

Original Research Article

Factors Influencing Participation of Female Pineapple Workers in Family Income and Decision Making aspect in Moulvibazar District, Bangladesh

ABSTRACT

Aims: In today's competitive world, the participation of women in the earning sectors is very common and crucial. But there are several reasons that either positively or negatively influence female participation in household income and decision-making. This present study aimed to highlight the determinants which are responsible for the economic contribution and decision-making of female pineapple workers in some selected areas of Moulvibazar district, Bangladesh.

Study Design: This article is about examining the factors which affect female workers' contribution to household income and decision-making. It is based on empirical analysis and estimates the components that influence the income and decision-making of female pineapple workers at the household level.

Place and Duration of Study: The study was carried out in the Sreemangal Upazila of Moulvibazar district of Bangladesh, including four villages, as the female participation in pineapple cultivation is relatively high. The research was taking place from June to September 2020 which is the production period of pineapple.

Methodology: The relevant data were collected from 180 respondents through face-to-face interviews using structured questionnaires. The simple random sampling technique was used to choose the sampled respondents. The demographic profile of the female pineapple workers was estimated by using descriptive analysis. To assess the factors influencing female workers' contribution to family income and household decision-making, the linear regression (Logit) model was used. In case to determine the severity that a pineapple female worker faced in their working place, the Constraints Facing Index (CFI) was applied.

Results: From descriptive analysis, the study revealed that 73.0% of the respondents belong to an active working group and the average family size was 6.25. The study's outcome also showed that 54.5% had no formal education, and almost 56.0% of sample respondents incorporated 6 to 10 family members. 52.3% of respondents have 11-30 years of working experience in the pineapple field. From the Logit model, it is shown that the key determinants of contribution to family income and decision-making in the study area were age level of the respondents, education, occupational experience, indebtedness, and savings which had a positive value of 1.041, 1.043, 1.095, 1.000 and 0.499, respectively. Instead of having several problems, low wage rate, physical injury, long working hours, lack of working facilities, and lack of training facilities were major among all the respondents.

Conclusion: Lastly, from the respondents' viewpoint, it has been summarized that increasing the wage rate, reducing working hours, supply of safety equipment, provide medical and training facilities improve not only their economic position but also ensure a

Comment [MP1]: The statistical formulation used in the method section is the logistic regression model.

healthy life and fair contribution in household income and decision making purpose.

Keywords: Factors influencing, Participation, Female, Pineapple Workers, Household income, Decision making, Moulvibazar district, Bangladesh.

1. INTRODUCTION

Bangladesh, with 16 million people, ranks eighth in the world in terms of population density with a gender ratio of 100:103, which means that half of this nation's population is female (Mainuddin and Islam, 2015). Haque *et al.* (2011) noticed that a mid-level of women empowerment prevails, but the autonomy level of Bangladeshi women is absolutely low. According to the Sebstad and Cohen study (2000) illustrates that female plays a minor role in family decision-making and had a limited command over household resources like health and finances, low amounts of available resources, household work stress, lack of mobility, and insufficient experience and expertise as it highlighted the women's vulnerability by a World Bank study in Bangladesh. They grow under the fear of society and family, which abolish their confidence and keep them away from decision-making. Regarding personal empowerment, women often do not have the right to decide what to wear, where to go, where to study, or where to work (Davis *et al.*, 2014). Women often have less power in relationships due to their economic, political and socio-cultural status and may not be in a position to protect themselves from gender-based violence and unwanted sexual intercourse, resulting in sexually transmitted infections and other sexual and reproductive health (SRH) problems (LIO, 2009). However, Bangladesh is on the path of removing all types of obstacles to women's development by improving various facilities, and at the same time, the participation of females in different working activities is remarkable nowadays. So, research in this field is crucial to develop new knowledge about factors pursuing female contribution to family income and the decision-making process of women empowerment in the recent era. Agriculture is the economy's single largest producing sector; accounting for 17 percent of total GDP, this sector generated 47% of the entire workforce. As a result, agriculture plays a crucial role and is regarded as the most important economic sector (BBS, 2020).

The participation of females in pineapple production is, on an average 30% (approximately), but their contribution is not highlighted like male workers (BBS, 2014). Pineapple is a delicious tropical fruit with a delicate flavor and high nutritional value. The commercial importance of pineapple is recognized all over the world. Thailand is the largest pineapple producer, accounting for 13% of global output, followed by Brazil and Costa Rica (Baruwa, 2013). The fresh consumption of pineapple is very common as well as it is widely consumed as juice. Among all the fruits produced in the country, pineapple ranks 4th in terms of total area and production (BBS, 2009). Each year a massive amount of pineapples of different varieties is produced in Bangladesh. This fruit is highly perishable and seasonal. If the excess fruits in the season were preserved by any means ensuring the quality, consumers would have the opportunity to taste this seasonal fruit all year round. Also, these processed fruits could be exported to earn foreign currency (Bala *et al.*, 2001). The scientific binomial name of pineapple is *Ananas Comosus*, which is derived from the word "Tupinanas", which means "excellent fruit". Because of its significant nutritional and economic benefits pineapple is a very popular fruit in Bangladesh, which is commonly available during the rainy season.

Comment [MP2]: To emphasize the significance of this study, the author(s) must describe the recent situation of women's empowerment in Bangladesh, such as the gender empowerment index and women's educational level. Probably you can find it in Bangladeshi Demographic and Health Survey (BDHS) report. Any references to recent studies in Bangladesh on the participation of Bangladeshi women in household decision making and their acceptance of domestic violence will strengthen the argument for conducting this study. I also recommend that the author(s) read 'Resources, Agency, and Achievements: Reflections on the Measurement of Women's Empowerment' (N. Kabeer), which serves as the study's conceptual framework.

Even though pineapple is a minor fruit crop in Bangladesh, it is prominent and grows continuously throughout the year. According to a time-series study, pineapple is Bangladesh's fourth most important fruit based on total growing yield per hectare (Hossain and Abdullah, 2015). Pineapples are commonly grown in Tangail, Chottagram, Rangamati, Dhaka, Bandarban, Sylhet, Khagrachari, Mymensingh, and Moulvibazar (BBS, 2020). The future of pineapple cultivation in Bangladesh is bright because, even though the fruit is grown in roughly 90 countries around the world, pineapples from Bangladesh are much more moist and flavorful than those from other countries. These pineapples are assured to earn a lot of money in terms of exports whether they are appropriately managed and marketed (Golam, 2014). Pineapples have a large amount of moisture, glucose, starch content, ascorbate, and dietary fiber. As a result, pineapple can be used as a food additive to help maintain optimum health (Hemalatha and Anbuselvi, 2013). It is also high in potassium, calcium, carbs, vitamin C, and moisture, a variety of nutrients, and dietary fiber that helps in digestion and the repair of body weight in a healthy diet. In the case of vitamins contains a single pineapple provides more than 130 percent of daily vitamin needs for humans. Pineapple enhances eyesight, bone strength, dental hygiene, blood flow, and blood pressure regulation, as well as reduces cold and flu problems (Hossain and Abdulla, 2015).

A suitable number of studies have been supervised on women's participation in family income and decision-making aspects from different country perspectives. For instance, in their research, Moloy *et al.* (2019) found that about 60% of women actively participate in healthcare decision-making, household purchases, and visits to family or relatives, respectively. Similarly, Dev *et al.* (2010) examined women's autonomy in household decision-making: a demographic study in Nepal. Their study concluded that women's autonomy in decision-making is positively associated with their age, employment, and the number of living children. Women from rural areas and the Terai region have less autonomy in decision-making, and rich women are less likely to have the autonomy to make decisions in their own healthcare. A study by Saleemi and Kofol (2022) estimated that due to changes in women's involvement in family matters, households' percentage of education expenditures spent on girls has changed, which is about 12.6 percentage points the higher proportion of expenditure than boys. Pandey *et al.* (2021) explored the involvement of women as domestic decision-makers in India; they discovered that women's position in society is an important indication of a region's socio-economic progress. In addition, women's educational attainment and employment position were found to be the most critical determinants of their empowerment and participation in decision-making in all aspects of household life. Other similar findings incorporated by Sariyev *et al.* (2020) in Bhutan showed that women did not lack considerable engagement in home decision-making; the assessments suggested that the relationship between women's participation in decision-making and dietary habits is non-linear.

Furthermore, Awan *et al.* (2015) discovered that women's involvement in the formal and informal labor markets had attained significant national and worldwide significance. For the past three decades, it has dominated the agendas of national and international organizations. Moreover, Ismail *et al.* (2015) in their study in Nigeria, found that women's availability to essential economic resources, such as land (as proprietors), limited labor-saving equipment, food-processing appliances, financing, and farming inventions, should be strengthened. Even though rural women play a prominent role in the sector, their

contribution to agricultural productivity and rural development in Nigeria is woefully underappreciated.

Therefore, it is remarkable that female workers occupy a significant portion of the total labor force, but they get minimal facilities and are deprived in various ways. Despite their considerable involvement in the household's income and well-being, they have minimal decision-making power. As a result, women's equal participation in socio-economic operations is restricted due to a lack of ownership and control over production factors, which impedes the process of human advancement (Acharya, 2003).

Very limited studies have been conducted on factors influencing women's participation in household income and decision-making aspects in the case of Bangladesh. For example, Marwati *et al.* (2020) estimated in their research work that education level, working time, work experience, and the number of family members significantly affected the income of female workers. Age did not affect the income of female workers. A study by Awan *et al.* (2015) also analyzed that women's education, women's profession, woman's working hours, women outside (home) work permission, number of dependents, and poverty status of households positively and significantly affect their support (contribution) to the household budget. Factors like the husband's education, his earned income, number of infants (0-5 years age), household participation (in economic activity) rate (including both male and female), and the husband's employment status negatively affect the women's contribution. Moreover, Sultana (2010), in her study of the effects of determinants on women's independence and decision-making power inside the household in rural areas, found that men have more power in making family decisions simply because they are men; women are usually expected to follow out commands. She further noted that male dominance is a natural state of things, which means that society has made men dominant and that men must work to support their families. In contrast, women are helpless in practically every sector and utterly reliant on men.

The above reviews and discussion indicated that a large number of studies were conducted on determinants affecting females' financial contribution and household decision-making. Only a few research on factor analysis about female laborers' engagement in pineapple production and decision-making viewpoint have been undertaken, according to these literature evaluations. So, it is essential to investigate more studies that would effectively assess the factors responsible for female pineapple workers' financial contribution and decision-making in the Moulvibazar district of Bangladesh. The research will help to identify and explore the major constraints female workers face in household income and decision-making. In turn, this will help to develop proper policy guidelines to overcome those constraints related to income and decision-making. Thus, the overall objective was to estimate the factors impacting female pineapple workers' involvement in household income and decision-making in the Moulvibazar district, Bangladesh.

2. MATERIAL AND METHODS

2.1 Selection of the study area and sample

The study used both descriptive and analytical methods. The study area was selected purposively, keeping in mind the objectives. Based on the female participation in pineapple work, the research was carried out in the Sreemangal Upazila of the

Comment [MP3]: I recommend that the author(s) divide the method section into sub-sections, as follows:

1. Data and participants. The author(s) discuss the design study, including population size and characteristics, sampling method design, and sample size. Also, please justify the sampling technique method used by the author(s) to select 180 respondents.
2. Measurements. The author(s) define the outcome variable and each explanatory variable, as well as how to measure each variable.
3. Statistical analysis. Mention the statistical analysis used in this study by the author(s).
4. Ethical approval. Because this study involves human subjects, ethical approval is required. The author(s) should declare the Institutional Review Board or ethical committee that performed this study's ethical clearance.

Moulvibazar district of Bangladesh, including four villages, namely Sadar, Mohajirabad, Doulochora, and Radhanagar; as in these areas, the numbers of respondents were comparatively high, and the specific research analysis in this perspective is very scanty. Simple random sampling techniques were employed to choose 180 respondents from the survey area. Primary data were gathered using structured questionnaires through face-to-face interviews with female pineapple workers from June to September 2020. Obtained information and data from questionnaires were coded and analyzed using SPSS software. The following analytical technique was used to estimate factors affecting female workers' income contribution and decision-making and constraints identification.

Comment [MP4]: Please explain the population size and characteristics, and then please justify the sampling technique method used by the author(s) to select 180 respondents.

2.2 Analytical techniques

2.2.1 Assessing the factor affecting female contribution to family income and decision-making

The study used the logistic regression model to determine the factors affecting female contribution to household income and decision making. The value of the livelihood diversification index ranges between zero (0) and 1. The Logit model is more suitable for finding the parameter estimates when there are latent or censored sample presents in the dependent variable. A sample in which information on the dependent variable is unavailable for some observation is known as a censored or latent sample (Gujarati, 2003).

Comment [MP5]: Since the author(s) use the logistic regression model, 'Contribution to household income' and 'contribution to household decision making' are, in my opinion, two distinct concepts. They are both indicators of women's empowerment. I recommend that you explain how you generate the measurement of your study's single outcome variable, 'contribution to household income and decision making,' from these two indicators. Otherwise, this study must have two outcome variables: 'contribution to household income' and 'contribution to household decision making.' However, before measuring (either the first or second option), you should define the measurement of each indicator in your study.

The following Logistic model was employed;

$$L_i = \ln \left[\frac{P_i}{1-P_i} \right]$$

$$= \beta_0 + \beta_1 X_1 + \dots + \beta_7 X_7 + U_i$$

The logit model was estimated using the binary dependent variable. The binary variable was assigned the value '1' for female workers' contribution to family income and decision-making and '0' otherwise. The logit model was specified as follows:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + U_i \dots \dots \dots (i)$$

Where,

- β_0 = Intercept
- $\beta_1 - \beta_8$ = Logistic regression co-efficient
- $X_1 - X_8$ = Independent variables of female workers;
- X_1 = Age (years)
- X_2 = Family size (no.)
- X_3 = Educational level (years of schooling)
- X_4 = Working environment (1 for having a good and favorable environment and 0 for otherwise)
- X_5 = Occupational experience (years)
- X_6 = Indebtedness (Tk.)
- X_7 = Working period (hours)
- X_8 = Savings (Tk.)
- U_i = Error term

To find out the appropriate estimation of the female contribution to household income and decision-making, statistical software SPSS was used to analyze the data.

2.2.2 Identify major constraints:

To find out the constraints that the female workers faced in participation in household income and decision making, the following method was used to calculate the Constraint Facing Index (CFI) (Afrad, 2002):

$$CFI = (C_h \times 3) + (C_m \times 2) + (C_l \times 1) + (C_n \times 0) \dots\dots\dots (ii)$$

Where,

CFI = Constraints Facing Index;

C_h = Number of respondents having high constraints;

C_m = Number of respondents having medium constraints;

C_l = Number of respondents having low constraints; and

C_n = Number of respondents having no constraints.

An attempt was made to find out suggestions from the respondents to overcome the identified constraints.

3. RESULTS AND DISCUSSION

This part of the study implies the socio-economic profile, the factors affecting female contribution to family income, and the decision-making aspect of the sampled respondents in the selected areas of the Moulvibazar district. The results also evaluate the problems faced by the female pineapple workers and some possible solutions to solve those problems.

3.1 Socio-economic characteristics of the respondents

The socio-demographic profile of the female pineapple workers is illustrated in Table 1. It is noticeable that most of the workers' group belong to the 25-64 age group, which indicates that active working peoples are more appropriate to work in a pineapple field as it is risky for older adults and hard-working activity. The average household size of the respondent was 6.25 (whereas 51.0% of members were male and 49.0% were female). Regarding the number of family members, most of the respondents in the study area were 6-10 family members (55.5%). In the case of the educational level majority of the respondents, which is 54.50%, didn't have any formal education owing to the financial crisis. In contrast, the primary and secondary levels were 24.4% and 21.1%, respectively. In the study area, most of the respondents were engaged in diversified working activities to fulfill their basic needs, where 57.2% of respondents worked only in a pineapple field, whereas the other two types are related to poultry and livestock rearing along with pineapple fieldwork which is 22.2% and 20.6%, respectively (Table 1).

Table 1: Percentage distribution of the respondents by socio-economic characteristics

Particulars	Percentage	Particulars	Percentage
Average Household Size (No.)	6.25 (Male: 51.0%; Female: 49.0%)		
Age categories		Widow	4.4
Below 24 years	26.5	Occupational experience	
25- 64 years	73.0	Below 10 years	34.5

Comment [MP6]: Does this imply that your respondents are both male and female? Please explain.

Comment [MP7]: Since there is an explanatory variable for 'the number of family members', I recommend that the author(s) delete this 'average household size' variable. It will be unnecessary.

Above 65 years	0.5	11 to 30 years	52.3
Family type		Above 30 years	13.2
Joint family	32.8	Occupation status	
Nuclear family	67.2	Pineapple work	57.2
Literacy level		Poultry and livestock rearing	22.2
No formal education	54.5	Small business	20.6
Primary	24.4	Income level	
Secondary	21.1	Below 1 Lakh	43.4
No. of family member		1 Lakh to 2 Lakh	52.8
Below 6	32.7	Above 2 Lakh	3.8
6 - 10	55.5	Indebtedness	
Above 10	11.8	Yes	58.6
Marital status		No	41.4
Single	18.3	Savings	
Married	74.4	Yes	18.5
Divorced	2.8	No	81.5

Source: Authors estimation, (2021)

From above Table 1, a noticeable number of respondents' working experience was 11-30 years, whereas 34.5% and 13.2% mentioned below 10 years and above 30 years of occupation experience. Approximately 59.0% of the respondents were trapped in indebtedness; on the contrary, only 18.5% had savings for future emergencies.

3.2 Factors affecting female workers' contribution to household income and decision-making:

In this study, eight independent variables have been considered significant determinants of the probability of female contribution to household income and decision-making. These were the age of the respondents, family size, education, occupational experience, working environment, indebtedness, working periods, and savings. A Logit model was used to determine the effect of different factors on female workers' participation in both aspects.

Table 2: Estimated values of co-efficient and related statistics for measuring the effect on the odds of female contribution to family income and decision making

Variables Name	Co-efficient β	Standard of error	t-values	Level of Significance	Exponential of coefficient or odds ratio
Age	0.040*	0.021	3.689	0.055	1.041
Family size	-0.003	0.062	0.002	0.963	0.997
Education level (years of schooling)	0.042**	0.039	1.140	0.016	1.043
Working environment	-0.109	0.324	0.113	0.736	1.115
Occupational experience	0.091*	0.046	3.824	0.051	1.095
Indebtedness	0.000	0.000	0.181	0.671	1.000

Comment [MP8]: This is not the logistic regression analysis, but the linear regression analysis. You should also specify the reference category for each independent variable (for logistic regression model). Unadjusted and adjusted odds ratios must also be calculated.

Working periods	-0.069	0.467	0.022	0.882	0.933
Savings	0.695*	0.376	3.424	0.064	0.499
Constant	-2.127	3.598	0.349	0.554	0.119
-2 Log likelihood	236.587				
Cox and Snell R square	0.176				
Nagelkerke R square	0.235				

Source: Authors estimation, (2021)

Note: ** indicates significant at 5% level and * denotes significant at 10% level.

Empirical results of logistic regression:

The present study estimated that all the factors were prior and had a positive impact on female contribution to family income and decision making (Table 2). The result shows that the model was suitable (2 log-likelihood ratio test, 236.587) for explaining the determinants (Nagelkerke R Square, 0.235) of the female contribution to the surveyed household. Among the variables considered in logistic regression analysis, four explanatory variables, namely age of female workers, education level, work experience, and saving (significant at 5% and 10% probability level). Age of the respondents, education level, occupational experience, indebtedness, and savings positively impacted female participation in household income and decision making, which were 1.041, 1.043, 1.095, 1.000, and 0.499, respectively. On the other hand, family size, working environment, and working periods had a negative impact which was 0.997, 1.115, and 0.933, respectively. The odds ratio of age coefficient was 1.041, which is significant, meaning that a unit increase in the age of female workers will increase the probability of making the household decision and contribute to their family income by, on an average, 1.041 holding other factors remaining constant. In their study, Roy *et al.* (2017) investigated that the multiple regression analysis showed that women's income was positively related to women's education and farm size but negatively related to age, family size, and indebtedness which is somehow relevant to the present study as educational level had a positive impact on female pineapple workers participation in household decision making and financial contribution because educated persons are placed their views and ideas in front of others more clearly than the illiterate peoples and they are more capable to earn more to meet up their family expenses and their decision are widely accepted by their family members owing to their correct and logical explanation. At the same time, family size had a negative impact on female contribution and decision making aspects similar as Roy *et al.*, 2017. But in the present study, age of the respondents significant at 10% level of significant and had a positive impact as with the increase in age level, their occupational experience was increased. At the same time, they were able to earn more money than before, and their decision was placed more valued by their family as they were taking decision based on their life experience. Moreover, it meant that if the independent variables, i.e., education level, occupational experience, indebtedness, and savings, increased by 1 unit, the probability of improving female contribution to family income and participation in household decisions will be increased by 1.043, 1.095, 1.000 and 0.499 times, respectively; and the family size, working environment, and working periods are surged by 1 unit, the probability of female grant will be decreased by 0.997, 1.115, and 0.933 times (Table 2). Another similar finding illustrates by Ismail *et al.* (2015) they claimed that the dominance of gender division is the most striking bottleneck to all the effort by women in this all-important sector in the income contribution in the rural areas.

Comment [MP9]: According to the statistical findings of your study, the significant explanatory variables had significance levels of 5% and 10%. As a result, the only factors influencing 'women's contribution in household income and decision making' were age, education level, work experience, and savings. Other explanatory variables that are not significant do not contribute to 'women's contribution in household income and decision-making.' Therefore, the author(s) should not mention non-significant explanatory variables as factors contributing to the outcome variable in this study.

3.3 Constraints faced by the sampled female workers and desirable solutions:

Constraints faced by female workers in the study area were estimated using a four-point rating scale by computing the constraint score of respondents. The problems that were met by the female workers and the possible solution were discussed below:

Table 3: Constraints faced by sampled female workers

Sl. No.	Statements	High (3)	Medium (2)	Low (1)	Not At All (0)	Total	Rank
1	Low wage rate	130	50	0	0	490	1
2	Poor working environment	66	25	47	42	295	8
3	Long working hour	100	47	20	13	414	3
4	Dominated by male workers	0	0	57	123	57	10
5	Physical injury	123	33	20	4	455	2
6	Lack of training	88	35	33	24	367	5
7	Lack of working facilities	77	59	23	21	372	4
8	Physical weakness	80	20	33	47	313	7
9	Lack of transportation facilities	45	55	48	32	293	9
10	Social problem	60	43	50	27	316	6

Source: Authors estimation, (2021)

Table 3 discusses several problems faced by the female workers in pineapple production work in the survey area. Among other problems, the low wage rate is one of the major problems for all types of female workers who are working laborers. And it is the main discriminating point which differentiates our male and female workers. The livelihood of every worker was largely dependent on their wage. But in the study area, the female workers' wage rate was insufficient as pineapple work is harder for female and they are only taking part in weeding, applying fertilizer and sometimes involve in harvesting so they are getting less money than male workers. Out of 180 female workers in the study area, 130 faced this constraint to a great extent, 50 faced it to a medium extent, and the computed value of CFI was 490 $[(130 \times 3) + (50 \times 2) + (0 \times 1) + (0 \times 0)]$ against a possible range from 0 to 540 for each (Table 3).

An overall situation of the constraints faced by the female workers in the study area was implied in Table 3; the low wage rate with CFI 490 was ranked first, whereas second, third, fourth, fifth, sixth, seventh, eighth, ninth, and tenth position were occupied by physical injury with CFI 455, long working hours with CFI 414, lack of working facilities with CFI 372, lack of training with CFI 367, the social problem with CFI 316, physical weakness with CFI 313, poor working environment with CFI 297, lack of transportation facilities with CFI 293, and dominated by male workers with CFI 57, respectively. Kona *et al.* (2018), in their study, showed that different age groups of working women, both married and unmarried, have faced different kinds of challenges and harassment in the workplace for being women. In most cases, they confront personal, power, and psychological harassment and suffer mental and physical stress, depression, lack of confidence, and proper balance between employment and family care. Another similar finding is incorporated by Prajnal (2017) that female workers worldwide face several problems in doing their work which are a balance

Comment [MP10]: How do you reach this conclusion? Meanwhile 'dominated by male workers' is the last rank of the constraints

between work and family, unfair treatment at work, lack of flexible work hours, lack of good-paying jobs, unequal pay for doing similar work as men, lack of transportation/lack of safe transportation, and lack of skills, experience or education. Besides the above two, these findings are compatible with the conclusions drawn by Abid *et al.* (2013); Zohurul and Hasan (2013); Sikdar *et al.* (2014); Vijayaragavan (2015); Kousalya (2015); Salam (2016); Bavya and Raghunandan (2018); Gowda and Rao (2018); in which they also found similar types of problems faced by female workers.

3.3.1 Desirable solutions for the female workers:

Instead of having many problems, everyone still lives with some hope that all issues will be solved someday. They also gave some opinions on which their situation can be improved. Those were discussed below:

Table 4: Possible solutions for the sample respondents

Name of Solution	Frequencies	Percentage
Increase wage rate	90	45
Reduce working hour	37	18.5
Provide training for personal safety	33	16.5
Provide safety equipment	27	13.5
Ensure medical facilities in low cost	13	6.5
Total	200	100

Source: Authors estimation, (2021)

All the workers in the study area were deprived of their right to get a real wage. As a result, they don't give their full attention to work because of the depression of losing wages and feel they were more deprived than the male workers. So, increasing the wage rate can help them to do their work with complete determination without any misconception. For this purpose, 45% of the total sampled respondents opinioned on increasing their wage rate (Table 4). Reducing working hours, providing training facilities for personal safety, providing safety equipment, and ensuring medical facilities are other factors that are helpful for them to fight the adverse situation and improve their livelihood. To improve health conditions, 18.5% of the total sampled respondents opinioned reducing working hours, to reduce the problem of inefficient working 16.5% of respondents considered increasing the training facilities, providing physical safety 13.5% of respondents believed safety equipment namely hand gloves and gumboots, to ensure better health conditions 6.5% of respondents opinioned to provide medical facilities with a low cost or free of charge, respectively (Table 4).

4.0 SUMMARY AND CONCLUSION

Females are a crucial part of any country, and their participation in domestic and employment sectors is appreciable for the overall socio-economic development. In recent times, women are not only doing their household chores but also doing several jobs to secure positions and become economically solvent. But the matter of regret is that by doing so, females faced various challenges to ensure their presence. There are also many factors that affect females' economic contribution and decision-making process in and outside the household, as we know that females worked as fuel to speed up the wheel of development. Without the involvement of women, proper action cannot be taken apart. Instead of having several constraints, the participation of females in the study area is known. This satisfied the

overall objective to determine the factors influencing female participation in family income and decision-making perspective. The findings of the study revealed that most of the respondents contain 6 to 10 family members and belong to the active age group; the majority of the respondents belong to the nuclear family and get married at earlier stages due to financial problems. Most of them engaged with pineapple work, and some were involved in rearing poultry and livestock. Females were also taking part in household income and decision-making perspectives. This study also described that age, educational level, occupational experience, and savings positively and significantly impacted the female contribution to household income. Having different types of constraints, low wage rate, physical injury, long working period, lack of training, and poor working environment, hampered the work performance of the respondents. So, in these aspects, different government and non-government organizations should take a few steps to ensure a fair wage rate, reduce working hours, ensure proper medical treatment and provide training facilities that not only ensure better performance of female workers in pineapple production but also securing their life from several unexpected circumstances.

ETHICAL APPROVAL

This article is original and incorporates unpublished content. The corresponding author certifies that all authors have read and accepted the article and that there are no ethical issues.

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ACRONYMS, ABBREVIATIONS

BBS	: Bangladesh Bureau of Statistics
SPSS	: Statistical Package for Social Sciences
<i>et al.</i>	: Et Alia (L.) and Others
etc.	: Etcetera
i.e.	: That is
Tk.	: Taka (Bangladeshi Currency)
%	: Percentage