

## Income and Food Status of Female Garment Workers in Gazipur Area, Bangladesh

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### Abstract

*The readymade garment industry is the top ambassador of Bangladesh as a country in the global market. Although its export earnings undoubtedly holds the significant position in the country's total export, some fundamental issues of workers like income level, education, health, and food are not in satisfactory. The study seeks to find out the variability of income and food habit among readymade garment workers and develop statistical relationship between income and food items. The present study is based on quantitative technique; a structured questionnaire survey was used to collect data on female garment workers from thirty 100% export oriented garment factories in Gazipur. A total of 385 female garment workers were selected based on simple random sampling. The study segregates the workers category ranging wage grade structure from 3 to 7 according to the "Gazette on Minimum Wages 2013". The findings have showed the sources of income for all graded workers that comprises monthly salary package, overtime, attendance bonus, festival Bonus, and other sources of income such as farming, and part time household chores etc. It is noteworthy that our study inferences entire worker's average working hour per week including overtime, overtime rate, festival bonus, and total income per month for grade 3 to 6 and 7 respectively, and reveals that workers grade 3 to 6 dominated in all parameters than grade 7. Further, we find the food habit of workers within our sample. We have found some significant relationships between income and food items of workers. Consumption frequency of eating items like egg, milk, meat, and vegetables per week does not differ statistically by income of different grades. On the other hand, there is a significant statistical relationship between consumption frequency of eating items like fish, fruit per week and income of different grades. Moreover, this study also reveals that consumption frequency of affinity (items include tea, pan, and cigarettes) among the garment workers differs significantly according to their income level. The research concluded that at present income and food status do not exhibit satisfactory level among the workers.*

**Keywords:** Income, Food Status and Ready Made Garment Workers.

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## Introduction

Bangladesh is an expanding economy in the world, small country in Southeast Asia with high population density. Export earnings of Bangladesh are heavily contributed by the RMG sector from early 90's (Faruque, 2014). It also has a positive impact on the socioeconomic development by employing large section of women as its main labor force that was previously considered to be underprivileged. But the full utilization and productivity out of this force were not achieved because of the lack of education and awareness about health and nutrition (Paul- Majumder, 1998). Lower level of income positively contributed to this ignorance. Usually, female garment workers prefer to work in the RMG sector because of their poor economic condition. They are living below the poverty line due to their low wage rate. They also cannot uphold their essential expenditure of living so as to try increasing their wages by doing overtime (Absar, 2001). They have to work hard for a long period of time in hazardous situation (Kendra, 2014). Sometimes female workers need to work till 3 o'clock in the morning for completing their delivery deadlines (Jamaly and Wickramnanyam, 1996). Normally, daily working hour is 8.28 hours without overtime in most of the RMG factories (Rahman et al., 2008).

In fact, women face discriminations at work in terms of their wage differentials on the basis of grading system for workers (Hossain et al., 1990). Wage structure for RMG worker according to "Gazette on Minimum Wages 2013" is BDT 3,000 (basic) for grade 7 that is the lowest rate and for grade 6 to 3 is 3270-4075 (basic) per month (Workers' Voice Report, 2014). Still garment workers are living below poverty line (Clark and Kanter, 2011). Most of the cases, female workers are the major contributor for their family maintenance, are particularly vulnerable to poverty and food anxiety (Rahman et al., 2009). But food is one of the most important elements of human being and its scarcity indicates the level of poverty. The food situation in the country could be analyzed by looking at the status of food security. Bangladeshi garment workers have considerably abridged their cost on food (AMRF Bangladesh and CCC The Netherlands, 2009).

For garment workers, most of the spending goes to food and shelter. Only cheap rate item like rice, eggs, pulse, and vegetables easily can consume for their daily habitual need and without the occasional or festival purpose the workers exclude every rich food item from their daily shopping list. Sometimes they can't buy pulse, vegetables, eggs, or many other essential food items, due to high price. Normally, excluding for house rental fee they avoid most of the non-food items because of low wage (AMRF Bangladesh and CCC The Netherlands, 2009). Households are classified on the basis of food expenditure. A household classified as food insecure if the income is not sufficient to meet the cost of the required food. The household is classified as food secures if the income is adequate, (Noman, 2013). *The main objective of the study* aimed to investigate the dietary pattern along with working hour, overtime rate, and monthly income level of female garment workers.

## Literature Review

Literature review reveals that a number of factors are attached with the income and food status of the readymade garment workers of Bangladesh. Saha (2014)

identified that almost 90% garment worker had just three meals with no snacks in last seven days for long hours and they were consumed meals of fish (55%), pulse (52%) and fruits/vegetables (63%) respectively for over 6 times in a week. Nearly 60% and 57% respondents from workers did not consume milk and meat in last seven days. Although, meat and fish were consumed less frequently, the consumption of fruits and vegetables were satisfactory. Ahmed (1998) relatively 67.2% participants ate fruits at least 7 times in a week. Sultana (2014) found a considerable percentage of the female worker did not take (88.8%) milk, (64.3%) meat, (34.2%) eggs and 47.4% vegetables at least 4 times in the week. Kabir et al. (2010) addressed big percentage of the participants consumed meat (62.5%), fish (53.8%), and eggs (58.4%) for 3 to 4 times or less in a week and almost 46.1% and 27.7% of the female worker did not take milk and vegetables, on the other hand, 72.2% took vegetables for 3 to 4 times or more in the week. 93.5% of the female workers consumed fruits at least 3 times in the week like mango, banana, lemon, guava, jackfruit and pineapple. Khan et al. (2005) identified 46% and 29% female did not take milk and meat respectively, on the other hand 70% of the female RMG worker had fish at least 4 times a week and 40% did not eat sweet pumpkin at all. Islam (2015) stated that most of the garment workers took frequently fish 89.5%, egg 66.7%, meat 72.9%, rice 100%, milk 52.8%, vegetable 78.1%, fruits 79.5%, and dal 75.7% for weekly. Absar (2001) stated that female garment workers work by low wage rate for long working hour, they claim to work for eight hour in one day and shift six days in a week. But in the Factory Act-1965 permits women to work overtime up until 8 o'clock at night. Jamaly and Wickramanayake (1996) found that for the delivery deadlines of the products women are nearly obligated to work after 8 o'clock and on occasion they work until 3 o'clock in the morning and also need to again back the factory to start work after five hours. Sometimes they have to work entire months at a time without a single day break but alarming issue is for Factory Act that reveals no employee should work more than ten days repeatedly without a break. Noman (2013) found only Tk 3,000 is fixed as the new minimum wage for RMG workers in Bangladesh, lowest paid in the world. AMRF Bangladesh and CCC The Netherlands (2009) identified 70-80% of the garment workers earn Tk.2,000-3,500 approximately that cannot properly against the recent price hike and 67% of the workers get less than Tk 4,000 as a wage, 39% get less than Tk 3,000. AMRF Bangladesh and CCC The Netherlands (2009) found that majority of the factory begins to work at 8:00 am. 55% finished their work at 8-10 pm. 30% of the workers could finish their work by 7:00 pm. Only 42.8 percent of workers work equal or less than 10 hours. However, generally 39.5% of the workers work 13 hours a day or more. The average working hours for all workers was found to be 11.46 hours a day and there was no actual difference found between male (11.45 hours) and female workers (11.46 hours).70% of garment workers work for more than 70 hours per week while only 53% of male workers work for the same hours. Nine percent of the workers keep on working more than 100 hours in a week. The overtime is compulsory management pressure. Only twenty five percent of workers enjoy the opportunity of going back to home working less than 12 hours and 70%-80% of female workers on an average have 30 hours of overtime when legally

permissible overtime is only 12 hours per week. However, only 20% percent of females, on an average, work less than 12 hours a day while 44% of male were engaged for the same period. More than 40% of female garment workers work overtime for a period of 49 hours while only 20% work less than 12 hours extra in a week. 26% of female workers do overtime for 70 hours while 47.5 percent male works overtime for the same period of time. In some factories, the workers work overtime for more than 100 hours monthly. Only 4% of workers work overtime below 60 hours a month. Another great concerning issue is that almost 43% of the workers are engaged in work for 10 hours while 39% are extended up to 13 hours. Both the male and female (39%) share 13 hours of working time. 63% of female workers work seven days a week while only 37% of male workers are compelled to work without any weekend.

## **Methodology**

### ***Survey Instrument***

The most important aspect to survey research is designing a survey tool that asks clear and relevant questions. To determine the actual conditions relevant to food and income status of female garment workers, we conducted a survey by preparing a structured questionnaire from July 2015 to August 2015; since our present study based on quantitative method that mainly followed the interview sample survey method on collecting data. Besides, certainly this study is both of explanatory and analytical in nature.

### ***Sample Size and Site***

The study is comprised a total sample size of 385. We used the following formula (Daniel, 1999) to determine the sample size calculation.

$$n = \frac{Z^2 P(1-P)}{d^2}$$

Where, n = sample size, Z = Z statistics for a level of confidence (here, the study sets confidence intervals at 95%), d= precision (the study sets precision for estimates as 5 %), P = expected prevalence or proportion (finally, this study also sets proportion value of 50%; Macfarlane (1997) suggests that if there was doubt about the value of P, it is best to err towards 50% as it would lead to a larger sample size.

Our study population was restricted only some garment factories located in Gazipur area. We have randomly chosen 385 female garment workers from randomly selected 30 different garment factories. There are 7 grades structure (Grade 1 to Grade 7) of garment worker as per “Gazette on Minimum Wages 2013” (Workers’ Voice Report, 2014). Grades are made according to designation where grade 3 to 6 includes junior, senior, and general machine operators and grade 7 is assigned only for assistant machine operator of different section in the garment factory as helper. For the study convenience, we made two categories of the female garment workers; all the sewing operators were included in grade 3 to grade 6 and grade 7 resembled helper. We explore food and income status in depth, asking nearly 29 questions to 251 female sewing garment operators and 134 female helpers respectively.

### ***Data Collection***

Questionnaires were developed to collect information on socio-demographic characteristics (religion, age, color, height, weight, home district, marital status, family status etc.), regular dietary habit, dietary intake (food item, intake pattern and frequency), usual working hour, overload hour, overtime, overtime rate, and monthly income. Before finalization of questionnaire, we reviewed it by an expert and took some adjustments where necessary. For obtaining information respondents were requested to recall their food intake in last seven days and for income in last month as well. Food intake pattern was recorded in terms of frequency of consumption of food items namely egg, milk, fish (small/large), meat (chicken/beef/others), fruits, and vegetables. Similarly, the frequencies of eating those items were recorded 'Never', '1 - 3 times' a week, '4 -5' times a week, '6 - 7' times a week. On the other hand, monthly income package including overtime and others was recorded by our own created income scale that starts from 4,500 tk and ends with 13,000 tk.

### ***Hypotheses***

To establish relationship between consumption frequency of food item and income level as well as to find out the variability of total working hour, overtime rate, total monthly income between female sewing operator and female helper the following hypotheses has been considered.

**Hypotheses 1.** The consumption frequency of affinity among the female garment workers differ according to the level of income.

**Hypotheses 2.** The consumption frequency of eating food items among the female garment workers does not differ according to position that they belongs to.

**Hypotheses 3.** The female sewing operators have more variability of total working

hours per week in including overtime than female helper.

**Hypotheses 4.** The variability of overtime rate per hour of female sewing operators is more than that of female helper.

**Hypotheses 5.** The female sewing operators have more variability in their total earned monthly income including overtime, attendance bonus, and others than female helper.

### ***Data Analysis Tools***

After obtaining the data from our respondents descriptive analysis was performed to summarize the data; however data processing and analysis was performed using Microsoft Excel 2007. In order to find association between some variables chi square test was used. Analysis of variance and inferential statistics were also performed where appropriate.

### **Results**

#### ***Characteristics of the Respondents***

A total of 385 respondents were incorporated in our study sample. Out of 385 respondents 251 were female sewing operators and 134 were female helpers respectively.

The most dominant age range was 18-23 and 24-28 years for 55% and 30% of sewing operators respectively. The majority (43%) height of sewing operator's was in between 5.1-5.3 inch and almost 36% sewing operators' height was fallen 4.8 - 5.00 inch. Only 14% sewing operators were found whose height was in between 4.5 - 4.7 inch. The major portion of sewing operators (199, 79.28%) weight was fallen between 46 - 60 kg.

On the other hand, the majority (55%) of the helper age was in between 18-23 years and 30% was fallen into 24-28 years. Only 2% helpers were found whose age was 41 to 45 years. The most common height (48%) of helper was 5.1 to 5.3 inch and subsequent common height range were 4.8 - 5.00 inch and 4.5 - 4.7 inch for 25.37% and 18.66% of helper respectively. However, only 2% of helpers were found whose height was fallen in the range of 3.11 - 4.4 inch. The majority of helper (97, 72.39 %) weight was fallen between 40 - 50 years old.

The majority of our respondents were married (sewing operator - 64.14% and helper - 50.74%). Unmarried percentage of sewing operator and helper were 33.07% and 47.01% respectively. Nevertheless, it is our interesting findings that we had found 7 sewing operators and 3 helpers who were divorced.

### ***Dietary Consumption Pattern***

Based on the respondents' response that they recall of food intake in the last seven days, all respondents took three meals in a day with or without no snacks in between meals. All respondents finished three meals - breakfast, lunch, and dinner through a combination of rice, fish, meat, egg, pulse, and bread. Study finds that only a few respondents did not take egg and fish once in a week; however, milk consumption we have observed different scenario, the majority percentage of sewing operator and helper had no milk choice once in a week in their food item; 68.12 % of sewing operator and 66.42 % of helper respectively. Almost same scenario had been observed for the consumption of meat, where 61.35% of sewing operator and 52.24 % of helper never took meat item once in a week. The majority proportion took 1-3 times fruit per week and it is applicable both for sewing operator and helper. They tried to consume all types of seasonal fruits like mango, apple, banana, jackfruit, pineapple, orange, guava, and others, while taking fruits. Finally, a good number of respondents nearly 61.75% of sewing operator and 59.70% of helper had their choice to take vegetables every day in a week. Study also reveals that all our respondents took special food like fried rice, fried chicken and meat, noodles, sweets and other rich food items in festive occasion according to their affordability.

Respondent's consumption of dietary pattern is summarized below. The next consecutive table is the list of consumption frequency of food items - egg, milk, fish, meat, fruits, and vegetables intake pattern.

Table 1: Pattern of intake food item (egg) by the female garment workers

Worker's Position	Frequency of weekly consumption (Egg)				
	Never	1 - 3 Times	4 - 5 Times	6 - 7 Times	
Sewing Operator	8 (3.19%)	167 (66.53%)	65 (25.90%)	11(4.38%)	251
Helper	4 (2.99%)	89 (66.42%)	38 (28.36%)	3 (2.24%)	134
Total	12	256	103	14	385

Table 2: Pattern of intake food item (milk) by the female garment workers

Worker's Position	Frequency of weekly consumption (Milk)				
	Never	1 - 3 Times	4 - 5 Times	6 - 7 Times	
Sewing Operator	171 (68.12%)	64(25.50%)	14 (5.58%)	2(0.80%)	251
Helper	89 (66.42%)	41(30.60%)	3(2.24%)	1(0.75%)	134
Total	260	105	17	3	385

Table 3: Pattern of intake food item (fish) by the female garment workers

Worker's Position	Frequency of weekly consumption (Fish)				
	Never	1 - 3 Times	4 - 5 Times	6 - 7 Times	
Sewing Operator	7 (2.79%)	98 (39.04%)	117 (46.61%)	29 (11.55%)	251
Helper	5 (3.73%)	78 (58.21%)	43 (32.09%)	8 (5.97%)	134
Total	12	176	160	37	385

Table 4: Pattern of intake food item (meat) by the female garment workers

Worker's Position	Frequency of weekly consumption (Meat)				
	Never	1 - 3 Times	4 - 5 Times	6 - 7 Times	
Sewing Operator	154 (61.35 %)	87 (34.66%)	9 (3.59%)	1 (0.40%)	251
Helper	70 (52.24 %)	50 (37.31%)	9 (6.72%)	5 (3.73%)	134
Total	224	137	18	5	385

Table 5: Pattern of intake food item (fruits) by the female garment workers

Worker's Position	Frequency of weekly consumption (Fruits)				
	Never	1 - 3 Times	4 - 5 Times	6 - 7 Times	
Sewing Operator	36 (14.34%)	182 (72.51%)	25 (9.96%)	8(3.19%)	251
Helper	34 (25.37%)	80(59.70%)	17 (12.69%)	3 (2.24%)	134
Total	70	262	42	11	385

Table 6: Pattern of intake food item (vegetables) by the female garment workers

Worker's Position	Frequency of weekly consumption (Vegetables)				
	Never	1 - 3 Times	4 - 5 Times	6 - 7 Times	
Sewing Operator	1 (0.40%)	24 (9.56%)	63 (25.10%)	163(64.94%)	251
Helper	1 (0.75%)	23 (17.16%)	38 (28.36%)	72 (53.73 %)	134
Total	2	47	101	235	385

### ***Working Hour, Overtime Rate, and Income Pattern***

Most of the respondents both sewing operator and helper usually work 8-9 hours per day except overtime. After that, they got the opportunity to do overtime which ranges 1-5 hours per day. The majority of the respondents do

usually overtime 2 hours per day, but sometimes they had to do more overtime when the factory is overloaded or received special order or before going long vacation for festive occasion such as Eid day, Durga puja or Christmas day. Not all the respondents get overtime opportunity since some factories are under loaded with work order. However, sometimes factory forced the workers to do overtime because of more work load, insufficient skilled labor and money saving tendency as per opinion from respondents. Nearly, 90 % of both types of respondents had enjoyed only one weekend, but some factories allow workers to work at the weekend with special overtime rate.

Overtime rate nearly is the same for both respondents, sometimes vary from factory to factory, or by position. Certainly, workers also enjoy festival bonus of their basic salary. Monthly income is calculated by accumulating received monthly salary package with overtime, attendance bonus and others. Table - 7, 8, 9 and 10 depicts at glance of working hour, overtime rate and monthly income pattern including overtime, attendance bonus and others in favor of both types of respondents.

Table 7: Total working hour/week including overtime

Worker's Position	Working Hour/Week in Hour				Inference about the Variance of Working Hour/Week of All the Female Garment Workers in Gazipur
	Average Working Hour	Minimum Working Hour	Maximum Working Hour	Mean $\pm$ SD	
Sewing Operator	70.91	50	98	70.91 $\pm$ 11.16	10.26 - 12.24 (at 95% confidence interval)
Helper	78.43	60	96	78.43 $\pm$ 8.51	7.60 - 9.68 (at 95% confidence interval)

Table 8: Overtime rate/hour enjoyed by the female garment workers

Worker's Position	Overtime rate/hour in BDT				Inference about the Variance of Overtime Rate / Hour of All the Female Garment Workers in Gazipur
	Average Rate	Minimum Rate	Maximum Rate	Mean $\pm$ SD	
Sewing Operator	24.55	15	35	24.55 $\pm$ 4.94	4.55 - 5.42 (at 95% confidence interval)
Helper	19.74	10	25	19.74 $\pm$ 3.95	3.52 - 4.48 (at 95% confidence interval)

Table 9: Festival bonus earned by the female garment workers

Worker's Position	Bonus Amount in BDT				Inference about the Festival Bonus Variance of all the Female Garment Workers in Gazipur
	Average Amount	Lowest Amount Level	Highest Amount Level	Mean $\pm$ SD	
Sewing Operator	2,767	1,800	3,700	2,767 $\pm$ 468	430 - 513 (at 95% confidence interval)
Helper	2,153	1,700	3,400	2,153 $\pm$ 355	316 - 406 (at 95% confidence interval)



Table 10: Monthly income earned by the female garment workers that includes per month salary, overtime and others)

Worker's Position	Income in BDT				Inference about the Monthly Income Variance of all the Female Garment Workers in Gazipur
	Average Income	Lowest Income Level	Highest Income Level	Mean $\pm$ SD	
Sewing Operator	9,470	5,300	12,966	9,470 $\pm$ 1,630	1,499 - 1,787 (at 95% confidence interval)
Helper	6,858	4,770	10,660	6,858 $\pm$ 1,227	1,096 - 1,395 (at 95% confidence interval)

**Test of Hypothesis**

Our study findings end with testing of hypothesis. Table - 11 presents the results of income level and frequency of affinity for both types of respondents. Here, affinity includes frequency of consumption for tea, pan or both tea and pan.

**Hypothesis 1:** Does the frequency of affinity among the female workers differ according to the level of income?

Here, is the table - 11 that is used for testing of hypothesis 1.

Table 11: Total monthly income level and frequency of affinity

Consumption Frequency of Affinity	Monthly Total Income Level in BDT								
	Below 5,000	5,000 - 6,000	6,001- 7,000	7,001- 8,000	8,001- 9,000	9,001 - 10,000	10,001 - 11,000	Above 11,001	
Never	8	9	9	22	7	5	11	22	93
Sometimes	5	12	29	24	18	17	25	33	163
Strongly Addicted	9	6	15	13	13	33	28	12	129
Total	22	27	53	59	38	55	64	67	385

We find the value of the chi - square statistic to the right, 29.14 that contains 0.01 of the area under the curve with 14 degree of freedom. However, the sample chi - square value of 46.06 that we calculated in Table - 11 falls in rejected region and reject the null hypothesis. So, we conclude that there is association between income level and consumption frequency of affinity i.e. consumption frequency of affinity depends on per month total income level.

**Hypothesis 2:** Does the frequency of eating food items - egg, milk, fish, meat, fruits and vegetables among the female workers differ according to position that they belongs to?

Here, we used Table-1 to Table-6 for testing of hypothesis 2. The value of chi - square statistic to the right, 7.81 that contains 0.05 of the area under the curve with 3 degree of freedom, is same for all the food items. However, the sample chi - square value of individual food items differ and these values are 1.31, 3.08, 3.71, and 3.92 for the food items egg, milk, meat, and vegetables respectively, derived in Table- 1, Table- 2, Table- 4, and Table - 6 accordingly, fall in accepted region. On the other hand, the sample chi - square values of fish and fruits are of 14.54, 8.82 respectively, derived in Table - 3, Table-5 accordingly, fall in rejected region. Hence, we conclude that frequency of

eating items do not depend on workers position, here female sewing operator and helper, in the garment factory except two food items - fish and fruits.

**Hypothesis 3:** Is the variability of total working hour including overtime per week same both for female sewing operator and helper?

With 250 degrees of freedom in the numerator, 133 degrees of freedom in the denominator, and  $\alpha = 0.01$ , the critical value of  $F$  for  $F$  distribution in the right tail is 1.44 but our calculated  $F$  ratio value of 1.72 falls in rejected region. So, we reject the null hypothesis because of  $1.72 > 1.44$ , and conclude that the variability of total working hour including overtime per week is not same; thus female sewing operator had shown more variability of total working hour per week than female helper.

**Hypothesis 4:** Is the variability of overtime rate per hour same for both female sewing operator and helper?

Similarly, the value of  $F$  for  $F$  distribution with 250 degrees of freedom in the numerator, 133 degrees of freedom in the denominator, and 0.01 of the area in the right tail is 1.44 but our calculated  $F$  ratio value of 1.57 falls in rejected region. So, we reject the null hypothesis because of  $1.57 > 1.44$ , and conclude that the variability of overtime rate per hour of female sewing operator is more than that of female helper.

**Hypothesis 5:** Is the variability of total monthly income including overtime, attendance bonus and others same for both female sewing operator and helper?

With 250 degrees of freedom in the numerator, 133 degrees of freedom in the denominator and  $\alpha = 0.01$ , the critical value of  $F$  for  $F$  distribution in the right tail is 1.44 but our calculated  $F$  ratio value of 1.76 falls in rejected region. So, reject the null hypothesis because of  $1.76 > 1.44$ , and conclude that female sewing operator had shown more variability in their total earned monthly income including overtime, attendance bonus and others than female helper.

## Discussion

Food intake data revealed that most of the respondents had three meals in a day. Substantial proportion of respondents did not consume milk and meat, similar findings were reported on adolescent garment worker in Bangladesh (Khan, 2005). Although egg, fish, and fruit were consumed less frequently '1 - 3' times in a week, the consumption of vegetables is extremely good thus can contribute significant amounts of vitamins, minerals, and iron.

Average total working hour including overtime per week with standard deviation of sewing operator and helper is  $70.91 \pm 11.16$ ,  $78.43 \pm 8.51$ . Similarly, overtime rate per hour with standard deviation of sewing operator and helper is  $24.55 \pm 4.94$  and  $19.74 \pm 3.95$  respectively. Study also revealed that average monthly income including overtime with standard deviation of sewing operator and helper is  $9,470 \pm 1,630$  and  $6,858 \pm 1,227$  respectively.

The study provides new information by testing of hypotheses that consumption frequency of affinity and level of income of all respondents are not independent that means level of income affects female workers to consume tea, pan, or similar items. Besides, consumption frequency of eating food items

does not depend on workers position except two food items - fish and fruits. However, from testing of variability, study also reveal that total working hours including overtime per week, overtime rate per hour, and total monthly income including overtime, attendance bonus, and others are not the same; female sewing operator, all above mentioned parameters, has more variability than that of helper.

### **Conclusion and Recommendations**

Our study findings shows the overall food status as well as income level of female RMG workers is not satisfactory level; still now our female workers are struggling much and could not ensure nutritious food security that was also study findings of the previous researchers. The data also shows the existing salary package is neither commensurate nor adjusted with the prevailing inflation rate with economy. Although they work hard from morning till evening, they are not satisfied on hard earned money to maintain basic needs. The present study suggests that the government as well as BGMEA can take initiative to start a rationing service for food items for all garments workers. The initiative can be implemented through a formal contract between recognized government agency like TCB and BGMEA or BKMEA. Moreover, garment owners can provide low cost shelter facility to the workers so that more earnings can be spent for nutritious food items. In addition to that central canteen facilities can be provided for the workers, by doing so consumption of healthy and nutritious food can be ensured. The study ends up by opening the area of further research to examine the health status and justify whether garment worker can quench health issue with the existing salary package.

### **References**

- Absar, S. S. (2001). Problems Surrounding Wages: Readymade Garments Sector in Bangladesh. *Labour and Management in Development*, 2 (7): 2-17.
- Ahmed, F. Zareen, M. Khan, MR. Banu, CP. Haq, MN. and Jackson, AA. (1998). Dietary pattern, nutrient intake and growth of adolescent school girls in urban Bangladesh. *Public Health Nutrition*, 1: 83-92.
- AMRF Bangladesh and CCC The Netherlands (April 5, 2009). *Study on Living Wage in the Export-oriented Garment Sector in Bangladesh*.
- Clark, C., and Kanter, S. (2011). *Violence in the Readymade Garments (RMG) industry in Bangladesh*. Center for International and Comparative Studies. University of Michigan. 3 (1):6-12.
- Daniel, WW. (1999). *Biostatistics: A Foundation for Analysis in the Health Sciences*. 7<sup>th</sup> edition. New York: John Wiley & Sons.
- Faruque, H. (2014, September 19). RMG industry of Bangladesh: Past, present and future. *Dhaka Tribune*, Retrieved from <http://www.dhakatribune.com/long-form/2014/sep/19/rmg-industry-bangladesh-past-present-and-future#sthash.72yJndaL.dpuf>.
- Hossain, H., Jahan, R., and Sobhan, S. (1990). *No Better Option? Industrial Women Workers in Bangladesh*. Dhaka.: University Press Limited,
- Islam, R., & Hoque, M. (2015). Perception and Practices of Food Habit and Nutritional Status of Adolescent Girls in Bangladesh: A Comparative Study between Garment Workers and School Going Girls. *International Journal of Health and Economic Development*, 1(2), 28-41.

- Jamaly, R. and Wickramanayake (1996). 'Women workers in the garment industry in Dhaka, Bangladesh', *Development in Practice*, 6(2):150–160.
- Kabir, Y., Shahjalal, H. M., Saleh, F., & Obaid, W. (2010). Dietary pattern, nutritional status, anaemia and anaemia-related knowledge in urban adolescent college girls of Bangladesh. *JPMA. The Journal of the Pakistan Medical Association*, 60(8), 633.
- Kendra, N. U. (accessed Sep 16, 2014). *Garment Factory & Workers Support Program*. [http://www.nuk-bd.org/garment\\_support.php](http://www.nuk-bd.org/garment_support.php).
- Khan, M. R., & Ahmed, F. (2005). Physical status, nutrient intake and dietary pattern of adolescent female factory workers in urban Bangladesh. *Asia Pacific journal of clinical nutrition*, 14(1), 19-26.
- Macfarlane, SB. (1997). Conducting a Descriptive Survey: 2. Choosing a Sampling Strategy. *Trop Doct*, 27 (1):14-21.
- Noman, S. M. S. (2013). Determination of Minimum Wage for Garments Worker in Bangladesh Ensuring Firms Profitability. *International Journal of Economics, Finance and Management*, 2(3).
- Paul-Majumder, P. (1998). *Health Status of the Garment Workers in Bangladesh: Findings from a Survey of Employers and Employees*. Bangladesh Institute of Development Studies, Dhaka. 24 (1): 204-225.
- Rahman, M., Matsui, N., & Ikemoto, Y. (2009). *The chronically poor in rural Bangladesh: Livelihood constraints and capabilities*. New York: Routledge
- Rahman, M. Bhattacharya, D. and Moazzem, K. G. (2008). *Bangladesh Apparel Sector in Post MFA Era: A Study on the Ongoing Restructuring Process*. Dhaka: Centre for Policy Dialogue in association with IFC and SEDF.
- Saha, S., Farzana, S., & Begum, A. (2014). Dietary Pattern and Anaemia Among Female Adolescent Garment Workers in Bangladesh. *Acta Medica*, 1(2), 103.
- Workers' Voice Report (July 16, 2014). *Update on implementation of the new wage structure in Bangladesh's RMG industry*. AWAJ Foundation and Consulting Service International Ltd.