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Corona Virus -19 Lockdown and its Impact on the Educational Status of Undergraduate Students of South Bengal, India

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ABSTRACT

The pandemic of coronavirus (COVID-19) has directly or indirectly affected human civilization and has recently given a tremendous challenge to humanity for leading a normal life. Academic and research activities of students have been very much hampered during this period. Education is an important vehicle through which students can analyze while making life decisions. Through proper education, they will get important knowledge, including basic facts, job skills, and cultural norms values. Education prepares our students to think properly about communication, social interaction, ethics, environment and sustainability. Although online classes are being organized by many educational institutions, rural students face a lot of problems in attending such classes. So, to access the impact of COVID-19 on the educational status of the undergraduate students, an online survey was done in the form of an online Google form and it was circulated to students of Bankura and Purulia district through several Facebook groups as well as WhatsApp and Telegram contacts with the help of college teachers. The Google form was designed in such a way, that students can respond only one time by using one email and it can be generated using one device at a time. A total of 170 students actively participated in this online survey platform. 37% of respondents said that their average study time decreases during these days. More than 40% of online classes missed by 21% of students and 20-40% of online classes missed by 38% of students due to poor network connectivity in their locality. The number of missed online classes increased during the afternoon and evening because of internet connectivity problems. Sometimes students faced headaches and eye irritations due to the excessive use of smartphones, so few classes were also missed for these reasons. In view of these issues some initiatives are urgently needed to reduce the psychological stress of students during the COVID-19 lockdown situation.

KEY WORDS: PANDEMIC; ON-LINE; GOOGLE; NETWORK; STUDENT; PSYCHOLOGICAL STRESS.

INTRODUCTION

Human civilization has now faced a tremendous challenge from the novel severe acute respiratory syndrome coronavirus (SARS-Cov-2) in different countries. On January 30, 2020, the World Health Organization (WHO) declared Corona Virus Disease (COVID- 19) outbreak as an international public health emergency. Corona virus circulates in some wild animals like bats and transmitted to humans. It can cause severe respiratory symptoms along with symptoms of common cold and fever(Zhu

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et al.,2020). The disease was first reported in China in December 2019 and now rapidly spread in many countries from Asia, Europe, and Africa(Jones,2020).The disease has now spread to 217countries and territories around the world and the total number of confirmed infected people is 42,055,863 people throughout the globe. In India, the disease was first reported on 30 January 2020 in Kerala from a student who returned from Wuhan, China. Now the total number of confirmed infected people is 7814682 till now across India (24th October, 2020) (WHO, COVID-19 Database). In West Bengal, many districts are also affected by this virus. The main problem of this outbreak is there are no specific treatments for these viruses to date. However, only one can reduce the chances of infection by only maintaining basic personal hygiene and social distancing from infected persons (Rubin and Wessely, 2020; Pulla, 2020).

Most of the people are now primarily restricted to their homes, owing to nationwide lockdowns and home-confinement strategies implemented in the majority of the COVID-19-hit countries to prevent the spread of the disease among communities (Rubin and Wessely,2020; Pulla,2020).This outbreak directly has hampered the normal lifestyle of people; many persons have lost their jobs and are facing tremendous mental stress. Due to the global outbreak of corona virus disease (COVID-19), the psychological issues have rapidly increased the public health burden of various persons (Totaleset al., 2020). Similarly, in this situation, the daily schedules of school, college, and university students are very much hampered and delays in academic activities mostly affected due to the closure of academic institutions (Cao et al., 2020). For college students, heightened levels of psychological distress and downstream negative academic consequences are prevalent under normal circumstances. During this adverse situation, education institutions shifted their classroom teaching to an online mode of teaching which would be expected to create academic stress for students. This creates a lot of problems in India because as per the 2017-18 national sample survey report only 24% of Indian household share internet facilities for education (Cao et al., 2020).

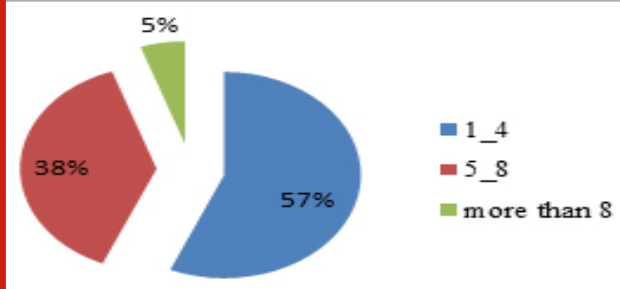
66% of the Indian population lives in rural areas where network connectivity is poor and only a little over 15% of rural households have access to internet services. In urban areas, only 42% of the population have access to internet services. More than 40% household has access to the internet in the states like Punjab, Kerala, Delhi, Uttarakhand and Himachal Pradesh whereas the proportion is less than 20% in the states of West Bengal, Bihar, Odisha, Assam, Andhra Pradesh, Jharkhand (Mukherjee and Roy,2020). During this online mode of teaching, students may experience reduced motivation toward studies, increased pressures for self-learning, changes in daily routines, and higher rates of dropout occur during this pandemic situation(Grubicet al.,2020).

In south Bengal regions, good percentages of student belonging to SC/ST/OBC and minority categories and many of them are even first-generation learners. This region is economically backward and no big industries are established in these regions. Students of this region are very talented, hard-working and procure top positions in board examinations in different University examinations in comparison to other districts of West Bengal (Mukherjee and Roy, 2020).In this background, the present study was planned online to evaluate the consequences and impact of Covid-19 lockdown among undergraduate students of South Bengal, India. During the online survey mainly students from two districts namely Bankura and Purulia were targeted. Through this study, we tried to understand their sociological status, mental health condition, pros and cons of the online mode of teaching during the lockdown situation.

MATERIAL AND METHODS

For understanding the impact of Covid-19 lockdown among undergraduate students of South Bengal, India, an online survey was conducted from 11th August to 24th August 2020. The survey was done in the form of an online Google form and it was circulated to students of Bankura and Purulia district through several Facebook groups as well as WhatsApp and Telegram contacts with the help of college teachers. The Google form was designed in such a way, that students can respond only one time by using one email and it can be generated using one device at a time. Due to the online mode of the survey, we specified our eligibility criteria (only students of South Bengal, India) to restrict its spread to a specific geography. The self-administered a questionnaire consisting of basic information about the students' names, age, gender, and the semester of study. Similarly, other questions were set to evaluate the effect of lockdown on their study, health as well as to understand the socio-demographic standards and psychological effects. The questionnaire was also included related to COVID-19 disease, its health hygiene, and information gathering related to this disease during the lockdown.

Figure 1: Number of family members in each student

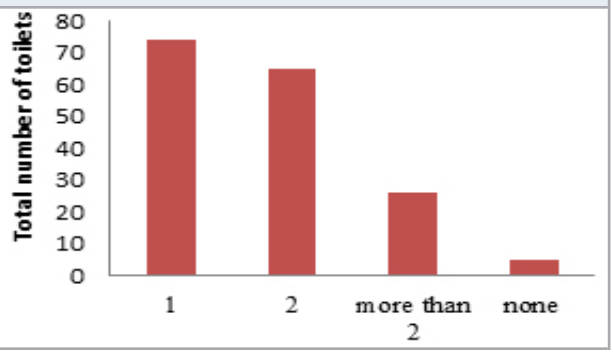


RESULTS AND DISCUSSION

A total of 170 responses were obtained from undergraduate students in the study period through the Google form survey platform. The data collected from respondents were analyzed and presented in Figures. Among 170 respondents, 26% of responses received from final six-

semester students, and only 9% of responses received from new second-semester students. Other semester students moderately participated in this online survey. The data are shown in Figure I revealed that 57% of students belonged to nuclear families and only 5% of student have belonged from joint family. The data shown in Figure II revealed that the majority of the respondents (44%) had only one toilet in their house and only 3% of students had no toilet, and family members still used open space for the toilet (Mukherjee and Roy, 2020).

Figure 2: Number of the toilet in each student family



The data shown in Figure III revealed that the average time of use of smart phones increased in the majority of the respondent's during the COVID-19 lockdown period. Out of 170 respondents, 70 students regularly used smart phone more than 4 hours in social media and 74 students used 2-4 hours in social media and it will directly affect the academic performance of students. Most respondents admitted that their study time decreased during the lockdown period. According to the internet and mobile association of India report 2019, 67% of men had access to the internet whereas in women it is only about 33%. This type of gender-wise disparity is very much prominent in villages areas where 72% of access done by men and 28% by women. But due to pandemic situation students are forced to attend their online classes so the disparity reduced from percentage proportion of men: women of72:28(all India level) to 58:42 (approx.) in south Bengal regions (Mukherjee and Roy, 2020).

The data shown in Figure IV revealed that during lockdown majority of the respondents (47%) received information related to COVID 19 and its precautions through social media like WhatsApp and Facebook. 13% from television, 13% from the governmental announcement, and 8 % from the newspaper. According to Dubey et al.,(2020)social media must be used for good purposes to educate people about symptoms and transmission COVID -19 diseases during this pandemic situation. At the same time implementation of strict governmental laws and legislation is needed to stop the spreading of fake news, rumours, disinformation, and misinformation (Dubeyet al.,2020).Similarly, Guptaet al., (2020) documented that the sleep pattern of respondents was very much influenced by the lockdown. Shift to a later bedtime, delayed sleep onset, daytime napping increased are very common among many people's (Gupta et al., 2020). Similarly, more than 40% of people faced anxiety and depression during this lockdown and pandemic situation (Grover et al., 2020).

Figure 3: Average time of Smartphone used during lockdown

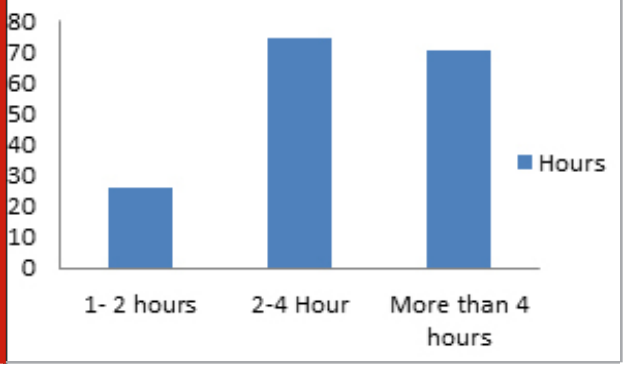


Figure 4: Awareness creates against COVID-19

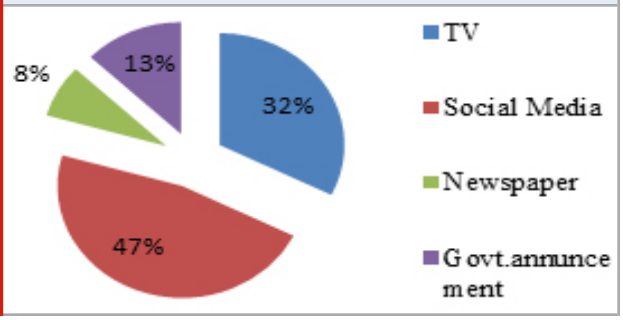


Figure 5: Types of ration card among student family

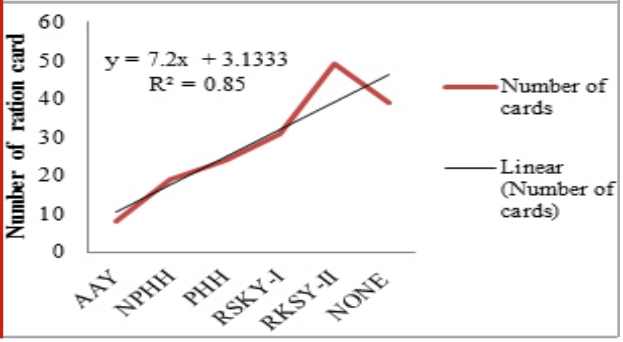
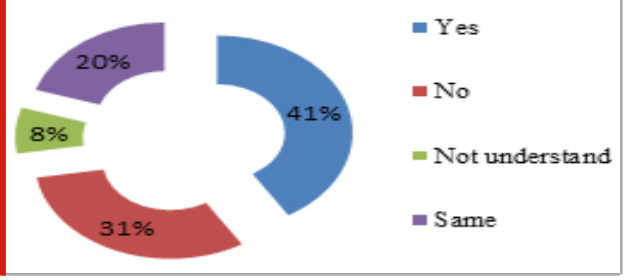


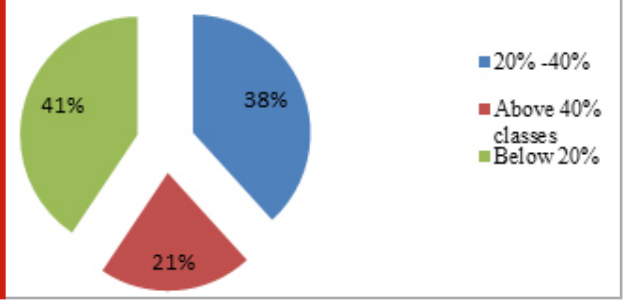
Figure 6: Bodyweight change during the lockdown



The data shown in Figure V revealed that most of the respondents have RKSY types of ration card and few students came from economically backward family. Till today few families do not have any ration cards. So, students from economically backward suffer a lot to attend the online classes. Similarly, the data shown in Figure VI reveals that 41% respondent gains their body weight during lockdown period because of leading sedentary life. The data were shown in Figure VII revealed that among all, 21% of students missed more than 40% of online classes, 38% missed 20-40% of online classes due to poor network connectivity in their locality. The number of online classes missed increases during the afternoon and evening because of connectivity problems as well as the exhaust of net data pack due to spending more time with smart phones during the daytime by students. Another survey also supported that due to closure of the educational institution, loss of classes and restricted social connections worsened pre-existing mental health conditions of 83% of young respondents(Youngminds,2020).

Dangi and George (2020) also showed that 76.44% of students suffered severe anxiety and 23.66% of students were having moderate anxiety in this lockdown period in their study area (Dangi and Mathew,2020). Sometimes students face headaches and eye irritation due to the use of excess time on smart phones so few classes also missed due to this reason. During the lockdown period, students were compelled to stay at home so during leisure time students learn many things. Girl students learned to prepare many food items from the internet, some prepare beautiful drawings as well as stitch work. Boys also spend time with physical exercise and nature study of their surroundings by using smart phones. Few students actively took part in many international and national online webinars which allow them the opportunity to listen to many things from reputed resource persons from home during this lockdown period (Dangi and Mathew, 2020).

Figure 7: Missed online classes due to poor internet connectivity



CONCLUSION

In the last two decades, mankind faced five pandemics like SARS (2002), Swine flu (2009), MERS (2012), Ebola (2014), and COVID-19 (2019). COVID-19 produces long-lasting effects on the various strata of people in society including students. The current pandemic situation does not obey the geographical boundary, race, religion, caste, and language. It creates psychological, social, economic, religious problems as well as depression and anxiety among people all over the world. It also produces immense agony among student fraternity who are already burdened with their semester and competitive exams, research and academic activities. This study showed that students are trying to adapt the new mode of online teaching but 21% of students missed more than 40% of online classes due to poor network connectivity in their locality. This creates a lot of mental anxiety among students along with loss of study time and restricted social connections. So, to reduce mental weakness and anxiety, educational institutions should have to conduct motivational sessions and set up one mental health helpline number. Arrangement of awareness programmes at both personal and community levels is urgently needed to reduce the psychological stress of students during the COVID-19 lockdown situation.

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Conflict of interest: The authors declare that they have no conflict of interest.

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International Journal of Life science and Pharma Research

Research Article

Zoology for Novel drug discovery

Socio-Economic Conditions and Occupational Health Hazards of Fish Hook Makers in Rural Bengal

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Abstract: Fish hook making is subject to health risks In the rural areas of West Bengal, a notable part of population is engaged in fish related activities in diverse ways either instantaneously or incidentally. The sector of activity of fish hook making is essentially rural and it being most haphazard, no focus has been given to the occupational health problems of these workers by politicians, planners, administrators and scientists. The objectives of our study is to access the occupational health hazards of fish hook makers and to give essential suggestions for the mitigation measures of those hazards resulting in a more desirable quality of life for the countryside inhabitants. A standardized structured questionnaire, with modification to suit the local context was used to collect the data. Data was analyzed in the form of percentage (%),mean and standard deviation. Out of the total 51 respondents 15 weremale and 36 were female. It revealed that in supreme number of cases hook workers experience hazards due tomachinery induced injury, musculo-skeletal disease, eye disease, skin disease due to working in unhealthy workplaces, manual handling of machines and not using personal protective equipments. So, fish hook makers need a notable degree of consciousness through regular safety training for minimizing their occupational health hazards.,

Keywords: Fish hook, health, countryside, inhabitants, musculo-skeletal, eye disease, safety training

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1. INTRODUCTION

Fish is used as the favourite food item of people of West Bengal. So a large population of the villagers is engaged with the fishing and fishing gear related work in rural areas. From ancient times, man tried out various ways for catching fish and using hook is one of such methods. Hook is a simple, easy to operate and selective fishing device.[1] Excavation of a unique late bronze age copper fish-hook from Bet Dwarka Island, Gujarat, west coast of India proved that advanced hook fishing technology existed in ancient India.[2] In hook fishing, partly fixed baits are offered to the fish and fish swallows the bait and hook attached fish can be hauled from the water.[3] Hooks may be in different shapes, sizes, thickness of wires, and types of end of the shank (Figure- 1).Nowadays hooks that are made well-tempered and durable, are specially protected by galvanizing, bronzing, tinning, or enamelling to prevent corrosion. The corrosion resistance of different types of fishing hooks has been studied by many authors.[4]

Fig1. Different types fish hook

Fig 2. Data collection from hook makers

In Bankura district of West Bengal, a few villagers are engaged in making fish hooks. The financially backward sections of people, who have not much traditional education, are engaged in this work. They make fish hooks along with other household activities to support their family financially. They made different types of fish hooks like Ton, Ring, Boya according to the demand of the market. The fish hooksare made by rural people in their own homes and are collected from the workers by the businessmen. So the female members in the families and few men who do not have job security around the year or few months, are engaged in this type of work. They earn something for the betterment of their families. Thus this sector is vital and an important sector of rural economy in Bankura district. The workers use unsafe and unguarded machinery and their occupational environment is not hygienic. So this occupation is not devoid of health hazards. Various types of health related problems are observed among them. On the other hand, as this occupation is rural and being most unrecognized, no focus has been given to the health problems of these workers by plan makers, politicians, and scientists. Only very few studies have been carried out to document different properties of fishing hooks but many studies were done on the fishing efficiency of the hooks.[5-6]Socioeconomic status of individuals is the strongest indicator of people's life that provides social, economic, cultural and political characteristics of people, households, community groups, and institutions.[7-8]In rural areas, the socio-economic status of individuals is divided into three categories namely high, middle and low. Low socioeconomic status and its correlates, such as lower education, poverty and poor health, ultimately affect our society as a whole.[9]We have chosen this topic to assess the socioeconomic status and occupational health hazards of fish hook makers and to give essential suggestions for the mitigation measures of those hazards resulting in a more desirable quality of life for the countryside inhabitants.

2. MATERIALS AND METHODS

Field investigations were conducted in five villages namely Salbedia, Kendbana, Bankanti, Ghutgoria and Pratappur belonging to Bankura district of West Bengal, India during the time span of October,2019 to February, 2020, where a notable mass of fish hook makers are found . In these villages, more than 150 hook makers are engaged in hook making profession. A premeditated ordered questionnaire, with moderation to match the local perspective was used to gather the data from fish hook makers.The data was evaluated in the shape of percentile(%),mean and standard deviation. Selection of sample and preparation of standard questionnaires are the fundamental part of this research. Before answering all the questions were thoroughly discussed with the respondents. .Questions were asked in their leisure hour so that they can get enough time for answering all the questions. The selected respondents were interviewed to collect information about socioeconomic background of the fish hook makers relating to age, sex, number of family members, education, income of the family followed by the procedure applied by Ganguly et al, 2016.[10] During Interview their socioeconomic status, educational level, daily average income, available governmental facility, and health hazards were also asked (Figure-2).

3. STATISTICAL ANALYSIS

Statistical analysis of the experimental data was performed using the computer software's "STAT PLUS 2007 (Trial version)"for calculation of mean and standard error to analyse different types of health hazards among respondents. "MS EXCEL 2007" is used to find out the percentage of various parameters like comparison of age groups among male and female, educational status among male and female respondents, family size and monthly income of hook makers from hook making.

4. RESULT AND DISCUSSION

From our study it was found that among all respondents, 70.58% were female and 29.41% were male. Majority of the respondents (41.17%) were belonging to the age group of 20-40 years, surprisingly they were all females.

This was due to males engaging in other work like agriculture, business. As fish hook making is a household profession so females prefer this profession with their daily household activities. This may give some kind of women empowerment. The number of female workers decreases with their old age as evident from the observation of age group data belonging to 60-80 years where males were predominant. This may reveal that when males are unable to do outside work they tend to do hook making rather than just sitting lazily at home. Figure 3 shows that 23.52% female respondentsbelong to the age group 40-60 and 5.85% from 60-80 age groups (Figure 3). This may be due to the reason that they are more physiologically active during the 20-40 years of age group when they are capable of doing hook making with other household activities. As we know education transforms human from the shape of social backwardness to light of social amelioration, from ignorance to enlightenment, and a nation from under-development to foster social and economic development.[11]If we consider educational status of the respondents of these villages, it was revealed that female workers are more educated than male workers. Among male workers majority (11.76%) were belonging to standard IV-VII class whereas among female workers majority (29.41%) were belonging to class VIII-IX. Not only that but a significant portion of female respondents (17.64%) were belonging to class X and above (Figure-4). This may be due to higher educated males had chosen another better occupation or due to financial crisis they were compelled to discontinue theirstudy and search alternative.

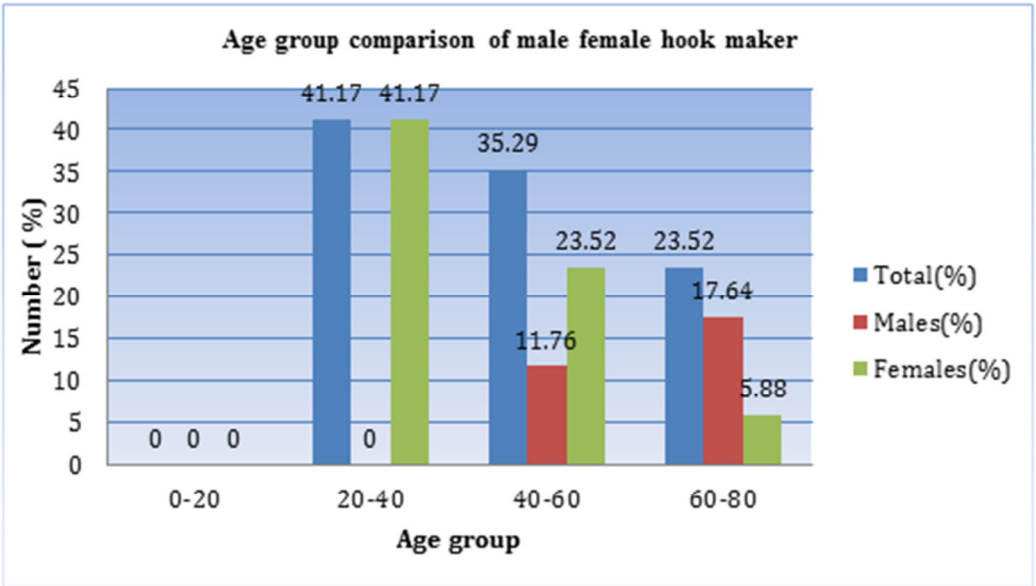

Fig3. Age group comparison between male and female hook maker

Maximum number of respondents earnRs. 2000 to 2500 per month. A small portion (5.88%) earn up to Rs. 1000 per month, 29.41% earn rupees 1500-2000, 17.64% earn rupees 1000-1500 and 11.76% earn rupees above 2500 per month(Figure 6). So it may be told that if the income increases according to the increasing price rate of the commodities more people will get interested and would engage themselves in this work by using their leisure time (Figure. 4).If we take a look at the family structure, it is clearthat the majority of the respondents (50.01%) are belonging to such a family that consists of up to 3 members only. Only a small fraction (7.14%) of workers belongs to a large family consisting of 8 members. This may reveal that when the number of family members increases then people tend to choose another occupation (Figure. 5).

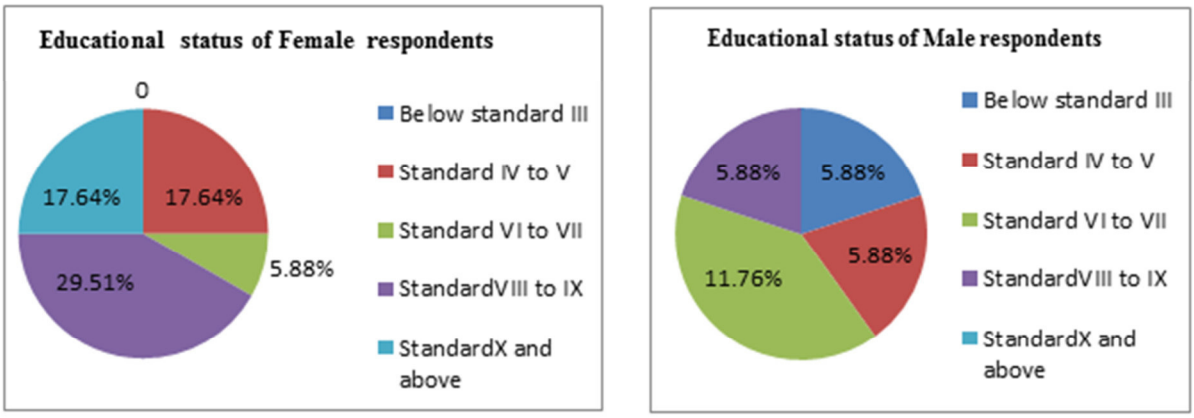

Fig4. Comparison of educational status between male and female hook maker

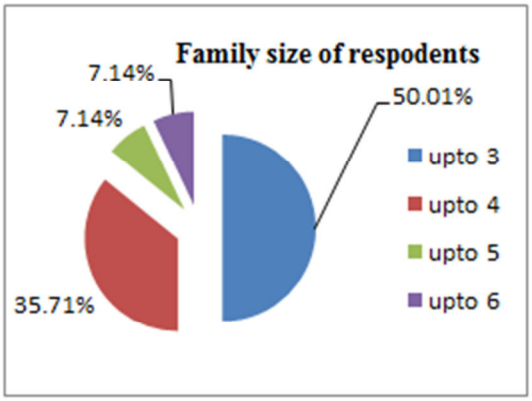

Fig 5. Family size of hook makers

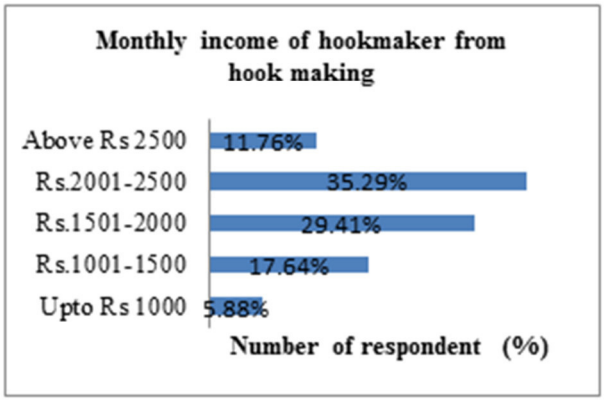

Fig 6. Monthly income of hook makers

Majority (71.42%) of the respondentshave a PHH type of ration card, 28.57% of the respondents possess the RKSY1 type of ration card. So it is evident that fish hook makers were generally a poorer section of society. Thus this section is indispensable and a significant section of economy in rural areas in Bankura district of West Bengal. Fish hook makers experienced various types of occupational health problems. Occupational disease occurred due to an exposure to risk factors arising from work activity. It was estimated that an average of 137 persons die from occupational disease in each day and an additional 17 die from injuries throughout the world.[12] Occupational health hazards are becoming a serious concern of this sector also. Low back disorders are common, musculoskeletal injuries, particularly due to working in stooped postures in many people working in different factories.[13] .Repeated exposures to vibrations and jarring motions while operating mechanical equipment.[14-15]also create various health hazards. In aquaculture, musculoskeletal injuries occur due to repetitive lifting or hand feeding, lifting of heavy cages or bags of feed, prolonged non-neutral postures at workstations, and tractor use.[16-17] In this study site majority of the male respondentsuffers from musculo-skeletal disease like pain in the body muscles, joints, neck regions, tendons, ligaments where as majority of females suffer from machinery induced injury due to mal handling and not using personal protection equipments.Among five villages average machinery induced injury in males are 1.40±1.14 , whereas average musculo-skeletal disease among males are 1.60±1.14. A large portion of male workers suffer from machinery induced injury (40%), eye disease (0.60±0.89), and skin disease (0.60±0.56). Females also suffer from machinery induced injury (3.40±1.51), skin disease (2.80±1.30) and eye disease (1.80±0.83) at older age. In each village musculo-skeletal diseases are also common among female workwe(3.00±1.22) (Figure 7). Skin disease may be due to worker's negligence about personal health and hygiene or they get very little time to maintain their proper health care. Eye disease may be due to working for a long time under dim light and metal particlesemerging during preparation of fish hook. Similar type of observation found among crafting communities, who work in poorly ventilated and inadequately lighted rooms. Workers have to work under unhygienic conditions leading to various health problems.[18]

Table 1. Various types of health hazards among hook makers

Types of health hazards	Affected males (%)	Affected females (%)
Machinery induced injury	1.40±1.14	3.40±1.51
Musculoskeletal disease	1.60±1.14	3.00±1.22
Skin disease	0.60±0.56	2.80±1.30
Eye disease	0.60±0.89	1.80±0.83

4. CONCLUSION

From our study,we can deduce that different types of occupational health hazards are regularly found among fish hook makers. So there is a need of notable degree of consciousness and sensitization through frequent safety training to reduce the health hazards. Under these circumstances, if various government sectors and NGO's came forward to overcome the hazards of these fish hook makers then in near future many other poor people engage themselves in this work to raise their socio economic standard.

5. RECOMMENDATION

Elicited from the perception of the current study we propose following recommendation:

1. Unsafe and unguarded manual handling of machines should be renewed.
2. Conscientious handling of machines, wires, marketable fish hooks and proper maintaining of machinery are necessary to avoid dreadful injuries.
3. Wearing PPE like protective goggles, hand gloves, jacket at the time of working can prevent the prevalence of accidents.
4. Occupational environment should be properly maintained.
5. Workers should pay attention to maintain their proper health and hygiene to avoid skin disease.
6. Workers should get systematic and consistent safety training to make aware of various types of protective measures to avoid hazards.
7. There is urgency of more illuminative investigation in attention of prior detection, safeguard and management

of job related diseases damages amongst fish hook makers.

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7. AUTHORS CONTRIBUTION STATEMENT

Mr AnimeshMandal conceptualized and gathered data with regard to this work.MrRajendra Prasad Mondal analyzed these data.The necessary inputs towards the designing of the manuscript were given by Mr AnimeshMandal.Both the authors discussed the methodology and results and contributed to the final manuscript**.**

8. CONFLICT OF INTEREST

Conflict of interest declared none.

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