



Socioeconomic Determinants of Mental Health Disorders among Tea Garden Workers in Bangladesh: Evidence from Lakkatura Tea Estate

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ABSTRACT

Background: Tea garden workers in Bangladesh constitute one of the country's most socioeconomically disadvantaged occupational groups. Poor wages, inadequate housing, limited educational opportunities, insecure employment, and restricted access to healthcare may adversely affect their mental health. However, empirical evidence on the socioeconomic determinants of mental health disorders among this population remains limited. **Objective:** This study aimed to examine the socioeconomic determinants of mental health disorders among tea garden workers in Bangladesh and identify the major factors associated with their psychological well-being. **Methods:** A quantitative cross-sectional survey design was employed. Primary data were collected from 30 tea garden workers residing in the Lakkhatura Tea Garden, Sylhet, using a structured interview schedule. Respondents were selected through purposive sampling. Descriptive statistical techniques, including frequencies and percentages, were used to analyze the data. **Results:** The findings revealed that respondents experienced multiple socioeconomic disadvantages. Most participants had low educational attainment (43.33% illiterate), while 80% belonged to ultra-poor or economically insufficient households. Low wages (40.0%), inadequate and unhygienic accommodation (36.67%), workplace accidents (53.33%), limited healthcare services (33.33%), and job insecurity (33.33%) were common concerns. Economic crisis (33.33%), health risks (26.67%), and excessive work load (23.33%) were the leading causes of depression and anxiety. Furthermore, many respondents reported loss of confidence (53.34%), feelings of worthlessness (53.33%), difficulties in coping with life challenges (43.33%), and perceived life as a constant struggle (63.33%). Nearly half (46.67%) were not hopeful about their future. **Conclusion:** Socioeconomic deprivation is strongly associated with poor mental health among tea garden workers in Bangladesh. Improving wages, occupational safety, housing conditions, healthcare access, educational opportunities, and psychosocial support is essential for promoting mental well-being and reducing mental health inequalities within this marginalized population.

Keywords: Socioeconomic Determinants, Mental Health disorders, Tea Garden Workers, Bangladesh.

INTRODUCTION

Mental health disorders are increasingly recognized as a major global public health challenge, affecting millions of people regardless of age, gender, or occupation. The World Health Organization (WHO) defines mental health as a state of well-being in which individuals realize their abilities, cope with the normal stresses of life, work productively, and contribute to their communities (World Health Organization [WHO], 2022). Nevertheless, mental health is profoundly influenced by socioeconomic conditions, including poverty, unemployment, low educational attainment, inadequate housing, poor working environments, and limited access to healthcare. These social determinants disproportionately affect marginalized populations in low- and middle-income countries (Patel et al., 2018; Lund et al., 2018).

Bangladesh has experienced substantial economic growth over recent decades; however, socioeconomic inequality remains a persistent challenge, particularly among disadvantaged occupational groups. Tea garden workers represent one of the country's most marginalized communities, characterized by low wages, poor living conditions, limited educational opportunities, inadequate healthcare services, and insecure employment. These long-standing socioeconomic disadvantages not only undermine their physical health but also increase their vulnerability to depression, anxiety, psychological distress, and other common mental health disorders (WHO, 2022).

The tea industry plays a significant role in Bangladesh's economy by providing employment to thousands of workers, most of whom perform physically demanding work under difficult environmental and occupational conditions. Long working hours, financial insecurity, workplace exploitation, occupational hazards, social exclusion, and limited access to mental healthcare collectively create chronic stress that may adversely affect workers' psychological well-being. Persistent exposure to these adverse conditions may reduce productivity, impair quality of life, and contribute to the intergenerational transmission of poverty and poor health outcomes.

A growing body of international literature demonstrates that socioeconomic disadvantage is strongly associated with poor mental health outcomes (Lund et al., 2018; Patel et al., 2018). However, empirical evidence focusing specifically on tea garden workers in Bangladesh remains scarce. Most existing studies have concentrated on labour rights, wages, housing, health services, and socioeconomic deprivation, while comparatively little attention has been given to the mental health consequences of these conditions. Consequently, there is a

significant knowledge gap regarding how socioeconomic determinants influence mental health disorders among tea garden workers in Bangladesh.

Against this background, the present study investigates the socioeconomic determinants of mental health disorders among tea garden workers in Bangladesh. Specifically, it examines the influence of factors such as income, education, employment conditions, workplace environment, housing, healthcare access, and social support on workers' mental health. The findings are expected to enrich the existing literature and provide evidence-based recommendations for policymakers, public health professionals, labour welfare organizations, and tea estate authorities to design effective interventions aimed at improving the mental well-being and overall quality of life of tea garden workers in Bangladesh.

OBJECTIVES OF THE STUDY

General Objective

To examine the socioeconomic determinants of mental health disorders among tea garden workers in Bangladesh.

Specific Objectives

- To assess the prevalence and nature of mental health disorders among tea garden workers in Bangladesh.
- To examine the socioeconomic conditions (e.g., income, education, occupation, housing, and access to healthcare) of tea garden workers.
- To identify the association between socioeconomic factors and mental health disorders among tea garden workers.
- To explore the influence of workplace conditions on the mental health status of tea garden workers.
- To provide evidence-based recommendations for improving the mental health and socioeconomic well-being of tea garden workers in Bangladesh.

LITERATURE REVIEW

A number of literatures have been found on the tea plantation workers of Bangladesh highlighting their different aspects. Research particularly on the mental health disorders of the tea garden workers of Bangladesh is scarce. A number of researches have been done by Bangladesh Tea Research Institute (BTRI) on different areas of tea culture, agronomical

aspects of tea cultivation, pest management, high yield variety, soil fertility and use of fertilizer etc. But, research on the field of tea workers' socioeconomic determinants of mental health disorder among the tea Garden workers very few. Nonetheless, some important assessment and study have been carried out in some specialized areas of mental health situation in different areas in Bangladesh. Moreover, the following mentioned few published and unpublished literature which are directly or indirectly related with our research problem.

Islam and Biswas (2015) conducted a study on Mental Health and the Health System in Bangladesh: Situation Analysis of a Neglected Domain of Dhaka, Bangladesh. They found that Mental Health constitutes a major public health challenge undermining the social and economic development throughout much of the developing world. It is estimated that mental disorders account for 13% of the global burden of disease (WHO 2008). The paper suggests that mental health care system in Bangladesh faces multifaceted challenges such as lack of public mental health facilities, scarcity of skilled workforce, inadequate financial resource allocation and social stigma. Bangladesh still does not have a comprehensive mental health policy to strengthen the entire health system. Clearly, the most crucial challenge is the absence of a dynamic and proactive stewardship able to design and enforce policies to further strengthen and enhance the overall mental health care.

The first national survey on mental health conducted in 2003-2005 demonstrated that 16.1% of the adult population had some form of mental disorder and that the prevalence of mental disorders was higher among women (19%) than men (12.9%). In other words, in Bangladesh women are more vulnerable to mental illness than their male counterparts. Moreover, people with severe mental illness are also less likely to access general health care. A lack of proper diagnosis, inadequate and/or improper laboratory tests, inadequate training of behavioral health specialists, and length of time spent without seeking care, inadequate space and equipment combined with stigma, fear, and shame hinder people with behavioral disorders from accessing mental health care.

Lim, et al., (2000) conducted a study on lost Productivity among Full-Time Workers with Mental Disorders of Vincent's Hospital, Sydney. Australia. They found that a substantial amount of lost productivity due to mental disorders comes from within the full time working population. The greater impact of mental disorders on work cutback compared to work loss suggests that work cutback provides a more sensitive measure of work impairment in those with mental disorders. Work impairment was based on self report only. While there is

evidence for the reliability of self-assessed work loss days, no reliability or validity studies have been conducted for work cutback days. The low rates of treatment seeking are a major health issue for the workforce, particularly for affective and anxiety disorders, which are important predictors of lost productivity.

This study finding that affective disorders were associated with the greatest amount of work loss and cutback days among people with only one disorder, and that the affective anxiety disorder combination had the greatest number of work loss days among people. This study also findings are consistent with this view and indicate that work cutback days among full-time workers are a more powerful measure of lost productivity due to mental disorders.

Majumde and Roy (2012) conducted a study on Socio-economic Conditions of Tea Plantation Workers in Bangladesh: A Case Study on Sreemongal. They found that Tea is the second most popular drink in the world, after water. For a number of developing countries it is an important commodity in terms of jobs and export earnings. The tea industry in Bangladesh annually produces about 55-60 million kg of tea. It ranks 10th in the list of 30 tea producing countries of the world. Bangladesh earns 2,000 million taka (Bangladesh Currency) every year from tea export contributing about 0.8% to the total GDP of Bangladesh. The study finds that working conditions for pickers are often poor, with low wages, low job and income security, discrimination along ethnic and gender lines, lack of protective gear and inadequate basic facilities such as housing and sometimes even drinking water and food. The study is done to identify the present socio-economic conditions faced by the tea industry workers of Bangladesh and thus provides recommendations to solve the problems.

Rahma (2016) conducted a study on An Enquiry into the Living Conditions of Tea Garden Workers of Bangladesh: A Case Study Tea Estate. He found that tea garden workers are an integral part of the agro-based tea industry of Bangladesh. They play vital role in tea production of the country. This study has made an attempt to explore the living conditions of the tea garden workers of Bangladesh including their wage structure, literacy, and health and sanitation status. In addition, this paper outlines the basic infrastructure and geo-topography of a tea estate. A case study of Khan Tea Estate of Jaintiapur Upazila in Sylhet has taken to get an in-depth idea of the tea garden workers' livelihood.

The Khan Tea Estate has an area of 638.72 hectares of land. Forty seven per cent of this land is used for tea cultivation. Rest of the land is occupied by paddy land, natural forest, rubber plantation, office and housing infrastructures and low-lying areas This study reveals that

literacy rate among the workers is slightly less than the national rate. Sixty one per cent of the workers are literate while the national literacy rate is about 65 per cent. Out of 61 percent literate workers, only 12 percent have studied in secondary schools, 23 per cent completed primary education and 26 percent workers have rudimentary literacy. Literacy rate of female workers is far less than their male counterparts. Among the illiterate workers, 65 per cent are female and 35 percent are male.

Hassan (2014) studied that *Deplorable Living Conditions of Female Workers: A Study in a Tea Garden of Bangladesh*. The study reveals the living conditions of the female laborers of tea garden in Bangladesh exploring the social and job environment with the inclusion of consciousness level as the deplorable scenario of their life styles. This research has been done in tea garden of Sylhet district in Bangladesh namely Lackkhatura Tea Estate, as the study area, taken into account at random. It shows that female workers are being oppressed and suppressed in each and every sphere of life as from family residence to job field. It also exhibits very explicitly that 68 percent of female workers have no control over their own income. 94 percent have no hereditary property ownership though they are entitled to get it legally from their family. 92 percent females think that they are being physically tortured and mentally harassed by their husband, male members of family and also by representative of estates manager. 86 percent women want to keep small size of family but cannot play role in the decision making of child issue. The study is fully based on primary level data that followed stratified sampling method with triangulation research design and reviewing some related literatures from past research reports.

Sarma (2013) conducted *A Case Study on Socio-Economic Condition of Tea Garden Labourers Lohpohia Tea Estate of Jorhat District, Assam*. He found that Tea Garden Laborers Lohpohia Tea Estate Estate of Jorhat District, Assam laborers play an important role in our society. Our society will never be complete without their involvement and contribution. Therefore, it is essential to study the socio economic condition of this particular section. In our proposed study, I want to highlight the socio-economic conditions of this section not in general but specifically in connection with Lopohia Tea Estate of Jorhat district. Accordingly, we have framed some objectives to study the socio-economic condition of laborers of that particular Tea Estate.

Ahammad (2013) conducted assessment of socio-economic conditions of the Tea Gardens workers a study on selected tea gardens of Chunarghat Upazila, Habiganj District,

Bangladesh. Tea is one of the most important exporting cash crops of Bangladesh. The country's average export of tea per year is about 26 million kg of value of \$ 36 million. A large number of tea workers are directly or indirectly related with this industry. Their life style and social status are different from others. Habiganj district is the second largest tea garden of Bangladesh. There are 23 tea gardens located in this district out of 163 tea gardens of Bangladesh. This research paper attempts to highlight the socio-economic condition of tea workers in selective tea gardens. All of the tea workers in these selected tea gardens are 'Hindu' and they are divided into some racial groups. The actual origin of tea workers are from different states of India i.e., Orissa, Bhupal, Assam, Bihar, Meghalaya etc. They are living within half to one mile distance from working place. Their weekly wage is only 330 Taka for 8 hours working in a day.

RESEARCH GAP

The existing literature indicates that tea garden workers in Bangladesh experience severe socioeconomic deprivation, including low wages, poor housing, inadequate healthcare, and limited educational opportunities. Previous studies by on the socioeconomic conditions, living standards, wages, education, sanitation, and gender discrimination among tea garden workers. Therefore, several important research gaps remain .There is a lack of empirical research specifically examining the socioeconomic determinants of mental health disorders among tea garden workers in Bangladesh. Previous studies have largely concentrated on socioeconomic conditions rather than their direct relationship with depression, anxiety, psychological distress, and overall mental well-being .Existing research has not comprehensively examined the combined effects of poverty, education, housing, healthcare access, occupational hazards, workplace conditions, and social support on mental health within a single analytical framework .There is limited evidence regarding how occupational stressors, including low wages, excessive workload, workplace accidents, and job insecurity, contribute to mental health disorders among tea garden workers. Very few studies have investigated the influence of childhood adversity, family violence, and psychosocial support on the mental health of this marginalized occupational group .Evidence-based recommendations for policymakers to improve both the socioeconomic conditions and mental health of tea garden workers remain scarce.

To address these gaps, the present study examines the socioeconomic determinants of mental health disorders among tea garden workers in Bangladesh by exploring the influence of

education, income, employment conditions, housing, healthcare access, workplace environment, and psychosocial factors on workers' mental health outcomes. This study contributes new evidence to an under-researched area and provides policy-relevant insights for improving the well-being of tea garden workers.

METHODOLOGY

The study has adopted quantitative method of social research to achieve objectives of the study. The Survey method of research was suitable for this research purpose. The Sample was taken from three important colonies of the total households. In this research the total population was 400 (household). So, 30 (household) samples were taken & those were selected through purposive or non-random sampling. Interviewing was the prime technique of data collection. As it was a quantitative research structured interview schedule was preferred. The questions were both open and close ended. Additionally observation was used as supportive technique in some of the cases to ensure the validity of the respondents answer.

The Study area was Lakhatora Tea Garden of National Tea Estate company Ltd. There were several tea gardens in Sylhet city where we could conduct our study. But Lakhatora Tea Estate was selected due to easy transportation other basic facilities Lakkatura Tea Estate is among the oldest tea garden in Bangladesh. It is also the single most beautiful tea garden in the nation. Along with this factor the huge population who are living in this territory considered .The Lakkatura Tea Garden is situated near Osmani Airport in Chaukidhenki Upazila of Sylhet district. Green Banani is surrounded by the northern side of Sylhet city, the Lakkatura Tea Garden. It is an official tea garden under the National Tea Board. The first tea garden in the sub-continent of Bangladesh is located in the Malianichara Tea Garden.

Overall, the data coded by numbers for facilitate the inputs in SPSS for analysis. The edition made for making the answers more valid and the idea were taken during the interview period through observation.

RESULTS AND FINDINGS

This study employed a sample survey to investigate the nature, causes, and consequences of mental health disorders among tea garden workers in Bangladesh. The survey included 30 respondents, all of whom resided in the Lakkatura Tea Garden area under the management of the National Tea Company Limited

Table 1: *Regarding age of the Respondents*

Age Group (Years)	Frequency (n)	Percentage (%)
15–25	3	10.0
25–35	8	26.7
35–45	8	26.7
45–55	8	26.7
55–65	3	10.0
Total	N=30	100.0

Table 1 presents the age distribution of the respondents. The findings indicate that respondents were distributed across five age categories. The largest proportion of respondents belonged to the age groups of 25–35 years, 35–45 years, and 45–55 years, each accounting for 26.7% of the total sample. In contrast, respondents aged 15–25 years and 55–65 years represented 10.0% each. The results suggest that the study sample was predominantly composed of middle-aged individuals, with a relatively balanced distribution across the three central age categories.

Table 2: *Regarding Sex of the respondents*

Gender	Frequency(n)	Percentage (%)
Male	17	56.67
Female	13	43.33
Total	N=30	100.0

The data table 2 reveal that the majority of the respondents were male 56.67%, while females accounted for 43.33% of the total sample. This suggests a relatively balanced gender composition, with a slight predominance of male participants.

Table 3: *Educational Level of the Respondents*

Education Level	Frequency(n)	Percentage (%)
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Illiterate	13	43.33
Can Sign Only	8	26.67
Primary Education	6	20.0
Secondary Education	3	10.00
Total	N= 30	100.00

Table 3 presents the educational status of the respondents. The findings indicate that a substantial proportion of the respondents (43.33%) were illiterate, reflecting a high prevalence of educational deprivation among the study population. About 26.67% of the respondents were able to sign their names but had no formal education. Furthermore, 20.00% had completed primary education, while only 10.00% had attained secondary-level education. The results suggest that the majority of the respondents possessed low levels of educational attainment, which may contribute to limited awareness, reduced access to information and services, and increased vulnerability to various social and mental health challenges

Table 4(a): Receiving *Mental Support of the Respondents*

Receiving Mental Support	Frequency(n)	Percentage (%)
Yes	20	66.67
No	4	13.33
Sometimes	6	20.00
Total	N=30	100.00

Table 4(a) shows the distribution of respondents according to their receipt of mental support. The majority of the respondents (66.67%) reported that they receive mental support, indicating that mental support is available to a significant proportion of the tea garden workers. On the other hand, 20% of the respondents stated that they receive mental support only sometimes, suggesting irregular access to such support. A smaller proportion (13.33%) reported that they do not receive any mental support. The findings imply that while most

respondents have some form of mental support, a considerable number still experience inadequate or inconsistent support, which may affect their mental well-being.

Table 4(b): Sources of mental support of the respondents

Source of Mental support	Frequency (n)	Percentage (%)
Spouse	12	40.00
Parents	5	16.67
Relatives	2	6.67
Neighbors	4	13.33
Offspring	3	10.00
No need	4	13.33
Total	N= 30	100.00

The table 4(b) shows that among the 30 respondents, the largest proportion (40.0%) reported receiving mental support from their spouse. This was followed by parents (16.67%), while neighbors and respondents reporting no need for mental support each accounted for 13.33%. Offspring provided mental support to 10.0% of the respondents, whereas relatives were the least common source of mental support (6.67%).

Table 5: Participation in Religious Activities of the respondents

Participation in Religious Activities	Frequency(n)	Percentage (%)
Many Times	15	50.00
Sometimes	13	43.33
Never	2	6.67
Total	(N = 30)	100.00

The findings of table 5 reveal that half of the respondents (50.00%) participated in religious activities many times. A substantial proportion (43.33%) reported participating sometimes, while only 6.67% stated that they never participated in religious activities. These results indicate that the majority of the respondents were involved in religious activities to varying degrees, with regular participation being the most common patte

Table 6: *Problems faced by tea Garden workers in their work place during illness*

Problems of work during illness	Frequency(n)	Percentage (%)
Less work than usual	7	23.33
Less work than capacity	6	20.00
Unable to work	7	23.33
Did not participate in work	10	33.34
Total	N= 30	100.00

The table 6 shows that among the 30 tea garden workers surveyed, one-third 33.34% reported that they did not participate in work during periods of illness, representing the largest proportion of respondents. Additionally, 23.33% stated that they were able to work but performed less work than usual, while an equal proportion 23.33% reported being completely unable to work due to illness. Furthermore, 20.00% indicated that they worked below their normal capacity. These findings demonstrate that illness substantially reduces work participation and productivity among tea garden workers, with more than three-quarters of respondents either being unable to work or experiencing diminished work performance during illness

Table 7: *Percentage Distribution According to Losses of Work Due to Physical Illness in the last One Month*

Losses of Work	Frequency (n)	Percentage (%)
Full time	1	3.33
Maximum time	5	16.67
Sometimes	6	20.00

Never	18	60.00
Total	N= 30	100.00

Table 7 indicates that the majority of respondents 60.0% did not lose work due to physical illness in the last month. However, 40.0% experienced some degree of work loss, including 20.0% sometimes, 16.67% for the maximum time, and 3.33% full-time. These findings suggest that physical illness affects the work productivity of a considerable proportion of tea garden workers.

Table 8: *Percentage Distribution Based on Accidents in the Workplace*

Accidents in workplace	Frequency(n)	Percentage (%)
Yes	16	53.33
No	14	46.67
Total	N=30	100.00

Table 8 presents the distribution of respondents according to whether they had experienced an accident in the workplace. Among the 30 tea garden workers surveyed, 16 respondents (53.33%) reported that they had experienced an accident while working, whereas 14 respondents (46.67%) stated that they had not experienced any workplace accidents.

The findings indicate that more than half of the respondents have encountered workplace accidents, suggesting that occupational hazards are common among tea garden workers. The relatively high proportion of accidents may reflect unsafe working conditions, inadequate protective equipment, physically demanding tasks, or limited occupational safety measures.

Table 9: *Percentage distribution based on natural disaster*

Natural Disaster	Frequency (n)	Percentage (%)
Flood	14	46.67
Earthquake	9	30.00
No	7	23.33
Total	N=30	100.00

Table 9 presents the percentage distribution of respondents based on their experience of natural disasters. Out of 30 respondents, 46.67% reported experiencing floods, making it the most common natural disaster. 30.00% (n experienced earthquakes, while 23.33% reported no experience of any natural disaster. The findings indicate that floods are the predominant natural disaster affecting the respondents, suggesting a greater need for disaster preparedness and support measures in flood-prone areas.

Table 10: *Percentage Distribution of Respondents Based on Manmade Disasters*

Manmade Disaster	Frequency(n)	Percentage (%)
Yes	12	40.0
No	18	60.0
Total	N=30	100.00

Table 10 shows the distribution of respondents based on their experience of manmade disasters. Among the 30 respondents, 40.0% reported that they had experienced a manmade disaster, while 60.0% stated that they had not. The findings indicate that although the majority of respondents had no experience with manmade disasters, a considerable proportion 40% had been affected. This suggests that exposure to manmade disasters remains a significant concern for a substantial segment of the study population and may have implications for their health, livelihood, and overall well-being

Table 11: *Percentage distribution of respondents based on being assaulted by someone*

Being assaulted	Frequency (n)	Percentage (%)
Yes	11	36.67
No	19	63.33
Total	N=30	100.00

Table 11 shows that out of 30 respondents, 11 (36.67%) reported that they had been assaulted by someone, while 19 (63.33%) stated that they had not experienced any assault. The findings indicate that although the majority of respondents were not subjected to assault, more than one-third had experienced such incidents. This suggests that assault remains a significant occupational and social concern among the respondents and may negatively affect

their physical safety, psychological well-being, and work performance. Appropriate workplace safety measures, awareness programs, and legal protection should be strengthened to reduce the occurrence of assault among tea garden workers.

Table 12: *Percentage distribution based on assaulted by whom*

Assaulted by whom	Frequency(n)	Percentage (%)
Family members	4	13.33
Friends	1	3.33
Spouse	3	10.00
Others	3	10.00
No one	19	63.34
Total	30	100.00

Table 12 shows the distribution of respondents according to the person who assaulted them. The majority of the respondents 63.34% reported that they had not been assaulted by anyone. Among those who experienced assault, family members were the most commonly reported perpetrators 13.33%, followed by spouses 10.00% and others 10.00%. Only 1 respondent (3.33%) reported being assaulted by friends.

Table 13: *Percentage distribution based on being beaten by someone during childhood.*

Beaten by someone during childhood	Frequency(n)	Percentage (%)
Yes	13	43.33
No	17	56.67
Total	N= 30	100.00

Table 13 shows that out of 30 respondents, 43.33% reported that they had been beaten by someone during their childhood, 56.67% stated that they had not experienced such physical punishment. Although the majority of respondents did not report being beaten during childhood, a substantial proportion (more than two-fifths) experienced childhood physical violence. This finding suggests that childhood physical abuse was relatively common among

the study participants and may have long-term implications for their physical, psychological, and social well-being. Further research is recommended to explore the association between childhood violence and later health outcomes among tea garden workers.

Table 14: *Percentage distribution according to neglect by parents or family during childhood.*

Neglect by parents	Frequency(n)	Percentage (%)
Yes	16	53.33
No	14	46.67
Total	N=30	100.00

Table 14 shows that more than half of the respondents 53.33% reported experiencing neglect by their parents or family during childhood, while 46.67% did not report such experiences. The findings indicate that childhood neglect was relatively common among the study participants, suggesting that a substantial proportion were exposed to adverse family experiences during their early years. Such experiences may have important implications for their psychological well-being and overall quality of life.

Table 15: *Percentage distribution according to the source of suggestions when making decisions during hesitation*

Source of suggestion	Frequency(n)	Percentage (%)
Parents	5	16.67
Husband	6	20.00
Wife	4	13.33
Siblings	6	20.00
Offspring	5	16.67
Neighbors	4	13.33
Total	N= 30	100.00

Table 15 shows that respondents sought advice from different family and social members when facing hesitation in decision-making. The highest proportion received suggestions from their husband 20.0% and siblings 20.0%), followed by parents 16.67% and offspring 16.67%.

A smaller proportion relied on their wife 13.33% and neighbors 13.33%. These findings suggest that respondents primarily depend on close family members for guidance during uncertain situations, highlighting the important role of family support in decision-making.

Table 17: *Percentage distribution based on mental pressure about job-related problems*

Job-related problems	Frequency (n)	Percentage (%)
Less wage	12	40.00
Excess working hour	7	23.33
Fear of retrenchment	5	16.67
No pressure	6	20.00
Total	N=30	100.00

Table 17 shows that less wage was the most common source of mental pressure, reported by 40% of the respondents. Excess working hours were the second most common problem, affecting 23.33% of the respondents, followed by fear of retrenchment reported by 16.67% . Meanwhile, 20% of the respondents reported no job-related mental pressure. These findings indicate that financial insecurity, particularly low wages, is the major contributor to mental stress among the respondents, followed by excessive working hours and concerns about job security

Table 18: *Percentage Distribution of Respondents According to Accommodation Problems*

Accommodation problems	Frequency (n)	Percentage (%)
Inadequate accommodation	11	36.67
Insecure accommodation	5	16.67
Conflict with authority	3	10.00
Unhygienic environment	11	36.67
Total	N= 30	100.00

Table 18 shows that the most common accommodation-related problems among the respondents were inadequate accommodation 36.67% and an unhygienic living environment 36.67%, each reported by 11 respondents. Insecure accommodation was experienced by

16.67% 5 respondents, while 10.00% reported conflicts with authorities regarding accommodation. The findings indicate that poor housing conditions and inadequate sanitation are the major accommodation challenges faced by the respondents, highlighting the need for improved housing facilities and a healthier living environment.

Table 19: *Percentage Distribution of Respondents According to Arguing with Family Members without Any Reason*

Arguing without any reason	Frequency (n)	Percentage (%)
Yes	12	40.00
No	18	60.00
Total	30	100.00

Table 19 shows that 60% of the respondents reported that they did not argue with family members without any reason, whereas 40% admitted that they engaged in such arguments. The findings indicate that although the majority maintained relatively stable family relationships, a considerable proportion experienced unnecessary conflicts within the family. These conflicts may be associated with work-related stress, financial hardship, or psychological pressure, suggesting the need for interventions that promote emotional well-being and healthy family communication among the respondents.

Table 20: *Percentage distribution based on losing confidence in himself/herself*

Losing confidence	Frequency (n)	Percentage (%)
Not at all	5	16.66
Not more than usual	9	30.00
Rather more than usual	8	26.67
Much more than usual	8	26.67
Total	N= 30	100

Table 20 shows that 30% of the respondents reported feeling "not more than usual" loss of confidence, making it the most common response. Equal proportions, 26.67% each reported feeling "rather more than usual" and "much more than usual" loss of confidence. Only

16.66% stated that they did not experience any loss of confidence. Overall, more than half of the respondents 53.34% experienced a higher-than-usual loss of confidence, suggesting that reduced self-confidence is a common psychological concern among the study participants.

Table 21: *Percentage distribution based on thinking of himself or herself as a worthless person*

Thinking of oneself as a worthless person	Frequency (n)	Percentage (%)
Yes	5	16.66
Sometimes	11	36.67
Not at all	14	46.67
Total	N= 30	100

Table 21 shows that nearly half of the respondents 46.67% reported not at all thinking of themselves as a worthless person, indicating relatively better self-worth among this group. However, 36.67% reported sometimes experiencing such thoughts, while 16.66% reported yes, suggesting persistent feelings of worthlessness. Overall, more than half of the respondents 53.33% experienced feelings of worthlessness either occasionally or regularly, highlighting a considerable level of psychological distress among the study participants.

Table 22: *Percentage distribution ability to concentrate on work*

Ability to Concentrate on Work	Frequency(n)	Percentage (%)
Always	12	40.0
Sometimes	15	50.0
Not at all	3	10.0
Total	N= 30	100.0

Table 22 shows that half of the respondents 50.0% were able to concentrate on their work only sometimes, indicating occasional difficulties in maintaining attention. A further 40.0% reported that they could always concentrate on their work, suggesting satisfactory cognitive

functioning. However, 10.0% stated that they were not able to concentrate at all, which may reflect significant psychological distress or reduced work efficiency.

Table 23: *Percentage Distribution of the Respondents Based on Separation or Bereavement*

Separation or Bereavement	Frequency(n)	Percentage (%)
Death of family member	12	40.00
Divorce	4	13.33
Second marriage	2	6.67
Separation among family members	3	10.00
Never	9	30.00
Total	N= 30	100.00

The table 23 shows that 40% of the respondents experienced the death of a family member, making it the most common separation or bereavement-related event. Thirty percent reported never experiencing such events. Divorce was reported by 13.33% of the respondents, while 10% experienced separation among family members. Only 6.67% reported second marriage as a significant life event. These findings indicate that bereavement due to the death of a family member was the predominant stressful life event among the respondents.

Table 24: *Percentage Distribution of the Respondents by Reasons for Depression or Anxiety*

Reason for Depression/Anxiety	Frequency(n)	Percentage (%)
Excessive work	7	23.33
Health risk	8	26.67
Social negligence	3	10.00
Economic crisis	10	33.33
Others	2	6.67
Total	N=30	100.00

Table 24 shows that economic crisis was the leading reason for depression or anxiety among the respondents, reported by 10 33.33% participants. This was followed by health risk respondents; 26.67% and excessive work 23.33%. Social negligence accounted for 3 respondents 10.00%, while other reasons were reported by 6.67%. The findings indicate that financial difficulties, health-related concerns, and heavy workloads were the major contributors to depression or anxiety among the study participants.

Table 25: *Percentage Distribution of the Respondents Based on Educational Hazards in Their Life*

Educational Hazards	Frequency(n)	Percentage (%)
No scope for education	13	43.33
Dropout	13	43.33
Conflict with classmates	1	3.33
Distance of school	1	3.33
No school	2	6.67
Total	N= 30	100.00

The findings of table 25 indicate that the major educational hazards experienced by the respondents were the lack of scope for education 43.33% and school dropout 43.33%, making these the most common barriers to education. A small proportion of respondents reported having no school available 6.67%, while conflict with classmates 3.33% and long distance to school (3.33% were the least frequently reported educational challenges. Overall, the results suggest that limited educational opportunities and school dropout are the predominant educational hazards affecting the respondents, highlighting the need for improved access to education and strategies to reduce dropout rates.

Table 26: *Percentage Distribution of the Respondents Based on Workplace Problems*

Workplace Problems	Frequency(n)	Percentage (%)
Threat of retrenchment	10	33.33
Dreadful work environment	8	26.67

Derogatory language by authority	4	13.33
Health risk		26.67
Total	30	100.0

Table 26 shows that the most commonly reported workplace problem among the respondents was the threat of retrenchment (33.33%, n, indicating considerable job insecurity. Dreadful work environment and health risks were each reported by 26.67% of the respondents, suggesting that unsafe and unfavorable working conditions are common concerns. A smaller proportion 13.33% experienced derogatory language from authority, reflecting issues related to workplace harassment and poor supervisory behavior. Overall, the findings indicate that job insecurity, occupational health hazards, and adverse working conditions are the major workplace challenges faced by the respondents.

Table 27: *Percentage Distribution of Respondents by Economic Condition*

Economic Condition	Frequency(n)	Percentage (%)
Ultra-poor	12	40.00
Insufficient	12	40.00
Moderate	4	13.33
Well-off	2	6.67
Total	N= 30	100.00

The findings of table 27 indicate that the majority of respondents belonged to economically disadvantaged households. Equal proportions 40.0% each) were categorized as ultra-poor and having insufficient economic conditions, together accounting for 80.0% of the sample. Only 13.33% of respondents reported a moderate economic condition, while a very small proportion 6.67% were well-off. These results suggest that most respondents experienced substantial financial hardship, which may adversely affect their quality of life, access to education and healthcare, mental well-being, and overall socio-economic stability.

Table 28: *Percentage Distribution of Respondents by Health Facilities*

Health Facilities	Frequency(n)	Percentage (%)
Inadequate healthcare	10	33.33
Lack of immediate care	9	30.00
Unawareness	3	10.00
Lack of doctors	8	26.67
Total	N= 30	100.00

Table 28 presents the distribution of respondents according to the health facilities available to them. Among the 30 respondents, 10 33.33% reported inadequate healthcare as their major problem, making it the most frequently mentioned issue. Nine respondents, 30.00%, stated that they experienced a lack of immediate medical care, while 8 respondents, 26.67%, reported a shortage of doctors. Only 3 respondents, 10.00%, identified unawareness regarding health services as the main concern.

Table 29: *Percentage Distribution of the Respondents Based on Ability to Sleep*

Ability to Sleep	Frequency(n)	Percentage (%)
Always	15	50.00
Sometimes	14	46.67
Not at all	1	3.33
Total	N=30	100.00

Table 29 shows the respondents' ability to sleep. Half of the respondents 50.0% reported that they were always able to sleep, indicating satisfactory sleep patterns among many participants. Nearly an equal proportion 46.67% reported sometimes being able to sleep, suggesting occasional sleep disturbances or irregular sleep quality. Only 3.33% of respondents stated that they were not able to sleep at all, representing a very small proportion with severe sleep problems.

Table 30: *Percentage Distribution of the Respondents Based on Feeling Hopeful about Their Future*

Feeling Hopeful About Their Future	Frequency	Percentage (%)
Yes	11	36.67
Sometimes	5	16.67
Not at all	14	46.67
Total	30	100.00

Table 30 shows that nearly half of the respondents (46.67%) were not at all hopeful about their future, indicating a high level of pessimism. About 36.67% reported feeling hopeful, while 16.67% were hopeful only sometimes. These findings suggest that a substantial proportion of respondents experience uncertainty and lack optimism regarding their future, highlighting the need for interventions that improve psychological well-being, economic security, and social support.

Table 31: *Percentage Distribution of Respondents According to Time Spent Chatting with People*

Time Spent Chatting with People	Frequency(n)	Percentage (%)
More time than usual	11	36.67
About the same as usual	9	30.00
Less time than usual	6	20.00
Much less than usual	4	13.33
Total	N= 30	100.00

Table 31 shows that 36.67% of the respondents reported spending more time than usual chatting with people, while 30.00% spent about the same amount of time. In contrast, 20.00% spent less time than usual, and 13.33% spent much less time than usual chatting. These findings indicate that although over one-third of respondents increased their social interaction through chatting, a considerable proportion reduced their communication, which may reflect differences in social engagement and psychological well-being among the respondents.

Table 32: *Percentage Distribution of the Respondents According to Feeling Capable of Making Decisions*

Decision-making capability	Frequency(n)	Percentage (%)
More so than usual	13	43.33
Same as usual	8	26.67
Less than usual	5	16.67
Much less capable	4	13.33
Total	N= 30	100.00

Table 32 shows that 43.33% of the respondents reported feeling more capable than usual of making decisions, indicating relatively strong confidence in their decision-making ability. Meanwhile, 26.67% stated that their decision-making ability was the same as usual. However, 16.67% felt less capable than usual, and 13.33% reported being much less capable of making decisions.

Table 33: *Percentage Distribution of the Respondents According to Feeling Incapable of Overcoming Their Difficulties*

Feeling incapable of overcoming difficulties	Frequency(n)	Percentage (%)
Not at all	5	16.67
No more than usual	8	26.67
Rather more than usual	6	20.00
Much more than usual	7	23.33
Total	N=30	100.00

Table 33 shows the respondents' perception of their ability to overcome difficulties. About 26.67% reported feeling incapable no more than usual, while 23.33% felt much more incapable than usual. Additionally, 20.00% experienced this feeling rather more than usual, and 16.67% reported not feeling incapable at all. These findings indicate that a considerable

proportion of respondents experienced increased difficulty in coping with life challenges, suggesting the need for psychological support and resilience-building interventions.

Table 34: *Percentage distribution of the respondents according to finding life as a constant struggle*

Finding Life as a Constant Struggle	Frequency(5)	Percentage (%)
Not at all	5	16.67
No more than usual	6	20.00
Rather more than usual	9	30.00
Much more than usual	10	33.33
Total	N= 30	100.00

Table 34 shows that 33.33% reported finding life much more of a struggle than usual, while 30.00% felt life was rather more of a struggle than usual. In contrast, 20.00% reported no more struggle than usual, and 16.67% stated not at all. Overall, 63.33% of the respondents experienced greater-than-usual struggles in life, indicating that a majority were facing considerable psychological and social difficulties. This suggests a high level of stress and hardship among the respondents, highlighting the need for appropriate mental health and social support interventions.

Table 35: *Percentage Distribution of the Respondents in Accordance with Being Able to Enjoy Normal Day-to-Day Activities*

Being Able to Enjoy Normal Day-to-Day Activities	Frequency(n)	Percentage (%)
More so than usual	8	26.67
Same as usual	9	30.00
Less so than usual	6	20.00
Much less than usual	7	23.33
Total	N= 30	100.00

Table 35 shows that 30% were able to enjoy their normal day-to-day activities the same as usual, which is the highest proportion. 26.67% reported enjoying their daily activities more so than usual. In contrast, 20% enjoyed their daily activities less so than usual, while 23.33% experienced much less enjoyment than usual.

DISCUSSION

The present study aimed to examine the socioeconomic determinants of mental health disorders among tea garden workers in Bangladesh. The findings demonstrate that mental health problems among tea garden workers are strongly associated with multiple socioeconomic disadvantages, including poverty, low educational attainment, inadequate healthcare services, poor housing conditions, unsafe working environments, financial insecurity, and limited employment opportunities. These determinants operate simultaneously and create chronic stress, which adversely affects workers' psychological well-being and quality of life.

One of the important findings of this study is that the majority of respondents belonged to the middle-age group, while male respondents slightly outnumbered female respondents. This age distribution suggests that most participants were economically active individuals responsible for supporting their families. Middle adulthood is often associated with greater economic responsibilities, childcare, healthcare expenditures, and occupational stress. Therefore, financial insecurity and unstable employment may have a stronger influence on psychological well-being among this age group.

The educational status of the respondents reveals another significant socioeconomic challenge. Nearly half of the respondents were illiterate, while only a very small proportion completed secondary education. Low educational attainment has long been recognized as one of the strongest predictors of poor mental health because education improves employment opportunities, income generation, health literacy, problem-solving ability, and access to social resources. Individuals with limited education often possess inadequate knowledge regarding mental health, available healthcare services, stress management strategies, and coping mechanisms.

The present study further indicates that although approximately two-thirds of respondents reported receiving mental support from family members, particularly spouses, psychological distress remained common. Emotional support from family is generally considered a

protective factor against mental illness because it promotes resilience during stressful life events. However, the findings suggest that family support alone cannot compensate for severe socioeconomic deprivation. When individuals continuously experience poverty, low wages, unsafe working conditions, inadequate healthcare, and social exclusion, emotional support becomes insufficient to eliminate chronic psychological stress.

Religious participation was another important protective factor identified in this study. Half of the respondents reported frequent participation in religious activities, while another large proportion participated occasionally. Previous studies have demonstrated that religious involvement may reduce psychological distress by providing emotional comfort, social integration, hope, and positive coping mechanisms during difficult life situations. Nevertheless, despite relatively high religious participation, many respondents still experienced symptoms of poor mental health. This finding suggests that although religion contributes positively to emotional resilience, structural socioeconomic inequalities continue to exert a much stronger influence on mental health outcomes.

Occupational conditions emerged as one of the strongest determinants of psychological well-being in this study. More than half of the respondents experienced workplace accidents, while many reported being unable to work during illness or experiencing reduced work productivity because of poor health. These findings indicate that tea garden work involves considerable occupational hazards that may increase both physical and psychological stress.

Job-related stress was another major contributor to poor mental health among respondents. The study found that low wages constituted the most frequently reported source of mental pressure, followed by excessive working hours and fear of job loss. Financial insecurity creates persistent psychological stress because workers remain uncertain about their ability to provide adequate food, education, healthcare, and housing for their families. Chronic financial hardship gradually reduces self-esteem, increases hopelessness, and contributes to depression and anxiety.

Overall, we can get some thematic approach from the results and findings.

Socioeconomic Conditions and Mental Health

One of the most significant findings of the present study is the overwhelming level of economic deprivation among tea garden workers. The results reveal that 80% of the respondents belonged to either the ultra-poor or economically insufficient categories, while

only a very small proportion reported moderate or satisfactory economic conditions. This finding clearly demonstrates that poverty remains one of the principal socioeconomic characteristics of tea garden communities in Bangladesh. Poverty has consistently been recognized as one of the strongest predictors of poor mental health.

Workplace Environment and Occupational Stress

The study demonstrates that occupational conditions substantially influence the mental health of tea garden workers. More than half of the respondents experienced workplace accidents, while many reported reduced work capacity or complete inability to work during illness. Furthermore, respondents identified excessive working hours, fear of retrenchment, unsafe workplaces, health risks, and poor working environments as major sources of occupational stress.

Tea garden work is physically demanding and often performed under harsh environmental conditions with limited occupational safety measures. Continuous exposure to heavy workloads, repetitive physical labour, heat, and occupational hazards may increase chronic stress and psychological fatigue. Job insecurity also emerged as an important psychological stressor in the present study. Approximately one-third of respondents reported fear of retrenchment as an important workplace problem. Employment insecurity creates persistent uncertainty regarding future income and family survival, thereby increasing emotional distress

The high prevalence of workplace accidents observed in the present study also deserves particular attention. Occupational injuries often produce long-term physical disability, financial hardship, and emotional trauma. Consequently, improving occupational safety should be considered an important mental health intervention as well as a labour welfare strategy.

Housing, Healthcare and Living Environment

Adequate housing and access to healthcare are essential social determinants of mental health. However, the present study demonstrates that tea garden workers continue to experience substantial deprivation in both areas. The findings indicate that inadequate accommodation and unhygienic living environments were the most common housing problems experienced by respondents. Many respondents also reported insecure housing arrangements and conflicts with estate authorities regarding accommodation. Poor housing conditions expose individuals

to overcrowding, infectious diseases, environmental hazards, and chronic psychological stress.

Healthcare accessibility also emerged as a major concern in the present study. Respondents frequently identified inadequate healthcare facilities, shortage of doctors, and lack of immediate treatment as important barriers to healthcare utilization. Limited healthcare access may delay the diagnosis and treatment of both physical and mental illnesses, thereby increasing disease severity.

Childhood Adversity, Violence and Family Relationships

The study identified childhood adversity as another important determinant of adult mental health. Nearly half of the respondents experienced physical punishment during childhood, while more than half reported parental neglect. Furthermore, over one-third had experienced assault during adulthood, with family members representing the most common perpetrators.

The study findings therefore suggest that current psychological distress among tea garden workers is influenced not only by present socioeconomic deprivation but also by cumulative adverse experiences throughout the life course.

Interestingly, despite these adverse experiences, most respondents continued to seek emotional support from spouses, parents, siblings, and close family members. Family support therefore appears to function as an important protective factor that may partially reduce psychological distress. However, because respondents simultaneously experience poverty, occupational stress, and poor living conditions, family support alone is insufficient to eliminate mental health problems.

The findings therefore indicate that improving family relationships, reducing domestic violence, strengthening community support systems, and promoting psychosocial counseling services could substantially improve the emotional well-being of tea garden workers.

Psychological Well-being and Mental Health Status

The findings of the study indicate that a considerable proportion of tea garden workers experienced symptoms commonly associated with poor mental health. More than half of the respondents reported experiencing greater-than-usual loss of confidence, while many also reported feelings of worthlessness, inability to overcome difficulties, uncertainty about the

future, and finding life to be a constant struggle. These findings collectively suggest a substantial burden of psychological distress among the study population.

Although half of the respondents reported adequate sleep, almost an equal proportion experienced occasional sleep disturbances. Sleep problems are frequently associated with depression, anxiety, and chronic stress. Previous research has demonstrated that psychological distress disrupts normal sleep patterns, while poor sleep further aggravates emotional disorders. Therefore, improving mental health may simultaneously improve sleep quality among tea garden workers.

The study also found that many respondents experienced difficulty concentrating on work, reduced enjoyment of daily activities, and decreased ability to cope with life's challenges. Together, these findings demonstrate that mental health problems among tea garden workers extend beyond clinical disorders and substantially affect everyday functioning, productivity, interpersonal relationships, and overall quality of life

CONCLUSION

In conclusion, the findings of the present study demonstrate that mental health disorders among tea garden workers are strongly associated with poverty, low educational attainment, poor housing conditions, inadequate healthcare services, occupational hazards, financial insecurity, childhood adversity, and limited social opportunities. These determinants interact to create persistent psychological distress and reduce overall quality of life. The study supports the World Health Organization's Social Determinants of Mental Health Framework and confirms previous national and international evidence that mental health cannot be improved through clinical services alone. Sustainable improvement requires comprehensive socioeconomic interventions that address poverty, education, employment, housing, healthcare, occupational safety, and social protection. Implementing such policies would not only improve the mental well-being of tea garden workers but also contribute to increased productivity, healthier communities, and sustainable development in Bangladesh.

Policy Implications

The findings have several important implications for policymakers, tea estate authorities, labour organizations, and public health professionals.

First, improving wages and employment security should be considered a priority. Since financial hardship emerged as the strongest predictor of psychological distress, increasing workers' income and ensuring fair labour practices would likely improve both mental health and productivity.

Second, occupational health and safety measures should be strengthened. Regular safety training, provision of protective equipment, workplace accident prevention programmes, and enforcement of labor standards would reduce occupational injuries and work-related stress.

Third, healthcare services within tea estates require substantial improvement. Increasing the availability of physicians, mental health professionals, essential medicines, and counseling services would improve early detection and treatment of common mental disorders.

Fourth, educational opportunities for both workers and their children should be expanded. Adult literacy programmes, school retention initiatives, and health education campaigns would improve health literacy, employment opportunities, and long-term psychological well-being.

Finally, community-based mental health programmes should be established within tea garden communities. Awareness campaigns, psychosocial counseling, peer-support groups, family counseling, and anti-stigma programmes could substantially improve emotional well-being and encourage timely help-seeking behavior.

Limitations and Future Research Guidelines

This study possesses several strengths. It addresses an important yet under-researched public health issue among one of Bangladesh's most marginalized occupational groups. It also examines multiple socioeconomic determinants simultaneously, thereby providing a comprehensive understanding of factors influencing mental health among tea garden workers. However, several limitations should be acknowledged. The study included only 30 respondents from a single tea garden selected through purposive sampling. Consequently, the findings cannot be generalized to all tea garden workers in Bangladesh. Furthermore, the cross-sectional design prevents the establishment of causal relationships between socioeconomic determinants and mental health outcomes. Future research should include larger and more representative samples from multiple tea gardens across different regions of Bangladesh to improve the external validity of the findings. Longitudinal studies are recommended to establish causal relationships between socioeconomic determinants and

mental health disorders over time. Mixed-methods research combining quantitative and qualitative approaches would provide a deeper understanding of workers' lived experiences and psychological challenges.

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