THE EFFECT OF WORK STRESS ON THE PERFORMANCE OF READYMADE GARMENT WORKERS IN BANGLADESH

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Abstract- In last few decades, Bangladesh Readymade Garment (RMG) Industry of Bangladesh has become a leading manufacturing industry in the world with its constant growth. The Industry is of major importance to the national economy of Bangladesh as it contributes more than 80% of the country's export earnings that amounts to about USD nineteen billion. The number of workers currently in this industry is more than 4.2 million and the number of factories is 5000 in different sizes. Despite this impressive growth, the performance of the workers in this industry is poor. Hence, this study aims at identifying the work stress factors and their impact on work performance of the RMG workers in Bangladesh. This used both qualitative and quantitative research methods. Respondent workers were selected by simple random sampling method from ten garment companies that are located in the periphery of Dhaka city. The impact of the stress of the workers was assessed by structured questionnaires. Two hundred ten readymade garment workers were interviewed from ten companies of different sizes for this study. Factor analysis was conducted to identify the factors related to stress of the workers that have impact on the work performance of the workers. Regression analysis was carried out to examine the impact of stress on workers' performance. The results show that the factors concerned with work stress symptoms are frustration and feeling of inefficiency, decrease satisfaction at work, problem of concentration at work and decrease of decision making ability. The performance impact factors are work pressure and frustration, understaffed workplace and work in holidays, job insecurity and pressure to complete the assignments. This study suggests that the policy makers should focus on the stress factors identified in this research that have impact on the performance of the workers in this industry.

Keywords- Lack of Control, Work Stress, Work Pressure and Frustration, Work in Holidays, Job Insecurity.

I. BACKGROUND

As readymade garment industry is the prime foreign earning industry of Bangladesh, majority of the employment are created in this sector in recent years. Now, there are more than 4.2 million workers working in this industry in about 5000 companies of which 90% workers are female who come from the rural areas of the country. The working conditions and the working lives of these workers are also not up to the standard. The working lives of these workers are often disturbed by the unfavorable working conditions that lead to work stress, job dissatisfaction, job insecurity, and low productivity of the workers. These are due to the gap in maintaining government compliances of these readymade garment (RMG) companies in Bangladesh.

Ready-Made Garment (RMG) Industry of Bangladesh is the major industry contributing significantly in the economy of the country in last two decades. This sector accounted for about 80% of the total export earnings of the country (Ahmed, Raihan, & Islam, 2013). Recently, it is observed that the workers are frequently coming to the streets and making insurgence on different demands. The reasons could be attributed by the dissatisfaction of the workers. The experts in this sector opined that reasons are concerned with the payment of wages and stress at work created by the employers which are causing the poor performance of the workers (Choudhury, & Rahman, 2017). As a result companies are losing working-hours, production targets and are hampering export earnings of this industry. In this connection, this study tried to find out the factors related to the symptoms of work stress and the factors that have direct impact on the performance of readymade garment industry in Bangladesh. This study identified the work stress symptom-related variables and the performance impact related-variables from extensive literature review (Appendix 1). The review shows that there are numerous reasons for creating e stress at work that has significant impact on the performance of the readymade workers in Bangladesh.

II. OBJECTIVES

The broad objective of this study is to identify the effect of work stress on the performance of readymade garment workers in Bangladesh. The specific objectives are as follows.

i. To identify the stress symptom factors of the garment workers in Bangladesh;
ii. To identify the stress factors related to the performance of the readymade garment workers in Bangladesh;
iii. To identify the significant symptoms and the factors related to the stress and performance at work of readymade garment industry of Bangladesh;

III. RESEARCH METHODS

This purpose of this study was to identify the factors concerning the effect of work stress on the performance of readymade garment workers in Bangladesh. Both primary and secondary data were used to conduct this study. Primary data were collected from the garment workers of Bangladesh and the secondary data were collected from the books, magazines, and journals.

3.1 Demographic Information of the Respondents

This study conducted study on 210 readymade garment workers in Bangladesh. Among the respondents, 40% of the respondents were male and 60% were female (Table 1).

Table 1 Gender Distribution of the Respondents

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	84	40.0	40.0	40.0
Female	126	60.0	60.0	100.0
Total	210	100.0	100.0	

The respondent workers mostly (33.30%) were at the age of 24-29 years followed by 30-35 years (24.80%), 18-23 years (24.30%), 36-41 years (12.40%), and above 41 years (5.20%) (Table 2).

Table 2 Age Distribution of the Respondents

Age (in Years)	Frequency	Percent	Valid Percent	Cumulative Percent
18-23	51	24.3	24.3	24.3
24-29	70	33.3	33.3	57.6
30-35	52	24.8	24.8	82.4
36-41	26	12.4	12.4	94.8
41 and above	11	5.2	5.2	100.0
Total	210	100.0	100.0	

Marital status of the respondent show that 58.60% workers are married while, 19.0% of them are unmarried (Table 3).

Table 3 Current Marital Status of the Respondents

Marital Status	Frequency	Percent	Valid Percent	Cumulative Percent
Married	123	58.6	58.6	58.6
Unmarried	47	22.4	22.4	81.0
Widow	40	19.0	19.0	100
Total	210	100.0	100.0	

The highest educated respondents are class I to class V followed by class V to class ix, SSC, HSC and Bachelor and above (Table 4).

Table 4 Educational Qualifications of the Respondents

Educational Qualifications	Frequency	Percent	Valid Percent	Cumulative Percent
Class 1 to Class 5	108	51.4	51.4	51.4
Class 5 to Class 9	78	37.1	37.1	88.6
SSC	14	6.7	6.7	95.2
HSC	7	3.3	3.3	98.6
Bachelor and above	3	1.4	1.4	100.0
Total	210	100.0	100.0	

Most of the workers under study are with 1-3 years of experience followed by 4-6 years, below 1 year, 7-9 years, and above 10 years (Table 5).

Table 5 Working Experience of the Respondents

Experience (in years)	Frequency	Percent	Valid Percent	Cumulative Percent
<1 Years	38	18.1	18.1	18.1
1-3 Years	68	32.4	32.4	50.5
4-6 Years	53	25.2	25.2	75.7
7-9 Years	29	13.8	13.8	89.5
>10 years	22	10.5	10.5	100.0
Total	210	100.0	100.0	

The job positions of the respondent workers are mainly Sewing/Cutting/Finishing/Packaging worker followed by Fulltime Worker, Part-Time worker, Assistant Manager, and Supervisor (Table 6).

Table 6 Current Position of the Respondents

Position	Frequency	Percent	Valid Percent	Cumulative Percent
Part-Time worker	43	20.5	20.5	20.5
Fulltime Worker	47	22.4	22.4	42.9
Sewing/Cutting/Finishing/Packaging worker	76	36.2	36.2	79.0
Supervisor	20	9.5	9.5	88.6
Assistant Manager	24	11.4	11.4	100.0
Total	210	100.0	100.0	

3.2 Sample Design and Determination of Sample Size

There are more than 50 million readymade garment workers in Bangladesh in more than 5000 companies. Hence, the sample size of this study was determined by using the following formula suggested by Yamane (1967.

$$n = \frac{N}{1 + N(e)^2}$$

Where, n is the sample size, N is the population size, and e is the level of precision. For this study, level of precision is presumed as 0.07 and the population size is 50 million. Putting these values in the above equation, the required number of sample size becomes approximately 204.

This study interviewed 210 garment workers from 10 companies under study. This figure is well above the critical sample size of 204 for employing multivariate analysis (Hair et al., 1998).

3.3 Questionnaire Design

The questionnaires of this study were developed through literature review. Responses to all the statements in the questionnaire were measured on a five-point scale ranging from 1 to 5 with 1 indicating strongly disagree and 5 indicating strongly agree. One of the relative advantages of using this scale is its suitability for the applications of multifarious statistical tools used in marketing and social research study (Malhotra, 1999). The collected data were statistically processed subsequently to get the useful information. The reliability statistics show that the internal consistency of the questionnaire is under the acceptable limit (Nunnally, 1978). The Cronbach's Alpha was identified as 0.920 which are at the acceptable level.

3.4 Data Collection & Analysis

Data were collected from both primary and secondary sources. Primary data were used for the purpose of analyzing the effect of work stress on the performance of readymade garment workers in Bangladesh. The survey was conducted among the 210 readymade garment workers from 10 companies. The survey was conducted in 2019. The interviewers were properly trained on the items included in the questionnaire for data collection before commencing the interview. Along with descriptive statistics1, inferential statistical2 techniques such as, Factor Analysis and Multiple Regression Analysis were used to analyze the data. A Principal Component Analysis (PCA) with an Orthogonal Rotation (Varimax)3 using the SPSS (Statistical Package for Social Sciences) was performed on the survey data. Multiple Regression Analysis4 such as, Multiple Regression was conducted by using SPSS to identify the relationships between the dependent and independent variables and the significant factors.

IV. ANALYSIS AND INTERPRETATIONS

This section describes the results of Exploratory Factor Analysis (EFA) and the results of Multiple Regression Analysis for Stress Symptom-Variables and Performance Impact Variables.

4.1 Stress Symptom Factors

The study identified the stress symptoms of the readymade garment workers in Bangladesh. Factor analysis results show that the communalities of the variable concerning stress symptoms are very high indicating that the data set has higher level of relations ships among them (Table 7).

Table 7 Communalities of the Stress Symptoms of the Garment Workers

Variables	Extraction
1. I feel tired even with adequate sleep.	.716
2. I feel frustrated in carrying out my responsibilities at work.	.763
3. I am moody, irritable, or impatient over small inconveniences.	.680
4. I want to withdraw from the constant demands on my time and energy.	.693
5. I feel negative, futile, or depressed about my job.	.680
6. My decision-making ability seems less than usual.	.781
7. I think that I am not as efficient as I should be.	.773
8. The quality of my work is less than it should be.	.764
9. I feel physically, emotionally, or spiritually depleted.	.621
10. My resistance to illness is lowered.	.556
11. I am eating more or less, drinking more coffee, smoking more cigarettes, or using more alcohol or drugs to cope with my job.	.718
12. I am having difficulty concentrating.	.759
13. I am easily bored.	.686
14. I feel a sense of dissatisfaction, of something wrong or missing.	.806
15. When I ask myself why I get up and go to work, the only answer that occurs is "the money."	.626

Extraction Method: Principal Component Analysis.

The results of the analysis also identified four stress symptom factors through EFA. The factors are: (i) frustration and feeling of efficiency decrease (ii) decrease satisfaction at work (iii) problem of concentration at work and (iv) decrease of decision making ability. The most important factor is frustration and feeling of efficiency (42.25%) followed by dissatisfaction at work (11.76%), problem of concentration at work (9.71%) and decrease of decision making ability (7.09%) (Table 8).

Table 8 Total Variance Explained

Stress Symptoms	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1. Frustration and Feeling of Efficiency Decrease	6.337	42.248	42.248
2. Decrease of Satisfaction Work	1.764	11.760	54.009
3. Problem of Concentration at Work	1.457	9.710	63.719
4. Decrease of Decision Making Ability	1.064	7.091	70.810

Extraction Method: Principal Component Analysis.

Table 9 shows the rotated component matrix of the stress symptom factors of the workers. It shows that the factor named frustration and feeling of efficiency is constituted with ten variables and the variables have higher level of factor loadings indicating that the variables have higher level of correlations with the factor. The second factor is constituted with two variables, third factor is formed with two variables and the fourth factor is constituted with one variable and all the variables have high correlations with the respective factors.

Table 9 Rotated Component Matrixa

Stress Symptoms	Factors			
	1	2	3	4
I feel frustrated in carrying out my responsibilities at work.	.845			
I think that I am not as efficient as I should be.	.795			
I want to withdraw from the constant demands on my time and energy.	.784			
I feel physically, emotionally, or spiritually depleted.	.768			
I feel negative, futile, or depressed about my job.	.747			
I feel tired even with adequate sleep.	.710			
The quality of my work is less than it should be.	.677			
My resistance to illness is lowered.	.638			
I am moody, irritable, or impatient over small inconveniences.	.616			
I am easily bored.	.488			
I feel a sense of dissatisfaction, of something wrong or missing.		.891		
When I ask myself why I get up and go to work, the only answer that occurs is "the money."		.677		
I am having difficulty concentrating.			.866	
I am eating more or less, drinking more coffee, smoking more cigarettes, or using more alcohol or drugs to cope with my job.			.807	
My decision-making ability seems less than usual.				.833

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

The results of regression analysis show that all the four stress symptom factors can explain the dependent variable i.e., work stress by 49% (R Square) indicating that the model is important (Table 10).

Table 10 Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.699[a]	.489	.479	.676

a. Predictors: (Constant), REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

b. Dependent Variable: Considering all the factors mentioned above, I feel stressful at my work

Analysis of variance shows that all the four factors are significantly related to the overall stress at work of the readymade garment workers (Table 11).

Table 11 ANOVAb

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	88.708	4	22.177	48.507	.000[a]
	Residual	92.811	203	.457		
	Total	181.519	207			

a. Predictors: (Constant), REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

b. Dependent Variable: Considering all the factors mentioned above, I feel stressful at my work

The individual factor relationships with the overall stress at works also show that all the four factors are significantly related (Table 12). This indicates each of the stress symptom factor identified through this analysis is significantly connected to the dependent variable. That means that if there is a change in each factor there will be the change in dependent variable.

Table 12 Coefficientsa

Stress Symptoms	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.548	.047		54.349	.000
1. Frustration and Feeling of Efficiency Decrease	.493	.047	.526	10.491	.000
2. Decrease of Satisfaction at Work	.350	.047	.373	7.441	.000
3. Problem of Concentration at Work	.221	.047	.236	4.700	.000
4. Decrease of Decision Making Ability	.120	.047	.128	2.552	.011

a. Dependent Variable: Considering all the factors mentioned above, I feel stressful at my work

4.2 Performance Impact Factors

Factor analysis results show that the communalities of the stress variables concerning the performance of the workers are very high indicating that the data set has higher level of relations ships among them (Table 13).

Table 13 Communalities of the Stress Variables

Stress variables	Initial	Extraction
1. I feel frustrated on the job	1.000	.633
2. I get upset in the job more than usual	1.000	.646
3. I blame myself for anything bad that happens on the job	1.000	.635
4. I always worried to lose job	1.000	.605
5. I need to work extra hours every day without overtime	1.000	.615
6. I need to work more than 10 hours in day	1.000	.514
7. My productivity is acceptable without overworking	1.000	.502
8. My department is understaffed	1.000	.674
9. There is too much pressure from the job where I work	1.000	.750
10. I am always hurry or rush to complete deadline at work	1.000	.746
11. I sometimes feel more frustrated with my subordinates and peers	1.000	.625
12. Shortage of required materials put me in frustration	1.000	.651
13. Lack of logistics put me in pressure	1.000	.728
14. I often work for holidays	1.000	.659

Extraction Method: Principal Component Analysis.

Factor analysis identified four performance impact factors through EFA. The factors are: (i) work pressure and frustration (ii) understaffed and work in holidays (iii) job insecurity and (iv) hurry to complete the assignment. The most important factor is work pressure and frustration (32.34%) followed by understaffed and work in holidays (14.07%), job insecurity (9.69%) and hurry to complete the assignment (8.07%) (Table 14).

Table 14 Total Variance Explained

Stress Factors	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1. Work Pressure and Frustration	4.528	32.341	32.341
2. Understaffed and Work in Holidays	1.969	14.066	46.407
3. Job Insecurity	1.357	9.693	56.100
4. Hurry to Complete the Assignment	1.129	8.067	64.168

Extraction Method: Principal Component Analysis.

The rotated component matrix of performance impact factors of the worker show that the factor named work pressure and frustration is constituted with six impact variables and the variables have higher level of factor loadings indicating that the variables have higher level of correlations with the factor. The second factor is constituted with three variables, third factor is formed with three variables and the fourth factor is constituted with two variables and all the variables have high correlations with the respective factors (Table 15).

Table 15 Rotated Component Matrixa

Impact variables	Performance Impact Factors			
	1	2	3	4
1. I sometimes feel more frustrated with my subordinates and peers	.742			
2. There is too much pressure from the job where I work	.739			
3. I get upset in the job more than usual	.726			
4. I feel frustrated on the job	.724			
5. Lack of logistics put me in pressure	.701			
6. Shortage of required materials put me in frustration	.643			
7. I often work for holidays		.796		
8. My department is understaffed		.779		
9. I need to work more than 10 hours in day		.501		
10. I always worried to lose job			.755	
11. My productivity is acceptable without overworking			-.686	
12. I need to work extra hours every day without overtime			.564	
13. I blame myself for anything bad that happens on the job				.793
14. I am always hurry or rush to complete deadline at work				.672

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

The results of regression analysis show that all the four performance impact factors can explain the dependent variable i.e., work performance of the workers by 45.30% indicating that the model is important (Table 16).

Table 16 Model Summaryb

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.673[a]	.453	.442	.697

a. Predictors: (Constant), REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1
b. Dependent Variable: Considering all the factors mentioned above, I feel stressful at my work

Analysis of variance (ANOVA) shows that all the four performance impact factors are significantly related to the overall performance of the readymade garment workers in Bangladesh (Table 17).

Table 17 ANOVAb

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.323	4	20.581	42.359	.000[a]
	Residual	99.601	205	.486		
	Total	181.924	209			

a. Predictors: (Constant), REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

b. Dependent Variable: Considering all the factors mentioned above, I feel stressful at my work

The individual factor relationships with the overall performance of the workers show that all the performance impact factors are significantly related (Table 18). This indicates that each of the performance impact factors is significantly related to the dependent variable i.e., the overall performance of the workers. That means that if there is a change in the factor there will be the change in dependent variable i.e., the overall performance of the workers.

Table 18 Coefficientsa

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.552	.048		53.064	.000
1. Work Pressure and Frustration	.547	.048	.587	11.355	.000
2. Understaffed and Work in Holidays	.095	.048	.102	1.976	.049
3. Job Insecurity	.207	.048	.222	4.290	.000
4. Hurry to Complete the Assignment	.206	.048	.220	4.265	.000

a. Dependent Variable: Considering all the factors mentioned above, I feel stressful at my work

CONCLUSIONS AND RECOMMENDATIONS

This study was conducted to identify the stress symptom factors and their impact on the performance of the readymade garment workers in Bangladesh. The Factor Analysis and Multiple Regression Analysis have been performed for Stress Symptoms Variables and Performance Impact Variables. This study identified the stress symptom factors of the readymade garment workers in Bangladesh which are concerned with frustration and feeling of efficiency, decrease satisfaction at work, problem of concentration at work and decrease of decision making ability. The results of regression analysis show that all the four stress symptom factors can explain the dependent variable i.e., work stress symptoms of the workers. Analysis of variance shows that all the four factors are significantly related to the overall work stress of the readymade garment workers. The individual factor relationships with the overall stress at works also show that all the four factors are significantly related. Factor analysis identified four performance impact factors such as, work pressure and frustration, understaffed and work in holidays, job insecurity and hurry to complete the assignment. The results of regression analysis show that all the four performance impact factors can explain the dependent variable i.e., work performance of the readymade garment workers. Analysis of variance (ANOVA) shows that all the four performance impact factors are significantly related to the overall performance of the readymade garment workers in Bangladesh. The individual factor relationships with the overall performance of the workers show that all the performance impact factors are significantly related. Hence, the factors identified from this study are important for the enhancement of the performance of readymade garment workers in Bangladesh. However, there is an ample scope to conduct further study to improve the results of this study by taking more samples into account in future.

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Appendix 1 Review of Literatures

Authors/Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Jalagat, R. (2017)		√		√	√		√					√						√	
Okeke, M. N., Echo, O., &Oboreh, J. C. (2016)	√	√	√			√	√												
Khan, M. U., Rahman, H. U., Zahid, M., &Makki, B. I. (2019)	√							√	√	√									
Zahargier, M. S., &Balasundaram, N. (2011)	√	√		√								√			√				
Akter, K. M., &Banik, S. (2018)		√			√														
Ratnawat, R. G., & Jha, P. C. (2014)	√			√			√					√		√					√

Murali, S., Basit, A., & Hassan, Z. (2017)	√	√	√			√	√				√		√		√			
Ekienabor, E. E. (2016)	√			√		√				√						√		
Akhtar, A., Naheed, K., Akhtar, S., & Farooq, U. (2018)		√					√	√		√			√					
Khuong, M. N., & Yen, V. H. (2016)		√	√				√			√	√		√				√	√
Ongori, H., &Agolla, J. E. (2008)	√	√	√											√				
Mawanza, W. (2017)	√	√				√						√	√	√				
Zeb, A., Saeed, G., &urRehman, S. (2015)		√	√				√	√		√						√		
Ajayi, S. (2018)	√			√						√		√			√		√	
Zafar, Q., Ali, A., Hameed, T., Ilyas, T., & Younas, H. (2015)		√				√	√	√		√							√	
Nahar, L., Hossain, A., Rahman, A., &Bairagi, A. (2013)		√					√			√				√				
Gyamfi, E. P. A. O. A., Emmanuel, A. K., & David			√				√					√		√			√	√
Akhtar, S., &Shimul, A. M. (2012)							√		√	√	√							
Anandi, B. S., Rajaram, D., Aravind, B. A., Sukumar, G. M., & Radhika, K. (2017)		√					√			√			√		√		√	
Warraich, U. A., Ahmed, R., Ahmad, N., &Khoso, I. (2014)		√	√			√			√	√		√		√				
Ahmed, M., Rahman, M. Z., &Sogra, K. J. (2017).	√	√					√		√	√				√				
Almanae, M. (2013).		√											√	√			√	
Total	10	16	7	5	2	6	13	4	4	8	5	7	3	6	8	3	2	7	3

Note: Variables: *(1) Administrative Support, (2) Work load, (3) Role conflict, (4) Lack of control, (5) Underutilization of skills, (6) Productivity, (7) Job stress, (8) Motivation, (9) Physical health, (10) Mental health, (11) Workplace environment, (12) Employee performance, (13) Job pressure, (14) Workplace Relationship, (15) Job security, (16) Work-life balance, (17) Commitment, (18) Role ambiguity, (19) Career development.*

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