in older adults. Users respond in a "Yes/No" format. The GDS was originally developed as a 30-item instrument. Since this version proved both time-consuming and difficult for some patients to complete, a 15-item version was developed. The shortened form is comprised of 15 items chosen from the Geriatric Depression Scale-Long Form (GDSL). These 15 items were chosen because of their high correlation with depressive symptoms in previous validation studies (Sheikh & Yesavage, 1986). Of the 15 items, 10 indicate the presence of depression when answered positively while the other 5 are indicative of depression when answered negatively. This form can be completed in approximately 5 to 7 minutes, making it ideal for people who are easily fatigued or are limited in their ability to concentrate for longer periods of time. A validation study was conducted by Sheikh and Yesavage (1986) in which the GDS-S was compared

to the GDS-L in differentiating depressed from non-depressed patients. Both measures were successful in classifying the 2 populations accurately with a reported correlation of ($r=.84$), $p < .001$.

2. The Brief Assessment Schedule Depression Cards (BASDEC) Boon Loke et al 1996: BASDEC consists of 19 cards, each with a statement of a symptom in big bold letters. In that study, BASDEC had a sensitivity of 71% and specificity of 88% among non-demented geriatric inpatients using a cut of score of 7. The adjusted PPV was 72%. There has been no replication study to date.

3. HMMSE-The Hindi version mini mental status examination (S. Gopal Jee, Dwivedi, C.B. and Pandey, R. 1996): It assess on individual on 11 content areas and 19 items related to different aspects of mental and cognitive functioning. These areas include time orientation, place orientation, attention, calculation, recall, naming, repetition reading, writing and coping of a figure. The total score of this scale range from 0-30. The reliability and validity of the scale was very high. Lower the score indicates cognitive impairment in aged person.

Procedure: A group of five clinical psychologists practicing in psychiatric set up were entrusted with the job of translating the item of the original version of GDS-15 in to Hindi (yesavage et al 1983). They were requested to retain the original psychological content and grammatical structure of each item. Two bilingual expert as well as three clinical psychologist from varanasi, they edited the Hindi translation obtain from each of this expert. Most of the test items though, could be directly translated, some item required restructuring and adaptation suitable to Hindi speaking Indians. The cross language equivalence of Hindi version of GDS-15 was ascertained by back translation method (Brisline, 1970). The original English version of GDS-15 was adjusted for similarity of item content on a three point scale 1-exactly similar, 3-entirely dissimilar by a panel of five experts. None of the item obtained a rating of 3 by any expert which attested the psycholinguistic equivalence of the two versions.

The measures in the present study were including in the battery of cognitive test which took approx 40 min to complete. The HGDS-15 was administer on the reliability sample(N=176) either individual or group by trained examiner who was unaware the propose of examination response to each item to scoring procedure of original version of GDS-15 and total score was obtain by summing the item score.

Then item analysis was carried out by computing correlation between item score and total score. Before evaluating the psychometric property of the GDS-15, Its Hindi version was developed. The item of English version of GDS (15 items) were translate in Hindi and the Hindi version of scale was submitted to a panel of three subject expert for evaluating the adequacy of translated item content on the three point scale(1-exactly similar),(3= entirely dissimilar) the comment of the expert of reviewed. None of the item obtain a rating of 3 by any expert which at least the psychologist equivalence of the two version. The entire expert suggested that it will be more appropriate to the screening of GDS-15. After establishing a psycholinguistic equivalence, the GDS-15 was administrator on a small sample of 20 aged populations (in which 10 literate 10 illiterate 10 male and 10 female) whose age range from 60 to 80 years. The purpose of this pilot study was to evaluate the adequacy of communication of meaning of HGDS-15 in terms of item content and attend emotionally aspect of the target population. Review of responses that revealed that scale is free from item ambiguity and there was no evidence of difficult in understanding either the instruction or the intended meaning of any item. This revised and find HGDS-15 was than administer on the final sample (N = 176) in order to examine its psychometric properties.

Results

Mean and standard deviation of all the items were computed which are given in table -1. The mean of the responses to the scale ranged from 2.63 to 3.77 and SD of the responses to the scale ranged from 0.972 to 1.19. A perusal of table-2 the minimum mean score was found on item 6 and maximum score was concern with item no 2, which indicate that item no 6 is more sensitive and person feel maximum wary so they scored minimum.

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Table 1: Mean of SD of the items of GDS-15 Hindi version (N=176)

Item no	Mean	S.D.	N
GDS1	2.68	1.19	176
GDS2	3.77	1.18	176
GDS3	3.25	1.16	176
GDS4	3.26	1.18	176
GDS5	2.72	1.13	176
GDS6	2.63	.97	176
GDS7	2.65	1.06	176
GDS8	3.12	1.28	176
GDS9	3.69	1.09	176
GDS10	3.26	1.16	176
GDS11	2.82	1.21	176
GDS12	2.04	1.19	176
GDS13	3.01	1.17	176
GDS14	3.11	1.25	176
GDS15	3.40	1.29	176

To assess the psychometric adequacy of the item translated in Hindi version, they were analyzed by using item total correlation. The item total correlation ranged from 0.16 to 0.70 and all items were statistically significant which is presented in table no 2.

Table-2 Inter item correlation matrix for GDS-15 Hindi version

	GDS 1	GDS 2	GDS 3	GDS 4	GDS 5	GDS 6	GDS 7	GDS 8	GDS 9	GDS1 0	GDS1 1	GDS1 2	GDS1 3	GDS1 4	GDS1 5
GDS1		.23	.36	.35	.33	.20	.37	.25	.043	.17	.25	.31	.19	.29	.13
GDS2			.40	.27	.21	.30	.23	.22	.11	.25	.17	.33	.05	.28	.15
GDS3				.61	.38	.21	.41	.48	.70	.24	.39	.47	.13	.43	.17
GDS4					.42	.25	.49	.51	.13	.18	.31	.45	.25	.51	.25
GDS5						.23	.65	.35	.05	.17	.28	.34	.23	.32	.15
GDS6							.31	.21	.09	.21	.21	.35	.03	.34	.17
GDS7								.34	.05	.26	.33	.43	.27	.36	.18
GDS8									.13	.28	.33	.51	.11	.53	.29
GDS9										.08	.009	.20	.05	.11	.14
GDS1 0											.15	.28	.13	.19	.18
GDS1 1												.49	.30	.33	.13
GDS1 2													.17	.48	.23
GDS1 3														.21	.05
GDS1 4															.26

Results of table-2 indicates that HGDS3 and HGDS9 are highly positively correlated with (0.70), HGDS5 and HGDS7 item are also highly correlated (0.65), HGDS4 and HGDS5, HGDS8 and HGDS12 are also highly correlated (.51). No of the alpha item deleted values excluded the overall alpha which provides the important evidence of the reliability of the item of HGDS-15. The internal consistency of the HGDS-15 was assessed by computing Cronbach alpha coefficient. The reliability of the scale was found to be 0.87. The results indicate that none of the items were psychometrically

poor. The item total statistic (homogeneity index) with Cronbach alpha has been given in table-3, which indicates the good Cronbach alpha ranged from 0.72 to 0.74.

Table -3 Item total statistics (homogeneity index) reliability of HGDS-15

Item no	Scale Mean If Item Deleted	Scale variance If item deleted	Corrected item total correctio	Cronbach's alpha if item deleted
GDS1	90.20	354.06	.494	.728
GDS2	89.12	355.80	.454	.730
GDS3	89.64	347.55	.662	.722
GDS4	89.63	345.96	.690	.720
GDS5	90.17	352.15	.570	.726
GDS6	90.26	361.16	.417	.734
GDS7	90.23	350.91	.642	.724
GDS8	89.73	345.53	.639	.720
GDS9	89.19	369.70	.158	.742
GDS10	89.63	358.40	.404	.732
GDS11	90.07	352.32	.522	.727
GDS12	89.85	345.19	.700	.719
GDS13	89.88	361.73	.328	.735
GDS14	89.77	345.79	.648	.720
GDS15	87.49	359.09	.342	.734

The retest reliability calculated after an interval of one month and found to be significant on 0.01 level of confidence (0.73, P<.001) which showed that test work stable over time for asserting the reliability coefficient of GDS-15. Split half method was applied which is presented in table 4.

Table-4 Reliability statistics of Test

	PART 1	Value	
Cronbach's Alpha			.72
		No of item	28 ^a
	PART2	Value	.74
		No of item	28 ^b
		Total no of item	56
		Correlation between form	.235
Spearman Brown Coefficient		Equal Length	.381
		Unequal Length	.381
		Guttman split half coefficient	.231

In this table there are two parts in test item. The Cronbach's Alpha Value of part one is 0.72 and value of part second is 0.74 which is also highly statistically Significant ((P<.001), Spearman Brown Coefficient of Correlation is 0.381 which Indicate the reliability of the Item.

To assess the validity of items, an item discrimination index was obtained by computing statistical differences (t value) for each item between high and low depression (Q3=high and Q1=low). This index was used in the item difficulty index and coefficient alpha to determined which item to drop. The discrimination index for each item has been presented in table 5. The indices were found to significant for all items on .0001 levels.

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Table – 5 Item discrimination Index for HGDS-15

Items	95% confidence Interval of the difference				
	t	df	Mean difference	lower	upper
GDS1	29.99**	175	2.68	2.51	2.86
GDS2	42.99**	175	3.76	3.59	3.94
GDS3	32.20	175	3.25	3.08	3.42
GDS4	36.77	175	3.26	3.08	3.43
GDS5	32.00	175	2.72	2.55	2.88
GDS6	35.94	175	2.63	2.49	2.78
GDS7	33.27	175	2.65	2.50	2.81
GDS8	32.81	175	3.16	2.97	3.35
GDS9	45.00	175	3.69	3.53	3.86
GDS10	37.23	175	3.26	3.08	3.43
GDS11	30.90	175	2.82	2.64	3.00
GDS12	33.96	175	3.04	2.86	3.22
GDS13	34.55	175	3.01	2.84	3.18
GDS14	33.03	175	3.11	2.93	3.30
GDS15	34.89	175	3.39	3.21	3.59

For ascertaining the convergent validity coefficient of HGDS-15, two criterion measure such as BRIF ASSESSMENT SCHEDULE DEPRESSION CARD (BASDEC) and Hindi version of Mini Mental Status Examination (HMMS) were taken. The correlation Coefficient between HGDS-15 score and item of the BASDEC and total score of MMSE were calculated. The obtained validity coefficient is reported in Table 6.

Table- 6 Convergent validity coefficient of HGDS-15 with two criterion measure of depression

Sub Scale	Correlation
HMMSE	0.28
HBASDEC	0.56

Discussion:

The Hindi version of GDS-15 was developed to adept and accesses its suitability for Indian sample. The psychometric properties of Hindi version of GDS-15 were evaluated. The Cronbach alpha for GDS-15 of Hindi version was obtained 0.74 and the item total correlation range from .21 to .70. For the French version, the Cronbach alpha value was obtained 0.74, which are nearly similar to Hindi version of GDS-15. The differences in the value of internal reliability of HGDS-15 may be because of social & cultural background of the population. On the basis of result it can be concluded that the value of alpha is considerably good (.72) for HGDS-15. According to the rule of thumb when alpha lies to 0.70 and 0.80, the internal consistency of the instrument was considered to be acceptable and good when alpha lies between .80 and .90. In this study the alpha is .72 which is also good reliability index and useful in the future research and clinical setting. It can be used in the field of temperament, emotion and clinical research. It may be also useful in hospital setting.

The HGDS-15 provide a quick assessment of depression in elderly person and total score of this test reflects the gloomy mood in geriatric population. Accordingly for obtaining the convergent validity coefficient, total score on HGDS-15 were correlated with various items of BASDEC and total score of MMSE, but MMSE are not correlated with HGDS-15 because MMSE is a screening tool of cognitive impairment. Yeasuage (1986) and Parmelee et al. (1989) reported that the scale was highly internal consistent and a clean factor structure emerged basically uni-dimensional. The finding of the present study also extends the result of Miriam et.al, who were also examined the psychometric properties of the short version of GDS-15 item. Brown et al. reported that the GDS-15 is broadly

accepted in the clinical and research setting and it is suitable for rapid screening tools of Geriatric depression. Some study (Jang et al. 2001 and Chau et al. 2006) have demonstrated that the full GDS item 30 and short GDS-15 present a similar index of criterion validity. But a Brazilian study (Sousa et al. 2007) has demonstrated that better performance of full version.

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Marital Adjustment of Employed and Unemployed Females of Nuclear Families

Rani Kumari*

Abstract

The aim of the present study was to measure and compare marital adjustment of employed and unemployed females living in nuclear and joint families of rural and urban areas. The study was conducted on a sample of 200 married females of age range from 30 to 50 years. The sample was drawn randomly from both rural and urban areas of Patna district of Bihar. 'Marital Adjustment Questionnaire' constructed and standardised by Kumar and Rohatgi (1987) has been used to measure marital adjustment of subjects. A self made 'Personal Information Inventory' was used to collect personal information of subjects. Application of t' test revealed that employed females are significantly lower on marital adjustment than unemployed females. Rural females are significantly higher on marital adjustment than urban females. Females from nuclear families are significantly higher on marital adjustment than those from joint families.

Keywords:- Adjustment, Marital, Females, Employed, Family, Nuclear

Introduction & Objectives

Marriage is one of the most important social institutions and plays a crucial role in the psychological, emotional, and social development of individuals. The success and stability of married life largely depend on the level of adjustment between husband and wife. Marital adjustment refers to the process through which partners accommodate each other's needs, expectations, attitudes, and behaviours in order to maintain harmony and satisfaction in their relationship. According to Spanier (1976), marital adjustment involves consensus, satisfaction, cohesion, and affectional expression between partners. A well-adjusted marriage contributes significantly to the mental health and well-being of individuals, whereas poor marital adjustment may lead to stress, dissatisfaction, and interpersonal conflicts. In recent decades, rapid social and economic changes have transformed family structures and marital roles. One of the most significant changes is the increasing participation of women in education and employment. Traditionally, women were primarily responsible for domestic duties and child-rearing, while men were regarded as the primary earners. However, modernization, urbanization, and improved educational opportunities have enabled women to participate actively in the workforce. This shift has influenced marital relationships and family dynamics in many ways (Rani & Rani, 2021).

Employment status of women is considered an important variable influencing marital adjustment. Employment provides women with financial independence, social recognition, and opportunities for personal growth, which may enhance their self-esteem and life satisfaction. Studies have indicated that employed women often experience higher levels of psychological well-being and marital satisfaction due to their economic contribution and sense of autonomy (Nathawat & Mathur, 1993). Similarly, Paul (2022) reported that employment may positively influence marital adjustment because working women tend to develop greater confidence and decision-making abilities within the family. However, employment may also create additional challenges for women. Working women often have to balance professional responsibilities with household duties, childcare, and marital obligations. This dual role can sometimes lead to role conflict, stress, and fatigue. Research has shown that work-family conflict and unequal distribution of domestic responsibilities may negatively affect marital adjustment among employed women (Burley, 1995). Therefore, the impact of

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employment on marital adjustment may vary depending on factors such as spousal support, work environment, and family responsibilities.

On the other hand, unemployed or non-working women may have more time to devote to household responsibilities and family care, which may contribute to family stability. However, lack of employment may sometimes result in economic dependence, limited social interaction, and reduced self-esteem, which may influence marital relationships negatively (Joshi & Kandpal, 2022). Hence, the relationship between employment status and marital adjustment is complex and requires systematic investigation.

Another important factor influencing marital adjustment is family structure. In contemporary society, the nuclear family has become increasingly common due to industrialization, urbanization, and migration. A nuclear family generally consists of a husband, wife, and their children living independently from extended family members. While nuclear families provide greater privacy and autonomy to couples, they also place greater responsibility on spouses for managing household and childcare duties without the support of extended family members (Sabre, 2016). Studies have shown that family structure may influence the level of marital adjustment among couples. Women living in nuclear families often experience greater independence and participation in decision-making processes within the household. According to Sabre (2016), women belonging to nuclear families tend to show higher levels of marital adjustment due to increased autonomy and mutual understanding between spouses. However, lack of social support in nuclear families may sometimes create stress, especially when both partners are employed and must manage multiple responsibilities.

Recent research has continued to explore the relationship between employment status and marital adjustment. For example, Subba and Varte (2023) found that socio-economic conditions, family environment, and communication patterns significantly influence marital harmony among married women. Similarly, Jan (2024) emphasized that successful marital relationships depend on mutual understanding, cooperation, and the ability of partners to adapt to changing social roles and expectations.

From a psychological perspective, marital adjustment is not a static condition but a continuous process that evolves over time as couples face different life circumstances such as financial challenges, career demands, and parenting responsibilities. Effective communication, emotional support, trust, and mutual respect are essential components of a well-adjusted marriage. These factors may be influenced by the employment status of women as well as by the family environment in which they live.

Despite the increasing participation of women in the workforce, limited research has focused specifically on marital adjustment among employed and unemployed women living in nuclear families, particularly in the Indian socio-cultural context. Understanding the differences in marital adjustment between employed and unemployed women is important for identifying the psychological and social factors that contribute to marital harmony. Therefore, the present study has the objectives to compare the marital adjustment of employed and unemployed females belonging to nuclear and joint families and stemming from rural and urban areas.

Hypotheses

- a. There will be significant difference between employed and unemployed female groups on marital adjustment.
- b. There will be significant effect of family size on marital adjustment of females.
- c. There will be significant difference between rural and urban females on marital adjustment

Sample

The study was conducted on a sample of 200 females of age range from 30 to 50 years in which 90 were employed and 110 were unemployed. The sample was drawn randomly from both rural and urban areas of Patna district of Bihar. The sample comprised of females from both nuclear and joint family structures.

Tools/Instruments

'Marital Adjustment Questionnaire' constructed and standardised by Kumar and Rohatgi (1987) has been used to measure marital adjustment of subjects. A self made Personal Information Inventory was used to collect personal information of subjects.

Statistical Analysis

Obtained data were put to statistical analysis. Mean, S.D. and 't' ratios were calculated.

Results and Discussion

The comparison of marital adjustment scores between employed and unemployed females demonstrates significant difference. The results indicate that employed females ($M = 21.34$, $SD = 3.55$) obtained higher marital adjustment scores than unemployed females ($M = 18.92$, $SD = 3.41$). The obtained t value (4.88) is significant at the .01 level (Table-1), indicating that employed females demonstrate significantly better marital adjustment than unemployed females. This finding suggests that employment plays an important role in enhancing the quality of marital relationships. Employment provides women with financial independence, social recognition, and opportunities for personal development, which may increase their confidence and participation in family decision-making. As a result, working women may experience higher levels of marital satisfaction and psychological well-being. Similar findings have been reported in earlier studies which indicate that employment positively influences marital adjustment among women (Nathawat & Mathur, 1993; Paul, 2022). Further analysis of rural employed and rural unemployed females reveals that rural employed females ($M = 20.76$, $SD = 3.46$) scored significantly higher than rural unemployed females ($M = 17.65$, $SD = 3.08$). The t value (4.45) was significant at the .01 level. This finding indicates that employment has a stronger positive effect on marital adjustment among rural women. In rural areas, employed women may gain greater economic independence and social status compared to unemployed women. Employment may also enhance their self-esteem and reduce financial stress within the family, thereby improving marital relationships. Previous research has highlighted that economic participation of women contributes significantly to improved family relationships and marital harmony (Joshi & Kandpal, 2022).

The comparison between urban employed and urban unemployed females shows that urban employed females ($M = 21.71$, $SD = 3.57$) scored slightly higher than urban unemployed females ($M = 20.76$, $SD = 3.23$). However, the obtained t value (1.39) was not significant, indicating that employment status does not significantly affect marital adjustment among urban females. One possible explanation for this result may be that urban women, regardless of employment status, have greater access to education, social support, and awareness about marital roles and relationships. Urban family environments often promote better communication and shared decision-making between spouses, which may lead to relatively similar levels of marital adjustment among both employed and unemployed women. Similar observations have been reported in recent studies examining marital relationships in urban contexts (Subba & Varte, 2023; Jan, 2024).

Table – 1 : Showing Means, S.Ds. and 't' ratios of Marital Adjustment Scores – Employed and Unemployed Females.

Groups	N	Means	S. D.	df	't' ratios	Level of Sign.
Employed	90	21.34	3.55	198	4.88	.01
Unemployed	110	18.92	3.41			
R-Emp	35	20.76	3.46	98	4.45	.01
R-Unemp	65	17.65	3.08			
U-Emp	55	21.71	3.57	98	1.39	NS
U-Unemp	45	20.76	3.23			

Table–2 presents the comparison of marital adjustment scores between females belonging to Nuclear Family Systems (NFS) and Joint Family Systems (JFS). The results indicate that females

belonging to nuclear families ($M = 21.75, SD = 3.62$) scored significantly higher on marital adjustment compared to females belonging to joint families ($M = 17.10, SD = 3.53$). The obtained t value (8.91) is significant at the .01 level. This finding suggests that women living in nuclear families tend to experience better marital adjustment than those living in joint families. One possible explanation for this finding is that nuclear families provide greater autonomy and privacy for couples, allowing them to make independent decisions and manage family responsibilities more effectively. In nuclear families, spouses interact more directly with each other and are less influenced by the expectations and interference of extended family members. Such conditions may promote better understanding, communication, and emotional intimacy between partners. Previous studies have also indicated that couples living in nuclear families often report higher levels of marital satisfaction due to greater independence and mutual cooperation (Rani & Rani, 2021; Sabre, 2016).

The comparison between rural nuclear family females and rural joint family females also revealed significant differences. Rural nuclear family females ($M = 21.11, SD = 3.42$) scored significantly higher than rural joint family females ($M = 16.37, SD = 2.93$), with a t value of 7.44 significant at the .01 level. This result suggests that nuclear family environments may be particularly beneficial for rural women. In rural joint families, traditional gender roles and hierarchical family structures may restrict women’s autonomy and decision-making power, which may negatively influence marital adjustment. On the other hand, nuclear family settings may provide rural women with greater independence and opportunities for communication with their spouses. Similarly, the comparison between urban nuclear family females and urban joint family females indicates that urban nuclear family females ($M = 22.17, SD = 3.71$) scored significantly higher than urban joint family females ($M = 18.61, SD = 3.06$). The t value (4.70) is significant at the .01 level. This finding suggests that the advantages of nuclear family systems in promoting marital adjustment are evident in both rural and urban contexts. Urban nuclear families may provide greater flexibility in marital roles and responsibilities, which may strengthen the emotional bond between spouses. The findings indicate that family structure is an important determinant of marital adjustment among women. Females living in nuclear families tend to demonstrate better marital adjustment than those living in joint families. The results emphasize the role of autonomy, communication, and mutual understanding in maintaining healthy marital relationships. These findings are consistent with earlier studies that highlight the influence of family structure on marital satisfaction and adjustment among married couples (Joshi & Kandpal, 2022; Subba & Varte, 2023).

Table – 2 : Showing Means, S.Ds. and ‘t’ ratios of Marital Adjustment Scores – NFS and JFS Females.

Groups	N	Means	S. D.	df	‘t’ ratios	Level of Sign.
NFS	125	21.75	3.62	198	8.91	.01
JFS	75	17.10	3.53			
R- NFS	50	21.11	3.42	98	7.44	.01
R- JFS	50	16.37	2.93			
U- NFS	75	22.17	3.71	98	4.70	.01
U- JFS	25	18.61	3.06			

Residential area has been also found casting significant effect on marital adjustment. The mean score of rural females ($M = 18.74, SD = 3.53$) was found to be lower than that of urban females ($M = 21.28, SD = 3.65$). The obtained t value (5.00) is significant at the .01 level (Table-3), indicating that urban females experience significantly better marital adjustment than rural females. This difference may be attributed to factors such as better education, higher socio-economic status, improved communication patterns, and greater awareness regarding marital roles among urban women. Studies have shown that urban women often experience greater exposure to modern values, improved decision-making opportunities, and more egalitarian marital relationships, which might have contributed to better marital adjustment (Joshi & Kandpal, 2022; Subba & Varte, 2023). The second comparison deals with females belonging to nuclear family systems in rural and urban areas.

The mean score of rural nuclear family females ($M = 21.11$, $SD = 3.42$) is slightly lower than that of urban nuclear family females ($M = 22.17$, $SD = 3.71$). The t value (1.64) is not significant, indicating that there is no significant difference between rural and urban females belonging to nuclear families in terms of marital adjustment. This finding suggests that the structure of the nuclear family may create similar marital dynamics regardless of geographical location. Nuclear families often promote direct interaction between spouses, shared decision-making, and greater autonomy, which may lead to relatively similar levels of marital adjustment among couples (Rani & Rani, 2021).

The third comparison focuses on females belonging to joint family systems in rural and urban areas. The results indicate that rural joint family females ($M = 16.37$, $SD = 2.93$) scored significantly lower than urban joint family females ($M = 18.61$, $SD = 3.06$). The obtained t value (2.99) is significant at the .01 level. This finding suggests that urban females living in joint families demonstrate better marital adjustment than rural females in similar family structures. One possible explanation for this difference may be the variation in socio-cultural attitudes and educational levels between rural and urban contexts. Urban women may possess better communication skills and greater awareness of interpersonal relationships, which may help them adjust more effectively even within the complexities of joint family environments. Previous studies have also reported that socio-economic conditions and cultural norms significantly influence marital adjustment among women (Paul, 2022; Jan, 2024). Another important comparison concerns employed females from rural and urban areas. The mean score of rural employed females ($M = 20.76$, $SD = 3.46$) was slightly lower than that of urban employed females ($M = 21.71$, $SD = 3.57$). The t value (1.25) is not significant, indicating that employment status may provide similar advantages for women regardless of rural or urban background. Employment may enhance women's confidence, independence, and social interaction, which may positively influence marital relationships. Working women may also contribute economically to the family, which often increases their participation in family decision-making and improves marital satisfaction. Similar findings have been reported in earlier research indicating that employed women often experience better psychological well-being and marital harmony compared to unemployed women (Nathawat & Mathur, 1993; Rani & Rani, 2021).

The final comparison examines unemployed females from rural and urban areas. The results show that rural unemployed females ($M = 17.65$, $SD = 3.08$) scored significantly lower than urban unemployed females ($M = 20.76$, $SD = 3.23$). The t value (5.06) is significant at the .01 level. This finding indicates that urban unemployed women show better marital adjustment than rural unemployed women. One possible reason for this difference may be the availability of better social support systems, educational exposure, and awareness about marital relationships in urban areas. Rural unemployed women may face greater economic dependence, limited opportunities for social interaction, and traditional gender role expectations, which may affect their marital adjustment negatively. Research has suggested that socio-economic conditions and cultural expectations play a significant role in shaping women's marital experiences (Subba & Varte, 2023; Jan, 2024).

Table – 3 : Showing Means, S.Ds. and 't' ratios of Marital Adjustment Scores – Rural and Urban Females.

Groups	N	Means	S. D.	df	't' ratios	Level of Sign.
Rural	100	18.74	3.53	198	5.00	.01
Urban	100	21.28	3.65			
R-NFS	50	21.11	3.42	123	1.64	NS
U-NFS	75	22.17	3.71			
R-JFS	50	16.37	2.93	73	2.99	.01
U-JFS	25	18.61	3.06			
R-Emp	35	20.76	3.46	88	1.25	NS
U-Emp	55	21.71	3.57			
R-Unemp	65	17.65	3.08	108	5.06	.01
U-Unemp	45	20.76	3.23			

Conclusions

The study finally led to the following conclusions :-

1. Employed females are significantly higher on marital adjustment than unemployed females.
2. Urban females are significantly higher on marital adjustment than rural females.
3. Females from nuclear families are significantly higher on marital adjustment than those from joint families.

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