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Development of a New Measure to Check Mental Health Condition of Higher Secondary Level Students in West Bengal, India

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Abstract: The mental health of adolescents, particularly higher secondary school students, is an area of increasing concern in the Indian educational context. Despite growing awareness, culturally appropriate and psychometrically sound tools for assessing the mental well-being of students are limited. This study aims to develop and validate a new Mental Health Scale tailored specifically for higher secondary students (ages 16–18) in West Bengal, India. The scale was designed as a paper-pencil, self-administered instrument incorporating six key domains of mental health: Physical Soundness, Emotional Stability, Adjustment, Intellectual Maturity, Self-confidence, and Joyful Living. A rigorous methodological framework was followed, including item selection from Indian literature, expert validation, pilot testing, and large-scale administration. A 5-point Likert scale was used for responses. The initial 72 items were refined through expert feedback and item analysis (t-test of mean score of upper group and lower group), resulting in a final version comprising 60 validated items. The reliability of the scale was established through the Split-Half method ($r = 0.806$) and Spearman-Brown formula ($rtt = 0.876$), indicating high internal consistency. Content, face, concurrent, and construct validity were also confirmed. Norms were developed using a representative sample of 576 students from Birbhum and Purba Bardhaman districts. This new scale offers a reliable, valid, and contextually appropriate tool for identifying and understanding the mental health status of adolescents in West Bengal, facilitating timely intervention and support.

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1. Introduction

Mental health has emerged as a critical concern in educational settings, particularly among adolescents navigating the complex developmental phase of late adolescence. In India, and specifically in the state of West Bengal, students at the higher secondary level face immense academic pressure, social expectations, and identity-related challenges, all of which can significantly impact their psychological well-being. Despite growing awareness about the importance of mental health, systematic and culturally relevant tools for early detection and assessment among school students remain limited.

Current mental health assessment tools used in Indian educational contexts are often adapted from Western models, which may not adequately reflect the socio-cultural dynamics and stressors unique to Indian adolescents. Moreover, these tools may fail to capture region-specific factors influencing students' mental health, such as language, family structure, educational system, and societal norms. This gap highlights the pressing need for a context-sensitive, psychometrically sound instrument specifically tailored for students in West Bengal.

This study aims to develop and validate a new measure to assess the mental health condition of higher secondary students in West Bengal. The proposed tool aspires to be both linguistically and culturally appropriate, offering educators, counselors, and policymakers a reliable method for identifying students in need of psychological support. Through rigorous methodological processes including item generation, expert validation, and empirical testing, this research seeks to contribute a valuable resource to the field of adolescent mental health assessment in the Indian context.

2. Research Objectives

1. To identify key psychological domains relevant to the mental health of higher secondary students in the socio-cultural context of West Bengal.
2. To develop a comprehensive item pool based on literature review, expert consultation, and student interviews reflecting various aspects of adolescent mental health.
3. To validate the content of the initial scale through expert judgment to ensure cultural relevance, clarity, and appropriateness.

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4. To pilot the preliminary version of the scale with a representative sample of higher secondary students and analyze item performance.
5. To determine the reliability of the developed measure.
6. To establish the validity of the scale using appropriate statistical techniques such as factor analysis.
7. To standardize the final version of the tool for practical use in educational and counseling settings across West Bengal and India.

3. Understanding the Concept of Mental Health

Health is a fundamental aspect of human life and encompasses various dimensions essential for individual well-being. While the concept of health has traditionally been viewed through a biomedical lens, as merely the absence of disease. This perspective has evolved significantly over time. Biomedical scientists consider a person healthy if they are free from disease or physical ailments. However, this definition has limitations, as it overlooks the dynamic interplay between the individual and their broader environment.

Recognizing these limitations, the ecological perspective emerged, which conceptualizes health as a dynamic equilibrium between the individual and their surroundings. Subsequently, psychological and socio-cultural dimensions were integrated, acknowledging that health is shaped not only by biological factors but also by psychological, social, cultural, and political influences. From this expanded view, the holistic dimension of health was developed, which considers well-being as a multi-dimensional process involving physical, mental, emotional, social, economic, and environmental factors. In this context, health is understood as a condition in which the individual maintains a sound mind within a sound body, supported by a healthy family and environment—an idea reminiscent of ancient holistic philosophies (Irshad, n.d.).

From a humanistic standpoint, mental health is considered a vital component of overall health. It involves self-awareness, emotional stability, positive attitudes toward oneself and others, and the ability to form meaningful relationships. Historically, the term *mental hygiene* was introduced by William Sweetser in the mid-19th century, and later, Clifford Beers, a pioneer in the mental health movement, established the National Committee for Mental Hygiene in the early 20th century in the United States. Beers also founded the first outpatient mental health clinic, highlighting the growing recognition of mental health as a field of scientific inquiry (Singh, 2011).

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Several scholars and institutions have defined mental health from different perspectives:

Cutts and Mosley (1994) defined mental health as "the ability which helps us to seek adjustment in different situations of our life."

Lulla (1981) emphasized the importance of students' mental health, identifying five core dimensions: physical, emotional, moral, spiritual, and social.

Daniels (1975) described mental health as the ability to adjust effectively to the environment and maintain satisfactory interpersonal relationships.

Crow and Crow (1951) stated that “mental health is the science that deals with human welfare and provides all fields of human relationship.”

According to the World Health Organization (WHO, 2001), mental health is “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.”

Maslow (1962) viewed mental health as a dynamic and evolving process in which individuals strive toward personal growth, self-actualization, and a meaningful life.

Hadfield (1952) emphasized the integration of native and acquired abilities in harmony with the personality’s overarching aim.

Bhagi and Sharma (1992) defined mental health as a state of emotional well-being, characterized by relative freedom from anxiety and distress, and the ability to manage life’s common demands and form positive relationships.

In essence, mental health is not merely the absence of mental illness; it is a condition of internal balance and psychological well-being. It is reflected in the ability to adapt to life’s challenges, maintain emotional resilience, form healthy relationships, and contribute meaningfully to society (Irshad, n.d.).

3. 1 ***Synthesis of Reviewed Mental Health Scales for Adolescents:***

In developing a Mental Health Scale tailored for adolescents, a comprehensive review of existing instruments was undertaken. The following summarizes key features, psychometric properties, and applicability of seven prominent mental health assessments:

Anand Prakash & A.P. Singh (2017) – Mental Health Questionnaire: This 20-item questionnaire, refined to 19 items after psychometric evaluation, assesses psychological distress, well-being, and life satisfaction. Utilizing a 5-point Likert scale, exploratory factor analysis

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revealed four factors explaining 65.09% of variance. The scale demonstrated high internal consistency (Cronbach's $\alpha = 0.826$) and acceptable sampling adequacy (KMO = 0.78).

Ashalatha P.J. & C. Jayan (2017) – Mental Health Inventory: Originally comprising 70 items across five dimensions, this inventory was refined to 64 items based on t-value analyses. Responses are captured on a 5-point Likert scale. The instrument exhibited strong internal consistency ($\alpha = 0.873$) and satisfactory test-retest reliability, with established face validity.

D.J. Bhatt & Gita Gida (1992) – Mental Health Inventory: This 40-item inventory evaluates five dimensions: Perception of Reality, Integrated Personality, Positive Self-assessment, Group Favorable Attitude, and Environmental Mastery. Employing a binary response format (Agree/Do Not Agree), it demonstrated high reliability coefficients (0.94, 0.87, 0.81) and satisfactory concurrent validity ($r = 0.63$).

Jagadish & Srivastava (1983) – Mental Health Inventory: Consisting of 56 items across six dimensions, this inventory uses a 4-point Likert scale. It showed good test-retest reliability ($r = 0.82$), indicating consistency over time.

Arun Kumar Singh & Alpana Sen Gupta (2000) – Mental Health Battery: Designed for individuals aged 13-22, this 130-item battery assesses six dimensions: Emotional Stability, Overall Adjustment, Autonomy, Security-Insecurity, Self-Concept, and Intelligence. Reliability coefficients ranged from 0.767 to 0.876, with both concurrent and construct validity established.

Selvakatheeswaran P. & Rexlin Jose G. (2016) – Mental Health Inventory: Targeting high school students, this inventory initially had 105 items, refined to 72 after item analysis. It covers Emotional, Social, Intellectual, and Physical Wellness dimensions, demonstrating satisfactory reliability ($\alpha = 0.75$) and established content and concurrent validity.

Bhatia & Sharma (1998) – Mental Health Scale: This 50-item scale assesses Realistic Perception, Joyful Living, Autonomy, Emotional Stability, and Social Maturity using a 5-point Likert scale. It exhibited high internal consistency ($\alpha = 0.89$).

The reviewed instruments offer comprehensive frameworks for assessing various facets of mental health in adolescents. Their robust psychometric properties support their utility in both research and applied settings. Insights from these scales informed the development of a tailored Mental Health Scale for adolescents, ensuring relevance and reliability in this demographic.

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4. Rationale for Developing a Mental Health Scale

Contemporary understanding recognizes that mental health extends far beyond simply the absence of illness. According to the World Health Organization (WHO), it involves emotional, psychological, and social well-being, enabling individuals to realize their potential, cope with stress, work productively, and contribute to their community (WHO, 2004). Such a holistic definition underscores that sound mental health encompasses resilience, self-efficacy, emotional regulation, and life satisfaction.

Adolescence marks a critical transitional phase, involving biological, cognitive, social, and emotional change that often leads to instability (Hashmi, 2013; Selvakatheswaran, 2017). In this period, adolescents often referred to as the "Digital" or "Net Generation", actively engage with the Internet for communication, entertainment, academics, news, shopping, and more (Buckingham, 2014; Selvakatheswaran, 2017). While digital engagement may offer social support, excessive use has been linked to anxiety, depression, cyber bullying, sleep disturbances, and reduced academic focus, both globally and within Indian youth (Agrawal et al., 2025).

In India, and specifically in West Bengal, cultural expectations, family pressure, and competitive educational environments often add to the mental health burden of students (Sehgal et al., 2025). Yet, mental health is still stigmatized in many communities, and appropriate mental health services or preventive measures are often lacking at the school level. The absence of accessible, culturally sensitive, and age-appropriate tools to assess mental health conditions exacerbates the problem, leading to under-identification and inadequate intervention (Sehgal et al., 2025).

Understanding mental health as a dynamic and multifaceted construct is essential for effective assessment. It involves not only the detection of mental health problems but also the recognition of positive mental traits such as resilience, self-efficacy, and emotional regulation. For a meaningful and contextually grounded assessment among higher secondary students, any mental health measure must consider these diverse and interrelated dimensions.

This study, therefore, adopts a holistic and culturally responsive approach to conceptualize mental health, aiming to develop a tool that can effectively reflect the lived experiences, challenges, and psychological states of adolescents in West Bengal. Such a tool is essential for early identification and tailored intervention within school and community settings.

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5. Methodology of Development of Mental Health Scale:

5.1 *Planning of the Scale:*

The formulation of Mental Health Scale was planned with the objective of measuring the mental health of Higher Secondary students who belongs to the adolescents age group in Indian set up. The nature of the scale was designed to be verbal and paper-pencil test. The scale was intended to act as self-administering individuals.

5.2 *Key Domains of Mental Health Scale:*

From the previous studies following six psychological domains of mental health has been demarcated.

5.2.1 Physical Soundness:

Maintenance of healthy and balanced life without stress, depression, anxiety, fatigue, physical limitations called Physical Happiness. It indicates the physical conditions of our body i.e. absence of disabilities and proper structure of every organ, healthy weight, right functioning of organs so that one can timely execute her daily duties without stress. According to World Health Organization, for overall health physical happiness is very much important.

5.2.2 Emotional Stability

It indicates the internal capacity to control own and another people's emotions so that one can properly identify different emotions and handle different situations tactically (Coleman and Andrew, 2008). Avoiding frustration and disappointments, emotional Stability indicates positive attitude and full enjoyment in life (Selvakathyswaran, 2017). There are so many ways for emotional wellness i.e. awareness of positive thinking, attitude, believes, feelings, emotion expression in perfect manner in any situation, and understand own mistakes and take a lesson from it (Selvakathyswaran, 2017).

5.2.3 Adjustment

It means a person maintains his or her positive and healthy relationship and communication with family members, neighbours, colleagues, home workers very well and healthy. Every people face more or less problematic situations in life and overcome these difficult periods without irritation and fear is called adjustment. Mainly a person arrives at a balanced position between needs and satisfaction through adjustment in life. It brings peace and happiness in one's inners world so one can live happily in outer world.

5.2.4 Intellectual Maturity

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An intellectually matured person always engages himself or herself in creative, mentally stimulating works, and logical issues. They like to judge any matter or facts on the basis of causes. There are no place for conservative thinking and superstition in intellectual matured person. It helps people to be logical and scientific man. It discards the excessive fantasy, imagination about materialistic life.

5.2.5 Self Confidence

A person can be self confident when he or she aware about his/her abilities and skills. It indicates people accept and trust themselves and have a sense to monitor their lives. If a person knows his / her strengths and weaknesses, a positive self evaluation, realistic expectations, aims are set. Self confidence is very much related with perceptions and people's thoughts depends on it. Positive perceptions rises the confidence level in any situation of life.

5.2.6 Joyful living

It is a continuous state of mind which does not suddenly happen as a result of any success or achievement of one's life. It is related with knowledge of life. If a person wants to enjoy joyful living, he or she must have physical, mental, emotional and intellectual fitness. Joyful is an inner peace, gratification, assurance and satisfaction and only emotionally and mentally stable person achieve joyful life.

5.3 *Item Selection*

In the developing process of Mental Health Scale, the first step was careful identification and selection of items relating to mental health. For this purpose some Indian literatures which were related to mental health were sincerely reviewed by the researcher. From those review process, items were selected for construction of Mental Health Scale for the Higher Secondary students who belongs to the age group 16-18 years. To avoid the repetition of a particular response set, both positive and negative items were included. A 5 point Likert scale format was selected and each statement rated on a five point scale which ranging from Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree.

All these items were discussed with three Experts to evaluate the significance of these items to assess Mental Health of the Higher Secondary students. The experts were senior and retired professors of Education department of Visva Bharati University and Kalyani University, West Bengal. Initially researcher expressed the objectives and purpose of the construction of the Mental Health Scale to the Experts. Then the scale was provided to them to know whether the

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items reflect the mental health condition of the Higher Secondary students who belong to the adolescents' period.

With the help, guidance and suggestions of the Experts, the items number 11, 35, 42, 55, 62 and 71 were modified keeping the main content intact as these items did not fulfil the criteria of 80% unanimity. The first draft of the Mental Health Scale consisted of 72 items belonging to six sub-scales namely Physical Soundness, Emotional Stability, Intellectual Maturity, Adjustment, Self-confidence and Joyful Living.

The following Table-3.7 is showing the numbers of positive and negative items belonging to different sub-scales of Mental Health Scale.

Table 1: *Distribution of Items in First Draft of the Mental Health Scale*

Mental Health Sub-scales	Positive Items	Negative Items
Physical Soundness	1, 2, 4, 5	3, 6, 7
Emotional Stability	8, 9, 11, 13, 14, 15, 18, 21	10, 12, 16, 17, 19, 20
Intellectual Maturity	22, 24, 25, 27, 28	23, 26, 29
Adjustment	31, 34, 37, 38, 39, 42, 44	30, 32, 33, 35, 36, 40, 41, 43
Self-confidence	45, 46, 47, 50, 52, 54, 55, 56, 59	48, 49, 51, 53, 57, 58
Joyful Living	60, 63, 65, 66, 67, 68, 70, 72	61, 62, 64, 69, 71

5.4 *First Try-out*

The initial form of the scale was administered on a sample of 30 Higher Secondary students of nearby school of my (researcher's) area, Birbhum District, West Bengal to realize the efficiency of language of the items. As the first try out was used only to check the efficiency of language and ambiguity of item, the number of students was kept small. After this initial execution, editing of the items was made, as come out from first try-out. The second draft of Mental Health Scale is constituted with these 72 edited items.

5.5 *Final Try-out*

In order to execute the item analysis, the prepared scale was administered to a randomly selected 120 samples, comprising male, female, arts, science, rural and urban Higher Secondary students of Birbhum District, West Bengal. The response sheets were scored for each individual

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sample separately. Items were scored on the basis of strength of weights assigned to the five categories of responses.

5.6 ***Scoring Pattern***

Mental Health Scale is a self-reporting five point scale. Items of the scale are in statement form followed by five alternatives. The student has to tick(√) on one alternatives against each item. The scores to be assigned for different alternatives are structured in the Table-3.8.

Table 2: *Scoring Pattern for Positive and Negative Items*

Responses for items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Positive Items	5	4	3	2	1
Negative Items	1	2	3	4	5

This scoring pattern is very much straightforward. The maximum score, counted for a positive item is 5 and minimum is 1. On the other hand for negative item the scoring pattern is assigned in reverse order.

5.7 ***Item Analysis and Item Selection:***

Item analysis is a process of analyzing item characteristics through item difficulty value, discrimination index, internal consistency, reliability, validity and norms and on the basis of these processes an individual item will be decided to select or reject in the final form of the scale. Response sheets of 120 students were scored and arranged in a descending order by keeping highest score at the top and lowest score at the bottom. From the arranged list of scores, the top 27% were kept in one group, known as 'Upper Group' and the bottom 27% were kept in another group, known as 'Lower Group'. To judge discriminatory power of the items, the upper group and lower group were taken into consideration for item analysis; and the middle-scripts were kept aside and not taken for further analysis (Kelly, 1939). The significance of difference between mean score of upper group and lower group in each item was assessed by employing 't' test. Items having significant 't' values were accepted and selected for final draft of the scale whereas others were rejected. Besides individuals score in each item was correlated with the total score of the individuals, employing Pearson's product moment correlation. Level of significance was tested to judge significance of association between score of individuals for each item and total score of the individuals. The obtained t-values and r-values are given in the following table:

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Table 3: *Item Analysis: Discrimination Index of the items of Mental Health Scale*

Item No.	Higher		Lower Group		Value of 't'	Tabulated 't' Value at 0.01 Level	Level of Significance	Value of 'r'	Critical Values of 'r' at 0.01 Level	Level of Significance	Accepted/Rejected
	Mean	SD	Mean	SD							
1	3.82	0.85	3.73	1.01	0.40	2.581	Insignificant	0.08	0.227	Insignificant	**Item Rejected**
2	4.03	0.81	3.03	1.38	3.59	2.581	Significant	0.36	0.227	Significant	Item Accepted
3	4.15	0.87	2.94	1.68	3.68	2.581	Significant	0.38	0.227	Significant	Item Accepted
4	4.06	0.79	2.88	1.45	4.11	2.581	Significant	0.40	0.227	Significant	Item Accepted
5	4.00	0.87	2.79	1.43	4.16	2.581	Significant	0.38	0.227	Significant	Item Accepted
6	4.18	0.81	2.76	1.17	5.74	2.581	Significant	0.53	0.227	Significant	Item Accepted
7	3.58	1.03	3.48	1.37	0.30	2.581	Insignificant	0.01	0.227	Insignificant	**Item Rejected**
8	4.03	0.81	2.64	1.39	4.98	2.581	Significant	0.42	0.227	Significant	Item Accepted
9	4.03	0.81	2.88	1.39	4.12	2.581	Significant	0.38	0.227	Significant	Item Accepted
10	4.12	0.86	2.48	1.50	5.43	2.581	Significant	0.49	0.227	Significant	Item Accepted
11	3.70	0.98	3.52	1.25	0.66	2.581	Insignificant	0.11	0.227	Insignificant	**Item Rejected**
12	3.64	0.82	3.42	1.46	0.73	2.581	Insignificant	0.11	0.227	Insignificant	**Item Rejected**
13	3.97	0.77	2.70	1.47	4.41	2.581	Significant	0.41	0.227	Significant	Item Accepted
14	4.00	0.79	2.94	1.56	3.48	2.581	Significant	0.35	0.227	Significant	Item Accepted
15	3.79	0.82	2.88	1.52	3.03	2.581	Significant	0.30	0.227	Significant	Item Accepted
16	4.00	0.87	3.18	1.29	3.03	2.581	Significant	0.30	0.227	Significant	Item Accepted
17	3.94	0.86	2.88	1.52	3.49	2.581	Significant	0.34	0.227	Significant	Item Accepted
18	4.00	0.79	3.00	1.46	3.46	2.581	Significant	0.33	0.227	Significant	Item Accepted
19	4.06	0.93	3.12	1.43	3.16	2.581	Significant	0.31	0.227	Significant	Item Accepted
20	3.91	0.77	2.79	1.45	3.92	2.581	Significant	0.40	0.227	Significant	Item Accepted
21	4.18	0.77	3.15	1.33	3.86	2.581	Significant	0.37	0.227	Significant	Item Accepted
22	4.12	0.78	3.03	1.47	3.77	2.581	Significant	0.38	0.227	Significant	Item Accepted

23	3.64	0.99	3.58	1.23	0.22	2.581	Insignificant	0.04	0.227	Insignificant	**Item Rejected**
24	3.91	0.88	2.73	1.38	4.16	2.581	Significant	0.41	0.227	Significant	Item Accepted
25	4.09	0.84	2.91	1.51	3.93	2.581	Significant	0.37	0.227	Significant	Item Accepted
26	3.91	0.80	2.79	1.45	3.88	2.581	Significant	0.34	0.227	Significant	Item Accepted
27	3.97	0.85	2.97	1.10	4.13	2.581	Significant	0.38	0.227	Significant	Item Accepted
28	3.88	0.78	2.94	1.50	3.19	2.581	Significant	0.27	0.227	Significant	Item Accepted
29	3.97	0.88	2.73	1.35	4.42	2.581	Significant	0.42	0.227	Significant	Item Accepted
30	3.82	0.81	3.73	0.84	0.45	2.581	Insignificant	0.03	0.227	Insignificant	**Item Rejected**
31	3.94	0.83	2.67	1.47	4.33	2.581	Significant	0.39	0.227	Significant	Item Accepted
32	4.15	0.83	2.91	1.44	4.28	2.581	Significant	0.40	0.227	Significant	Item Accepted
33	3.94	0.86	3.09	1.35	3.03	2.581	Significant	0.23	0.227	Significant	Item Accepted
34	4.06	0.83	3.21	1.36	3.06	2.581	Significant	0.27	0.227	Significant	Item Accepted
35	3.91	0.80	3.61	1.25	1.17	2.581	Insignificant	0.09	0.227	Insignificant	**Item Rejected**
36	3.91	0.72	3.00	1.58	3.00	2.581	Significant	0.28	0.227	Significant	Item Accepted
37	3.91	0.72	2.64	1.41	4.61	2.581	Significant	0.41	0.227	Significant	Item Accepted
38	4.03	0.77	2.91	1.40	4.03	2.581	Significant	0.37	0.227	Significant	Item Accepted
39	4.00	0.87	2.91	1.42	3.76	2.581	Significant	0.39	0.227	Significant	Item Accepted
40	4.06	0.86	3.03	1.38	3.63	2.581	Significant	0.34	0.227	Significant	Item Accepted
41	4.00	0.83	2.73	1.51	4.25	2.581	Significant	0.42	0.227	Significant	Item Accepted
42	3.61	1.09	3.39	1.48	0.66	2.581	Insignificant	0.10	0.227	Insignificant	**Item Rejected**
43	3.55	1.06	3.42	1.17	0.44	2.581	Insignificant	0.04	0.227	Insignificant	**Item Rejected**
44	4.12	0.86	3.15	1.39	3.40	2.581	Significant	0.35	0.227	Significant	Item Accepted
45	4.12	0.93	2.88	1.54	3.98	2.581	Significant	0.39	0.227	Significant	Item Accepted
46	4.06	0.83	3.18	1.40	3.10	2.581	Significant	0.30	0.227	Significant	Item Accepted
47	4.03	0.73	2.79	1.39	4.56	2.581	Significant	0.36	0.227	Significant	Item Accepted
48	4.09	0.72	3.00	1.44	3.90	2.581	Significant	0.29	0.227	Significant	Item Accepted
49	3.88	0.86	3.61	0.97	1.21	2.581	Insignificant	0.18	0.227	Insignificant	**Item Rejected**

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50	4.09	0.80	2.73	1.35	4.98	2.581	Significant	0.45	0.227	Significant	Item Accepted
51	3.97	0.92	2.91	1.44	3.56	2.581	Significant	0.31	0.227	Significant	Item Accepted
52	4.27	0.84	3.00	1.44	4.40	2.581	Significant	0.34	0.227	Significant	Item Accepted
53	4.06	0.83	2.24	1.17	7.28	2.581	Significant	0.55	0.227	Significant	Item Accepted
54	4.12	0.82	2.61	1.17	6.09	2.581	Significant	0.53	0.227	Significant	Item Accepted
55	3.76	1.12	3.70	1.38	0.20	2.581	Insignificant	0.07	0.227	Insignificant	**Item Rejected**
56	3.97	0.85	2.67	1.31	4.79	2.581	Significant	0.39	0.227	Significant	Item Accepted
57	3.79	0.78	2.94	1.52	2.85	2.581	Significant	0.24	0.227	Significant	Item Accepted
58	3.97	0.81	2.88	1.60	3.50	2.581	Significant	0.38	0.227	Significant	Item Accepted
59	4.06	0.83	2.97	1.49	3.68	2.581	Significant	0.39	0.227	Significant	Item Accepted
60	4.09	0.88	2.88	1.43	4.15	2.581	Significant	0.35	0.227	Significant	Item Accepted
61	3.88	0.82	2.48	1.42	4.89	2.581	Significant	0.43	0.227	Significant	Item Accepted
62	4.09	0.84	2.55	1.35	5.58	2.581	Significant	0.48	0.227	Significant	Item Accepted
63	4.03	0.77	2.61	1.30	5.42	2.581	Significant	0.38	0.227	Significant	Item Accepted
64	3.70	0.77	2.79	1.39	3.29	2.581	Significant	0.32	0.227	Significant	Item Accepted
65	4.12	0.86	3.24	1.30	3.24	2.581	Significant	0.29	0.227	Significant	Item Accepted
66	3.88	0.74	2.67	1.24	4.82	2.581	Significant	0.40	0.227	Significant	Item Accepted
67	4.03	0.85	2.58	1.37	5.19	2.581	Significant	0.44	0.227	Significant	Item Accepted
68	4.06	0.86	3.00	1.48	3.56	2.581	Significant	0.31	0.227	Significant	Item Accepted
69	4.15	0.76	2.91	1.38	4.54	2.581	Significant	0.45	0.227	Significant	Item Accepted
70	3.94	0.83	3.06	1.41	3.08	2.581	Significant	0.38	0.227	Significant	Item Accepted
71	3.52	1.00	3.39	1.41	0.40	2.581	Insignificant	0.11	0.227	Insignificant	**Item Rejected**
72	4.12	0.78	3.09	1.40	3.69	2.581	Significant	0.37	0.227	Significant	Item Accepted

5.8 *Final Version of the Scale:*

In the final version of the scale, the items having significant ‘t’ value and ‘r’ value at 0.01 level of confidence was accepted and retained. Total number of significant items was 60. So the final draft of the scale was consisted with 60 items. The scoring pattern was the same as

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mentioned earlier. In the final version of the Mental Health Scale, distribution of items belonging to different sub-scales is showing through the following table:

Table 5: *Distribution of Items in Final Draft of the Mental Health Scale*

Sub-scales	Positive Items	Negative Items
Physical Soundness	1, 3, 4	2, 5
Emotional Stability	6, 7, 9, 10, 11, 14, 17	8, 12, 13, 15, 16
Intellectual Maturity	18, 19, 20, 22, 23	21, 24
Adjustment	25, 28, 30, 31, 32, 35	26, 27, 29, 33, 34
Self-confidence	36, 37, 38, 40, 42, 44, 45, 48	39, 41, 43, 46, 47
Joyful Living	49, 52, 54, 55, 56, 57, 59, 60	50, 51, 53, 58

Table 6: *Final Draft of the Mental Health Scale*

Mental Health Scale

গবেষক হিসাবে তোমার মানসিক স্বাস্থ্যের স্বরূপ জানাই বর্তমান গবেষণার লক্ষ্য-

তোমার সামনের ষাট (৬০) টি বিবৃতি মন দিয়ে পড়ো এবং তোমার প্রতিক্রিয়াটি জানাও। তোমার প্রতিক্রিয়া জানানোর জন্য পাঁচ (৫) টি বিকল্প দেওয়া হল। তোমার প্রতিক্রিয়া অনুযায়ী বিকল্পতে (✓) চিহ্ন দাও। (put the tick (✓) mark in right option)

এখানে তোমার মনের ভাবটিকেই লেখো। বিবৃতিটি পড়ে যেটি ঠিক মনে হবে সেই বিকল্পটিতেই (✓) চিহ্ন দাও। এটি শেষ করার নির্দিষ্ট কোন সময়সীমা নেই তবুও এই মানসিক স্বাস্থ্য স্কেলটি শেষ করতে তোমার ৩০ মিনিটের বেশী সময় লাগার কথা নয়। বিকল্পগুলি নিম্নলিখিত:

ভীষণভাবে সমর্থন করি (Strongly Agree)	সমর্থন করি (Agree)	অনিশ্চিত (Undecided)	সমর্থন করি না (Disagree)	একেবারেই সমর্থন করি না (Strongly Disagree)

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নং (Sl. No.)	বিবৃতি (Statement)	সম্পূর্ণ সহমত (Strongly Agree)	সহমত (Agree)	অনিশ্চিত (Uncertain)	অসহমত (Disagree)	সম্পূর্ণ অসহমত (Strongly Disagree)
১.	শরীর সুস্থ থাকলে মনে আনন্দ অনুভব করি। (If the body is healthy , I feel delighted.)					
২.	শরীরের যেকোনো ছোটখাটো সমস্যাই মনে চিন্তার সৃষ্টি করে। (Any minor physical problems create agitation in mind.)					
৩.	যেকোনো জায়গা বা যেকোনো পরিস্থিতিতে শরীরের যত্ন নেওয়াকে গুরুত্ব দিই। (In any situation I give preference to take care of my health.)					
৪.	যেকোনো ভালো কাজ সঠিকভাবে সম্পাদন করতে গেলে সবার আগে সুস্থ সবল শরীর ও স্বাস্থ্যের অধিকারী হতে হবে বলে মনে করি। (To perform any good feed properly, I think first of all we should have a sound health.)					
৫.	সারাদিনের বিভিন্ন কাজকর্মের মধ্যেও শরীরের আরাম চিন্তায় মনে আসে। (Even during the course of different works of a day, the thought of comfort of the body comes to mind)					
৬.	যে কোন কাজ সঠিক সময়ে শেষ করতে না পারলে মনের মধ্যে অনুশোচনা হয়। (If any work is not completed within the right time, there is a regret in the mind.)					
৭.	পরিচিত কোন মানুষের বিপদ আপদ, দুঃখ-কষ্ট মনকে পীড়া দেয়। (The miseries and sufferings of persons of close circle hurt my mind.)					
৮.	যেকোন কাজের ব্যর্থতায় মন অশান্ত হয়ে পড়ে। (The mind becomes restless with the failure in any work.)					
৯.	নিজের আচার আচরণের জন্য কোন ব্যক্তি আঘাত পেলে মনে কষ্ট হয়। (If one gets hurt by my behaviour, it hurts my mind.)					
১০.	যে কোন স্থানের নিয়ম শৃঙ্খলা আমার দ্বারা নষ্ট হলে মন ভারাক্রান্ত হয়ে যায়। (The mind becomes burdened, the rules and regulations of a place is broken by me.)					
১১.	পিতা, মাতা, শিক্ষক শিক্ষিকা দের দেওয়া যেকোন কাজের দায়িত্ব সঙ্গে সঙ্গে পালন করতে পারলে মন তৃপ্ত হয়। (The mind is satisfied if the task is observed immediately, given by parents and teachers.)					
১২.	পরিচিত মানুষজনের কাছে নিজের সমালোচনা শুনলে ক্ষুব্ধ ও আক্রমনাত্মক হয়ে উঠি। (Listening to my own criticism from the people I know, I become angry and aggressive.)					
১৩.	বাড়ির সদস্যরা বকাঝকা করলে বা কটু কথা বললে মন সহজেই খুবই ব্যথিত হয়। (The mind is easily upset when family members scold or speak harshly.)					
১৪.	যেকোন সমস্যামূলক পরিস্থিতিতে মাথা ঠাণ্ডা রেখে কাজ করতে পছন্দ করি। (I like to handle the problematic situations calmly.)					
১৫.	সহপাঠীরা পড়াশোনা বা অন্যান্য কাজে এগিয়ে গেলে বা প্রাধান্য পেলে মনের মধ্যে বিরক্তি ও রাগের উদ্রেক হয়। (If classmates get any advantages or priorities in class, i feel irritation and anger in mind.)					
১৬.	কোন পছন্দের জিনিস পাওয়ার আশা করে না পেলে মনের মধ্যে অশান্তির সৃষ্টি হয়। (When I cannot get my favourite thing which is expected, I feel restless.)					
১৭.	দলগত কোন কাজে ভুলত্রুটি হলে নিজের ভুল ভ্রান্তিই খোঁজার চেষ্টা করি। (If there are many errors in group work, I always try to look for my own mistakes.)					
১৮.	কার্য কারণ সম্পর্ক দিয়ে যে কোন ঘটে যাওয়া ঘটনার ব্যাখ্যা করতে পছন্দ করি। (I like to explain any event which is already happened with cause effect relationship.)					
১৯.	অবসর সময়ে বুদ্ধির বিভিন্ন খেলা নিয়ে সময় কাটাতে পছন্দ করি। (I like to spend my leisure with various brain games.)					
২০.	তর্ক বিতর্ক মূলক আলোচনায় অংশগ্রহণ করতে ভালো লাগে। (I like to participate in debates.)					
২১.	বিপদসঙ্কুল পরিস্থিতিতে বেশিরভাগ ক্ষেত্রেই সাধারণ বুদ্ধি লোপ পায়। (In problematic situations often I lost my common sense.)					

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২২.	যুক্তি ও বুদ্ধি দিয়ে চলা মানুষদের সাথে মেলামেশা করতে পছন্দ করি। (I like to spend my time with logical and intellectual people.)					
২৩.	দলগত কোন কাজে সিদ্ধান্ত নিতে পছন্দ করি। (In a group work I like to take any decision as a group member.)					
২৪.	অনেক সময় ড. যুক্তি ও বুদ্ধি দিয়ে চলা মানুষদের সাথে মেলামেশা করতে পছন্দ করি। (Sometimes avoid my responsibilities when I unable to control the situations.)					
২৫	পরিচিত গন্ডির বাইরে নতুন নতুন মানুষের সাথে আলাপ করতে মন উৎসাহী হয়ে যায়। (Beyond known circle my mind becomes interested to meet the new people.)					
২৬.	যে কোন নতুন পরিবেশে স্বচ্ছন্দ বোধ করি না। (I don't feel comfort in any new environment.)					
২৭.	কোন উৎসব অনুষ্ঠানে জায়গায় জনসমাগম বেশি হলে মনে অস্বস্তি বোধ হয়। (In any occasions huge gathering of people irritate me.)					
২৮.	রুটিন মাফিক কাজের বাইরে কেউ কোনো বাড়তি কাজ দিলে দায়িত্ব সহকারে সেটা করার চেষ্টা করি। (If any work is given to me out of my routine, I will try to do this work properly.)					
২৯.	চেনা জানা নেই এমন ব্যক্তি দের সাথে সহজ ভাবে মিশতে মন সায় দেয় না। (The mind does not agree to meet comfortably to unknown person.)					
৩০.	যেকোন বয়সের মানুষদের সাথে সহজেই মিশতে পারি। (I can easily get along with people of any age.)					
৩১.	বন্ধু বান্ধবদের সাথে খাবার দাবার ও পড়াশোনার বিভিন্ন বিষয়ে সহযোগিতা ভাগ করে নিতেই পছন্দ করি। (I like to share my tiffin and academic matters with friends.)					
৩২.	ধনী দরিদ্র সকল অর্থনৈতিক অবস্থার ছেলে মেয়ে দের সাথে বন্ধুত্ব করতে পছন্দ করি। (I like to make friendship with boys and girls from any economic background viz. Poor, rich.)					
৩৩.	বাড়ির কাজের লোকেদের সাথে খোলামেলা মেলা মেশা কখনই পছন্দ করি না। (I don't like open fraternization of servants or house workers.)					
৩৪.	বাড়ির সদস্যদের বা কাজের লোকজনদের করে দেওয়া আমার কাজ পছন্দ না হলেই মনটা সর্বক্ষণ খুঁত খুঁত করতে থাকে। (When family members or house workers do my works and can not fulfill my work related demand then I feel irritation.)					
৩৫.	নতুন জায়গায় ঘুরতে গিয়ে সেখানকার মানুষ দের কাছাকাছি থাকতেই পছন্দ করি। (When traveling to a new place, I like to stay with the local people.)					
৩৬.	জীবনের যে কোন বিষয়ে সিদ্ধান্ত নিজে নিতেই স্বচ্ছন্দ বোধ করি। (I feel comfortable to take any decision of life by own.)					
৩৭.	নিজের কাজ নিজে করতেই ভালোবাসি। (I like to do my work myself.)					
৩৮.	যেকোন জটিল পরিস্থিতি সামলানোর ক্ষেত্রে নিজের ক্ষমতার উপর যথেষ্ট ভরসা আছে। (I have enough confidence in controlling over any difficult situation.)					
৩৯.	কোন কাজে কয়েক বার ব্যর্থ হলে মন হতাশাগ্রস্ত হয়ে পড়ি। (I become depressed after getting failed in a work for several times.)					
৪০.	পরিবারের সদস্যদের আলোচনার মধ্যে আমার মতামত যথেষ্ঠ গুরুত্ব পায়। (My opinion get enough importance in a discussion of my family members.)					
৪১.	মাঝে মধ্যে জটিল পরিস্থিতি মোকাবেলায় যথেষ্ঠ ক্ষমতা থাকা সত্ত্বেও প্রয়োগে ভয় পাই। (Inspite of having enough ability to deal with the difficult situation, I often afraid to apply that.)					
৪২.	আমি আমার জীবনে কাজকর্ম নিয়ে যথেষ্ট সন্তুষ্ট। (I am satisfied enough with the works of my life.)					

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৪৩.	মাঝে মধ্যেই ভবিষ্যৎ চিন্তায় মন বেশি ই উৎকন্ঠিত হয়। (The mind often gets anxious with the thoughts of future.)					
৪৪.	অন্যের দেওয়া কাজের দায়িত্ব পালন করার সময় নিজের উপর সম্পূর্ণ ভরসা রাখতে পারি। (I can keep trust on myself at the time of fulfilling work responsibility given by others.)					
৪৫.	আগামী দিনের পরিকল্পনা নিয়ে মন সর্বদা সচেতন থাকে। (My mind always remains conscious about the plans of upcoming days.)					
৪৬.	অনেক সময় একা একা কোন কাজ করার ক্ষেত্রে মনের জোর হারিয়ে ফেলি। (I often lose my ability of spirit all alone.)					
৪৭.	নতুন কোন কাজ শুরু করার আগে মনকে প্রস্তুতকরতে অনেক সময় লাগে। (Before the beginning of a new work, it takes much time to prepare the mind.)					
৪৮.	বিভিন্ন পরীক্ষা মূলক ব্যবস্থায় ব্যর্থ হয়ে ও মনের জোর একই থাকে। (Despite failing in various experimental measures, the strength of mind remains dame)					
৪৯.	আমি নিজেকে পৃথিবীর সুখী মানুষদের একজন বলে মনে করি। (I consider myself as one of the happiest person in the world.)					
৫০.	অতীতের কোন দুর্ঘটনার দৃশ্য অনেক সময় মনে এসে বর্তমান জীবনের আনন্দকে নষ্ট করে। (Past accidental scene often comes in mind and often spoils the joy of present life.)					
৫১.	জীবনের কিছু কিছু ব্যর্থতা সুখের সময় গুলিকে নষ্ট করে দেয়। (Some of the failures in life spoils the happier days.)					
৫২.	ছোটখাটো দুঃখের বিষয়, মন খারাপ হওয়া এই ব্যাপারগুলো এড়িয়ে চলি। (I avoid the things like minor regrets or being upset.)					
৫৩.	বেশি আনন্দ পেলে মনের মধ্যে অজানা আশঙ্কা চলে আসে। (On getting more pleasure , an unknown fear comes into mind.)					
৫৪.	অবসর সময় মজাদার বিষয়, হাস্য কৌতুক ইত্যাদি পড়াশোনার মধ্যে কাটাতে ভালো লাগে। (I like to spend the leisure time by reading funny stuff, comics etc.)					
৫৫.	জীবনের প্রতিটা মুহূর্ত উপভোগ করার ইচ্ছা সবসময় মনের মধ্যে থাকে। (The desire to enjoy every moment of life is always in my mind.)					
৫৬.	দিনের একটা অবসর বন্ধু বান্ধবদের সাথে কাটাতে পারলে মনে আনন্দ হয়। (If I can spend leisure time of a day with friends, i feel happy.)					
৫৭.	নিজের যোগ্যতা সম্পর্কে সচেতন হওয়া দরকার বলে মনে করি। (I think it is important to be aware of own ability.)					
৫৮.	জীবন যে গুলো পাইনি সেগুলো ই বেশি গুরুত্ব দিই। (I give more importance to the things that I did not get in life.)					
৫৯.	বাইরের জগতের থেকে মনের কথার উপর গুরুত্ব দিই। (I give more importance to the words of mind than the outside world.)					
৬০.	এখনও পর্যন্ত জীবনে যা পেয়েছি তা পাওয়ার যোগ্য বলে ই মনে করি। (I think I deserve whatever I have got in life so far.)					

5.9 *Reliability of the Mental Health Scale:*

According to Anastasi (1968) 'Reliability' refers to the consistency of scores which are obtained by the same individuals when re-examined with test on different occasions, or with different sets of equivalent items, or under variable examining conditions. Simply, reliability

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refers to the precision or accuracy of the measurement or score. A well structured scientific instrument should produced accurate results both at present and over time (G.L. Ray and Sagar Mondal, 2011). Reliable tests are stable in whatever they measure and yield comparable scores on repeated administration.

The reliability of this scale is calculated using Split-Half method which is also known as Odd-Even method. According to this method, the scale is divided into two equivalent halves. So Odd numbered items are listed in first half and even numbered items in second half. Then score of the first half of the scale is correlated with the score of the second half. The correlation coefficient value for these halves is 0.806. According to De La Rey (1978) scores of the respondents in both halves have a high correlation, there evidence of consistency is enough in the test. After that Reliability coefficient of the whole scale is calculated through using Spearman-Brown prophecy formula.

$$\mathbf{r_{tt} = 2r/1+r}$$

Where r_{tt} = correlated reliability coefficient of the total test

r = the reliability coefficient of the split half

Hence $r_{tt} = 2*0.78/1+0.78$

$r_{tt} = 1.56/1.78$

$= 0.876$

From this result, it can be concluded that as the reliability score through Split-Half and Spearman-Brown methods is quite high for this scale, so it is reliable for this study.

5.10 ***Validity:***

The term 'Validity' means truthfulness. According to Lindquist (1951), validity of a test is the accuracy with which it measures that which is intended to measure. So validity refers to the degree to which a test measures which it claims to measure When the contents of the items individually and as a whole are relevant to the test, it represents content validity (Ray & Mondal, 2011). Here validity of Mental Health Scale is established through content validity, face validity, concurrent validity and construct validity.

5.11 ***Content Validity:***

When the contents of the items individually and as a whole are relevant to the test, it represents content validity (Ray & Mondal, 2011). According to Anastasi (1968), content validity involves essentially the systematic examination of the test content to determine whether

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it covers a representative sample of the behaviour domain to be measured. For getting valid results, the content of a test, survey or measurement method must cover all relevant parts or dimensions of the subject it aims to measure. Content validity can be called as a qualitative, non-statistical type of validity (Beukman, 2005). In this study, to establish content validity the investigator met three experts; who are senior and retired professors of Education department of Visva-Bharati and Kalyani University, West Bengal. They assessed the relevancy of items according to the dimensions and content of the scale. Following Edward's (1969) opinion, only those items are selected in the scale which has 80% unanimity.

5.12 ***Face Validity:***

Face validity means to the level to which a test appears to measure what it wants to measure (Leedy & Ormrod, 2004). It is the extent to which a test is subjectively viewed as covering the concept it purports to measure. It indicates the transparency or relevance of a test as it appears to test participants (Holden, Ronald B., 2010 wikipedia). Face validity of a test is 'looks like' which means it is going to measure what is supposed to measure (University of Salford: School of Community, Health Sciences and Social care). For this scale, in the beginning session, the total list of 72 statements was sent to the three experts of Education Department of Visva-Bharati and Kalyani University, West Bengal to judge the item relevancy with particular dimensions. All the items are found to have more than 80% unanimity and it establishes indicator of face validity of the scale.

5.13 ***Concurrent Validity:***

Concurrent validity is the degree to which scores on a test are related to the scores of another, already established as valid, designed to measure the same construct. In this method a test score is correlated with a criterion which is available at present time (Ray & Mondal, 2011). Here concurrent validity of drafted Mental Health Scale is assessed by correlating scores of 120 participants on Mental Health Scale developed by the Investigator and Mental Health Battery developed by Arun Kumar Singh and Alpana Sen Gupta, 2000. Pearson's product moment correlation value (r) between these two sets of score is 0.813, which establish concurrent validity of the drafted scale.

5.14 ***Construct Validity:***

Anatasi (1968) defined construct validity as the extent to which the test may be said to measure a theoretical construct or trait. Construct validity is used to determine how well a test

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measures what it is supposed to measure. In this study, the construct validity of the scale is measured by calculating the correlations among different dimensions of Mental Health Scale (Subscale) and correlation between different dimensions of Mental Health Scale (Subscale) with total scale score. The obtained and r-values are given in the following table:

Table 7: *Intercorrelations (r) among Sub-scales and Correlations (r) between Subscales with Total Scale Score*

Sub-scale	Value of Sub-scale Intercorrelations (r)						Value of Correlations (r) with Total Score
	Physical Soundness	Emotional Stability	Intellectual Maturity	Adjustment	Self-confidence	Joyful Living	
Physical Soundness	1.00	0.63	0.49	0.57	0.59	0.56	0.75
Emotional Stability		1.00	0.53	0.62	0.68	0.62	0.84
Intellectual Maturity			1.00	0.57	0.57	0.56	0.74
Adjustment				1.00	0.64	0.72	0.84
Self-confidence					1.00	0.69	0.87
Joyful Living						1.00	0.86

All the correlations (r) are significant at 0.01 level of confidence which establish construct validity of this Mental Health Scale.

5.15 ***Norms:***

Test norms consist of data which helps to estimate the relative position of the tested individual in a predefined population, with respect to the trait being measured. It provides a basis for comparing the individual with a group. Here Percentile norms have been developed for prepared Mental Health Scale. For this Mental Health Scale was administered to a fresh cross-sectional sample of 576 Higher Secondary students of Birbhum and Purba Bardhaman Districts of West Bengal. Following table is showing the percentile rank norms of prepared Mental Health Scale for the Higher Secondary students of the study area irrespective of gender, residential background and academic stream:

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Table 8: *Percentile Rank Norms of Mental Health Scale*

Percentile Rank	Mental Health Score
P_{10}	189
P_{20}	197
P_{30}	204
P_{40}	209
P_{50}	216
P_{60}	223
P_{70}	230
P_{80}	238
P_{90}	249

From this percentile rank norms, a five point qualitative criterion have been developed for easy understanding and for classifying sample with respect to their mental health. The categorizations of Mental Health Score are given in the following table:

Table 9: *Categorization of Mental Health Score*

Percentile Rank	Mental Health Conditions	Range of Mental Health Score
P_{80} and Above	Excellent Mental Health	238 and Above
P_{60} to P_{79}	Good Mental Health	223-237
P_{40} to P_{59}	Average Mental Health	209-222
P_{20} to P_{39}	Poor Mental Health	197-208
Bellow P_{19}	Very Poor Mental Health	Bellow 196

6. Administration and Instructions

Prepared Mental Health Scale can be administered in individual or group settings. Final version of the scale was administered on a sample of 576 Higher Secondary students of selected schools of Purba Bardhaman and Birbhum Districts, West Bengal after obtaining permissions from concerned school authority. Before administration of the scale, researcher gave assurance to the students that their response will be kept confidential and will be used only for research

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purpose. Students have been instructed to read the following statement carefully: "On the following pages 60 statements have been given. Read each statement carefully and decide your answer on five point alternatives answers, viz. strongly agree, agree, undecided, disagree and strongly disagree, and put a mark (✓) in cell of the alternative which is nearest to your answer. Kindly do answer to all the 60 statements. There is no time limit to complete your response but it should be completed within 30 minutes." The researcher also explained the above instruction verbally to the students for their accurate understandings and requested to ask anything if any statement is not clear to them.

7. Discussion

The newly developed adolescent mental health scale demonstrated robust psychometric properties, with high content validity and internal consistency comparable to existing instruments. The initial 72 items were refined through expert feedback and item analysis (t-test of mean score of upper group and lower group), resulting in a final version comprising 60 validated items. The reliability of the scale was established through the Split-Half method ($r = 0.806$) and Spearman-Brown formula ($r_{tt} = 0.876$), indicating high internal consistency. Content, face, concurrent, and construct validity were also confirmed. Norms were developed using a representative sample of 576 students from Birbhum and Purba Bardhaman districts of West Bengal.

This tool has clear implications for educational policy and school-based mental health interventions in West Bengal as the new scale provides a practical tool for early identification. Schools could administer it periodically to screen students. Teachers and school counselors should be trained to recognize different condition of the mental health. This tool support recent government initiatives: for example, the Indian Ministry of Education's *Manodarpan* program explicitly surveys students' mental well-being and aims to strengthen support systems (Govindan et al., 2025). This measure could complement such efforts by providing dependable tool to policymakers.

8. Conclusion

The present study successfully developed a culturally and developmentally appropriate Mental Health Scale for higher secondary level students in West Bengal. Recognizing the

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multidimensional nature of adolescent mental health, the scale includes six core psychological domains: Physical Soundness, Emotional Stability, Adjustment, Intellectual Maturity, Self-confidence, and Joyful Living. The development process followed systematic psychometric procedures, from item construction and expert validation to pilot testing, statistical item analysis, and norm development. The final 60-item scale demonstrated high reliability and validity, making it a dependable tool for both researchers and educators.

This scale not only fills a critical gap in the availability of indigenous mental health assessment tools for adolescents but also offers a framework that reflects the unique socio-cultural dynamics of Indian students. The tool can be effectively used in schools and counseling settings to assess mental well-being, identify at-risk students, and design targeted mental health interventions. As mental health increasingly becomes a priority in educational policy and practice, this study contributes a valuable, evidence-based instrument to support adolescent well-being in West Bengal and potentially other similar contexts.

But the new scale, although validated for content and internal consistency, has not yet been compared against a clinical gold standard; thus it measures *self-reported* mental health status rather than diagnosed disorders. Future studies should replicate this research with larger and more diverse samples, including different linguistic groups, and may refine the scale via factor analyses or item response techniques.

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