DETERMINANT OF STRESS AMONG GARMENT WORKERS IN BANGALORE - A FACTOR ANALYSIS APPROACH

Umesalma

Research Scholar - University of Mysore, B. N. Bahadur Institute of Management Sciences, University of Mysore, Manasagangotri, Mysore – 570006. Karnataka, India.

Email Id - SALMA_BHEL1@YAHOO.CO.IN

Prof. Aisha M Sheriff., MBA, Ph.D., MISTE.,

Professor - B.N. Bahadur Institute of Management Sciences, University of Mysore, Manasagangotri, Mysore – 570006. Karnataka, India.

Email Id - aishasheriff@hotmail.com

ABSTRACT

The current study aims to identify the determinants of stress among garment workers in Bangalore and the study also aims to assess the impact of organization stress, external stress, group stress and individual stress on the garment workers in Bangalore. The research methodology employed in this study is a mono-method quantitative analysis. The study centers on garment workers in Bangalore city. A meticulously designed questionnaire was drawn by consulting the official documents and published articles in areas of employee stress. This study also use a cross-sectional research approach. The researcher conducted a survey over a span of four months to gather data from garment workers in Bangalore city. Four hundred garment workers from the Bangalore metropolitan area were chosen for the study. A 95% confidence interval and a 5% margin of error were considered when calculating the sample size using the Cochran procedure. Software version 22 of AMOS and SPSS were used to analyze the data in the study. The data indicate that group stressors are the primary factor influencing stress levels among workers, followed by external stress factors. The stress experienced by garment workers is greatly influenced by both organization stress and individual stress. The impact of the work environment on the stress levels of these personnel is evident. Employers can have a substantial influence on the well-being of their employees by tackling and reducing group stressors, such as excessive workloads and insufficient support from colleagues.

Remedial measures for garment workers to reduce stress include implementing regular breaks throughout the workday, providing access to mental health resources, creating a supportive work environment, and offering stress management workshops. By addressing the root causes of stress and providing workers with the tools they need to cope, employers can help improve the overall well-being and productivity of their garment workers. Additionally, promoting work-life balance and encouraging open communication can also help reduce stress levels among garment workers.

Keywords - Organization Stress, External Stress, Group Stress and Individual Stress, Garment workers.

Introduction

India ranks among the leading nations in the world when it comes to making garments. Indian textiles and apparel goods are known for their exceptional craftsmanship across the whole production process, from the creation of fibers, yarns, and fabrics to the manufacturing of high-quality garments that are highly sought after worldwide. India's cotton, silk, and denim fabrics are widely sought after in foreign markets, and Indian clothing has also achieved

128

significant success in fashion hubs worldwide. India is a major user and producer of cotton, with the biggest acreage of 12.5 million hectares, accounting for 38% of the global area dedicated to cotton cultivation. The Indian textile and apparel sector exhibits significant diversity, encompassing several divisions such as traditional handloom, handicrafts, wool, silk items, and the organised textile industry in India(IBEF, 2024).

Despite the thriving state of the garment sector in India, its workers encounter numerous challenges like meagre salaries, extended work shifts, and unfavorable working environments(Adnan, 2024). A significant number of individuals are compelled to labour in hazardous settings devoid of adequate protective equipment, resulting in detrimental health consequences. Moreover, there are documented instances of employers engaging in exploitation and abuse, rendering the business arduous and inhospitable for workers to prosper in (Yuan, et al., 2022). In order to establish a just and enduring working environment, it is imperative to priorities the welfare and rights of garment workers in India, notwithstanding the expansion of the industry (Kabir et al., 2022).

Workers received a meagre income to make ends meet. A significant number of textile industry employees have acquired loans to augment their earnings and are currently facing difficulties in repaying them. The work demands have intensified significantly as a result of the increasing number of requests (Jenkins, 2020). The hourly targets are excessively elevated, surpassing the production capacity of a proficient worker with typical skill levels. The personnel are subjected to verbal abuse by their bosses when they fail to accomplish their tasks. Overtime is frequently involuntary since workers are compelled to work additional hours in order to meet targets. The legally mandated double of the regular hourly wage for overtime is typically not disbursed (Lillypet et al., 2017).

Employees face significant employment instability. Employees experience a persistent sense of vulnerability around the possibility of being terminated. Errors in work, failure to meet targets, arriving late to work even by a few minutes, and responding defiantly when reprimanded, can all be cited as reasons for termination (Padmini & Venmathi, 2012). The majority of employees are unaware of norms of conduct. While they are aware of the audits being conducted, they assert that the management selectively chooses and instructs staff on what to say during the audits. Unions are absent in the majority of factories. When workers encounter any issues, they must approach the management. However, disclosing a problem often proves to be detrimental for the individual. Workers who actively participate in a union are frequently subjected to harassment by supervisors and management (Jain, 2022).

These stressors impact their well-being and quality of life, leading to high levels of stress and mental health issues. A lack of job security and limited access to healthcare further exacerbate their hardships. It is crucial for government regulations to be enforced and for companies to take responsibility for the welfare of their workers in order to create a more equitable and humane industry. Without these changes, the cycle of exploitation and poor working conditions will continue to perpetuate, ultimately harming the individuals who contribute so much to the success of the garment industry (Reddy, 2019).

With this background, the current study aims to identify the various stressors faced by garment workers in Bangalore district. The first gives a brief introduction of the study area, and the review of literature in presented in the section which enables identifying the gap and measurement variables. The research methods are presented in the third section. The results and discussion are made in the fourth section of this paper. The fifth section closes the research paper with concluding remarks and the scope for further research.

Review of Literature

The study utilized a systematic literature review methodology (Rother, 2007; Nightingale, 2009; Lame, 2019; Okoli & Schabram, 2015) to assess both background reviews and independent studies on the stress of garment workers.

- **Sharma & Srivastava 2022,** working professionals often experience stress. It is well-known that stress has a negative effect on health, burnout, and job satisfaction via a variety of physiological, psychological, behavioral, and cognitive mechanisms, all of which contribute to diminished performance.
  The findings are: What causes organization stress among women working in India's textile industry is the driving force behind this research. The research also aims to develop and test a contextual assessment instrument to gauge organization stress among garment industry women in India. Research in any Indian textile sector has shown that the measurement scale used to quantify the stress levels of garment industry female workers is highly reliable and valid. According to the results, the components are as follows: individual, societal, organizational, and work-related.

- **Fitch, et al., 2017,** this study presents the frequency of depression and the characteristics that are linked to it among female garment industry workers in Bangladesh, a significant exporter of clothing to the Western market. This research will provide valuable evidence for national and international stakeholders who are interested in enhancing the health, safety, and well-being of outsourced manufacturing workers. Depression is a complex health problem that is influenced by various psychological, social, economic, and health factors and has a range of outcomes.
  The findings are: This study reveals a substantial frequency of moderate-to-severe depression among employed women in Bangladesh. Implementing measures to prevent and treat depression in developing countries and communities can effectively alleviate distress, decrease the occurrence of suicide, and mitigate economic detriment. Raising awareness of the inadequate mental health of outsourced workers could aid in the development of initiatives aimed at safeguarding and maintaining their overall well-being.

- **Anandi et al., 2017,** the garment industry in India has experienced significant growth in recent years. The garment industry holds significant relevance in the Indian economy as it makes a big contribution to India's export revenues. Therefore, individuals operating within the aforementioned sociological framework of the workplace are anticipated to experience the impact of the overall increase in the speed of life, which leads to heightened job demands and a constant sense of time urgency. Managers have a crucial role in mitigating the major causes of stress and influencing

the future trajectory of employees. Therefore, the aforementioned study was conducted among managers and staff members at the supervisory level. The study aimed to determine the extent and intensity of work-related stress, as well as to investigate the correlation between socio-demographic characteristics and work-related stress in a garment manufacturing plant.

The findings are: The organization must address issues such as imbalances between effort and reward and provide suitable transportation options that match the demands of employees in order to alleviate the stress associated with commuting.

- **Islam, et al, 2019,** over the past few decades, the Bangladesh Readymade Garment (RMG) Industry has emerged as a prominent global manufacturing sector, exhibiting consistent growth. The Industry plays a crucial role in the national economy of Bangladesh, accounting for over 80% of the country's export profits, which totals over USD nineteen billion. There are currently around 4.2 million persons employed in this industry, and there are 5000 factories of all sizes. Notwithstanding this remarkable expansion, the productivity of the employees in this sector remains subpar. Therefore, the objective of this study is to identify the elements that cause job-related stress and examine their influence on the work performance of the RMG workers in Bangladesh.

  The findings are: The results indicate that work stress symptoms are associated with frustration, feelings of inefficiency, decreased job satisfaction, difficulties with attention, and worse decision-making abilities. The performance impact elements include work pressure, frustration, understaffed workplace, work over holidays, employment uncertainty, and pressure to accomplish projects. This study recommends that policy makers prioritize the stress factors revealed in this research, as they significantly influence the performance of workers in this business.

- **Lilly Pet, et al., 2017,** garment factories in India play a significant role in fostering economic growth and serve as the second largest source of employment. A significant number of unskilled labourers from rural areas are employed in this industry. They typically perform repetitive, ongoing tasks such as stitching, ironing, packing, and lifting large objects, which can be tedious, continuous, and protracted. Prolonged work without breaks, lack of personal protection equipment, and insufficient supply of ergonomic amenities in the workplace can result in significant health problems for workers. The aim of this study was to determine the pattern and prevalence of significant health issues among individuals employed in textile factories.

  The findings are: An examination of the health issues among garment factory workers indicated a higher incidence of musculoskeletal disorders. Most of the research were conducted among women. Hence, it is imperative to arrange targeted initiatives focused on the prevention of musculoskeletal problems among garment workers.

- **Venkatesh & Bansal 2020,** stress can be a divisive factor among employees. This study aims to assess the level of stress experienced by garment workers when selecting firms in the provinces of Tamil Nadu, Haryana, Karnataka, and Kerala. It also examines the strategies employed by these workers to cope with stress. The study employed a descriptive research method, and the samples were selected using a

convenient sampling procedure. The study participants consisted of four hundred garment laborers. The survey was done in the four primary states of India. This study aims to investigate the activity levels and stress levels among employees of garment firms in India, while also identifying the mechanisms and flexibility of stress.

The findings are: The structure of modern life involves the constant exploration of new technologies and the intensification of global competitiveness. As a result, employees have been burdened with rising levels of stress and anxiety. Stressed employees are more likely to experience poor physical and mental health, reduced motivation, increased body weight, and decreased safety in the workplace.

- **Kitronza&Mairiaux2015,** scientific research on occupational health in the Democratic Republic of Congo (DRC) is limited. The objective of this study is to assess the extent of occupational stress, along with its related components, within the textile industry. The current study examines the occurrence of stress among individuals using both models.

  The findings are: Various socio-professional aspects are linked to stress, which identifies people that are vulnerable. The findings demonstrated that both stress models provide additional and valuable information, hence enhancing the accuracy of modeling workers' health and enabling recommendations for preventive and management.

Research Gap

Previous studies on the stress of garment workers have shown a significant negative impact on their physical and mental health. The determinants of stress among garment workers is not extensively studied. This gap in research has left a crucial aspect of their well-being unexplored. Understanding the specific factors that contribute to stress in this population is essential in order to develop to improve their overall quality of life. By filling this gap in knowledge, researchers can better address the unique needs of garment workers and work towards creating a healthier and more sustainable work environment for them.

Research Objectives

- To identify the determinants of stress among garment workers in Bangalore.
- To assess the impact of organization stress, external stress, group stress and individual stress on the overall stress of garment workers in Bangalore.
- To suggest a targeted interventions and support system by garment manufactures.

Research Methods

The study employs the following research approaches.

The research philosophy being discussed is positivism. The research philosophy of positivism aligns with the theories on stress among workers. The research seeks to identify various stress encountered by the garment workers (Alharahsheh& Pius, 2020).

This study utilizes a deductive research approach. The deductive approach is commonly used in positivist research since it relies on developing a hypothesis based on existing theories, followed by testing it through data collection and analysis (Casula, et al., 2021).

The research methodology employed in this study is a mono-method quantitative analysis. The study centers on garment workers in Bangalore city, utilizing a quantitative analysis methodology. To obtain quantitative data, the researchers distributed surveys to garment factory workers located in Bangalore (Manzoor, 2020).

The researcher used the survey method as a research approach to collect data fromgarment workers. The study includes questions about the various stresses encountered by the garment workers in their personal and professional life. A meticulously designed questionnaire was created by consulting the official documents and published articles in areas of stress.

This study used a cross-sectional research approach. The researcher conducted a survey over a span of four months to gather data from garment workers in Bangalore city. The selected timeframe offers a sufficient sample size and allows the researcher to accurately capture any possible variations in app usage that may be affected by seasonal influences (Wang & Cheng, 2020).

Four hundred garment workers from the Bangalore metropolitan area were chosen for the study. A 95% confidence interval and a 5% margin of error were considered when calculating the sample size using the Cochran procedure.

The methodology utilized in this study is non-probability sampling, more precisely convenience sampling. The use of convenience sampling was justified since it allowed researchers to conveniently access a large pool of garment workers in Bangalore city. The assessment of the validity and reliability of the data collection instrument employed in this study was performed.

Gliem and Gliem (2003), present the following general guidelines: The text provided is not clear and does not convey any meaningful information.9 - Outstanding, surpassing expectations.8 – Satisfactory, greater than zero.7 - Acceptable, greater than or equal to 6 - Doubtful, uncertain.The rating scale ranges from 5, which represents poor quality, to a value less than 0.5, which is considered unacceptable. The reliability scores for all constructs in the educators' research instrument ranged from above .9 to below .95, suggesting exceptional reliability. The inter-item correlations among the constructs are examined by confirmatory factor analysis. The Pearson correlation coefficient, denoted as r, has a value of 0.675, which falls comfortably within the established requirements for confirming internal consistency. Convergent validity refers to the evaluation of the level of correlation between different indicators of an idea, indicating their agreement. In order to assess convergent validity, it is necessary to take into account the factor loading, composite reliability (CR), and average variance extracted (AVE) of the indicator (Hair Jr & et al., 2017). The questionnaire's reliability and validity were assessed using the Gaskins' master validity instrument, and it was confirmed (Shia et al, 2023).

The study employed SPSS Version 22 and AMOS Version 22 software to analyze the data. The use of this software in research enables efficient analysis of collected data and assessment of correlations between variables. The researchers utilized a range of software tools to analyze data and deployed statistical approaches, including factor analysis and structural equation modeling, to gain a deeper understanding of the factors that influence the stress of garment workers (Thakkar&Thakkar, 2020).

The scope of the study is confined to understanding the four types of stressors effecting the garment workers. The four stressors included in the study are Organizational Stressors, Group Stressor, Individual Stressor and External Stressors.

Results and Discussion

Profile of the respondents

Demographic Profile

The demographic profile of the respondents shows that 29.3% of the garment workers in the study are in the age group of 18-30 years. 45% are in the age group of 31 to 40 years. 24% of respondents are on the age group of 41 to 50 years and a small percentage of 2% of respondents were above 50 years of age. 25% of respondents in the study have completed basic schooling and 37.5% have completed their SSLC. 13% are illiterate and only a small cohort of garment workers have completed their higher secondary education and graduation. 83.5% of garment workers in the study are married. 48.8% of garment workers have two children while 28.3% have 1 child. A majority 61.3% of the spouse work in private firms. 68% of garment workers expressed that there are two working members in the family. The annual income of the garment workers was between Rs. 1,20,000/- and 6,00,000/-.

Work Profile

A majority 92.8% of workers were working in the operational department. 30% of respondents in the study are tailors, 11.5% are pressman, and 11% are cutting master. The other workers specialise in different processes of button stitching, folding, and packing etc., 49% of garment workers have less than 5 years' experience and 35.3% have 5-10 years' experience. Only 16% of respondents in the study have more than 10 years of experience. 98.5% of the garment workers in the study work for 6-8 hours. All workers work in morning shift. 27% of workers work overtime every day, 21.5% work overtime once in a week, and 17.3% work overtime twice in a week. 67.5% of workers are associated with gents apparel. 14.8% worked in a factory associated with kids wear and 17.8% are working in ladies apparel. A majority of factories in the study are established for more than 15 years. Most factories in the study are well established with morethan 5 years' experience. 93.8% of companies have more than 100 employees.

Testing of Hypothesis

H_01- Individual stressors, External stressors, Organization stressors and Group stressors do not lead to stress among garment workers.

Ha1- Individual stressors, External stressors, Organization stressors and Group stressors lead to stress among garment workers.

STEP -1 Exploratory factor analysis

Table 1 – **KMO Bartlett's statistics**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.827
Bartlett's Test of Sphericity	Approx. Chi-Square	2636.505
	df	120
	Sig.	0.000

The data being analysed is of very high quality, as evidenced by the impressive result of KMO Statistic of 0.827. This proves that factor analysis is a viable and appropriate technique for this data set. Here, Bartlett's test is used to test the null hypothesis that the original correlation matrix follows an identity matrix. Certain correlations between variables are required for factor analysis. In the absence of a correlation matrix, all correlation coefficients would be equal to zero. Since the p-value is less than 0.05, the test is significant. A comprehensive evaluation has shown that the R-matrix does not exhibit the features typically seen in an identity matrix. The variables being studied, however, display distinct interdependencies, and this must be acknowledged. The results of the Bartlett's test were statistically significant ($p = 0.000$) with a chi-square value of 2636.505 and 120 degrees of freedom, indicating that factor analysis is appropriate for this investigation.

Table 2 – **Communalities**

Communalities		
	Initial	Extraction
OS_JI (Organization Stressors_ Job Insecurity)	1.000	0.745
OS_WL (Organization Stressors_ Work Load)	1.000	0.382
OS_OSS (Organization Stressors_ Organization Support)	1.000	0.587
OS_WC (Organization Stressors_ Working Conditions)	1.000	0.730
OS_PB (Organization Stressors_ Pay and Benefits)	1.000	0.702
OS_WLB (Organization Stressors_ Work Life Balance)	1.000	0.628
OS_BSR (Organization Stressors_ Boss Subordinate Relationship)	1.000	0.658
SFEF_ES (Stress from External Factors_ Economic Stressors)	1.000	0.593
SFEF_ENVS (Stress from External Factors_ Environmental Stressors)	1.000	0.741
SFEF_TS (Stress from External Factors_ Technological Stressors)	1.000	0.638
GS_TC (Group Stressors_ Team Cohesiveness)	1.000	0.690
GS_CON (Group Stressors_ Conflicts)	1.000	0.498
IS_PERS (Individual Stressors _ Personality)	1.000	0.479

IS_ABC (Individual Stressors _ Ability to Cope)	1.000	0.742
IS_FAM (Individual Stressors _ Family)	1.000	0.497
IS_CIL (Individual Stressors _ Change in Life Events)	1.000	0.689
Extraction Method: Principal Component Analysis.		

The general concept of communality could be thought of as the proportionate amount of common variation found in a particular variable. The communality of a variable is 1 when it does not have any unique variance, meaning that all of its explained volatility can be attributed to other variables. The present principal component analysis confirms the degree of communalities with extractions ranging from 0.382 to 0.745, which pertain to factors influencing stress among garment workers in Bangalore.The abbreviations of stressors will be used the study hence forth.

Table 3- **Total variance explained**

Total Variance Explained									
Compone nt	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Varianc e	Cumula tive %	Total	% of Varianc e	Cumula tive %	Total	% of Varian ce	Cumu lative %
1	4.780	29.873	29.873	4.780	29.873	29.873	3.319	20.745	20.745
2	2.791	17.441	47.314	2.791	17.441	47.314	3.224	20.149	40.894
3	1.395	8.720	56.035	1.395	8.720	56.035	2.230	13.936	54.830
4	1.034	6.460	62.494	1.034	6.460	62.494	1.226	7.665	62.494
5	0.970	6.062	68.557						
6	0.922	5.760	74.317						
7	0.749	4.681	78.998						
8	0.614	3.837	82.835						
9	0.476	2.973	85.808						
10	0.437	2.730	88.538						
11	0.371	2.320	90.858						
12	0.358	2.238	93.097						
13	0.328	2.052	95.149						
14	0.297	1.854	97.003						
15	0.257	1.606	98.609						
16	0.223	1.391	100.000						
Extraction Method: Principal Component Analysis.									

According to particular criteria, it is advised that the combined variation explained by all components should be between 70% and 80%. Nevertheless, several academics have raised questions about the practicality of attaining this extent of range in social science investigations, given the factors commonly utilised in such studies usually only explain

around 50% to 60% of the variation. The current Principal Component Analysis (PCA) exhibits a significant degree of variance, with each component contributing to a total of 62.494% of the overall variation, suggesting a positive result. The components can be understood as the interrelationship between each construct and the component. Each of the 16 components has a loading value that corresponds to each particular construct. An instance of a connection can be observed between item 1 and multiple components, including the first component, the second component, the third component, and later components.

Figure 1 – **Scree Plot**
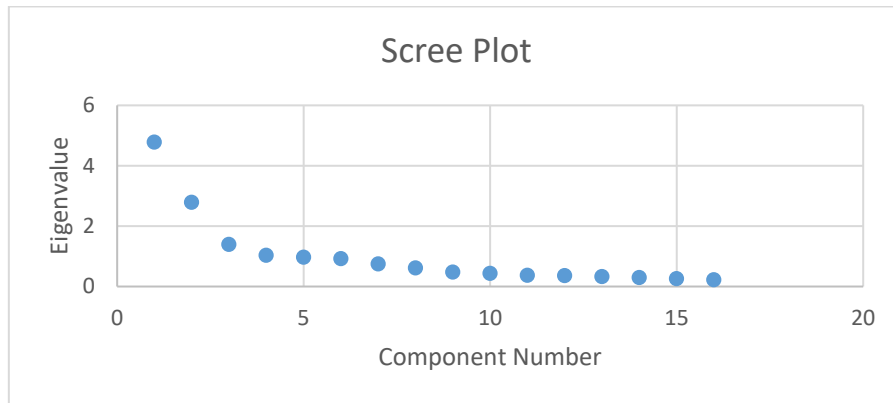
The scree plot indicated that the 16 items measuring the factors influencing stress among garment workers were loaded under 4 Factors namely - Individual stressors, External stressors, Organization stressors and Group stressors.

Table 4 – **Rotated component matrix**

Rotated Component Matrixᵃ				
	Component			
	1	2	3	4
OS_PB	0.793			
OS_JI	0.763			
OS_WLB	0.747			
OS_BSR	0.733			
OS_WL	0.587			
OS_OSS	0.460			
OS_WC	0.418			
SFEF_TS		0.857		
SFEF_ENVS		0.849		
SFEF_ES		0.735		
GS_CON			0.775	
GS_TC			0.710	
IS_ABC				0.712
IS_CIL				0.707

| IS_PERS				0.674
IS_FAM				0.547
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 7 iterations.				

Using the results of rotated components, it was concluded that none of the items were deleted from the current PCA model. The 16 items were loaded under four factors based on the results of principal component analysis. 7 items were loaded under organizational stressors, 3 items were loaded under external stressors, 2 items were loaded under group stressors and 4 items were loaded under individual stressors.

STEP- 2 Reliability and validity of the model

A crucial procedure in doing an item analysis on a set of test items is examining the inter-item correlations. Inter-item correlations are used to evaluate the extent to which the scores of a certain item are related to the scores of all other items on a scale. This study evaluates item redundancy, which refers to the extent to which items on a scale measure comparable content (Cohen & Swerdlik, 2005). The average inter-item correlation of a set of items is typically considered ideal when it falls within the range of .20 to .40. The observed range suggests that although the products share some similarities, they also possess distinct characteristics that prevent them from being identical copies.

Figure 2 – **Inter-item correlations**
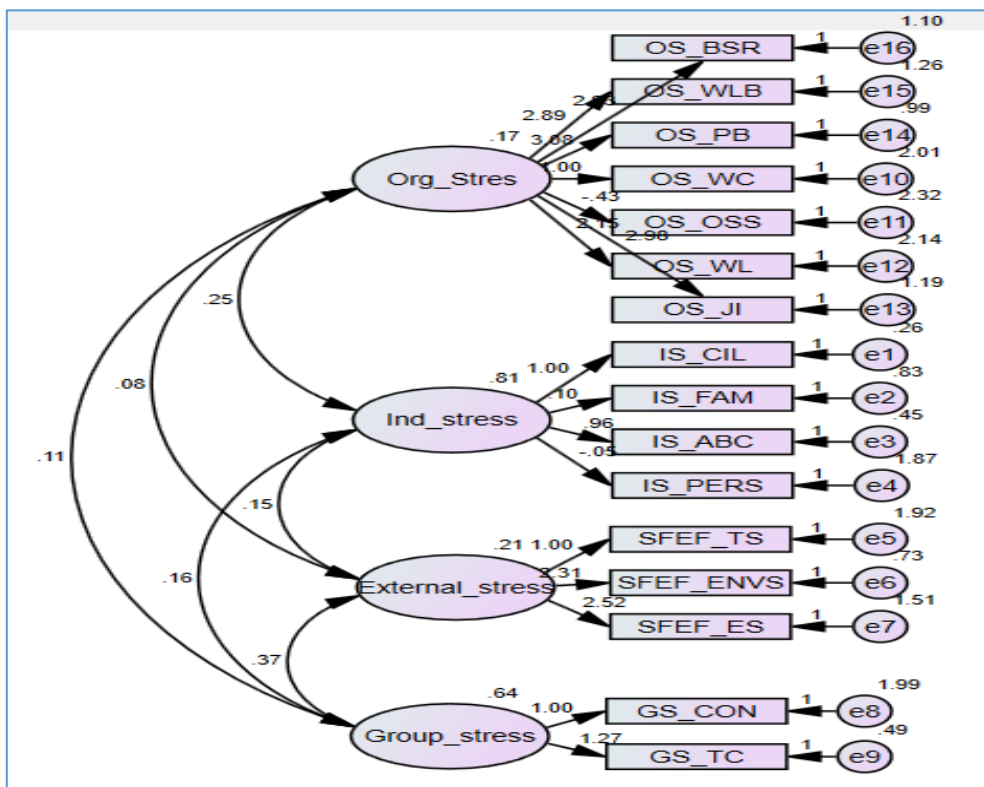
The figure above displays the results of the inter-item correlations that were determined using confirmatory factor analysis. The inter-item correlations of the items are below the previously specified cutoff, indicating a satisfactory level of connection. Moreover, the determinants of stress among garment workers are deemed suitable for further examination.

The model's validity is determined by the application of confirmatory factor analysis, which is supported by the lack of item correlations close to zero. The confirmatory component analysis findings, which involved examining correlations between constructs and standardised regression estimates, were entered into the Stats Tool application to assess the overall validity presented in Table 5.

Table 5- **Correlations**

			Correlation Estimate
Ind_stress	<-->	External_stress	0.355
Ind_stress	<-->	Group_stress	0.217
Ind_stress	<-->	Org_Stres	0.67
External_stress	<-->	Group_stress	0.199
External_stress	<-->	Org_Stres	0.399
Group_stress	<-->	Org_Stres	0.338

Source – Authors own research

If the values are less than 0.20, it is conceivable that the items do not accurately represent the same content domain. If the values surpass the threshold of 0.40, it indicates that there may be limitations on the items' capacity to accurately depict the notion. The correlation values in the current model are between 0.199 and 0.671 indicating appropriate inter-item correlations.

Table 6-**Validity and reliability model**

	CR	AVE	MSV	MaxR(H)	Group_ Stress	Ind_ Stress	External_ Stress	Org_Str ess
Group_Stress	0.617	0.561	0.998	0.709	**0.749**			
Ind_Stress	0.733	0.547	0.449	0.825	0.217	**0.739**		
External_Stress	0.735	0.592	0.998	0.717	0.199	0.355	**0.769**	
Org_Stress	0.760	0.579	0.449	0.855	0.338	0.670	0.399	**0.761**

Source – Authors own research

Convergent validity refers to the evaluation of the degree to which different concept indicators demonstrate agreement through correlation. When determining convergent validity, it is necessary to take into account the indicator's factor loading, composite reliability (CR), and average variance extracted (AVE) (Hair Jr & et al., 2017). Its value range encompasses the whole integer system, from zero to one. Convergent validity may only

be established if the average variance extracted (AVE) value is higher than the specified threshold of 0.50.

The criterion value for composite dependability (CR) must be more than 0.70. In a similar vein, we expect the AVE to be greater than the 0.50 threshold. Also, the AVE shouldn't be higher than the MSV, which stands for maximum shared square variance. As a last requirement, the MaxR(H) value ought to exceed the MSV, or minimum significant value.

The Fornell-Lacker criteria, proposed by Fornell, Cha, and Bagozzi (1994), are utilized to evaluate discriminant validity. Hair Jr. et al. (2017) states that the present method assesses the relationship between the square root of the average variance extracted (AVE) and the latent component correlation. As compared to indicators of other latent constructs, one would expect a latent construct to have greater explanatory power when it comes to explaining the variability in its own signs. According to Hair Jr. et al. (2017), the square root of a construct's average variance extracted (AVE) should be greater than the correlations with other latent constructs.

All aspects of the existing framework were thoroughly analyzed, and it was found that every construct met the established criteria for validity. As a result, it was concluded that the determinants of stress among the garment workers model demonstrate dependability and validity.

STEP -3 Confirmatory factor analysis

Model Fit statistics - The measured significance value does not exceed the predefined significance threshold of 0.05 indicating the significance of the model. The chi-square value of the study is 698.032, with 200 degrees of freedom. Optimally, the CMIN/DF ratio should approximate 3.000. The value of 2.053 in the current model is significant. The observed data and the suggested model show a high level of agreement, as indicated by the goodness of fit score of 0.818. In addition, the RMSEA (root mean square error of approximation) value is 0.049, which falls within an acceptable range. The model demonstrates a significant level of agreement and a remarkable level of acknowledgment within the academic domain.

Table 7 – **Results of SEM, Structural relationship with unstandardized and standardized estimates**

STRUCTURAL RELATIONSHIP			Unstd Estimate	Std Estimate	p
Org_Stres	<---	Stress	0.187	0.394	***
Ind_stress	<---	Stress	0.371	0.329	***
External_stress	<---	Stress	0.593	0.447	***
Group_stress	<---	Stress	0.833	0.917	***

Source – Authors own research

One unit increase in mean scores of organization stress will lead to 0.187 units increase in the stress of the garment workers. This relationship indicates that as the overall stress levels within the organization rise, the stress levels experienced by garment workers specifically

will also increase. It is important for management to address and mitigate organizational stress in order to prevent it from negatively impacting the well-being and productivity of their employees in the garment sector. By implementing strategies to reduce stress at the organizational level, managers can help create a healthier and more positive work environment for their employees.

One unit increase in mean scores of individual stress will lead to 0.371 units increase in the stress of the garment workers. This positive correlation suggests that as individual stress levels rise, the stress levels of garment workers also increase. This could indicate that workplace stress is influenced by an individual's personal stress levels, highlighting the importance of addressing and managing stress in both personal and professional settings to create a healthier work environment for garment workers. It may be beneficial for employers to provide resources and support for managing stress to help mitigate its impact on workers in the garment industry.

One unit increase in mean scores of external stress will lead to 0.593 units increase in the stress of the garment workers. This positive correlation suggests that as external stressors increase, the stress levels of garment workers also increase at a nearly one-to-one ratio. This indicates that external factors play a significant role in affecting the overall stress levels experienced by these workers. As such, it is important for employers to be mindful of external stressors and implement strategies to mitigate their impact on their employees' well-being.

One unit increase in mean scores of group stress will lead to 0.833 units increase in the stress of the garment workers. This positive correlation suggests that as the stress levels of the group increase, so do the stress levels of the individual garment workers. It is important for employers to address and manage group stress effectively in order to mitigate its impact on the well-being and performance of their employees. By implementing strategies to reduce group stress, such as team-building activities or stress management workshops, companies can create a more positive and productive work environment for their garment workers.

Figure 3 – **SEM model with standardized estimates**
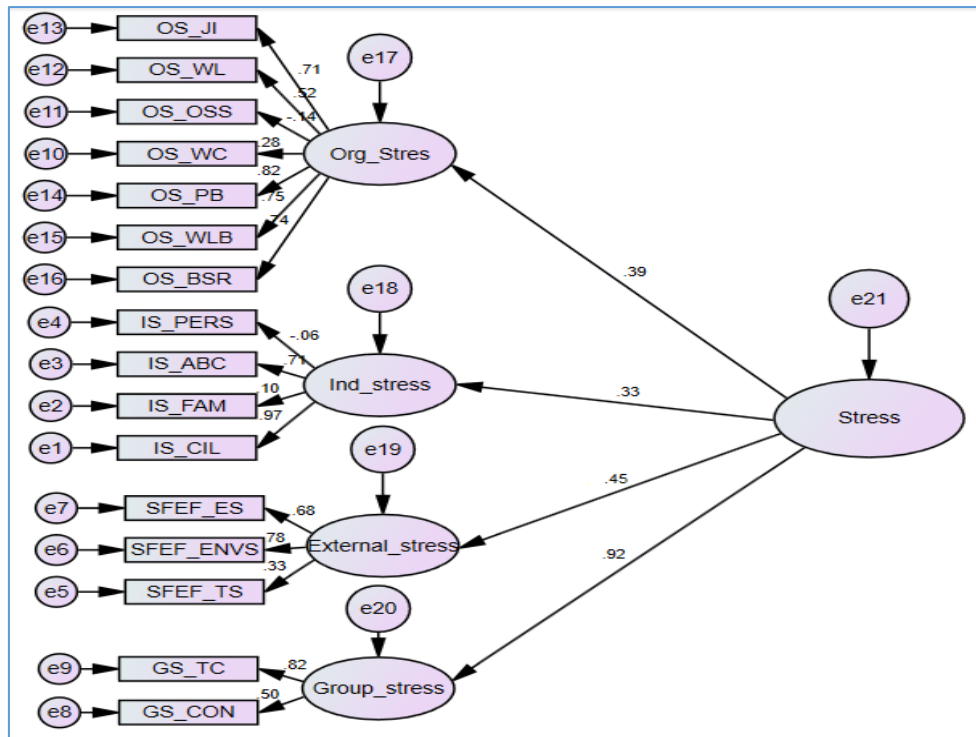
Standardized estimates are generally employed for the purpose of ranking predictors, also known as independent or explanatory variables, as they effectively remove the measurement units associated with both the independent and dependent variables. The magnitudes of the standardized coefficients of the independent variables can be utilized to establish their ranking. The variable with the highest absolute value of the standardized coefficient is the most significant.

The results of the standardized estimate shows that group stressors are most significant determinant of stress among workers followed by external stress factors. Organization stress and individual stress also contribute significantly to the stress of the garment workers. It is clear that the environment in which these workers operate plays a crucial role in their overall stress levels. By addressing and mitigating these group stressors, such as heavy workloads and lack of support from colleagues, employers can make a significant impact on the well-being of their employees. Additionally, efforts should be made to reduce external stress factors, such as financial pressures or family issues, in order to create a more supportive and conducive work environment for all garment workers.

Conclusion

The study concludes that addressing the various stressors, employers can create a more positive and productive work environment for their employees. This not only benefits the individuals working in the garment industry, but it also contributes to the overall success and sustainability of the organization. By prioritizing the well-being of their employees, employers can foster a culture of support and collaboration that ultimately leads to higher levels of job satisfaction and performance. Ultimately, investing in the mental and emotional

health of their workforce will pay off in the long run, creating a more resilient and thriving industry.

One effective strategy for garment industry owners to reduce the stress of workers is to ensure that they are provided with fair wages and reasonable working hours. This can help alleviate financial stress and prevent burnout. Additionally, offering opportunities for career advancement and professional development can give workers a sense of purpose and control over their future, which can also help reduce stress levels. Overall, creating a positive and supportive workplace culture where employees feel valued and respected is key to reducing stress among garment workers.An intervention programme on stress which includes workshops on stress management techniques, mental health resources, and regular check-ins with supervisors can also be beneficial in addressing the unique stressors faced by garment workers. By implementing these strategies, industry owners can not only improve the well-being of their employees but also increase productivity and overall job satisfaction. It is essential for companies to prioritize the mental health of their workers in order to create a more sustainable and ethical work environment in the garment industry.

Limitations and Scope for further research

The current study is a quantitative research design on identifying the determinants of stress among garment workers, future researchers can conduct a qualitative study to further explore the personal experiences and emotions of garment workers in relation to stress. Qualitative research can provide a deeper understanding of the underlying factors contributing to stress in this particular population, allowing for a more comprehensive analysis of the issue. By incorporating interviews, focus groups, and observations, researchers can gain valuable insights that may not be captured through quantitative data alone. This approach could help inform interventions and policies aimed at improving the well-being of garment workers and reducing stress in the workplace.

References

1. **Adnan, T. (2024).**Low wage crisis: Impacts on Bangladeshi garment sector workers. *Indian Journal of Mass Communication and Journalism*, 38.
2. **Alharahsheh, H. H., & Pius, A. (2020).** A review of key paradigms: Positivism VS interpretivism. *Global Academic Journal of Humanities and Social Sciences*, *2*(3), 39-43.
3. **Anandi, B. S., Rajaram, D., Aravind, B., Sukumar, G. M., & Radhika, K. (2017).** Work-related stress assessment among a garment factory employee in Bangalore suburban locality. *Int J Community Med Public Health*, *4*(10), 3870-3876.
4. **Casula, M., Rangarajan, N., & Shields, P. (2021).** The potential of working hypotheses for deductive exploratory research. *Quality & Quantity*, *55*(5), 1703-1725.
5. **Farrell, A. M., & Rudd, J. M. (2009).** Factor analysis and discriminant validity: A brief review of some practical issues. In *Australia and New Zealand Marketing Academy Conference 2009*. Anzmac.

6. **Fitch, T. J., Moran, J., Villanueva, G., Sagiraju, H. K. R., Quadir, M. M., & Alamgir, H. (2017).** Prevalence and risk factors of depression among garment workers in Bangladesh. *International journal of social psychiatry*, *63*(3), 244-254.

7. **Fornell, C., & Cha, J. (1994).** Partial Least Squares. Advanced Methods of Marketing Research, RP Bagozzi.

8. **Gliem, J. A., & Gliem, R. R. (2003).**Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education.

9. **Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017).** PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, *1*(2), 107-123.

10. **IBEF Report,**https://www.ibef.org/exports/apparel-industry-india.

11. **Islam, N., Haque, P., Mubasshir, A., Sadi, M., & Sakib, S. (2019).** The Effect of Work Stress on the Performance of Readymade Garment Workers in Bangladesh. *Available at SSRN 3411193*.

12. **Jain, D. (2022).** Human resource issues and challenges prevailing in Indian textile & garment industry. *International Journal of Home Science*, *8*(3), 227-232.

13. **Jenkins, J. (2020).** Struggle in the garment sector. *Theory & Struggle*, (121), 68-77.

14. **Kabir, H., Maple, M., Islam, M. S., & Usher, K. (2022).** A qualitative study of the working conditions in the readymade garment industry and the impact on workers' health and wellbeing. *Environmental and Occupational Health Practice*, *4*(1), 2021-0020.

15. **Kitronza, P. L., & Mairiaux, P. (2015).** Occupational stress among textile workers in the Democratic Republic of Congo. *Tropical medicine and health*, *43*(4), 223-231.

16. **Lame, G. (2019, July).** Systematic literature reviews: An introduction. In *Proceedings of the Design Society: international conference on Engineering Design* (Vol. 1, No. 1, pp. 1633-1642). Cambridge University Press.

17. **Lillypet, S., Jain, T., & Joseph, B. (2017).** Health problems among garment factory workers: A narrative literature review. *Journal of Occupational health and epidemiology*, *6*(2), 114-121.

18. **Lillypet, S., Jain, T., & Joseph, B. (2017).** Health problems among garment factory workers: A narrative literature review. *Journal of Occupational health and epidemiology*, *6*(2), 114-121.

19. **Manzoor, A. (2020).** Designs of mixed method research. In *Cognitive Analytics: Concepts, Methodologies, Tools, and Applications* (pp. 95-121). IGI Global.

20. **Nightingale, A. (2009).** A guide to systematic literature reviews. *Surgery (Oxford)*, *27*(9), 381-384.

21. **Okoli, C., & Schabram, K. (2015).** A guide to conducting a systematic literature review of information systems research.

22. **Padmini, D., & Venmathi, A. (2012).** Unsafe work environment in garment industries, Tirupur, India. *J Environ Res Dev*, *7*, 569-575.

23. **Reddy, L. (2019).** Work place harassment and health related problems faced by garment workers in Bengaluru–A study. *IJRAR-International Journal of Research and Analytical Reviews (IJRAR)*, *6*(2), 240-247.

24. **Rother, E. T. (2007).** Systematic literature review X narrative review. *Acta paulista de enfermagem*, *20*, v-vi.

25. **Sharma, L., & Srivastava, M. (2022).** A scale to measure organizational stress among women workers in the garment industry. *European Journal of Training and Development*, *46*(9), 820-846.

26. **Shia, T. H., Mansor, R., & Majid, N. A. (2023).** Confirmatory Factors Analysis of Scale Measuring Secondary School Students' Learning Behaviours.

27. **Thakkar, J. J., & Thakkar, J. J. (2020).** Applications of structural equation modelling with AMOS 21, IBM SPSS. *Structural Equation Modelling: Application for Research and Practice (with AMOS and R)*, 35-89.

28. **Venkatesh, R., & Bansal, R. (2020).** Occupational Stress, Coping Strategy Mechanism, And Pliability Of Garment Employees: A Structural Equation Model Approach. *GIS Business*, *15*(1), 331-339.

29. **Wang, X., & Cheng, Z. (2020).** Cross-sectional studies: strengths, weaknesses, and recommendations. *Chest*, *158*(1), S65-S71.

30. **Yuan, D., Gazi, M. A. I., Rahman, M. A., Dhar, B. K., & Rahaman, M. A. (2022).** Occupational stress and health risk of employees working in the garments sector of Bangladesh: An empirical study. *Frontiers in public health*, *10*, 938248.