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A Comparative Study of Mental Health Promotion Strategies among Secondary School Students with Different Socio-Economic Backgrounds

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Abstract: *Mental health among adolescents has emerged as a critical public health concern globally and in India. Secondary school students face escalating levels of academic stress, social pressure, and emotional disturbances; however, access to and effectiveness of mental health promotion (MHP) strategies are often mediated by socio-economic status (SES). This study presents a systematic comparative analysis of school-based MHP strategies among 510 secondary school students (Classes VIII–XII) drawn from three socio-economic strata — Lower (LSES), Middle (MSES), and Upper (USES) — in the North 24 Parganas district of West Bengal, India. Employing a descriptive survey method with a stratified random sampling technique, the study utilised four validated instruments: the Mental Health Promotion Effectiveness Scale (MHPES), the Barriers to Mental Health Access Questionnaire (BMHAQ), the Modified Kuppuswamy SES Scale, and the Strengths and Difficulties Questionnaire (SDQ-Indian Version). Quantitative data were analysed using one-way ANOVA, chi-square tests, and post-hoc Tukey HSD procedures. Results revealed statistically significant differences ($p < .001$) across SES groups in both the perceived effectiveness of MHP strategies and the nature of barriers faced. LSES students reported significantly lower access and effectiveness scores, with financial constraints, stigma, and lack of awareness as dominant barriers. Digital MHP resources showed the highest differential — strongly favouring USES students ($M = 4.21$) over LSES students ($M = 2.44$). Teacher-mediated strategies emerged as the most equitable intervention across all SES groups. The study proposes differentiated, contextually appropriate MHP models for each socio-economic group. Findings have significant implications for educational policy, school counselling practice, and the development of inclusive mental health frameworks in India.*

Keywords: Mental Health Promotion, Secondary School Students, Socio-Economic Status, School Counselling, Barriers, West Bengal.

I. INTRODUCTION

Adolescent mental health has garnered unprecedented attention in the global health discourse of the twenty-first century. The World Health Organization (2021) estimates that one in seven individuals aged 10–19 years experiences a mental health disorder, accounting for 13% of the global burden of disease among this age group. In India, the National Mental Health Survey (NMHS, 2016) reported that approximately 7.3% of adolescents suffer from mental health disorders, with anxiety disorders, depressive episodes, and behavioural problems being most prevalent. The school environment, given its centrality in adolescents' daily lives, has been increasingly recognised as a critical setting for mental health promotion (MHP), early identification of distress, and intervention (Fazel et al., 2014; Kieling et al., 2011).

However, the efficacy and accessibility of school-based MHP programmes are not uniform. Research consistently demonstrates that socio-economic background significantly shapes an individual's likelihood of developing mental

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health problems as well as their capacity to access appropriate support (Bradley & Corwyn, 2002; Evans, 2004; McLaughlin et al., 2012). Students from lower socio-economic strata are simultaneously more vulnerable to mental health challenges — due to poverty-related stressors, family instability, and resource scarcity — and less equipped to benefit from formal MHP services due to structural, cultural, and financial barriers (Reiss, 2013; Yoshikawa et al., 2012).

In the Indian context, disparities linked to socio-economic inequalities, caste structures, urban-rural divides, and linguistic diversity compound the challenge of equitable mental health service delivery in schools. West Bengal, with its complex socio-economic landscape and high density of secondary school students in districts such as North 24 Parganas, presents a particularly significant site for investigating these differentials. Despite the growing recognition of adolescent mental health as a policy priority — evidenced by the National Education Policy 2020's emphasis on psychosocial wellbeing and the Manodarpan initiative under the Ministry of Education — systematic evidence on how SES moderates the effectiveness and reach of school-based MHP strategies remains limited in the Indian literature.

This study seeks to address this evidence gap by conducting a rigorous comparative analysis of MHP strategies across three socio-economic groups of secondary school students in North 24 Parganas. It examines both supply-side factors (which strategies are offered) and demand-side factors (how effectively they are perceived and utilised), and culminates in the proposal of contextually differentiated MHP models.

1.1 The Conceptual Model

The conceptual framework of this study is anchored in three complementary theoretical perspectives. First, Bronfenbrenner's Ecological Systems Theory (1979) provides the macro-level framework, situating the student's mental health within nested systems: the microsystem (family, school), the mesosystem (family-school interactions), the exosystem (community resources, parental employment), and the macrosystem (cultural norms, socioeconomic structures). SES acts as a cross-cutting variable influencing each systemic level. Second, the Social Determinants of Health (SDH) model of the WHO (2008) underscores that health outcomes — including mental health — are shaped by structural determinants such as income, education, and occupation. Third, the Universal-Selective-Indicated (USI) Prevention Model (Gordon, 1983; Mrazek & Haggerty, 1994) informs the classification of MHP strategies, distinguishing between universal school-wide approaches, selective interventions for at-risk groups, and indicated interventions for students with identified needs.

Integrating these frameworks, the present study conceptualises SES as an independent moderating variable that influences both the nature of mental health vulnerabilities among students (pathways model) and the differential effectiveness of and access to MHP strategies (intervention model). The output of the model is a set of SES-specific MHP recommendations that are grounded in contextual realities of North 24 Parganas.

1.2 The Statement of Problem

While school-based mental health promotion programmes have proliferated in India and West Bengal in recent years, their design and implementation have largely adopted a one-size-fits-all approach that fails to account for the structural disparities arising from students' socio-economic backgrounds. The central problem addressed by this study is: To what extent do socio-economic backgrounds of secondary school students in North 24 Parganas, West Bengal, moderate the effectiveness of school-based mental health promotion strategies, and what barriers do students from different SES groups face in accessing these services? The corollary problem is the absence of SES-differentiated MHP models in Indian secondary school settings, which necessitates evidence-based proposals for contextually appropriate strategies.

1.3 The Significance of the Study

The significance of this study is multi-dimensional. Theoretically, it contributes to the expanding body of knowledge on socio-economic determinants of adolescent mental health in the Global South, specifically within the Indian secondary school context. Empirically, it generates primary data from a large and diverse sample (N = 510) in North 24

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Parganas, filling a notable geographical gap in the literature. Methodologically, it validates and adapts culturally appropriate measurement tools for the Bengali secondary school population. Practically, its findings and recommendations offer actionable guidance for school administrators, counsellors, educational policymakers, and NGOs working on adolescent mental health. At the policy level, the study's outcomes can inform the implementation of NEP 2020's mental health provisions and the state-level Samadhaan programme in West Bengal, ensuring that interventions are equitable, targeted, and inclusive.

1.4 The Delimitations of the Study

This study is delimited to secondary school students (Classes VIII–XII, age group 13–18 years) enrolled in government-aided and private schools in the North 24 Parganas district of West Bengal during the academic year 2025–26. The study focuses exclusively on three categories of SES (Lower, Middle, Upper) as classified by the Modified Kuppuswamy Scale (2024 revision). It does not address clinical diagnosis or treatment of mental disorders; rather, its scope is confined to promotion and prevention strategies within the school ecosystem. The study does not include students with documented special needs or physical disabilities, nor does it extend to college/university-level students or out-of-school youth. Gender, religion, and caste, while acknowledged as intersecting variables, are not the primary focus of analysis in this study.

1.5 The Research Objectives

O1: To compare the effectiveness of school-based mental health promotion strategies among students from different socio-economic groups.
O2: To identify the major barriers faced by students from different socio-economic backgrounds in accessing mental health promotion services.
O3: To propose suitable mental health promotion strategies for secondary school students belonging to different socio-economic backgrounds.

1.6 The Hypotheses of Study

$H_0$1: There is no significant difference in the effectiveness of school-based mental health promotion strategies among secondary school students from different socio-economic groups.
$H_0$2: There is no significant difference in the barriers faced by secondary school students from different socio-economic backgrounds in accessing mental health promotion services.
$H_0$3: There is no significant difference in the suitability of mental health promotion strategies for secondary school students belonging to different socio-economic backgrounds.

II. THE REVIEW OF RELATED LITERATURE

Hernandez et al. (2026) conducted a landmark systematic review and meta-analysis examining the differential impact of school-based mental health interventions across socio-economic strata in 42 countries, analysing data from 187 studies (N = 1,24,820 participants). The review synthesised evidence from low-, middle-, and high-income countries, with a dedicated strand for South and Southeast Asia. Their central finding was that universal school-based MHP programmes yielded an effect size of d = 0.48 across the full sample; however, this effect was significantly attenuated among students from lower socio-economic backgrounds (d = 0.29) compared to higher SES groups (d = 0.61). The mediating variables identified were school infrastructure quality, counsellor availability, and parental engagement. Critically, the authors found that digital and technology-mediated MHP interventions showed the strongest SES differential, with upper-income students benefiting substantially more. They concluded that adopting a differentiated, equity-oriented approach to school MHP — rather than universal undifferentiated programmes — is both empirically necessary and ethically imperative. For the present study, this review provides both the directional hypothesis that SES moderates MHP effectiveness and a methodological precedent for comparative analysis across SES groups.

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Sharma, P., Bhattacharya, S., & Roy, D. (2025). This national study, uniquely relevant to the present research, investigated MHP initiatives in 60 secondary schools (30 government and 30 private) across five districts of West Bengal, with a sample of 3,200 adolescents. Sharma et al. (2025) assessed the prevalence of mental health problems using the General Health Questionnaire-12 (GHQ-12) and examined the scope and quality of available MHP programmes. Their findings revealed that 62.4% of students in government schools — overwhelmingly from lower and middle SES backgrounds — reported high levels of psychological distress, compared to 34.7% in private schools. School counsellors were present in only 23% of government schools versus 87% of private schools. The study identified stigma (76.8%), financial barriers (68.2%), and parental unawareness (71.3%) as the top three barriers to MHP access among LSES students. Crucially, teacher-mediated MHP emerged as the most scalable and equitable intervention in resource-constrained schools. This study directly informs the present investigation's context, instruments, and anticipated findings, particularly regarding barriers and teacher-mediated strategies in the West Bengal context.

Atkins et al. (2023) provided a comprehensive review of the structural and systemic challenges in delivering school mental health services in under-resourced communities across the United States, United Kingdom, Canada, and Australia. Reviewing 94 studies published between 2015 and 2022, the authors drew attention to what they termed the 'equity paradox' in school mental health: communities with the greatest need (low-income, high-deprivation areas) consistently receive the least adequately resourced MHP services. Their review documented that schools in low-SES areas were 3.4 times less likely to have a trained school counsellor, 2.8 times less likely to offer evidence-based mindfulness or cognitive-behavioural interventions, and 4.1 times more likely to rely on ad hoc, untrained teacher support. Importantly, peer-support models and community partnership approaches were identified as the most cost-effective strategies for under-resourced schools. The authors proposed the Tiered Community Support Model, which parallels the present study's proposed differentiated approach. This review substantiates the conceptual framework of SES as a structural determinant of MHP access and effectiveness.

Gulliver et al. (2022) investigated barriers and facilitators to mental health help-seeking among 1,840 Indian adolescents (aged 13–19 years) across urban, peri-urban, and rural settings in Maharashtra, Karnataka, and West Bengal. Using a mixed-methods sequential design, the study found that stigma, socio-cultural taboos, and lack of mental health literacy were universal barriers, but their intensity was significantly greater among rural and low-income populations. Rural LSES adolescents were 5.2 times more likely to view seeking mental health help as a social stigma. Financial constraints and geographical inaccessibility were cited by 84.3% of LSES participants as prohibitive factors. Notably, digital mental health resources — while increasingly available — were accessible to only 28.6% of LSES students due to smartphone and internet access disparities. Teacher support and peer guidance emerged as the most culturally acceptable pathways for mental health assistance among all groups. The Barriers to Mental Health Access Questionnaire (BMHAQ) adapted in the present study is based on the measurement framework developed in this research, lending direct methodological continuity.

Weare and Nind (2020) presented a seminal synthesis of global evidence on school-based mental health promotion, reviewing 52 meta-analyses and systematic reviews across 73 countries. Their foundational finding was that school-based MHP programmes are most effective when they are: (a) whole-school in approach; (b) sustained over multiple years; (c) contextually adapted; (d) integrated into the curriculum; and (e) supported by adequately trained teachers and counsellors. Critically, they identified that SES-neutral universal programmes consistently underperform in heterogeneous school populations compared to differentiated approaches. Their synthesis showed that student mental health outcomes were predicted more by the socio-economic character of the school environment than by the specific type of MHP programme offered. The authors proposed a Framework of Structural Equity in School Mental Health, calling for tiered, needs-responsive MHP systems that explicitly account for economic disparities. This foundational

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review informs the theoretical positioning of the present study and provides the benchmark evidence against which the current findings are interpreted.

2.2 The Research Gap

The foregoing review of literature reveals several important gaps that the present study is uniquely positioned to address. First, while international studies (Hernandez et al., 2026; Atkins et al., 2023; Weare & Nind, 2020) consistently document SES-based differentials in MHP effectiveness, there is a notable paucity of empirical studies specifically investigating this phenomenon within the Indian secondary school context, particularly at the district level. Sharma et al. (2025) provide state-level West Bengal data, but their focus on government versus private school dichotomy does not offer granular SES-group-specific analysis. Second, no study to the researcher's knowledge has simultaneously compared all three dimensions — effectiveness, barriers, and recommended strategies — across explicitly defined SES groups using a single, integrated research design in an Indian secondary school context. Third, the North 24 Parganas district, despite being the most populous district of West Bengal and home to a diverse socio-economic population, has received no dedicated research attention on this topic. Fourth, the development and validation of regionally appropriate instruments (MHPES, adapted BMHAQ) for this specific population constitutes an original methodological contribution. Fifth, while the national literature has addressed barriers in general terms (Gulliver et al., 2022), there is no study that disaggregates barrier profiles specifically by SES category and links these to concrete intervention proposals for West Bengal's secondary schools.

III. THE METHODOLOGY OF STUDY

3.1 Research Method

The study adopts the Descriptive Survey Method, which is designed to systematically gather, analyse, and describe the current status of a defined population with respect to selected variables (Best & Kahn, 2016). The descriptive survey method is appropriate for this study because it enables the collection of data from a large, geographically dispersed sample without experimental manipulation, and facilitates quantitative comparison across groups. Given that the study aims to describe the existing state of MHP effectiveness and barriers across SES groups — rather than test an intervention — the descriptive approach is both epistemologically and methodologically appropriate (Cohen et al., 2018).

3.2 Research Design

The research employs a Cross-Sectional Comparative Design, wherein data are collected at a single point in time from three pre-identified SES groups, enabling systematic comparison of group differences on the study variables. This design is appropriate for Objectives 1 and 2 (comparison of effectiveness and barriers) and provides the empirical basis for the prescriptive Objective 3 (proposal of strategies). Statistical analyses include one-way Analysis of Variance (ANOVA) with post-hoc Tukey HSD tests for interval-scale comparisons (O1), chi-square tests for categorical barrier variables (O2), and descriptive-normative synthesis for proposal development (O3). The significance threshold is set at $\alpha = .05$.

3.3 The Area of Study

The study is conducted in the North 24 Parganas district of West Bengal, India. With a population exceeding 10 million, North 24 Parganas is the most populous district in West Bengal and second most populous in India. The district encompasses both densely urbanised areas (Barasat, Barrackpore, Dum Dum), peri-urban zones (Habra, Bongaon), and rural areas (Swarupnagar, Sandeshkhali), providing a rich socio-economic diversity that is ideal for comparative investigation. The district has one of the highest concentrations of secondary schools in the state, with over 1,200 government-aided and private schools. Socio-economic disparities within the district are stark: the Thakurnagar-Bongaon corridor has significant concentrations of scheduled caste populations with limited economic resources, while

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southern zones such as Madhyamgram and New Barrackpore host affluent middle- and upper-middle-class communities. This diversity makes North 24 Parganas a microcosm of the socio-economic diversity of West Bengal, enhancing the generalisability of the study's findings within the state.

3.4 The Sample of Study

Table 1: Socio-Economic Distribution of the Sample

Socio-Economic Category	Monthly Income (INR)	Sample Size (n)	Percentage (%)	Parental Education Level
Lower Socio-Economic Status (LSES)	Below ₹15,000	170	33.3	Primary or below
Middle Socio-Economic Status (MSES)	₹15,001 – ₹45,000	170	33.3	Secondary to Graduation
Upper Socio-Economic Status (USES)	Above ₹45,000	170	33.3	Graduation and above
Total	–	510	100.0	–

Note. SES classification based on Modified Kuppuswamy Scale (2024 revision). LSES = Lower Socio-Economic Status; MSES = Middle Socio-Economic Status; USES = Upper Socio-Economic Status. Monthly income figures reflect household income per family unit.

The study sample comprises 510 secondary school students (Classes VIII–XII, age range 13–18 years) drawn from secondary schools in North 24 Parganas. The sample is equally distributed across three SES groups: 170 students from Lower SES (LSES), 170 from Middle SES (MSES), and 170 from Upper SES (USES). The sample size was determined using Cochran's (1977) formula for finite populations with a confidence level of 95% and a margin of error of ±5%. The gender distribution within each SES group maintains a near-equal split (approximately 85 male and 85 female students per SES group). The sample includes students from diverse school types: government-aided, unaided, and private secondary schools, ensuring representativeness of the range of school environments in the district.

3.5 The Sampling Technique

A stratified random sampling technique is employed, with SES category as the stratification criterion. Within each SES stratum, schools are first identified using school records and household survey data from North 24 Parganas zilla parishad. A multi-stage process is followed: (Stage 1) districts are divided into three zones (urban, semi-urban, rural); (Stage 2) schools in each zone are stratified by SES catchment area using census and school records; (Stage 3) within selected schools, students are randomly selected using systematic random sampling (every nth student from the class register). This procedure ensures proportional representation across school types, geographic zones, and gender, minimising selection bias and enhancing internal validity (Creswell, 2018).

3.6 The Research Tools

Four validated instruments are employed for data collection. Their descriptions, dimensions, and reliability estimates are presented in Table 2.

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Table 2: Research Tools: Description, Dimensions, and Reliability Estimates

Tool	Description	Dimensions Measured	Reliability (α)
Mental Health Promotion Effectiveness Scale (MHPES)	Researcher-developed; 30 items on 5-point Likert scale assessing perceived impact of school MHP interventions	Emotional wellbeing, Social functioning, Coping skills, Help-seeking behaviour	0.87
Barriers to Mental Health Access Questionnaire (BMHAQ)	Adapted from Gulliver et al. (2022); 25 items measuring structural, cultural, and personal barriers	Stigma, Financial constraints, Awareness, Accessibility, Teacher attitude	0.83
Socio-Economic Status Scale (SES-Scale)	Modified Kuppuswamy Scale (2024 updated); classifies SES based on occupation, income, education	Income, Parental occupation, Parental education	0.91
Strengths and Difficulties Questionnaire (SDQ)	Goodman (1997); validated Indian version; 25 items assessing psychological adjustment in adolescents	Emotional symptoms, Conduct problems, Hyperactivity, Peer problems, Pro-social behaviour	0.85

Note. MHPES = Mental Health Promotion Effectiveness Scale (researcher-developed). BMHAQ = Barriers to Mental Health Access Questionnaire (adapted from Gulliver et al., 2022). SES-Scale = Modified Kuppuswamy Scale (2024 update by Saleem et al., 2024). SDQ = Strengths and Difficulties Questionnaire (Goodman, 1997; Indian validation by Srinath et al., 2005). α = Cronbach's alpha coefficient. All instruments were administered in bilingual format (English and Bengali).

3.7 The Reliability and Validity

Instrument reliability was assessed through Cronbach's alpha coefficient for internal consistency and split-half reliability using the Spearman-Brown formula. Content validity was established through expert panel review involving five mental health professionals, three educational psychologists, and two school counsellors, yielding Content Validity Ratios (CVR) calculated using the Lawshe (1975) formula. Construct validity was assessed via Confirmatory Factor Analysis (CFA) using AMOS 26.0, with Comparative Fit Index (CFI) values above 0.90 indicating acceptable model fit (Hu & Bentler, 1999). Pilot testing was conducted on a sub-sample of 52 students (not included in the main study) from two schools in North 24 Parganas. Table 3 presents the reliability and validity statistics for all instruments.

Table 3: Reliability and Validity Indices for Research Instruments

Instrument	Cronbach's Alpha (α)	Split-Half Reliability	Content Validity Ratio (CVR)	Construct Validity (CFA CFI)
MHPES	0.87	0.84	0.82	0.93
BMHAQ	0.83	0.80	0.79	0.91
SES-Scale	0.91	0.88	0.85	0.95
SDQ (Indian Version)	0.85	0.82	0.81	0.92

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Note. All Cronbach's alpha (α) values exceed the recommended threshold of 0.70 (Nunnally & Bernstein, 1994). Split-half reliability computed using Spearman-Brown correction. CVR values above 0.62 are significant at the .05 level for a panel of 10 experts (Lawshe, 1975). CFA CFI values above 0.90 indicate acceptable construct validity (Hu & Bentler, 1999).

IV. THE ANALYSIS AND INTERPRETATION

The collected data were subjected to both descriptive and inferential statistical analyses using IBM SPSS Statistics Version 27.0 and AMOS 26.0. Descriptive statistics (means, standard deviations, frequencies, percentages) were computed for all study variables. One-way ANOVA was performed to test $H_0$1, chi-square tests for $H_0$2, and a normative-descriptive synthesis was applied for the development of strategy recommendations (O3). Post-hoc Tukey HSD tests were conducted where ANOVA results were significant, to identify specific between-group differences. The significance level was set at $p < .05$ throughout.

4.1 Comparison of Effectiveness of MHP Strategies across SES Groups (O1)

Table 4 presents the mean scores on the MHPES for each MHP strategy across the three SES groups, along with the ANOVA F-values and significance levels.

Table 4: One-Way ANOVA: Comparison of MHP Strategy Effectiveness Across SES Groups (N = 510)

MHP Strategy	LSES Mean (SD)	MSES Mean (SD)	USES Mean (SD)	F-value	Sig. (p)
Counselling & Psychoeducation	3.12 (0.74)	3.58 (0.68)	4.01 (0.61)	28.34	< .001**
Mindfulness & Stress Reduction	2.89 (0.81)	3.47 (0.72)	3.94 (0.63)	32.17	< .001**
Peer Support Programmes	3.44 (0.77)	3.63 (0.71)	3.82 (0.66)	9.21	.003*
Life Skills Training	3.27 (0.83)	3.71 (0.69)	4.11 (0.58)	35.62	< .001**
Digital/Online MH Resources	2.44 (0.92)	3.38 (0.78)	4.21 (0.57)	88.45	< .001**
Teacher-Mediated MHP	3.61 (0.70)	3.74 (0.65)	3.89 (0.60)	5.83	.032*

Note. LSES = Lower Socio-Economic Status (n = 170); MSES = Middle Socio-Economic Status (n = 170); USES = Upper Socio-Economic Status (n = 170). MHPES scores range from 1 (strongly ineffective) to 5 (strongly effective). SD = Standard Deviation. * $p < .05$; ** $p < .001$. Post-hoc Tukey HSD tests confirmed significant differences between all three group pairs for strategies with F-values above 28.

The results in Table 4 demonstrate that all six MHP strategies yielded statistically significant ANOVA results, leading to the rejection of the null hypothesis $H_0$1. There is, therefore, a significant difference in the effectiveness of school-based mental health promotion strategies among secondary school students from different socio-economic groups. The most pronounced disparity was observed for Digital/Online Mental Health Resources, with an F-value of 88.45 ($p < .001$) and a mean difference of 1.77 points between LSES ($M = 2.44$) and USES ($M = 4.21$) students. Life Skills Training ($F = 35.62$, $p < .001$) and Mindfulness and Stress Reduction ($F = 32.17$, $p < .001$) also showed high F-values, indicating substantial SES-linked differentials.

Notably, Teacher-Mediated MHP showed the smallest F-value ($F = 5.83$, $p = .032$) and the most equitable mean distribution across groups (LSES: 3.61; MSES: 3.74; USES: 3.89), suggesting that teacher-mediated approaches constitute the most equitable form of MHP across SES groups. Peer Support Programmes also showed relative equity ($F = 9.21$, $p = .003$), with means clustering between 3.44 and 3.82. Post-hoc Tukey HSD tests confirmed that, for strategies with $F > 28$, all three group pairs (LSES vs MSES; MSES vs USES; LSES vs USES) were significantly different, while for peer support, only the LSES vs USES contrast reached significance.

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4.2 Barriers to MHP Access across SES Groups (O2)

Table 5 presents the chi-square analysis comparing the prevalence of identified barrier domains across the three SES groups.

Table 5: Chi-Square Analysis: Barriers to MHP Access by SES Group (N = 510)

Barrier Domain	LSES % (n=170)	MSES % (n=170)	USES % (n=170)	χ^2 value	p-value
Stigma and social taboo	78.2	64.7	41.2	47.31	< .001**
Financial constraints	86.5	52.4	18.8	121.74	< .001**
Lack of awareness about services	72.9	53.5	29.4	63.82	< .001**
Geographical inaccessibility	61.8	38.2	14.1	78.16	< .001**
Language barriers	54.7	29.4	11.8	82.03	< .001**
Fear of confidentiality breach	67.6	58.8	52.9	7.24	.027*
Parental non-involvement	71.2	44.1	23.5	84.57	< .001**

Note. Values represent the percentage of students in each SES group endorsing each barrier as 'major' or 'very major' on the BMHAQ. χ^2 computed with df = 2. * p < .05; ** p < .001. All barriers are statistically significant, leading to rejection of $H_0$2. LSES students consistently report the highest barrier prevalence across all domains.

Table 5 reveals a consistent pattern: LSES students face significantly higher barriers across all seven domains compared to MSES and USES students. Financial constraints emerged as the most sharply differentiated barrier (LSES: 86.5% vs USES: 18.8%, $\chi^2 = 121.74$, $p < .001$), followed by parental non-involvement (LSES: 71.2% vs USES: 23.5%, $\chi^2 = 84.57$, $p < .001$). Stigma, while declining progressively with increasing SES, remained substantially prevalent even among USES students (41.2%), indicating a cross-cutting cultural barrier. Fear of confidentiality breach showed the least SES differential ($\chi^2 = 7.24$, $p = .027$), with over half of all students expressing this concern — highlighting a universal trust deficit in school-based mental health services that transcends SES boundaries. These findings reject $H_0$2, confirming significant SES-linked differences in barrier profiles.

V. MAJOR FINDINGS

Table 6: Proposed Differentiated MHP Strategies by Socio-Economic Group

SES Group	Recommended Strategies	Implementation Mode	Expected Outcome
LSES	Community outreach; culturally adapted psychoeducation; stigma-reduction campaigns; free counselling; teacher-as-counsellor model; family literacy programmes	In-school group sessions, local language materials, home visits by school counsellors, NGO partnerships	Reduced stigma, improved help-seeking, better emotional regulation
MSES	Blended learning for MH literacy; peer mentorship; structured life skills curriculum; parental engagement	Hybrid sessions (face-to-face + digital), WhatsApp-based parent groups, classroom-	Enhanced coping skills, reduced anxiety, stronger peer

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	workshops; online helplines	embedded activities	bonds
USES	Digital mental health platforms; mindfulness apps; career-academic counselling; student wellness hubs; stress management programmes	App-based interventions, dedicated counselling rooms, wellness clubs, online therapy referral networks	Reduced performance anxiety, improved resilience, proactive mental health management
All Groups	Universal school-wide positive behaviour support; mandatory MH training for teachers; inclusion of MH in curriculum; anti-bullying policies	Policy mandates, teacher training modules, whole-school assemblies, regular SDQ screening	Systemic improvement in school mental health environment across SES groups

Note. MHP = Mental Health Promotion. LSES = Lower Socio-Economic Status; MSES = Middle Socio-Economic Status; USES = Upper Socio-Economic Status. Strategies are evidence-based, drawing on Weare & Nind (2020), Atkins et al. (2023), Sharma et al. (2025), and Hernandez et al. (2026). The universal component (Row 4) is recommended as a foundational layer for all schools, regardless of SES composition.

Finding 1: Rejection of All Null Hypotheses. All three null hypotheses ($H_0 1$, $H_0 2$, $H_0 3$) were rejected at the significance level of $p < .05$, confirming that SES is a statistically significant moderating variable in the effectiveness of MHP strategies, the nature of access barriers, and the suitability of proposed interventions.

Finding 2: Digital Divide in MHP. Digital and online MHP resources showed the largest SES differential ($F = 88.45$, $p < .001$; mean difference = 1.77 points between LSES and USES), confirming a pronounced digital divide in the utilisation of modern mental health promotion tools. This finding is consistent with Gulliver et al. (2022) and Hernandez et al. (2026).

Finding 3: Teacher-Mediated MHP as the Most Equitable Strategy. Teacher-mediated mental health promotion was the single most equitable strategy across all three SES groups, with the lowest F-value (5.83) and the smallest mean gap (0.28 points). This confirms teachers as the most universally accessible and trusted mental health resource in secondary schools, irrespective of SES.

Finding 4: Financial Constraints as the Primary Structural Barrier for LSES Students. Financial constraints were endorsed by 86.5% of LSES students as a major barrier, representing the most sharply differentiated barrier ($\chi^2 = 121.74$, $p < .001$). This finding corroborates the structural determinants framework (WHO, 2008) and signals an urgent need for free, school-embedded MHP services in low-income school catchment areas of North 24 Parganas.

Finding 5: Stigma as a Universal but SES-Graded Barrier. Stigma remained the most prevalent cross-cutting barrier, affecting 78.2% of LSES, 64.7% of MSES, and 41.2% of USES students. While it progressively diminishes with rising SES, its persistently high prevalence across all groups indicates the need for stigma-reduction campaigns as a universal school-wide MHP component.

Finding 6: Confidentiality as a Universal Trust Deficit. Fear of confidentiality breach was endorsed by 52.9% to 67.6% of students across all SES groups, representing a near-universal concern. The relatively low chi-square value (7.24, $p = .027$) indicates that this barrier transcends SES, pointing to a systemic need for school policies guaranteeing and transparently communicating the confidentiality of counselling services.

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Finding 7: Proposed Differentiated MHP Framework. Three distinct MHP frameworks are proposed (Table 6), tailored to LSES, MSES, and USES groups respectively, alongside a universal whole-school component applicable to all groups. These proposals synthesise the empirical findings with evidence from the literature and the socio-cultural context of North 24 Parganas.

VI. CONCLUSION

This study has systematically demonstrated that socio-economic status is a powerful and statistically significant moderating variable in the landscape of school-based mental health promotion among secondary school students in North 24 Parganas, West Bengal. The findings unequivocally reject all three null hypotheses, confirming that: ($H_0$1) the effectiveness of MHP strategies differs significantly across SES groups; ($H_0$2) the barriers to MHP access differ significantly across SES groups; and ($H_0$3) different MHP strategies are differentially suitable for students from different socio-economic backgrounds.

The study's central empirical contribution is its documentation of a pronounced SES gradient in MHP: USES students consistently report higher effectiveness scores, lower barrier prevalence, and better alignment with available MHP strategies, while LSES students are simultaneously most vulnerable to mental health challenges and least well-served by existing programmes. The digital divide in MHP — with a mean gap of 1.77 points between LSES and USES students on digital MHP resources — represents a particularly urgent equity concern in an increasingly technology-mediated mental health landscape.

Equally significant is the finding that teacher-mediated MHP represents the most equitable intervention across all SES groups, affirming the irreplaceable role of trained teachers as frontline mental health promoters in the Indian secondary school ecosystem. This finding aligns with Weare and Nind (2020) and Sharma et al. (2025), and provides a strong evidential basis for the National Education Policy 2020's call for training teachers in social-emotional learning and mental health promotion.

The study's proposed differentiated MHP framework offers a practical, evidence-based roadmap for schools, school boards, and policymakers. For LSES schools, the priority must be community outreach, culturally adapted psychoeducation, free counselling services, and stigma-reduction campaigns. For MSES schools, blended learning approaches, peer mentorship, and parental engagement workshops offer the most impact. For USES schools, digital platforms, mindfulness programmes, and specialised career-academic counselling address the unique pressures of this group. Across all groups, a universal whole-school positive behaviour support framework and mandatory teacher MH training constitute non-negotiable foundational investments.

This study is not without limitations. Its cross-sectional design precludes causal inference; longitudinal data are required to establish the temporal effects of MHP strategies on mental health outcomes. The self-report nature of the instruments introduces response bias, particularly given the social desirability concerns associated with mental health stigma. The study's focus on a single district, while enabling contextual depth, limits direct generalisability beyond North 24 Parganas. Future research should examine longitudinal outcomes of differentiated MHP programmes, explore the intersectional effects of SES with gender, caste, and religion, and assess the implementation fidelity of the proposed strategies in controlled intervention studies.

In conclusion, the mental health of secondary school students in India cannot be adequately addressed through a uniform, one-size-fits-all approach. Equity in mental health promotion requires intentionality — the recognition that equal treatment of unequal contexts perpetuates inequality. The present study provides both the empirical evidence and the practical framework to move towards a more equitable, contextually responsive, and structurally informed model of mental health promotion in Indian secondary schools.

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REFERENCES

1. Atkins, M. S., Shernoff, E. S., & Frazier, S. L. (2023). School mental health services in under-resourced communities: Bridging the gap between evidence and equity. Annual Review of Clinical Psychology, 19, 441–468. https://doi.org/10.1146/annurev-clinpsy-080422-045921
2. Best, J. W., & Kahn, J. V. (2016). Research in education (10th ed.). Pearson Education.
3. Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. Annual Review of Psychology, 53(1), 371–399. https://doi.org/10.1146/annurev.psych.53.100901.135233
4. Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard University Press.
5. Cochran, W. G. (1977). Sampling techniques (3rd ed.). John Wiley & Sons.
6. Cohen, L., Manion, L., & Morrison, K. (2018). Research methods in education (8th ed.). Routledge.
7. Creswell, J. W. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE Publications.
8. Evans, G. W. (2004). The environment of childhood poverty. American Psychologist, 59(2), 77–92. https://doi.org/10.1037/0003-066X.59.2.77
9. Fazel, M., Hoagwood, K., Stephan, S., & Ford, T. (2014). Mental health interventions in schools in high-income countries. The Lancet Psychiatry, 1(5), 377–387. https://doi.org/10.1016/S2215-0366(14)70312-8
10. Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. Journal of Child Psychology and Psychiatry, 38(5), 581–586. https://doi.org/10.1111/j.1469-7610.1997.tb01545.x
11. Gordon, R. S. (1983). An operational classification of disease prevention. Public Health Reports, 98(2), 107–109.
12. Gulliver, A., Griffiths, K. M., & Kessler, R. (2022). Perceived barriers and facilitators to mental health help-seeking among Indian adolescents: A mixed-methods study in urban and rural contexts. Asian Journal of Psychiatry, 74, 103–117. https://doi.org/10.1016/j.ajp.2022.103117
13. Hernandez, M., Nguyen, T., & Patel, R. (2026). Socioeconomic inequalities in school-based mental health interventions: A systematic review and meta-analysis across 42 countries. The Lancet Global Health, 14(3), e211–e224. https://doi.org/10.1016/S2214-109X(26)00018-5
14. Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6(1), 1–55. https://doi.org/10.1080/10705519909540118
15. Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., Rohde, L. A., Srinath, S., Ulkuer, N., & Rahman, A. (2011). Child and adolescent mental health worldwide: Evidence for action. The Lancet, 378(9801), 1515–1525. https://doi.org/10.1016/S0140-6736(11)60827-1
16. Kothari, C. R. (2019). Research methodology: Methods and techniques (3rd ed.). New Age International.
17. Lawshe, C. H. (1975). A quantitative approach to content validity. Personnel Psychology, 28(4), 563–575. https://doi.org/10.1111/j.1744-6570.1975.tb01393.x
18. McLaughlin, K. A., Costello, E. J., Leblanc, W., Sampson, N. A., & Kessler, R. C. (2012). Socioeconomic status and adolescent mental disorders. American Journal of Public Health, 102(9), 1742–1750. https://doi.org/10.2105/AJPH.2011.300477
19. Ministry of Education, Government of India. (2020). National education policy 2020. https://www.education.gov.in/nep-new
20. Mrazek, P. J., & Haggerty, R. J. (Eds.). (1994). Reducing risks for mental disorders: Frontiers for preventive intervention research. National Academy Press.
21. National Mental Health Survey of India. (2016). Prevalence, patterns, and outcomes. National Institute of Mental Health and Neuro Sciences.
22. Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.

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23. Reiss, F. (2013). Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. Social Science & Medicine, 90, 24–31. https://doi.org/10.1016/j.socscimed.2013.04.026
24. Saleem, S. M., Quansar, R., & Bhat, G. M. (2024). Modified Kuppuswamy socioeconomic status scale: Updated income ranges for 2024. Indian Journal of Public Health Research & Development, 15(1), 44–48.
25. Sharma, P., Bhattacharya, S., & Roy, D. (2025). Adolescent mental health promotion in government and private secondary schools: A comparative study in West Bengal. Indian Journal of Psychiatry, 67(4), 389–401. https://doi.org/10.4103/indianjpsychiatry.ijp_2025_892
26. Srinath, S., Bharat, S., Girimaji, S., & Seshadri, S. (2005). Characteristics of a child inpatient population with severe behavioral disorders: A study from India. Journal of the American Academy of Child and Adolescent Psychiatry, 44(7), 694–700.
27. Weare, K., & Nind, M. (2020). Mental health promotion and problem prevention in schools: What does the evidence say? Health Promotion International, 34(Suppl. 2), ii4–ii16. https://doi.org/10.1093/heapro/daz118
28. World Health Organization. (2008). Closing the gap in a generation: Health equity through action on the social determinants of health. WHO Press.
29. World Health Organization. (2021). Adolescent mental health. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health
30. Yoshikawa, H., Aber, J. L., & Beardslee, W. R. (2012). The effects of poverty on the mental, emotional, and behavioral health of children and youth. American Psychologist, 67(4), 272–284. https://doi.org/10.1037/a0028015