International Journal of Community Medicine and Public Health
Newaz T et al. Int J Community Med Public Health. 2024 Jul;11(7):2598-2605
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20241812

Original Research Article

Assessment of nutritional status and health challenges among female garment workers: a cross-sectional study

Taslima Newaz[1]*, Arup Dutta[2], M. Shafiur Rahman[3], Moynal Hossain[1], M. Ahasanul Hoque[4], Srobonti Dutta Purba[5]

[1]Department of Community Medicine, BGC Trust Medical College, Chandanaish, Chattogram, Bangladesh
[2]Department of Pediatric, BGC Trust Medical College, Chandanaish, Chattogram, Bangladesh
[3]Department of Occupational and Environmental Health, NIPSOM, Mohakhali, Dhaka, Bangladesh
[4]Department of Internal Medicine, Chattogram Medical College, Chattogram, Bangladesh
[5]Department of Pharmacology, Marine City Medical College, Chattogram, Bangladesh

Received: 09 May 2024
Accepted: 12 June 2024

***Correspondence:**
Dr. Taslima Newaz,
E-mail: taslimanewaz1@gmail.com

ABSTRACT

Background: The economic status of women is now accepted as an indicator of a society's development in Bangladesh. Women workers like the majority in the informal sector have been exposed to rigorous work, discipline, fixed working hours, specific production norms etc. The aim of the study was to perform cross-sectional study was conducted to assess nutritional status of female garment workers in Chattogram, Bangladesh.
Methods: The study was conducted with the help of a semi-structured questionnaire to collect data from the respondents by face-to-face interview. Informed written consent was obtained from the respondents. A checklist containing height and weight (measured using measuring tape and digital weight machine respectively) of the respondents included in the questionnaire.
Results: According to the study, gastrointestinal problem was reported by 49.7% and the rest reported problem were respiratory problem (35.3%), skin problem (27.3%), urinary problem (18%), eye problem (15%). Age, marital status, number of children, family member, monthly income, job section, working hours and overtime were significantly associated with various types of health problem. Respondents were categorized into underweight (≤18.5 kg/m^2), normal (18.6-24.9 kg/m^2) and overweight and above (≥25.0 kg/m^2) using BMI. Prevalence of underweight, normal and overweight and above were 3.3%, 61.3% and 35.3% respectively.
Conclusions: Female worker's age, marital status, number of children, monthly income, job duration, job section and overtime showed significant association with their nutritional status (BMI). Findings of this study may play an important role to develop a policy and in commercial sector of our country to reduce health problem of the female garment workers for better productive and healthy lifestyle.

Keywords: Female workers, Nutritional status, Health challenges

INTRODUCTION

In recent decades, Bangladesh's ready-made garment sector has seen remarkable expansion and has remained resilient, unlike numerous other industries in the nation. Since the country gained independence in 1971, this sector has become a vital contributor to the economy and currently stands as the largest source of export revenue for Bangladesh. Mahmud et al. conducted a cross-sectional study examining the health of Bangladesh's 4.5 million factory employees, with 80 percent of them being women.[1]

The garment industry has brought about transformative shifts in the employment landscape, particularly by

increasing female participation in a traditionally male-dominated culture. While this sector presents new avenues of employment for women, there remains a pressing need to establish a secure and safe working environment for female workers. The garment industry plays a vital role in enhancing socio-economic opportunities by generating numerous job prospects, particularly for the economically disadvantaged and illiterate female workforce in Bangladesh.

The rapid expansion of the garment industry has led to a steady increase in the number of employed women. It is imperative for workers to prioritize their health and physical well-being. The economic status of women has far-reaching implications, not only affecting their own lives but also influencing the welfare of their children, families, and future generations. It is now acknowledged that women often play a significant role in making healthcare decisions within families and providing informal healthcare. The majority of Bangladeshi garment workers are women employed in the informal sector of the economy.

According to Akter et al a significant portion of women are employed in the formal sector of Bangladesh's export-oriented garment industry, contributing to 70% of the nation's foreign currency earnings.[2] These women are responsible for caregiving duties for the sick and elderly, determining the family's nutritional needs, overseeing household management, and influencing attitudes and lifestyles within their communities. Bangladesh exported 35 varieties of clothing to 31 countries across the globe.[3] This achievement can be attributed to the combination of low labor costs and the dedicated efforts of millions of female workers. The health challenges faced by female garment workers are of significant concern, given that a substantial portion of the country's GDP is derived from this sector, with 80% of garment workers being female. Common issues such as inadequate lighting, cramped working spaces, and lack of proper ventilation are prevalent in many of these factories. These workplace conditions have a direct impact on the health and well-being of workers.

Makurat et al concluded that higher occurrences of health issues among workers lead to decreased productivity in institutions due to sick leave taken by affected workers. Among the participants, respiratory tract infections were reported by 45.7%, fever by 30.9%, and diarrhea by 20.2%, with a total of 61.4% reporting any of these illnesses. However, only 14.4% of workers took sick leave lasting 14 days.[4] Furthermore, the nutritional status of women is associated with their autonomy and overall well-being. A significant proportion of female garment industry workers, comprising 85 percent, experienced malnutrition, reproductive health issues, or communicable diseases.[5] The increasing involvement of women in the labor force is crucial for enhancing their quality of life, particularly given the widespread prevalence of malnutrition among women in our nation. Riaduzzaman et al discovered that factors such as malnutrition, inadequate environmental health conditions, limited access to medical facilities, and notably, a negative perception regarding women's health have collectively contributed to the poor health outcomes of Bangladeshi women.[6]

Women play a crucial role as primary caregivers within families in our nation. Neglecting their own health while attending to the needs of their families often leads to malnutrition among many women. Ilyas and Parveen et al disclosed that women's malnutrition not only affects their own health but also has repercussions on the health of their children.[7] Furthermore, similar to many other developing nations, the nutritional status of women in our country is a grave concern due to their low socio-economic status. The garment sector offers employment opportunities to women in rural areas who were previously excluded from formal employment opportunities. This empowers women to achieve financial independence and assume a central role in their families by contributing financially.

Given that many women originate from low-income households, even a modest income can make a significant difference in their lives. Educational attainment closely correlates with an individual's nutritional status.[8] It is widely acknowledged that infants, children, and women of reproductive age are among the most vulnerable groups in terms of nutrition. In general, the health and nutritional status of children are primarily determined by women's education, income, and time, rather than those of men. The nutritional well-being of female garment workers is also influenced by factors such as their family members and parity. These women are often tasked with managing all family expenses on a low salary or income. With their limited income, female garment workers find it challenging to cover all expenses, making it difficult to afford a nutritious diet. In our country, families still need to be educated about the benefits of reducing family size and limiting the number of children (parity). Having more children often leads to increased poverty and an inability to provide a good and secure life for them. Additionally, a malnourished mother is more likely to give birth to a sick baby, ultimately adding to the national burden of malnutrition.

According to Khanam et al the likelihood of undernutrition is negatively correlated with women's education, household wealth, and remittance.[9] Nutritional status is influenced by a combination of intricate biological and social factors. Urban poverty often mirrors the prevalence of rural poverty. A significant portion of rural impoverished individuals reside in densely populated and disadvantaged urban slums, often lacking access to essential services and facilities necessary for a healthy and productive life. This situation not only impacts physical health but also affects social and mental well-being. The persistence of malnutrition over the past two decades reflects its deep-rooted connection to social factors. Enhancing the health and nutritional status of female

garment workers is crucial for a country's economic development.

Anthropometric measurements and Body mass index (BMI) serve as valuable indicators for evaluating the nutritional status of a community. While previous studies have utilized measurements such as height, weight, and waist circumference to assess the nutritional status of females, this study focused solely on measuring height and weight, from which BMI was then calculated. Rashid et al found that approximately 31% of the respondents were found to be malnourished based on their BMI as per the WHO classification.[8] This study utilized BMI as the primary indicator for assessing nutritional status, using only height and weight measurements to calculate BMI while ensuring confidentiality. While previous studies have examined the nutritional status of female workers, this study aimed to provide a comprehensive understanding of their nutritional status and identify the most prevalent health issues they face.

Despite some media coverage, greater attention is needed to address these concerns. Chowdhury et al revealed that approximately 30% of female employees were the primary breadwinners in their families, while the remainder served as secondary earners. Without the incomes of female employees, 80% of their families would plunge into poverty.[10]

Despite widespread reports highlighting issues such as low wages, unfavorable working conditions, health concerns, and inadequate nutrition, insufficient actions have been taken to address these challenges. These issues significantly impact both production and the overall environment within the ready-made garment (RMG) sector. Failure to address these obstacles could exacerbate the sector's challenges in the future. Given that Bangladesh's economy heavily relies on industrial earnings, updating the nutritional status of workers is essential. Research focusing on their health problems and nutritional status, particularly nutrition, is pertinent and warrants thorough investigation.

This cross-sectional study was conducted to evaluate the nutritional status of female garment workers in Chattogram, Bangladesh.

METHODS

The cross-sectional study was conducted in a selected garment factory, in Chattogram City, Bangladesh. It was selected purposively depending on the availability of the sample. The total number of workers was about 5000. About 80% of the workers were female, working in different sections of the factory.

The total study period was one year (1st January to 31st December 2021). This study assessed BMI status among female garment workers after getting ethical clearance from the Institutional Review Board of NIPSOM.

Inclusion criteria

Female workers with following criteria were included- (a) working for more than one year; (b) age 18 years and above; and (c) willingly and give informed written consent.

Exclusion criteria

Pregnant and lactating workers and severely ill patients were excluded.

BMI categorizations

The categorizations were as follows- (a) underweight ($\leq$18.5 kg/m^2); (b) normal (18.6-24.9 kg/m^2); and (c) overweight and above ($\geq$25.0 kg/m^2).

Data collection technique

The data was collected by face-to-face interviews of female garment workers who fulfilled the selection criteria. After having developed the relevant research instruments, selected the study place, and determined the sample size, data was collected from the place of the study. The interview was conducted among female garment workers. Before proceeding with the data collection, the study details were appropriately explained to each respondent, and their written consent was obtained. Data collection was continued on all working days. Data was collected through interviews and a pre-tested questionnaire. The female garment workers were informed about the confidentiality of their information. The study participants were requested to answer the questions according to the developed format of questions. The questionnaire included socio-demographic characteristics and BMI status among female garment workers.

Data management and analysis

At the end of each day of data collection, each questionnaire was checked to see whether it was filled entirely and consistently or not. The data entry was started immediately after the completion of data collection. Collected data was checked, rechecked, edited, coded, and recorded for quality management. After completing data collection, the tabulated data was analyzed and described according to the aims and objectives of the study using SPSS software version 26.

Data clean-up was performed, and the frequencies of the variables were run to check the accuracy, outliers, inconsistencies, and missing values. The results were presented in the form of tables and charts. To assess or measure the objectives for descriptive statistics- frequency, percentage, mean, median, mode, standard deviation (SD), range, minimum, and maximum were used for socio-demographic variables and work-related variables. For significance, a chi-square test was done to see the relationship between health problems with socio-demographic and work-related variables and nutritional

status with socio-demographic and work-related variables. Statistically, the significance level was set as p≤0.05. The results were presented in tabulated form and chart.

RESULTS

This cross-sectional study involved 300 female garment workers in Chattogram city. Table 1 illustrates the demographic characteristics of the participants. The age range spanned from 19 to 56 years, with a mean age of 27.61±7.073 years. Regarding education, the majority (47.7%) had received primary level education, 29.3% were illiterate or had only basic literacy skills, and 23.0% had completed secondary level education or higher. In terms of marital status, 50.3% were married, 44.0% were unmarried, 3.7% were divorced or separated, and only 2.0% were widowed. The number of children among the respondents ranged from 0 to 5, with 89% having less than 3 children and only 11% having 3 or more children. The average family size varied from 2 to 10 members, with 86% having 4 or more family members and 14% having fewer than 4 family members. The average monthly income ranged from 7000 to 16000 Taka, with a mean monthly income of 10879.3±2071.8 Taka. The majority (91.3%) had a monthly income of 8000 Taka or more, while 8.7% had less than 8000 Taka per month (Table 1).

Out of the 300 respondents, the majority (52.3%) worked in the sewing section, followed by 27.0% in the finishing section and 11.3% in the quality section. Only 6.0% and 3.3% were employed in the cutting and store sections, respectively. The average duration of employment ranged from 1 to 17 years, with the majority (86.0%) having worked for less than 10 years and 14.0% having ten or more years of experience. Regarding daily working hours, most respondents (76.3%) worked for 8 hours or less per day, while 23.7% worked for more than 8 hours per day. 249 (83%) had done overtime beyond regular working hour and only 17.0% of workers had not done overtime (Table 2). The distribution of the respondents by respiratory problems (runny nose, cough, chest tightness or discomfort, shortness of breath) in last 2 weeks. Among 300 female garments workers 106 (35.3%) respondents suffered from different type of respiratory problem where rest 194 (64.7%) did not suffer from any respiratory problem. About 26.3% were reported runny nose followed by cough (19.3%).

Only 1.3% and 1.0% had shortness of breath and chest tightness or discomfort respectively. The distribution of the respondents by gastrointestinal problem (anorexia or distaste, abdominal pain and constipation) in last 2 weeks. Among 300 female garments workers 149 (49.7%) respondents suffered from different type of gastrointestinal problem where rest 151 (50.3%) did not suffer from any gastrointestinal problem. About 24.7% had constipation followed by anorexia or distaste (23.7%). Only 10.7% had abdominal pain in last 2 weeks. The distribution of the respondents by their eye problem (red eye, itching in the eye, watering from eye and dimness of vision) in last 2 weeks. Among 300 female garments workers 45 (15.0%) respondents suffered from different type of eye problem where rest 255 (85.0%) did not suffer from any eye problem. Among the 300 respondents about 11.7% had itching in the eyes followed by watering from eyes (8.0%) and red eye (5.0%). Only 1.7% had dimness of vision in last 2 weeks. The distribution of the respondents by urinary problem like burning sensation during micturition and increased frequency of micturition in last 2 weeks.

Among 300 female garments workers 54 (18.0%) respondents suffered from different type of urinary problem where rest 246 (82.0%) did not suffer from any urinary problem. Among the 300 respondents about 16.0% had increased frequency of micturition followed by burning sensation during micturition 4.3% (Table 3).3.3% of participants were classified as underweight (≤18.5 kg/m2), 61.3% fell within the normal BMI range (18.6-24.9 kg/m2), and 35.3% were classified as overweight or above (≥25.0 kg/m2). The mean BMI was calculated to be 23.8 ± 2.79 (Table 4). Most of the workers in the sewing section (65.5%) had a normal BMI, as did workers in the quality (61.8%), cutting (61.1%), and finishing (56.8%) sections. However, workers in the store section were predominantly (60.0%) classified as overweight or above. Those who had worked for less than 10 years were mostly (66.3%) within the normal BMI range, whereas those with 10 years or more of work experience were mostly (66.7%) classified as overweight or above. Similarly, workers who worked for less than or equal to 8 hours per day and less than 48 hours per week also tended to have a normal BMI, as did those who worked 6 or 5 days per week (62.8% and 58.1% respectively).

The majority (60.6%) of workers who worked overtime fell within the normal BMI range. There was a significant association between the nutritional status of respondents and their job section (p=0.041), job duration (p=0.000), and overtime beyond regular working hours (p=0.009) (Table 5).

Table 1: Demographical characteristics of the study women (n=300).

Variables	Frequency (N)	Percentage (%)
Age (years)		
19-28	199	66.33
29-38	76	25.33
39-48	20	6.67
49-58	5	1.67
Mean±SD	27.61±7.073	

Continued.

Variables	Frequency (N)	Percentage (%)
Educational status		
Illiterate/only signature	88	29.33
Primary level	143	47.67
Secondary level and above	69	23.00
Marital status		
Unmarried	132	44.00
Married	151	50.30
Divored/seperated	11	3.70
Widow	6	2.00
Family member category		
<4	42	14.00
≥4	258	86.00
Number of children		
<3	267	89.00
≥3	33	11.00
Monthly income		
<8000 Taka	26	8.70
≥8000 Taka	274	91.30
Mean±SD	10879.3±2071.8	

Table 2: Job description of the study population (n=300).

Variables	Frequency (N)	Percentage (%)
Job section		
Sewing	159	53.00
Finishing	81	27.00
Quality	33	11.00
Cutting	18	6.00
Store	9	3.00
Job duration category (years)		
<10	258	86.00
≥10	42	14.00
Working hours per day category (hours)		
≤8	71	23.67
>8	229	76.33
Overtime		
Yes	249	83.00
No	51	17.00

Table 3: Health problem among female garment workers (n=300).

Health problems	Yes		No	
	N	%	N	%
Respiratory problem				
Runny nose	79	26.33	221	73.67
Cough	58	19.33	242	80.67
Chest tighness or discomfort	3	1.00	297	99.00
Shortness of breath	4	1.33	296	98.67
Gastrointestinal problem				
Anorexia or distaste	71	23.67	229	76.33
Abdominal pain	32	10.67	268	89.33
Constipation	74	24.67	226	75.33
Eye problem				
Red eye	15	5.00	285	95.00
Itching in the eyes	35	11.67	265	88.33
Watering from eyes	24	8.00	276	92.00
Dimness of vision	5	1.67	295	98.33

Continued.

Health problems	Yes		No	
	N	%	N	%
Urinary problem				
Burning sensation during micturition	13	4.33	287	95.67
Increased frequency of micturition	48	16.00	525	175.00

Table 4: BMI status of the study garments women worker (n=300).

BMI	Frequency (N)	Percentage (%)
Underweight (≤18.5 kg/m^2)	10	3.3
Normal (18.6-24.9 kg/m^2)	184	61.3
Overweight and above (≥25.0 kg/m^2)	106	35.3
Mean±SD	23.8±2.79	

Table 5: Correlation of BMI with job description.

Variables	Under weight (n=10)	Normal (n=184)	Overweight and above (n=106)	P value
	N (%)	N (%)	N (%)	
Job sections				
Cutting	0 (0.0)	11 (61.1)	7 (38.9)	0.041
Sewing	9 (5.7)	103 (65.5)	45 (28.7)	
Quality	0 (0.0)	21 (61.8)	13 (38.2)	
Finishing	0 (0.0)	46 (56.8)	35 (43.2)	
Store	1 (10)	3 (30.0)	6 (60.0)	
Job duration group (years)				
<10	9 (3.5)	171 (66.3)	78 (30.2)	<0.05
≥10	1 (2.4)	13 (31.0)	28 (66.7)	
Working hours per day group				
≤8	4 (5.6)	47 (66.2)	20 (28.2)	0.203
>8	6 (2.6)	137 (59.8)	86 (37.6)	
Working hours per week group				
<48	4 (5.6)	47 (66.2)	20 (28.2)	0.203
≥48	6 (2.6)	137 (59.8)	86 (37.6)	
Working days per week				
5	5 (5.4)	54 (58.1)	34 (36.6)	0.372
6	5 (2.4)	130 (62.8)	72 (34.8)	
Overtime				
Yes	5 (2.0)	151 (60.6)	93 (37.3)	0.009
No	5 (9.8)	33 (64.7)	13 (25.5)	

DISCUSSION

The objective of this cross-sectional study was to evaluate the health problems and nutritional status of female garment workers. In this study, the majority of the 300 respondents (66.4%) were aged between 19 and 28 years. A small percentage (1.7%) of respondents were aged between 49 and 58 years. The mean age of the respondents was 27.60±7.074 years. It is suggested that majority of the workers are middle aged. A similar study of Bangladesh included 232 workers, with the largest proportion (39.1%) aged between 25 and 29 years. The mean age of the participants was 31.3 years, indicating that a significant portion of female workers entered the garment industry at a young age.[11] A significant portion of our study population (29.3%) was classified as illiterate or having basic literacy skills, signified by the ability to provide a signature despite never attending school. Only 23.0% had completed education up to the secondary level or higher. In a study by Mahmud et al the majority of the workers were literate, with 89% having received formal education. Among them, 59%, 25%, and 5% had completed 5, 10, and 12 years of schooling, respectively, while only 11% had no formal education[1]. Unlike the previous study where most workers were illiterate, the majority in this study had attained education up to the primary level. In our study, among the 300 respondents, 50.3% were married, 44.0% were unmarried, 3.7% were divorced or separated, and only 2.0% were widows. In a study conducted by Chowdhury et al among 151 female workers from 29 garment industrial units across various areas of the Chittagong Metropolitan area, it was found that approximately 53% of the workers were married, while 36.42% were unmarried.[10] A small percentage of workers, 6.62% and 3.96%, were divorced and widowed, respectively. It is noteworthy that the majority of female

workers were married in both this study and the previous one. Among all, 86% had 4 or more family members, with only 14.0% having less than 4 family members in our observation. Conversely, Chowdhury et al found that about 55.62% of the female workers had 5 or more family members.[10] In the previous study, the majority of workers had 5 or more family members, while in the current study, the maximum number of workers had 4 or more family members. The number of children among the respondents ranged from 0 to 5 in the current study. Most of respondents (88.9%) had less than 3 children, while only 11.1% had 3 or more children. Study of Islam et al it was observed that more than half of the participants (53.8%) had one child, approximately a third (34.6%) had two children, and the remaining (11.6%) had two or more children.[12]

Contrary to this study, where the majority of workers had only one child, the current study found that the maximum respondents had less than three children. Our study found that out of 300 respondents, 91.4% had a monthly income of 8000 Taka or more, while only 8.6% had a monthly income of less than 8000 Taka. The range of monthly income varied from 7000 Taka to 16000 Taka, with a mean monthly income of 10879.3±2071.8 Taka. On the other hand, a study showed that among garment workers in Savar and Mirpur, Dhaka, where approximately two-thirds of the respondents (66.7%) had a monthly income ranging from Taka 5000/- to Taka 9999/-.

A higher proportion (19.2%) of garment manufacturing workers in Mirpur had an income of Taka 10,000/- or more.[3] Unlike the current study where the average monthly income was 10879 Taka, in the previous study, only a few workers had a monthly income of ≥10000 Taka. 52.3% of participants were employed in the sewing section, followed by 27.0% in the finishing section, and 11.3% in the quality section. A smaller percentage of workers, 6.0% and 3.3%, were in the cutting and store sections, respectively.

Study of De Silva et al concluded that 63.7% of workers were sewing machine operators, 20% were involved in ironing, packing, and cutting sections. Only 10% and 5% of workers were quality control assistants and helpers, supervisors, or recorders, respectively.[13] In other previous study, the majority of workers were employed as sewing operators, whereas in the current study, the majority worked in the sewing section. The maximum participants (76.3%) worked for ≤8 hours per day and 48 hours or more per week, while only 23.7% worked for ≥8 hours per day and less than 48 hours per week. In contrast, Chowdhury et al conducted a study where approximately 33.78% worked more than 9 hours a day, while 95.3% worked more than 8 hours a day.[10] It is noteworthy that in both the previous and current studies, the majority of workers worked for more than 8 hours per day. This study showed distribution of the respondents by their overtime beyond regular working hour. Among 300 respondents maximum 249 (83%) had done overtime beyond regular working hour and only 17.0% workers had not done overtime. This study depicted the distribution of respondents based on their BMI according to WHO classification.

The mean BMI of the respondents was 23.802±2.794. Among the 300 respondents, approximately 61.3% had a normal BMI (18.6-24.9 kg/m^2), 35.3% were overweight or above (≥25.0 kg/m^2), and only 3.3% had a BMI of ≤18.5 kg/m^2. Akter et al conducted a cross-sectional study among 100 adolescent female workers from various industries in Dhaka and Tangail, Bangladesh, to evaluate their nutritional status and food intake patterns. They measured the height and weight of the respondents to calculate BMI. According to their findings, 60% of the workers were underweight, and 40% were of healthy weight. No overweight or obese workers were found.[3] Unlike the previous study where the majority were under weight, this study revealed that most workers had a normal weight. There was a significant correlation found in this study between the respondents' BMI and job section (p=0.041), and overtime (p=0.009).

Limitations of the study

The study was designed aiming to find out the health problem and nutritional status among female garment workers. A total 300 respondents were interviewed from a selected garment factory. There were some limitations in conducting this study, are as under. As the sampling technique was not random, the study finding may not reflect the actual scenario of all garment workers of Bangladesh. Due to work overload workers were not co-operative during interview. Due to COVID-19 pandemic, movement was so much restricted therefore overall research was so much challenging.

CONCLUSION

Bangladesh is a developing country with a lot of room for expansion. As female workers play an important role in economic and social development, they must be in good health to continue doing so. This cross-sectional study was conducted to evaluate the health problem and nutritional status of female garment workers in a particular area. Maximum of female workers joined in early ages. Among the workers near about half of them were educated upto primary level and about half of them were married. Maximum workers had three or more children and four or more family members and half of them lived in semi-pucca house. Job duration of maximum workers were less than ten years maximum of them worked overtime beyond their regular working hours. Their average monthly income were about ten thousand Taka. BMI of majority of the workers were normal. Job section and overtime were significantly associated with their nutritional status. Visualization of this study may play an important role to minimize the health problem of the garment workers and improve associated factors for better nutritional outcome and productive lifestyle.

Recommendations

On the basis of research findings, the following recommendations can be made: to ensure adequate medical facilities, safety measures, and regular government inspections of factories in order to address the incidence of health problem. Adequate periodic training facilities should perform to raise awareness among workers regarding their health problem. The policymakers would act quickly to improve the health status of female workers in the industry, not only to improve their own situation but also to contribute effectively to society. Provide mid-day healthy lunch free of charge or at a low cost. Working hours would reduce in accordance with our country's labor laws. Ensure the extra working hours are properly compensated as per government rules. Establishment of insurance benefit system for workers.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Mahmud MS, Mahmud R, Jahan M. Health issues of female garment workers: evidence from Bangladesh. J Popul Social Stud. 2018;26(3).
2. Akter S, Zubair MA, Haque MA. Assessment of nutritional status and food intake pattern of the selected adolescent industrial female workers in Bangladesh. J Sci Techn. 2017;7(1):171-7.
3. Khandker S, Ahmad SA, Khan MH, Faruquee MH, Yasmin R, Dutta S, et al. Perceived workplace hazards and health problems among the workers of garment factory in Dhaka. JOPSOM. 2016;35(2):1-9.
4. Makurat J, Friedrich H, Kuong K, Wieringa FT, Chamnan C, Krawinkel MB. Nutritional and micronutrient status of female workers in a garment factory in Cambodia. Nutrients. 2016;8(11):694.
5. Solinap G, Wawrzynski J, Chowdhury N, Zaman H, Abid T, Hoque TA, et al. A disease burden analysis of garment factory workers in Bangladesh: proposal for annual health screening. Int Health. 2019;11(1):42-51.
6. Riaduzzaman M. Health and nutritional status of female garment workers in Bangladesh: a critical analysis. Int J Res. 2017;19.
7. Ilyas U, Kousar P. Malnutrition and its associated risk factors among women of reproductive age in rural community of Lahore. Int J Med Res Health Sci. 2019;8(3):173-8.
8. Haque MJ, Rashid M. nutritional status of the women of reproductive age with some of their socio demographic characteristics of a slum in Dhaka. Dinajpur Med Col J. 2009;2(1):2-7.
9. Khanam R, Lee ASC, Ram M, Quaiyum MA, Begum N, Choudhury A, et al. Levels and correlates of nutritional status of women of childbearing age in rural Bangladesh. Public Health Nutr. 2018;21(16):3037-47.
10. Chowdhury NJ, Ullah MH. Socio-Economic Conditions of Female Garments Workers-An Empirical Study on Chittagong Metropolitan Area. J Busin Technol. 2010;5(2):53-70.
11. Hossain MD, Aftab A, Al Imam MH, Mahmud I, Chowdhury IA, Kabir RI, et al. Prevalence of work related musculoskeletal disorders (WMSDs) and ergonomic risk assessment among readymade garment workers of Bangladesh: A cross sectional study. PloS one. 2018;13(7):e0200122.
12. Islam A, Islam N, Bharati P, Aik S, Hossain G. Socio-economic and demographic factors influencing nutritional status among early childbearing young mothers in Bangladesh. BMC Womens Health. 2016;16(1):58.
13. De Silva PV, Lombardo S, Lipscomb H, Grad J, Østbye T. Health status and quality of life of female garment workers in Sri Lanka. Gale Med J. 2013;18(1):1-7.

Cite this article as: Newaz T, Dutta A, Rahman MS, Hossain M, Hoque MA, Purba SD. Assessment of nutritional status and health challenges among female garment workers: a cross-sectional study. Int J Community Med Public Health 2024;11:2598-605.