

Impact of Stress, Coping Strategies on Psychological Well-being among Apparel Workers: A Cross-Sectional Study in Bangladesh

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ABSTRACT

The apparel industry plays a crucial role by fetching a major portion of its foreign currency earnings. Further, this industry has been providing employment opportunities for impoverished workers, mostly from underprivileged rural areas. The workplace milieu of the apparel factories is not congenial for the physiological and psychological wellness of employees; the wages of workers are insufficient to make ends meet, ensuing in suboptimal physical and psychological soundness to execute their roles efficiently. Moreover, the steep growth of the industry created stress and health risks for workers. While even a minimal level of stress can act as a demotivating factor, increased stress can render negative impact on employees' well-being. When employees experience higher psychological well-being, their commitment to the organization increases, ultimately enhancing their individual performance and, by extension, the organization's productivity. Employees suffering from mental health issues are unable to work effectively and efficiently. This present study attempts to look into the impact of stress and coping strategies on psychological well-being (PWB) among apparel workers. The necessary information was collected using the Bengali version of the perceived stress, coping, and PWB scales. The study results unearthed that while stress had a significant adverse impact on PWB, coping strategies demonstrated a significant and positive correlation. A multiple regression analysis showed that stress and coping strategies predict PWB. The independence sample t-test revealed lower PWB of female than male workers and also reported that dissatisfied workers had lower PWB than satisfied workers. The study's findings could help researchers, managers, policymakers, academicians, and therapists design appropriate training and intervention programs to improve the psychological well-being of workers in the apparel sector.

Keywords: Bangladesh, Apparel Industry, Stress, Coping Strategies, Psychological Well-being

The apparel industry of Bangladesh serves as a cornerstone of Bangladesh's socio-economic context. As the largest employer providing 4 mn direct jobs, particularly for women from rural areas, it fosters economic empowerment and social advancement. Being the leading exporter, this sector contributes significantly to export earnings (85% of total), bolstering foreign exchange reserves and stabilizing the economy;

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Received: March 17, 2024; Revision Received: June 27, 2024; Accepted: June 30, 2024

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also making up 10% of Gross Domestic Product (“GDP”)-driving industrialization and overall development (Bangladesh Garment Manufacturers and Exporters Association, n.d.). When clothes are being sold in a store, it is referred to as apparel (Cambridge Dictionary, n.d.). Therefore, the apparel industry refers to the manufacturing units that produce clothes that are sold under various brands. But, apparel workers are reported to have several physical health complications (Ahmed & Raihan, 2014; Nishigaya, 2002; Saraswathi et al., 2013; Lombardo et al., 2012), as well as various psychological concerns. These include stress related to work tasks, traumatic experiences, depression, insomnia, hypertension, heart problems, anxiety, and difficulties in social interactions (Fitch et al., 2017; Kabir et al., 2023). The stressors contribute significantly to the psychological vulnerabilities experienced by workers. Consequently, these challenges can lead to absenteeism, reduced productivity, and even job loss, further exacerbating workers' stress and psychological well-being issues.

Psychological Well-being

Psychological well-being (PWB) is a state of overall wellness where individuals realize their potential, cope efficiently with life's challenges, work productively, and contribute to their communities (Sayers, 2001). Well-being, a desired state emerging in the 1980s, encompasses hedonic and eudaimonic aspects. Hedonic well-being focuses on subjective feelings of happiness, comprising affective and cognitive components, while eudaimonic well-being emphasizes realizing one's potential and purposeful living. The PWB involves feeling good and functioning effectively (Ryff, 1995; Deci & Ryan, 2008). Ryff (1989) developed a model of PWB containing six dimensions (e.g., ‘self-acceptance,’ ‘autonomy,’ ‘purposeful and meaning in life,’ ‘positive relation with others,’ ‘personal growth and development,’ and ‘environmental mastery’).

Researchers have recognized job stress as an influencing factor on mental wellness (Faragher et al., 2005; Malek et al., 2009). Coping strategies are an additional factor that can support psychological well-being, which Lazarus and Folkman (1984) defined as the knack of dealing with stressful conditions by solving various issues. Numerous studies indicated a significant productivity increase with improvements in psychological well-being (Robertson & Cooper, 2011). Consequently, organizations must prioritize employee well-being to ensure operational efficiency and long-term financial success.

Stress

According to Selye (1956), stress is described as the nonspecific physical response to any form of pressure imposed upon it, making it a prominent health concern in modern workplaces. Murphy and Lawrence (1995) further describe stress as the harmful physiological and emotional reactions to overwhelming job demands beyond an individual's capabilities. When individuals are unable to manage workplace demands, they experience stress, a critical factor affecting both physical and psychological well-being, garnering global attention (Margolis, 1974). A study by Warr and Payne (1983) suggested that mostly our response to stressors explains the origination of stress rather than the stressors themselves. Individuals possessing useful coping techniques tend to experience a relatively lesser extent of stress while faced with stressful events.

Coping Strategies

Monat and Lazarus (1977) characterized coping as the efforts to master circumstances that imposed or exceeded adaptive resources. It is how an individual uses several strategies to deal with stress (Parker & Endler, 1992). Lazarus and Folkman (1984) highlighted coping

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tactics to handling life demands in stressful situations and identified 2 variants of coping: problem-focused coping (focuses on the problem and aims to alter or eradicate the origin of stress) and emotion-focused coping strategies (focuses on a person's emotions and helps to change the way an individual reacts to the stressor). Previous studies have shown the efficacy of coping strategies in maintaining psychological well-being, which varies from person to person (Kappe & van der Flier, 2012; Parsons et al., 1996).

REVIEW OF LITERATURE

Wright et al. (2007) examined work conditions from the perspective of mental wellness as well as the physical health conditions among male and female workers (comprising of both skilled white-collar employees and low-skill blue-collar workers or manual laborers) in the apparel industry of Sweden. The findings reported that manual laborers expressed greater physical and psychological issues. Rahman (1989) also did a study to ascertain the influence of workplace stress on the mental wellness of male laborers in Bangladesh's apparel or garment factories. The study discovered that workers in the high-stress group (26 subjects) reported lesser psychological health than the low-stress group (33 subjects).

Yuan et al. (2022) investigated the extent to which on-job stress influences the well-being of 350 Bangladeshi apparel employees selected randomly from 25 apparel factories in the Dhaka division. The results revealed that job stress significantly influenced health risks, and both genders perceived their jobs as highly stressful. However, the level of stress seemed to be of greater degree among female employees than corresponding male colleagues. Dey et al. (2016) also reported similar results.

Abirami et al. (2019) conducted a study on 136 female apparel workers in South India and reported no significant difference between age and nuptial status with PWB. Weziak-Bialowolska et al. (2019) conducted a study on 2200 Mexican apparel workers and found a positive association between job satisfaction and worker's well-being.

Shankar and Famuyiwa (1991) studied stress among factory workers concluding that stress significantly impacted mental health. Another study revealed that perceived stress was substantially and adversely related to all dimensions of mental wellness (Anand & Nagle, 2016). Ganesan (2021) conducted a study on 136 female apparel workers in South India and found 67% of female workers had low psychological well-being.

Razak and Kutty (2021) studied Malaysian educators and found that people using adaptive coping strategies had a greater level of mental wellness. Gustems-Carnicer and Calderón (2013) also reported that coping strategies aid in ameliorating university-level students' mental anguish, where proactive coping approaches were positively correlated with mental wellness and both problem and emotion-focused coping were strong predictors of psychological distress.

Rationale of the Study

In Bangladesh, the apparel industry is the main source of foreign exchange. This industry helps Bangladesh's economy flourish and lessens the country's unemployment issues. Unfortunately, the work environment is not congenial, and the income is insufficient to lead their lives. Their physical and mental health are severely harmed by the stress created by noisy, dirty workplaces, inadequate workspaces, lack of emergency services, and support from co-workers and bosses. Workers with mental health issues are not able to perform their

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jobs well or successfully. Researchers have noted that people employ diverse coping mechanisms to manage stress and regulate mental health concerns (Larazus & Folkman, 1984; Peterson & Wilson, 2002).

Nowadays, researchers are concerned about work-related stressors and their impact on well-being. A vast number of research in this domain has been conducted in Western societies. Regretfully, no research on the suggested variables could be found in Bangladesh. Most studies addressed health hazards, workplace stresses, sociodemographic characteristics, job performance, and other related topics (Dey et al., 2016; Mahmud et al., 2018). As workplace stress and workers' psychological health have become a major global concern, it is imperative to mitigate stress and create an array of useful coping tactics to shield workers from myriad of physical and mental health risks. This study would provide new information regarding stress, coping strategies, and PWB among apparel workers to researchers, academicians, business executives, managers, employees, sociologists, psychologists, governments, non-governmental organizations, policymakers, and legislators to make informed decisions and encourage pertinent intervention or training programs among apparel workers. This study will furnish them with information and serve as a guide.

Objectives

The objectives were-

- To examine the gender difference in psychological well-being among male and female apparel workers.
- To see whether the psychological well-being of male and female apparel workers differs according to age, nuptial status, and job satisfaction.
- To explore the relationship between stress, coping strategies (i.e., problem-focused and emotion-focused coping), and psychological well-being among male and female apparel workers.
- To examine the impact of stress and coping strategies on psychological well-being among male and female apparel workers.

Hypotheses

The following outlines the hypotheses formulated in the current study:

- H1: There is a significant gender difference in psychological well-being among male and female apparel workers.
- H2: There are no significant differences in the psychological well-being among male and female apparel workers across age and nuptial status.
- H3: There is a significant difference in psychological well-being among apparel male and female workers in terms of job satisfaction.
- H4: There is a negative correlation between stress and psychological well-being among male and female apparel workers.
- H5: Coping strategies (problem-focused and emotion-focused) are positively connected to psychological well-being among male and female apparel workers.
- H6: Stress and coping strategies (i.e., problem-focused and emotion-focused) significantly impact psychological well-being among male and female apparel workers.

METHODOLOGY

Sample and Sampling Technique

The current study sample comprises 100 workers (both male and female) drawn from various apparel factories in Dhaka using a purposive sampling technique. Workers currently employed in the apparel industry willing to participate were taken into consideration. Furthermore, workers who were unable to converse, extremely unwell, and absent during the time of data collection were excluded.

Research Design

The ex-post facto research design was used in this cross-sectional study because it enable the evaluation of the influence of one variable on another (Leavy, 2017). Additionally, as the event already exists or happened, it does not need modifying or controlling independent variables (Cohen et al., 2018; Salkind, 2010).

Measures

- **Perceived Stress Scale:** This 10-item scale, as developed by Cohen et al. (1983), was designed to ascertain individual stress levels where the participants elicited responses on a 5-point scale encompassing “0=never” to “4=very often”. Scoring for items 4, 5, 7, and 8 were reversed. The Bengali version scale (translated by Islam, 2016) was valid and reliable ($\alpha=.81$) for Bengali-speaking populations (Mozumder, 2017). Here, the coefficient of alpha ($\alpha=.71$) has been computed from a pilot study.
- **Coping Scale:** Bangla version (adapted by Haque, 2004) of the coping scale (originally developed by Folkman & Larazus, 1980) was used to assess the coping behavior of the samples ($\alpha=.86$). It has 22 items (13 items are problem-focused and 9 items are emotion-focused) with a 4-point Likert-type response option: (“1=I usually don't do this at all” to “4=I do this always”). The scoring for items 3,7,8,9, 10,11,13,16 & and 17 were “4=I usually don't do this at all” to “1=I do this always.” The sum of the total score is the coping score for each respondent, where the highest score (88) indicates better coping and vice versa. Under this study, the Cronbach alpha was found to be .67.
- **Psychological Well-being Scale:** Bangla translation, as adapted by Bairagi et al. (2021), of the psychological well-being scale (54 items) was utilized to ascertain the mental wellness of apparel workers. The scale, developed by Ryff (1989), contained six(6) subscales (e.g., “autonomy,” “environmental mastery,” “personal growth,” “positive relations with others,” “purpose in life,” and “self-acceptance”). On this 6-point scale, “1 denotes strong disagreement” while “6 denotes strong agreement” for positive items, and the interpretation is inverse for negative items’. Here, lofty scores denote elevated levels of PWB and vice versa. For the present study, the coefficient of alpha ($\alpha=.97$) has been computed from a pilot study.

Procedure

At first, the relevant authority was consulted for approval. The samples are made aware of the goal of the study and assured of their privacy before the collection of the required data. Following that, respondents were requested to read the directions and kindly respond to all questions carefully. The samples are encouraged to ask any questions that come to mind while doing the task. They were acknowledged for their participation, and the questionnaires were collected from them once they finished the assignment.

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Data Analysis

A combination of descriptive (that includes arithmetic mean, standard deviation, and %) and inferential statistical (e.g., one-way ANOVA, independent sample t-test, Pearson product-moment correlation, and multiple regression) analyses using SPSS were conducted to summarize and determine the relationship between predictors and criterion variables.

RESULTS AND DISCUSSION

Table 1 features the demographic characteristics of the sample and the differences in psychological well-being according to these attributes. The non-significant Shapiro-Wilk statistic indicated that the assumption of normality was not violated.

Table 1. The Distribution of Mean Psychological Well-being Scores Across Different Demographic Parameters (N=100).

Characteristics	Category	N	M	SD	t or F
Age	18-22	56	151.25	8.91	.031
	23-27	37	151.03	8.35	
	28-33	7	150.43	7.96	
Gender	Male	50	154.02	7.63	3.59***
	Female	50	148.20	8.53	
Nuptial Status	Married	62	150.29	8.34	-1.23
	Unmarried	38	152.45	8.86	
Job Satisfaction	Not satisfied	82	150.33	8.45	-1.97*
	Satisfied	18	154.67	8.40	

Note. * $p < .05$; *** $p < .001$

The samples included males and females in equal proportions, where 62% of the participants were married. Most of the sample (56.0%) were between 18 and 22 years old. The t-test was significant, with the mean PWB score of males ($M=154.02$, $SD=7.63$) significantly higher (mean differences 5.82, 95% CI [2.61, 9.03], than females ($M=148.20$, $SD=8.53$), $t(100) = 3.59$, $p < .001$, two-tailed, $d = .72$). The results also revealed no statistically significant differences in PWB across different age groups and nuptial status. Thus, hypotheses H1 and H2 are accepted. The probable reasons might be that female workers play multiple roles; they may experience an adjustment crisis that leads to difficulties and stress because they need to manage the demands of work and their personal lives (Shanbhag & Joseph, 2012). Also, they are more prone to feel injustice in the workplace, which ultimately lowers their PWB (McCord et al., 2018). These results are supported by past studies (e.g., Abirami et al., 2019; Ganesan, 2021). Additionally, table 1 revealed a significant difference in the PWB score of respondents in terms of job satisfaction. The respondents who were satisfied ($M=154.67$, $SD=8.40$) with their jobs had higher PWB (mean difference -4.34, CI [-8.69, .024]) than respondents who had low satisfaction ($M=150.33$, $SD=8.45$), $p < .05$, two-tailed, $d = .514$. Thus, the hypothesis (H3) is accepted. The probable reason might be poor working conditions and low or insufficient wages (Huda & Akhter, 2011; Islam et al., 2014). This result is also supported by past studies (Weziak-Bialowolska et al., 2019).

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Table 2. Mean, Standard Deviation, and Correlations Matrix among the Criterion and all Predictor Variables

Variables	M	SD	1	2	3
Stress	31.15	3.16	-		
Problem-focused coping	37.09	3.23	-.312**	-	
Emotion-focused coping	20.40	2.80	-.031	-.119	-
Psychological Well-being	151.11	8.57	-.285**	.257**	.211*

Note. * $p < .05$, ** $p < .01$; Criterion variable: PWB

Table 2 shows the calculated mean of stress, problem-focused, emotion-focused coping, and psychological well-being were 31.15, 37.09, 20.40, and 151.11 respectively. Pearson product-moment correlations revealed that stress ($r = -.285$, $p < .01$), problem-focused ($r = .257$, $p < .01$), and emotion-focused ($r = .211$, $p < .05$) coping were significantly related with psychological well-being. Therefore, the hypotheses (i.e., H4 & H5) are accepted. The reasoning is that the workers found the jobs extremely stressful due to work-related and social stressors (Caruso, 2006; Sirch, 2022; Virtanen et al., 2010), ultimately affecting their PWB. Also, people always use problem-focused coping strategies to relieve stress by managing the issues that create stress (Kelly et al., 2008). Furthermore, putting one's attention elsewhere can provide a little respite for someone to unwind and settle down. Such a situation might aid the individual in navigating unpleasant notions, thus lowering the psychological burden and fostering PWB (Otenbreit & Dobson, 2004). These results were corroborated by earlier research reporting that stress negatively and coping strategies positively impacted workers' well-being (Brooks & Greenberg, 2017; Rahman, 1989; Razak & Kutty, 2021).

Table 3. Multiple Regression Coefficients of Criterion Variable on Predictor Variables

Variables	B	SE	β	t	p
Constant	132.925	16.514		8.049	.001
Stress	-.569	.266	-.210	-2.136	.035
Problem-focused coping	.581	.263	.219	2.211	.029
Emotion-focused coping	.703	.288	.230	2.444	.016

Note. $R^2 = 16.5\%$; B=Unstandardized beta; β =Standardized beta; SE=Standard Error

Table 4. The overall F-test for Regression of Apparel Workers' Psychological Well-being on Predictor Variables

Source of Variance	SS	DF	MS	F	p
Regression	1196.993	3	398.998	6.314	.001
Residual	6066.797	96	63.196		
Sum	7263.790	99			

The results implied that three predictors explained 16.5% of the variance ($R^2 = .165$, $F(3,96) = 6.314$, $p < .001$). The standardized beta (β) indicated that stress ($\beta = -.210$, $p < .05$), problem-focused ($\beta = .219$, $p < .05$), and emotion-focused ($\beta = .230$, $p < .05$) coping significantly predicts worker's psychological well-being. Finally, the ANOVA values denote that all the predictors are good and fit significantly the model. So, the hypothesis (H6) is accepted. The reason may be that in a stressful situation, an individual always feels threatened due to stress, which impacts their psychological well-being (Vaughn & Roesch, 2003). Workers

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who utilize coping strategies tend to be more creative in fixing challenges. This can maintain peace inside an organization and indirectly stop disagreements from starting between co-workers. A productive, upbeat, and healthy work setting is essential to helping workers attain high psychological well-being. These results were corroborated by earlier research findings (Anand & Nagle, 2016; Gustems-Carnicer & Calderón, 2013).

Limitations

There are several restrictions on this study. First of all, there is a limited sample size. Second, the study solely included data from the Dhaka division in Bangladesh. There was also a chance that the sample was taken elsewhere. Third, this research only involved apparel workers.

Implication

This study is significant because it sheds light on the psychological problems that Bangladeshi apparel workers face. Regardless of the shortcomings, this study was effective in determining the contributions of the proposed factors to the PWB of apparel workers. These findings suggest that stress and both types of coping strategies are significantly linked to PWB and are significant indicators of PWB. The results of the investigation will be highly helpful to the apparel industry's employees, management, and regulatory bodies, as well as to other researchers working on relevant subjects. Moreover, this study also suggests that effective coping strategies may be useful in increasing PWB. Workplace health experts and policymakers can use the practical implications to reduce stress-driven-mental-strain. E.g., comprehending the effects of stress and coping strategies on apparel workers can facilitate the development of focused solutions. Researching coping mechanisms unique to the apparel industry might help promote networks and training initiatives. Therefore, this study offers guidance for developing specific interventions aimed at boosting overall worker satisfaction and productivity, thereby improving PWB. Hence to improve workers' psychological well-being, the government, trade associations, employers, and foreign purchasers must collaborate and play a significant role through ongoing oversight, audits, and the application of relevant laws.

CONCLUSION

Psychological well-being is a crucial factor for workers because it is associated with positive work outcomes that are related to organizational performance. Stress is an alarming issue among workers. It causes many physical and psychological health issues. There are many reasons for workers' stress; however, effective coping strategies are vital in increasing psychological health. Consequently, it is strongly suggested to undertake a rigorous study on the psychological well-being of apparel workers in the future, with more participants.

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Acknowledgment

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Rathi, S.R. & Shukla, A. (2024). Impact of Stress, Coping Strategies on Psychological Well-being among Apparel Workers: A Cross-Sectional Study in Bangladesh. *International Journal of Indian Psychology*, 12(2), 4146-4157. DIP:18.01.369.20241202, DOI:10.25215/1202.369