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Effectiveness of an Educational Awareness Programme on Mental Health Knowledge among Adolescents in a Selected School of Bankura, West Bengal

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Abstract*— This study evaluated the effectiveness of an educational awareness program on mental health knowledge among 100 adolescent students in a selected school of Bankura, West Bengal, using a pre-test/post-test design. Participants were selected via simple random sampling. Data were collected using a structured demographic proforma and a validated 40-item questionnaire. Baseline assessments revealed profound knowledge deficits, with 84% of adolescents demonstrating inadequate knowledge. Following a targeted educational intervention, inadequate knowledge dropped to 3%, while moderate and adequate knowledge strata rose significantly. The mean knowledge score increased from 12.90 (± 4.20) at pre-test to 25.95 (± 3.80) at post-test. $t(99) = 23.06$, $p < 0.05$, yielding an exceptionally large effect size (Cohen's $d = 2.31$) and confirming the rejection of the null hypothesis (H_{01}). Chi-square analysis demonstrated no significant association between baseline knowledge and age, family type, or maternal occupation ($p > 0.05$). However, a significant association was found with father's occupation ($\chi^2 = 6.21$, $p = 0.013$), partially supporting the research hypothesis (H_2). In conclusion, the structured educational awareness programme was highly effective in mitigating baseline literacy deficits, highlighting the immense value of school-based mental health interventions.

***Index Terms*— Effectiveness, Educational Awareness Program, Mental Health Knowledge, Adolescents**

I. INTRODUCTION

Adolescent mental health has emerged as a major global public health concern requiring urgent attention from governments, healthcare systems, and educational institutions. Mental health problems during adolescence not only cause significant distress to individuals and their families but may also lead to long-term functional impairment, with substantial social and economic consequences if left unaddressed. [1] These concerns highlight the importance of developing effective adolescent mental health promotion strategies that include awareness, early intervention, and preventive approaches.

Adolescence is a critical developmental stage characterized by rapid physical, psychological, emotional, and social changes. During this period, individuals are particularly vulnerable to stress, emotional instability, and behavioural difficulties. If not identified and managed early, mental health problems during adolescence may persist into adulthood, adversely affecting academic performance, interpersonal relationships, and overall quality of life. [2]

Globally, the burden of mental health disorders among adolescents, including anxiety, depression, behavioural disorders, and substance use problems, has increased significantly in recent years. [3] Despite this growing burden, many adolescents have limited knowledge regarding mental health conditions, their warning signs, and available support systems. This lack of awareness contributes to stigma, delayed help-seeking behaviour, and worsening mental health outcomes. [4]

Mental health literacy, defined as knowledge and beliefs about mental health disorders that aid their recognition, management, and prevention, plays a vital role in promoting early identification and timely intervention. [5] Evidence suggests that school-based educational interventions can significantly improve mental health literacy, reduce stigma, and foster positive attitudes toward mental health among adolescents. [6]

Schools are considered an ideal setting for mental health promotion, as they provide structured access to a large adolescent population during a formative stage of development. School-based educational programmes can enhance knowledge, improve coping skills, reduce misconceptions, and encourage help-seeking behaviour among students.[7] Systematic reviews have consistently reported that structured mental health education programmes delivered in schools are effective in improving mental health awareness and reducing stigma among adolescents. [4]

On 7th January, 2014, Government of India launched its first comprehensive program for adolescents, 'National Adolescent Health Program'. The program states that all adolescents in India are able to realize their full potential by making informed and responsible decisions related to their health and well-being and by accessing the services and

support they need to do so. It introduces community-based interventions. In the objectives it includes enhancements of Mental Health. Conducting mental health activities at school level improves the chances of children's access to mental health or any other services for that matter. [8]

In the Indian context, studies have highlighted the increasing burden of adolescent mental health problems and the need for structured school-based interventions to improve awareness and early identification of psychological issues. [9] However, mental health education is still not systematically integrated into school curricula in many regions.

In view of the increasing mental health challenges among adolescents and the need for effective school-based mental health promotion strategies, the present study was undertaken to assess the effectiveness of an educational awareness programme on mental health knowledge among adolescent students in a selected school of Bankura, West Bengal.

1.1 Background of the study

Adolescent mental health has been increasingly recognized as a key component of healthy development and overall well-being. Adolescence, defined by the World Health Organization as the age group of 10–19 years, is a critical developmental stage during which individuals undergo rapid physical, cognitive, emotional, and social changes that shape their future health outcomes. [2] Experiences during this period play a vital role in determining long-term mental and physical well-being.

In recent years, rapid social transformation, academic pressure, technological advancement, and changing family structures have introduced new stressors for adolescents. School-going adolescents commonly experience stress related to academic expectations, examinations, peer relationships, and future career uncertainty. When not appropriately addressed, these stressors may contribute to the development of mental health problems such as anxiety, depression, and emotional distress. [1]

Global evidence indicates that a significant proportion of adolescents experience mental health conditions, yet many remain undiagnosed and untreated due to limited awareness, stigma, and poor mental health literacy. [10] The inability to recognize early warning signs and seek timely help further exacerbates the burden of mental illness among young people.

Mental health literacy has emerged as an important public health strategy for improving awareness, reducing stigma, and promoting early help-seeking behaviour among adolescents. It encompasses knowledge and beliefs about mental health disorders that aid their recognition, management, and prevention. [7] Evidence suggests that school-based mental health education programmes are effective in improving knowledge, shaping positive attitudes, and reducing misconceptions regarding mental illness among adolescents. [5]

Schools are considered ideal settings for mental health promotion because they provide structured access to adolescents during a critical developmental period. School-based interventions have been shown to improve mental health awareness, enhance coping skills, and encourage early identification of psychological problems. [9] Systematic reviews further confirm that structured educational programmes implemented in school settings significantly improve mental health literacy among students.

In India, adolescent mental health has been recognized as a priority area under national health initiatives. Despite such initiatives, gaps in awareness and understanding of mental health among adolescents continue to persist, particularly in rural and semi-urban regions. Studies conducted in India and other low- and middle-income countries have reported that adolescents often lack adequate knowledge about mental health conditions, their symptoms, and available support systems. Misconceptions and stigma remain major barriers to help-seeking behaviour and early intervention.

In view of these challenges, educational awareness programmes conducted in schools are considered a practical and effective strategy to improve mental health literacy among adolescents. Such interventions can bridge knowledge gaps, promote early recognition of mental health problems, and encourage positive mental health practices.

1.2 Need for the study

Mental health problems among adolescents have emerged as a significant global public health concern in recent decades. Despite the increasing prevalence of emotional, behavioural, and psychological disorders in this age group, levels of awareness and understanding of mental health remain inadequate in many settings. [1] Poor mental health literacy among adolescents often contributes to stigma, discrimination, delayed recognition of symptoms, and underutilization of available mental health services. [2]

Adolescence is a critical developmental phase characterized by rapid physical, cognitive, and socio-emotional changes. During this period, individuals are particularly vulnerable to stress, anxiety, and emotional disturbances. However, due to limited knowledge, adolescents often struggle to differentiate between normal developmental challenges and clinically significant mental health conditions, which may delay early help-seeking behaviour. [11]

Schools provide a strategic and effective platform for mental health promotion, as adolescents spend a substantial amount of their time within the school environment interacting with peers and teachers. School-based interventions have been recognized as an important approach for improving mental health literacy, enhancing coping skills, and promoting early identification of psychological distress. [9] Evidence suggests that structured educational programmes delivered in schools can significantly improve adolescents' knowledge and attitudes toward mental health and reduce associated stigma. [5] In India, particularly in states such as West Bengal, limited research has been conducted to evaluate the effectiveness of structured mental health awareness programmes among school-going adolescents. Although

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studies indicate the presence of emotional and behavioural problems among adolescents, awareness regarding mental health issues, early identification of symptoms, and appropriate help-seeking practices remains inadequate. [2] Misconceptions, stigma, and lack of accurate information continue to act as major barriers to timely mental health care. National initiatives such as the Rashtriya Kishor Swasthya Karyakram (RKSK) emphasize adolescent health, including mental well-being, through school-linked and community-based interventions. [8] However, the implementation of structured mental health education in school curricula remains inconsistent, particularly in rural and semi-urban regions.

Given this context, there is a clear need to design, implement, and evaluate structured educational interventions aimed at improving mental health literacy among adolescents. School-based mental health awareness programmes may serve as an effective strategy to enhance knowledge, reduce stigma, and promote early recognition and management of mental health problems. Therefore, the present study was undertaken to assess the effectiveness of an educational awareness programme on mental health knowledge among adolescent students.

1.3 Statement of the problem

Effectiveness of an Educational Awareness Programme on Mental Health Knowledge Among Adolescents in a Selected School of Bankura, West Bengal.

1.4 Research Objectives

1.To assess the pre-test and post-test levels of knowledge regarding mental health among adolescents.

2. To evaluate the effectiveness of the educational awareness programme by comparing pre-test and post-test knowledge scores.

3. To determine the association between the baseline mental health knowledge scores and selected socio-demographic variables.

1.5 Research Hypotheses

Research Hypothesis (H_1): The mean post-test mental health knowledge score of adolescent students will be significantly higher than their mean pre-test knowledge score following the educational awareness programme.

Null Hypothesis (H_{01}): There will be no significant difference between the mean pre-test and post-test mental health knowledge scores among adolescent students after the educational awareness programme.

Research Hypothesis (H_2): There will be a significant statistical association between the baseline mental health knowledge scores of adolescent students and selected socio-demographic variables.

Null Hypothesis (H_{02}): There will be no significant statistical association between the baseline mental health knowledge scores of adolescent students and selected socio-demographic variables.

II. REVIEW OF LITERATURE

A review of literature is a systematic and critical examination of scholarly publications, research studies, and other relevant sources related to the research problem. It helps the investigator understand the existing knowledge, identify research gaps, and provide a foundation for the present study.

For the present study, the review of literature is organized under the following headings:

Section I: Literature related to adolescent mental health.

Section II: Literature related to mental health knowledge and mental health literacy among adolescents.

Section III: Literature related to school-based mental health awareness programmes.

Section IV: Literature related to the effectiveness of educational interventions on mental health knowledge among adolescents.

Section V: Research gap.

2.1 Section I: Literature Related to Adolescent Mental Health

Adolescence is a critical developmental stage marked by rapid physical, emotional, cognitive, and social changes. Mental health during this period plays a crucial role in determining educational achievement, interpersonal relationships, and long-term well-being. The emergence of psychological distress during adolescence can significantly influence adult mental health outcomes if not identified and addressed early. [7]

A systematic review by Roshni K. et al. (2026) reported that low mental health literacy, persistent stigma, and inadequate awareness significantly reduce help-seeking behaviour among adolescents in India. The study emphasized the urgent need for structured awareness programmes aimed at improving mental health knowledge, reducing stigma, and facilitating timely access to mental health services. [11]

Similarly, a scoping review conducted by Mehra D, Lakiang T, Kathuria N, Kumar M, Mehra S.. (2022) highlighted that a substantial proportion of mental health disorders begin during adolescence. The review reported a growing burden of anxiety, depression, stress-related conditions, and emotional disturbances among Indian adolescents. It further emphasized the importance of school-based mental health promotion programmes as effective interventions for addressing these emerging concerns. [3]

In addition, Nimgaonkar, S. A., Agrawal, A., & Malhotra, S.. (2022) conducted a scoping review on adolescent mental health interventions in India and found that school-based mental health programmes significantly improved students' awareness, emotional well-being, and coping skills. The authors concluded that schools serve as an ideal setting for mental health promotion due to their accessibility, structured environment, and continuous interaction with adolescents. [3]

Overall, existing literature consistently indicates that adolescents are vulnerable to mental health challenges and often lack adequate awareness regarding mental health

conditions. The evidence strongly supports the implementation of school-based mental health awareness programmes to improve knowledge, reduce stigma, and promote early identification and management of psychological problems among adolescents.

2.2 Section II: Literature Related to Mental Health Knowledge and Mental Health Literacy Among Adolescents

Mental health literacy refers to the knowledge and beliefs about mental health problems that facilitate their recognition, management, and prevention. Adequate mental health literacy enables adolescents to identify symptoms of mental illness, seek appropriate help, and support peers experiencing psychological distress. [7] Strengthening mental health literacy during adolescence is therefore essential for promoting early intervention and improving overall mental well-being.

A systematic review conducted by Ma, Anderson, and Burn (2023) examined 21 studies describing 20 school-based mental health interventions and reported moderate evidence that educational programmes significantly improve mental health literacy and reduce stigma among children and adolescents. The authors concluded that structured school-based educational interventions are effective in enhancing awareness and promoting positive attitudes toward mental health. [4]

Existing literature consistently indicates that a large proportion of adolescents have inadequate knowledge regarding mental health disorders, warning signs, treatment options, and available support services. Misconceptions and stigma continue to negatively influence attitudes toward mental illness, resulting in delayed help-seeking behaviour and underutilization of mental health services. Consequently, mental health literacy interventions are increasingly recognized as a key component of adolescent health promotion and early intervention strategies. [6,7]

Further evidence from a systematic review and meta-analysis by Frețian AM, Graf P, Kirchhoff S. (2021) demonstrated that mental health literacy interventions among children and adolescents lead to sustained improvements in knowledge and significant reductions in stigmatizing attitudes over time. These findings highlight the long-term effectiveness of structured educational programmes in improving mental health awareness and promoting supportive attitudes. [6]

Similarly, Seedaket S, Turnbull N, Phajan T, Wanchai A. (2020) reported that both school-based and community-based interventions are effective in improving mental health literacy among adolescents. The review emphasized that interactive teaching strategies, including group discussions, multimedia tools, and video-based learning, are particularly effective in enhancing adolescents' understanding of mental health issues compared to traditional lecture-based approaches. [5] Evidence from low- and middle-income countries further supports these findings, indicating that school-based mental health programmes contribute to improved awareness, reduced stigma, and better understanding of mental health conditions among adolescents. These studies underscore the importance of integrating structured mental health education into school curricula to promote early recognition and intervention. [12]

Overall, the literature strongly supports the effectiveness of school-based mental health literacy interventions in improving knowledge, attitudes, and awareness among adolescents, thereby contributing to better mental health outcomes.

2.3 Section III: Literature Related to School-Based Mental Health Awareness Programmes

Schools are widely recognized as effective settings for mental health promotion, as they provide structured access to adolescents during a critical developmental stage and offer opportunities for early identification, prevention, and intervention of mental health problems.[3] School-based platforms also facilitate continuous engagement with students, making them making them suitable for delivering structured mental health education programmes.

A systematic review by Ma, Anderson, and Burn (2023) reported that school-based mental health literacy interventions are moderately effective in improving knowledge and reducing stigma among children and adolescents. However, the review also highlighted limited evidence regarding long-term effectiveness, largely due to the absence of follow-up assessments in most studies. [4] This suggests the need for sustained interventions and longitudinal evaluation.

Similarly, a systematic review and meta-analysis conducted by Nazari et al. (2023) on web-based mental health interventions for young people found a significant improvement in mental health literacy (SMD = 0.70). [13] However, the effects on stigma reduction and help-seeking attitudes were inconsistent, indicating that while digital and school-based approaches are effective in improving knowledge, they may not consistently translate into behavioural change without stronger and more interactive intervention designs.

Evidence from low- and middle-income countries further supports the effectiveness of school-based mental health programmes. A systematic review conducted by Soto et al. (2022–2023) reported that such interventions significantly improve emotional well-being and reduce psychological distress among adolescents, particularly when implemented through structured curricula and supported by trained facilitators. This highlights the importance of systematic programme delivery in resource-limited settings. [14]

In addition, Scholz, Taylor, and Strelan (2022) conducted a systematic review of universal mental health and well-being programmes in secondary schools and found that school-based interventions contribute to improved psychological well-being. The review emphasized that interventions incorporating coping skills training, emotional regulation,

and resilience-building components are more effective, and that implementation quality and teacher involvement play a critical role in programme success. [15]

Furthermore, Seedaket S, Turnbull N, Phajan T, Wanchai A (2020) confirmed that both school-based and combined educational interventions are effective in improving mental health literacy among adolescents. The study highlighted that interactive and participatory approaches such as group discussions, multimedia resources, and experiential learning methods are more effective than traditional lecture-based teaching in enhancing understanding of mental health concepts. [16]

Overall, the literature consistently demonstrates that school-based mental health awareness programmes are effective in improving mental health literacy, enhancing coping skills, and promoting positive psychological outcomes among adolescents. However, evidence also indicates that long-term sustainability, behavioural change outcomes, and help-seeking behaviour remain areas requiring further research and stronger programme implementation strategies.

2.4 Section IV: Literature Related to the Effectiveness of Educational Interventions on Mental Health Knowledge Among Adolescents

A growing body of evidence indicates that educational awareness programmes are effective in improving mental health knowledge, attitudes, and help-seeking behaviour among adolescents. School-based interventions are increasingly recognized as practical and scalable approaches for enhancing mental health literacy during the formative school years.

A systematic review by Ma, Anderson, and Burn (2023) evaluated school-based mental health literacy interventions and reported that structured educational programmes significantly improve students' understanding of mental health concepts, enhance recognition of mental health problems, and promote more positive help-seeking attitudes. The review concluded that such interventions are generally effective in increasing mental health literacy, although variability in programme design and evaluation methods limits the strength of evidence across studies. [4]

Evidence from low- and middle-income countries further supports these findings. A systematic review and meta-analysis by Soto et al. (2022) found that school-based mental health interventions significantly improve emotional well-being, increase mental health awareness, and enhance recognition of psychological distress among adolescents. The study emphasized that structured curricula delivered by trained facilitators are more effective in improving both knowledge and preventive mental health behaviours. [14] Similarly, a quasi-experimental pilot study conducted by Sharma, P., Mishra, S., & Bala, R. (2022) among rural Indian adolescents demonstrated that experiential and participatory teaching methods significantly improve mental health knowledge and reduce stigma associated with mental illness. The authors concluded that activity-based learning approaches are more effective in influencing both knowledge and attitudes compared to traditional lecture-based methods. [12]

In the Indian context, Malhotra and Sriram (2021) reported that school-based mental health interventions focusing on coping skills, resilience-building, and mental health awareness lead to measurable improvements in adolescents' knowledge and psychological well-being. The review further highlighted that early school-based interventions play a crucial role in improving the identification of emotional problems and promoting timely help-seeking behaviour. [2] Furthermore, Seedaket S, Turnbull N, Phajan T, Wanchai A.. (2020) confirmed that structured educational programmes significantly improve mental health literacy among adolescents. The review emphasized that interactive and participatory teaching strategies—such as group discussions, multimedia tools, and experiential learning—are more effective than traditional lecture-based approaches in improving learning outcomes and sustaining engagement. [5]

Overall, the literature consistently demonstrates that educational interventions delivered in school settings are effective in improving mental health knowledge, enhancing awareness of psychological problems, reducing stigma, and encouraging positive help-seeking attitudes among adolescents.

2.5 Summary

The reviewed literature indicates that mental health awareness is essential for promoting psychological well-being and reducing stigma among adolescents. Existing studies show that students often have inadequate knowledge regarding mental health and require structured educational support. Furthermore, evidence suggests that teaching program interventions are effective in improving mental health awareness and knowledge. However, limited research has been conducted among school-going adolescents in Bankura, West Bengal, highlighting the need for the present study.

2.6 Research gap

Current literature demonstrates the effectiveness of mental health literacy interventions among adolescents; however, there is limited evidence regarding nurse-led mental health awareness programs in school settings, particularly in rural and semi-urban regions of West Bengal. Furthermore, studies evaluating the effectiveness of structured educational interventions on adolescents' mental health knowledge in Bankura district are scarce. This gap necessitates the present study to generate evidence for nursing practice and adolescent mental health promotion.

Conceptual Framework:

Conceptual framework used for this study was based on Karl Ludwig Von Bertalanffy General System Theory. The system model has three components-Input, Process and

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Output. In this study adolescents were identified with poor knowledge about mental health by the help of self-administered demographic questionnaire and Structured Knowledge Questionnaire (40 Items) questionnaire tool on knowledge regarding mental health were act as input.[16] The study process comprised administration of mental health awareness program regarding Mental Health among the adolescents and gaining knowledge of mental health was the output of the process. Feedback is the process through which output was returned to the system which was not under the study.

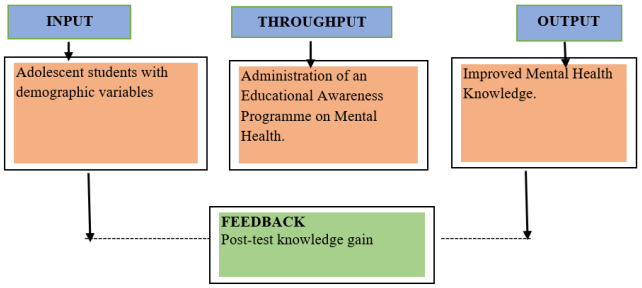


Fig. 1: Conceptual framework of the study based on General System Theory by Von Bertalanffy.

III. MATERIALS AND METHOD

Research design, setting, population, sample, sampling technique, variables, operational definitions, instruments, intervention, data collection procedure, plan for data analysis, and ethical considerations of the study conducted to assess the effect of educational awareness program on Mental Health Awareness among the students.

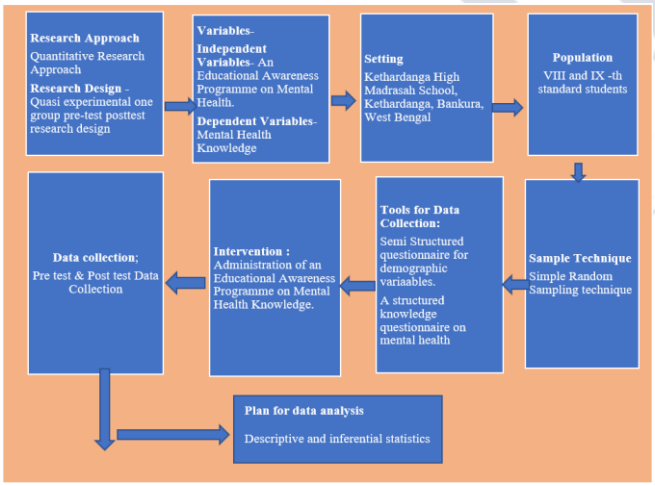


Fig: 2 Schematic presentation of Research Methodology

3.1 Research Approach: A quantitative research approach was adopted for the present study to evaluate the effectiveness of an educational awareness programme on mental health knowledge intervention among the adolescent students.

3.2 Research Design: A quasi-experimental one-group pre-test–post-test design was used to assess the effect of an educational awareness programme on mental health knowledge intervention among the adolescent students. The knowledge of the students regarding mental health were assessed before the intervention (pre-test), followed by intervention of the planned teaching program and reassessed after the intervention (post-test).

3.3 Setting of the Study: The study was conducted at the Kethardanga High Madrasah School, Bankura, West Bengal.

3.4 Population: The target population comprised all class VIII and IX standard adolescent students of Kethardanga High Madrasah School, Bankura, West Bengal.

3.5 Sample and Sample Size: A total of 100 students were selected for the study, 50 from class VIII and 50 from class IX standard.

3.6 Sampling Technique: Simple Random Sampling technique was used to select the students who met the inclusion criteria.

3.7 Criteria for Sample Selection

Inclusion Criteria

Participants were eligible for inclusion if they:

- Were enrolled in Class VIII or Class IX.
- Were willing to participate in the study.
- Were available during the data collection period.

Exclusion Criteria

Participants were excluded if they:

- Were absent during either the pretest or posttest assessment.

3.8 Variables of the Study

Independent Variable: Educational awareness program on mental health.

Dependent Variable: Level of mental health knowledge among adolescent students**.**

Demographic Variables

The demographic variables included:

- Age
- Gender
- Birth order
- Type of family
- Parents education
- Parents occupation
- Previous knowledge regarding mental health

3.9 Operational Definitions

Effectiveness: The significant gain in knowledge scores regarding mental health, statistically measured by comparing the differences between the pre-test and post-test scores.

Educational Awareness Programme: A planned teaching session of approximately 45–60 minutes regarding mental health, mental health problems, prevention, and help-seeking behaviours.

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Mental Health Knowledge: Knowledge related to mental health concepts, common mental health problems, risk factors, symptoms, prevention, and available support services as measured by the structured questionnaire.

Adolescents: School-going students falling within the specific age bracket (typically 13–18 years, corresponding to classes VIII-XII) enrolled in the selected schools of Bankura district.

3.10 Description of the Tool

Data were collected using:

1. Demographic data sheet
2. Structured mental health knowledge questionnaire (40 items)

Tool I: Demographic Data

A structured questionnaire was used to collect demographic information including age, gender, birth order, type of family, p**a**rent's occupation**,** parent's education and previous knowledge regarding Mental Health.

Tool II: Description of the Tool

Data were collected using a structured knowledge questionnaire designed to assess the level of mental health knowledge among adolescent students. The tool was developed based on standardized behavioural and psychological assessment frameworks and adapted to suit the objectives of the present study. The instrument was prepared by adapting concepts from the **Rutter Children's Behaviour Questionnaire** and the **Strengths and Difficulties Questionnaire (SDQ)**, along with relevant evidence-based mental health concepts appropriate for adolescents. [16, 17, 18]

The Rutter Children's Behaviour Questionnaire is one of the earliest standardized instruments developed to screen for emotional and behavioural problems in children and adolescents, widely used in school mental health research. [16, 17] The modified version of the Rutter scale has been extensively applied in epidemiological and community-based studies to assess behavioural and emotional adjustment among school-going children. [17]

The Strengths and Difficulties Questionnaire (SDQ) is a validated behavioural screening tool that measures emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems, and prosocial behaviour in children and adolescents. It is widely used in both clinical and research settings across different populations due to its reliability and validity. [18]

Based on these standardized frameworks, a structured knowledge questionnaire was developed consisting of 40 multiple-choice questions.

Structured Knowledge Questionnaire (40 Items, Blueprint)

Domain	Content Area	No. of Items
I	Concept of Mental Health	6
II	Common Mental Health Problems	8
III	Risk Factors	6
IV	Signs and Symptoms	8
V	Prevention and Promotion	6
VI	Help-Seeking and Support Services	6
Total		40

Scoring Procedure

The questionnaire followed a dichotomous scoring system. Each item had one correct response.

- Correct answer = 1 mark
- Incorrect answer = 0 mark

The total knowledge score ranged from **0 to 40**, with higher scores indicating better knowledge regarding mental health and related issues among adolescents.

For interpretation purposes, the total scores may be categorized into levels such as inadequate, moderate, and adequate knowledge.

Knowledge levels:

• Inadequate	<50% (0-19 marks)
• Moderate	50–75% (20–30 marks)
• Adequate	>75% (31-40 marks)

3.11 Validity of the Tool

Content validity of the instrument was ensured through an extensive review of literature and consultation with subject experts in psychiatric nursing, psychology, and community health nursing. Necessary modifications were made based on expert suggestions to ensure clarity, relevance, and appropriateness of items for adolescent respondents. The final tool was considered appropriate for assessing knowledge related to mental health among adolescents.

3.12 Reliability of the Tool

The analysis yielded a Cronbach's alpha value of .82, indicating good internal consistency. According to conventional criteria, this coefficient suggests that the instrument demonstrates high reliability and is appropriate for use in assessing the knowledge of mental health awareness among the students.

3.13 Intervention

Following the pretest assessment, an educational awareness program on mental health was administered to the participants. The program was designed to enhance adolescents' understanding of mental health, including its importance, common mental health problems, risk factors, preventive measures, and strategies for maintaining positive mental well-being. The educational session was delivered using a structured teaching approach and appropriate audio-visual aids to facilitate learning and engagement.

3.14 Data Collection Procedure

Prior to data collection, formal administrative permission was obtained from the concerned school authorities. Ethical

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principles were maintained throughout the study. Participants were informed about the purpose, objectives, and procedures of the study, and written informed consent was obtained from the participants and/or their parents or guardians, as applicable.

Data collection was conducted in three phases -

- First phase, participants completed a pretest using a structured knowledge questionnaire to assess their baseline knowledge regarding mental health.
- Second phase, the educational awareness program on mental health was administered.
- Final phase, a posttest was conducted using the same questionnaire to evaluate the effectiveness of the intervention and to assess changes in participants' knowledge regarding mental health.

The confidentiality and anonymity of all participants were maintained throughout the study, and participation was entirely voluntary. Participants were informed of their right to withdraw from the study at any stage without any consequences.

3.15 Plan for Data Analysis

Data were coded and entered into statistical software for analysis.

- Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to describe demographic variables and the mental health knowledge score.
- A paired-samples *t* test was used to compare mean pre-test and post-test scores.
- The level of significance was set at $p < .05$.
- Effect size was calculated using Cohen's *d*.

3.16 III.VI Ethical Considerations

- Ethical approval was obtained from the appropriate authority.
- Formal permission was secured from institutional authorities.
- Written informed consent was obtained from each participant.
- Confidentiality and anonymity were maintained throughout the study.

IV. RESULTS AND DISCUSSION

The findings are discussed in relation to the study objectives and interpreted in the context of existing literature on adolescent mental health education and awareness programmes.

Section I: Demographic characteristics of the adolescent students, presented through frequency and percentage distributions according to selected demographic variables.

Table1: Distribution of sample according to their age in years among the adolescent students (**n=100)**

Demographic Variables	Frequency	Percentage (%)
Age (in years)		
12-13 years	06	06
12-13 years	28	28
14-15 years	62	62
15-16 years	04	04
Types of family		
Nuclear	88	88
Joint	12	12
Occupation		
Father		
Service	77	77
Business	23	23
Mother		
Service	54	54
Homemaker	**46**	46

The demographic profile detailed in Table 1 shows that the majority of the participants (62%) were aged 14–15 years, followed by 28% in the 13–14 years age bracket. Minor representations were observed in the 12–13 years (6%) and 15–16 years (4%) cohorts. Regarding family structures, an overwhelming majority (88\%) of the adolescents resided in nuclear families, while only (12%) belonged to joint family setups.

Analysis of parental occupational status revealed that (77%) of the participants' fathers were employed in professional services, with the remaining (23%) engaged in business operations. For maternal occupational distribution, more than half of the mothers (54%) were engaged in professional services, while (46%) were homemakers.

Table 2: Distribution of Parents According to Educational Qualification (**n = 100)**

Educational Qualification	Father f (%)	Mother f (%)
Secondary (SF)	0 (0%)	29 (29%)
Higher Secondary (HS)	5 (5%)	37 (37%)
Graduate	85 (85%)	32 (32%)
Postgraduate (PG)	10 (10%)	2 (2%)
Total	**100 (100%)**	**100 (100%)**

Interpretation

The table shows the educational qualifications of the parents of the adolescent students. Among fathers, the majority (85%) were graduates, followed by postgraduates (10%) and higher secondary educated (5%). None of the fathers had only secondary-level education. Among mothers, the highest proportion (37%) had completed higher secondary education, followed by graduates (32%), secondary education (29%), and postgraduates (2%). These findings indicate that fathers generally had higher educational attainment than mothers in the study population.

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Section II: Pre-Intervention and Post-Intervention Knowledge Levels

Table 3: Presents the comparative frequency and percentage distributions of adolescent students' mental health knowledge scores before and after the implementation of the educational awareness program.

n = 100

Knowledge Category (Score Range)	Pre-test Frequency (f)	Pre-test Percentage (%)	Post-test Frequency (f)	Post-test Percentage (%)
Inadequate (<50%) (0-19) marks)	84	84%	3	3%
Moderate (50% - 75%) (20-30) marks)	11	11%	83	83%
Adequate (>75%) (31-40) marks)	5	5%	14	14%
Total	**100**	**100%**	**100**	**100%**

The baseline assessment (pre-test) detailed in Table 2 reveals a substantial knowledge deficit regarding mental health among the targeted adolescents. Prior to the intervention, an overwhelming majority of the participants (84%) demonstrated inadequate knowledge. Conversely, only (11%) possessed a moderate level of understanding, and a minimal cohort (5%) exhibited adequate knowledge.

Following the execution of the educational awareness program, a statistically stark shift in knowledge distribution was observed. The post-test metrics indicate that the proportion of students categorized with inadequate knowledge dropped precipitously from (84%) to (3%). This decline was mirrored by a significant upward migration into higher knowledge strata: students holding moderate knowledge increased from (11%) to (83%), while those achieving adequate knowledge rose from (5%) to (14%).

These proportional shifts indicate that the targeted educational program served as a highly efficient tool for mitigating baseline knowledge deficits and improving psychological and mental health literacy among school-going adolescents.

Section III: This section deals with the findings related to the effectiveness of the intervention of the educational awareness programme on mental health among the adolescent students.

This section evaluates the impact of the educational awareness program on adolescent mental health knowledge. To determine the statistical significance of the knowledge change, a paired-samples (t)-test was conducted to compare pre-intervention and post-intervention scores.

Hypotheses Testing

The research hypotheses were evaluated at a conventional significance level of ($\alpha = 0.05$):

- **Research Hypothesis (H1):** The mean post-test mental health knowledge score of adolescent students will be significantly higher than their mean pre-test knowledge score following the educational awareness program.
- **Null Hypothesis (H0):** There will be no significant difference between the mean pre-test and post-test mental health knowledge scores among adolescent students after the educational awareness program.

Table 3: Paired t-Test and Cohen's d Effect Size for Pre- and Post-Intervention **(n = 100)**

Knowledge Scores Assessment Phase	Mean	Standard Deviation (SD)	Mean Difference (MD)	Degrees of Freedom (df)	Paired (t)-value	Effect Size (Cohen's (d)
Pre-test	12.90	4.20	13.05	99	23.06	2.31
Post-test	25.95	3.80				

As shown in Table 3, the baseline mental health knowledge of the adolescent participants was relatively low, yielding a pre-test mean score of (12.90), (SD = 4.20). Following the implementation of the targeted educational awareness program, the mean knowledge score increased substantially to (25.95) (SD = 3.80), resulting in a mean descriptive gain of (13.05) points.

A paired-samples (t)-test confirmed that this observed increase in knowledge was statistically significant, t (99) = 23.06), ($p < 0.05$). The empirical findings indicate that the probability of this knowledge gain occurring due to random chance is negligible. Furthermore, calculating the intervention's effect size yielded a Cohen's d of 2.31. According to international benchmarks, this represents an exceptionally large effect size, establishing that the educational program exerted a powerful and practically meaningful impact on the students' understanding.

Consequently, the null hypothesis (H0) is rejected, and the research hypothesis (H1) is accepted. These statistical outcomes conclusively demonstrate that the educational awareness program was highly effective in expanding mental health knowledge among school-going adolescents.

Section IV: Association between mental health knowledge scores and selected demographic variables of the adolescent students.

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Table 4 Chi square values showing the association mental health knowledge scores and selected demographic variables, age, type of family and occupation of the parents of the adolescent students.

n=100

Demographic Variables	Mental Health Knowledge Score (< Median)	Mental Health Knowledge Score (≥ Median)	Total	Chi-square Value	p Value
Age (years)				**4.07**	**0.25**
12–13 years	04	02	06		
13–14 years	21	07	28		
14–15 years	40	22	62		
15–16 years	01	03	04		
Types of Family				**2.19**	**0.14**
Nuclear	52	36	88		
Joint	07	05	12		
Occupation – Father				**6.21**	**0.013**
Service	63	14	77		
Business	13	10	23		
Occupation – Mother				**2.69**	**0.10**
Service	24	30	54		
Homemaker	28	18	46		

Table 4 presents the association between mental health knowledge scores and selected demographic variables, namely age, type of family, and parents' occupation among adolescent students (n = 100).

The Chi-square test revealed no statistically significant association between mental health knowledge scores and age, χ^2 (3) = 4.07, p = .254. Similarly, no significant association was found between mental health knowledge scores and type of family, χ^2 (1) = 2.19, p = .139, or mother's occupation, χ^2 (1) = 2.69, p = .101.

However, a statistically significant association was observed between mental health knowledge scores and father's occupation, χ^2 (1) = 6.21, p = .013. This finding indicates that the mental health knowledge scores of adolescent students varied significantly according to their fathers' occupation.

Therefore, the null hypothesis (H_0) was accepted for age, type of family, and mother's occupation, as no significant association was found. The null hypothesis was rejected for father's occupation, indicating a significant association with mental health knowledge scores.

Hence, among the selected demographic variables, only father's occupation was significantly associated with the mental health knowledge scores of adolescent students.

V. DISCUSSION AND CONCLUSION

Finding I: Distribution of Mental Health Knowledge Before and After the Educational Awareness Programme

The present study revealed that before the intervention, the majority of adolescent students (84%) had inadequate knowledge regarding mental health, while 11% had moderate knowledge and only 5% had adequate knowledge. Following the educational awareness programme, only 3% of students remained in the inadequate knowledge category. The proportion of students with moderate knowledge increased to 83%, and those with adequate knowledge increased to 14%.

Discussion

The findings indicate that adolescent students initially possessed limited knowledge regarding mental health. The high proportion of participants with inadequate knowledge during the pre-test highlights the need for mental health education among adolescents. Following the implementation of the educational awareness programme, a remarkable improvement in knowledge levels was observed.

The substantial reduction in the percentage of students with inadequate knowledge from 84% to 3% demonstrates the effectiveness of the educational intervention. Similarly, the increase in moderate and adequate knowledge categories indicates enhanced mental health literacy among the participants.

These findings are consistent with the study conducted by Ma KKY, Anderson JK, and Burn AM, who reported that school-based mental health literacy interventions significantly improved adolescents' knowledge and awareness regarding mental health. Similar improvements were also reported by Seedaket S and colleagues, who found that structured educational programmes effectively enhanced mental health understanding among adolescents.

The findings suggest that educational awareness programmes can serve as an effective strategy for improving mental health literacy and promoting positive mental health practices among school-going adolescents.

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Finding II: Effectiveness of the Educational Awareness Programme on Mental Health Knowledge Scores

The effectiveness of the educational awareness programme was evaluated by comparing pre-test and post-test knowledge scores.

The mean pre-test mental health knowledge score was **12.90 (SD = 4.20)**. Following the intervention, the mean post-test score increased to **25.95 (SD = 3.80)**. The mean difference between the scores was **13.05**.

The paired-samples t-test revealed a statistically significant difference between the pre-test and post-test scores (**t = 23.06, df = 99, p < 0.05**). Furthermore, the effect size calculated using Cohen's d was **2.31**, indicating a very large practical effect of the intervention.

Therefore, the null hypothesis (H01) was rejected and the research hypothesis (H1) was accepted.

Discussion

The significant increase in post-test knowledge scores clearly demonstrates the effectiveness of the educational awareness programme in improving mental health knowledge among adolescent students.

The mean gain score of 13.05 points indicates that the educational intervention substantially improved participants' understanding of mental health concepts, risk factors, signs and symptoms, preventive measures, and help-seeking services.

The paired t-test value of 23.06 indicates that the observed improvement was statistically significant and unlikely to have occurred by chance. Moreover, the effect size (d = 2.31) represents an exceptionally large effect according to Cohen's criteria, highlighting the strong practical impact of the intervention.

These findings are supported by studies conducted by Frețian AM and colleagues, who reported significant improvements in adolescent mental health literacy following structured educational interventions. Similar findings were reported by Sharma P and colleagues, who found that school-based mental health awareness programmes significantly improved adolescents' mental health knowledge and reduced misconceptions.

The findings further support the growing body of evidence suggesting that school-based educational programmes are effective approaches for improving mental health literacy and promoting early recognition of mental health problems among adolescents.

Finding III: Association Between Baseline Mental Health Knowledge Scores and Selected Demographic Variables

The association between baseline mental health knowledge scores and selected demographic variables was examined using the Chi-square test.

The findings revealed that:

- Age was not significantly associated with mental health knowledge scores ($\chi^2 = 4.07$, $p = 0.25$).
- Type of family was not significantly associated with mental health knowledge scores ($\chi^2 = 2.19$, $p = 0.14$).
- Mother's occupation was not significantly associated with mental health knowledge scores ($\chi^2 = 2.69$, $p = 0.10$).
- Father's occupation was significantly associated with mental health knowledge scores ($\chi^2 = 6.21$, $p = 0.013$).

Therefore, the null hypothesis (H02) was accepted for age, type of family, and mother's occupation, whereas it was rejected for father's occupation.

Discussion

The findings indicate that most demographic variables did not significantly influence adolescents' baseline mental health knowledge. This suggests that inadequate mental health literacy was widespread across different age groups and family backgrounds.

However, a significant association was observed between mental health knowledge scores and father's occupation. This may indicate that socioeconomic and occupational factors influence adolescents' exposure to health-related information and educational resources.

Similar findings have been reported in previous studies where parental occupation and socioeconomic status influenced health awareness and knowledge among adolescents. Nevertheless, the absence of significant associations with most demographic variables suggests that mental health education programmes should be implemented universally across all adolescent populations rather than targeting specific subgroups.

SUMMARY

The present study was conducted to assess the effectiveness of an educational awareness programme on mental health knowledge among adolescent students of Kethardanga High Madrasah School, Bankura, West Bengal.

A quantitative research approach with a quasi-experimental one-group pre-test–post-test design was adopted. One hundred adolescent students from Classes VIII and IX were selected using simple random sampling. Data were collected using a structured demographic questionnaire and a 40-item mental health knowledge questionnaire.

The major findings of the study were:

Before the intervention, 84% of students had inadequate knowledge, 11% had moderate knowledge, and 5% had adequate knowledge regarding mental health. After the intervention, inadequate knowledge decreased to 3%, while moderate and adequate knowledge increased to 83% and 14%, respectively. The mean pre-test knowledge score was 12.90 ± 4.20, which increased to 25.95 ± 3.80 after the educational awareness programme. The mean difference was 13.05. The paired t-test showed a statistically significant improvement in knowledge scores ($t = 23.06$, $df = 99$, $p < 0.05$). The effect size was very large (Cohen's $d = 2.31$), indicating a substantial practical impact of the educational awareness programme. Among the selected demographic variables, only

father's occupation showed a statistically significant association with baseline mental health knowledge scores ($\chi^2 = 6.21$, $p = 0.013$).

The findings demonstrate that the educational awareness programme was highly effective in improving mental health knowledge among adolescent students. The study supports the integration of structured mental health education into school health programmes to enhance mental health literacy, promote early recognition of mental health problems, and encourage positive mental health practices among adolescents.

Limitations of the Study

The present study has certain limitations that should be considered while interpreting the findings. The study was conducted in a single selected school in Bankura, West Bengal; therefore, the findings may not be generalized to all adolescent students in other settings. The sample size was limited to 100 participants, which may restrict the broader applicability of the results. The study adopted a one-group pretest–posttest quasi-experimental design without a control group, which limits the ability to attribute the observed changes exclusively to the intervention, as other external factors may have influenced the outcomes.

The assessment of mental health knowledge was conducted immediately after the intervention; hence, long-term retention of knowledge was not evaluated. Additionally, the study focused only on knowledge level and did not assess changes in attitudes, behaviour, or help-seeking practices among adolescents. Finally, the findings are based on self-reported responses, which may be influenced by response bias.

Recommendations

Based on the findings of the study, the following recommendations are proposed:

1. Mental health awareness programmes should be regularly conducted in schools to improve adolescents' knowledge and understanding of mental health.
2. School health nurses and community health nurses should play an active role in planning and implementing mental health education activities.
3. Mental health promotion and adolescent mental health should receive greater emphasis in nursing education and training programmes.
4. Schools should incorporate mental health education into routine health services through interactive teaching methods and awareness campaigns.
5. Future studies should be conducted with larger samples, diverse settings, and longitudinal follow-up to evaluate the sustained effectiveness of educational interventions.

Implications of the Study

The study highlights the effectiveness of structured educational programmes in enhancing mental health awareness among adolescents. The findings have significant implications for nursing practice, education, administration, and research.

- Nursing Practice: Nurses can play a vital role in promoting mental health literacy among adolescents through school-based educational interventions.
- Nursing Education: The findings support the inclusion of adolescent mental health promotion strategies in nursing curricula and training programmes.
- Nursing Administration: Health and educational administrators can utilize these findings to strengthen school mental health services and develop supportive policies.
- Nursing Research: The study provides a basis for further research on mental health education, stigma reduction, and help-seeking behaviour among adolescents.

Conclusion

The structured teaching programme was effective in improving knowledge regarding mental health awareness among adolescents. Strengthening school-based mental health education can contribute to early identification of mental health issues, improved help-seeking behaviour, and overall psychological well-being among students.

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