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Is Workplace Bullying Responsible for Low Job Performance? A Twofold SEM-ANN Approach

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Abstract. Workplace bullying is one of the phenomenal supervisory tool using in the garment industry of Bangladesh. The productivity of this industry workers are the lowest as compared with its competitors such as China, Vietnum, India, Thailand, Pakistan, Sril anka, Combodia etc. Therefore, the primary purpose of this study was to examine whether the workplace bullying responsible for low job performance in the garment industry of Bangladesh. The study is based on quantitative data, collected through a survey questionnaire adapted from previous studies. The target population was the workers from the ready-made garment industry in Bangladesh. Moreover, simple random sampling technique was used to collect 384 samples. Additionally, Smart-PLS 3.3.9 and SPSS (v23) were employed for preliminary data examination and to examine the proposed hypotheses. A two-fold SEM-ANN approach was used to validate the proposed model of the study. The findings of the study revealed that workplace bullying negatively effect on employees' job performance. Psychological stress and burnout play a negative mediating effect between workplace bullying and job performance. Additionally, perceived organizational support play s a significant moderating role among workplace bulling and its outcome variables such as job performance, psychological stress, burnout, and organizational citizenship behaviour. However, organizational citizenship behavior does not play any significant mediating role in the relationship between workplace bulling and job performance. The study has been unique in nature, as it focuses on the workers in in the developing country context like Bangladesh where the employees encounter tremendously with bulling from supervisor and higher management as their regular practice. The outcomes of the consequences are psychological stress, burnout, organizational citizenship behaviors, and low job performance enormously which has been highlighted in the current study.

Keywords: Bangladesh, Low job performance, Organizational citizenship behaviors, Psychological stress, Ready-made garment industry, Workplace bullying.

1. INTRODUCTION

Workplace bullying, as defined by Mount and Mazerolle (2021) and Dickson-Swift et al. (2014), encompasses intentional actions such as harassment, offending, social exclusion, and negatively impacting someone's work tasks repeatedly. Research by Hassanain and Ibrahim (2021) and Mount and Mazerolle (2021) indicates that approximately 10-20% of employees are adversely affected by workplace bullying each year. This phenomenon not only affects individuals but also has implications at the organizational and social levels (Georgakopoulos & Kelly, 2017). The issue of workplace bullying has been recognized for a long time, but it has gained more attention recently due to its various negative consequences (Ibrahim & Hassanain, 2022). High rates of absenteeism and lack of engagement have been observed in organizations where bullying is prevalent (Sheehan & Griffiths, 2011; Mount & Mazerolle, 2021). Studies have shown that workplace bullying leads to health issues, decreased job satisfaction, and a higher likelihood of employees wanting to quit their jobs and leave the organization (Christersson, Heywood, & Rothe, 2017; Clercq, Fatima, & Jahanzeb, 2021). The effects of workplace bullying are far-reaching and include increased absenteeism, employee turnover, diminished self-esteem, emotional exhaustion, and decreased productivity (Rockett, Fan, & Foy, 2017; Spagnoli & Balducci, 2017). Employees who find it challenging to protect themselves from such treatment are considered victims of bullying, as they experience frustration and embarrassment (Pidd, Duraisingam, Roche, & Trifonoff, 2017). Interestingly, workplace bullying does not involve physical violence but relies on tactics such as jokes, gossip, and chatter, creating a hostile work atmosphere that impairs employees' performance (Murray, Branch, & Caponecchia, 2020; Hassanain & Ibrahim, 2021). Victims of workplace bullying may suffer from various mental health issues, leading to decreased employee satisfaction (Rothe, Sarasoja, & Heywood, 2015). Clercq, Fatima, and Jahanzeb (2021) note that bullying at work generates tension, hostility, and unease due to its underlying issue of inconsistent authority. Verbal abuse, name-calling, and humiliation are common aspects of workplace bullying, often stemming from the misuse of authority and power (Keplinger & Smith, 2022; Mount & Mazerolle, 2021; Murray, Branch, & Caponecchia, 2020).

A safe and productive workplace is one that is free from bullying, humiliation, and harassment (Porteous, 2022). Workplace bullying negatively affects employees' efficiency and organizational success, as employees are reluctant to discuss their concerns openly, fearing repercussions (Ollo-López & Nuñez, 2018; Ibrahim & Hassanain, 2022). The prevalence of bullying emphasizes the need for vigilance (Rai & Agarwal, 2018; Keplinger

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& Smith, 2022). Additionally, there is evidence of workplace bullying facilitated through information and communication technologies (Anwar, Kee, Ijaz). A specific form of workplace bullying is cyber-bullying, which involves using electronic channels like social media and email to harm individuals at work (Kowalski et al., 2014). The use of social media for bullying has made the situation more hostile, encouraging offenders (Herron, 2022). Ibrahim & Hassanain (2022) and Mount & Mazerolle (2021) emphasize the negative repercussions of workplace bullying on employees' well-being, while organizations value high employee performance. Studies have shown that workplace bullying hampers workplace efficiency and productivity, essential for thriving in the global market (Crumpton, 2014; Clercq, Fatima, & Jahanzeb, 2021). Workplace bullying imposes significant psychological, economic, and social costs on both employers and employees (López-Cabarcos et al., 2020; Clercq, Fatima, & Jahanzeb, 2021). This issue is prevalent in both developed and developing countries and has garnered substantial academic attention in the areas of work stress, aggression, and health (Christersson, Heywood, & Rothe, 2017).

Bullying in the workplace often stems from the actions of supervisors and managers as well. In numerous instances, subordinates may receive legitimate criticism for their low performance, but sometimes such criticism is wrongly perceived as bullying. Research suggests that the actions and attitudes of leaders significantly impact the prevalence of bullying within an organization. A study published in the journal "Work & Stress" (Einarsen et al., 2007) found that when supervisors displayed aggressive or abusive behaviours, it created a hostile work environment that increased the likelihood of bullying among employees. However, it is essential to distinguish between genuine bullying and criticism stemming from stress or low productivity. A balanced work environment is crucial to avoid misunderstandings. Organizations need to establish clear guidelines and definitions of bullying to differentiate it from constructive feedback or legitimate performance management (Guide for Preventing and Responding to Workplace Bullying, 2013). If the criticism is intended to improve work performance and not to humiliate or harm the employee, it may not qualify as bullying. Open communication and feedback mechanisms within the organization are vital to address these concerns effectively. To rule out misinterpretations and ensure fair treatment, organizations can implement anti-bullying policies, provide training for supervisors on respectful leadership, and establish confidential channels for reporting incidents. A study by (Tracy et al., 2006) in the journal "Personnel Psychology" emphasized the role of organizational interventions in mitigating workplace bullying effectively. In conclusion, bullying can indeed be influenced by supervisor behaviour, but it is crucial to distinguish it from legitimate criticism to maintain a healthy work environment.

Previous studies have examined workplace bullying in various contexts, using different theoretical approaches (Ågotnes et al., 2021; Boudrias et al., 2021; Dåderman & Ragnestål-Impola, 2019; Ramachandaran et al., 2024). However, it is worth noting that workplace bullying remains an overlooked issue in impoverished and deprived nations. In such settings, individuals have unfortunately grown accustomed to experiencing workplace bullying, and they refrain from speaking up due to reasons like ignorance, fear of job termination, or a sense of hopelessness regarding the prospects of seeking justice. This study aims to fill this crucial research gap by focusing on this neglected phenomenon. Furthermore, our research stands out due to the implementation of the SEM-ANN (Structural Equation Modeling-Artificial Neural Network) approach, which provides deeper insights into the observed phenomenon through a mixed-methods approach. To address the identified research gap, our study investigates the association between workplace bullying and job performance within the context of the garment industry in Bangladesh. Despite being a significant supervisory tool in this industry, workplace bullying has raised concerns due to its potential negative impact on employee productivity. Hence, this study seeks to explore whether workplace bullying plays a role in the comparatively low job performance observed among workers in the Bangladeshi garment industry, especially when compared to its competitor countries such as China, Vietnam, India, Thailand, Pakistan, Sri Lanka, and Cambodia.

To explore the relationship between perceived workplace bullying and job performance in the ready-made garment (RMG) industry of Bangladesh, the study employs the Job Demand Control Support (JDCS) model (Karasek, 1979) and the two-factor theory (XY theory), alongside Organizational Citizenship Theory and Social Exchange Theory. The research aims to understand how workplace bullying directly impacts the job performance of RMG workers and how burnout, organizational citizenship behaviors, and psychological stress mediate this relationship (Kang, Turi, Bashir, Alam, & Shah, 2021; Pu, et al., 2022). Furthermore, the study intends to examine how perceived organizational support moderates the relationship between workplace bullying and job performance in developing country contexts like Bangladesh (Teo, Bentley, & Nguyen, July 2020; Dzurec, 2020; Ibrahim & Hassanain, 2022). The paper is organized as follows: a detailed literature review, hypotheses development, and conceptual framework are presented first. The methodology section follows, describing scales, methods, and analysis. Next, the results are discussed, and implications of the study are presented. The paper concludes with a discussion of limitations and future research directions.

2. LITERATURE REVIEW

2.1. Job Performance

Job performance is the sum total of a worker's execution of assigned tasks. Every individual in an organization is expected to perform certain assigned, stated, and even unstated (logistics and supportive) roles. So, job performance refers to grouping, assigning, analyzing, and evaluating a worker's job performance and

generally involves human resource expertise (Boudrias, Trépanier, & Salin, 2021). Different organizations have their own scales, formats, and standards to monitor and ass the job performance of their knowledge workers. They developed their benchmark, and assess the performed work over a certain time. Sometimes not only outcomes, but also the procedure and other criteria are assessed, because, most of the time, the output may be the same, but resource optimization, efficiencies, and effectiveness also matter more in most sensitive situations. The garment industry in Bangladesh is considered the most vulnerable industry regarding the abuse of workers, therefore, it becomes too much difficult to assess job performance. Therefore, in such garment manufacturing settings, these benchmarks may be oriented toward easily measurable outcomes, such as assessing how well an individual employee's work met a specific production quota. In service jobs, the outcomes may be specific, based on criteria such as how many customers complained, or a drop in sales (Cerit, Keskin, & Ekici, 2018). Accurately assessing performance in these situations, however, is often more challenging than in manufacturing settings in which individual output can be mathematically measured (Ariza-Montesa, Arjona-Fuentes, Radic, Hand, & Law, 2021).

2.2. Support Underpinning Theories

There are so many theories that can be applied to the above-mentioned formation. Organizational citizenship theory and social exchange theory can also be applied. However, the context can be best covered by the Job Demand Control Support (JDCS) presented by Johnson & Hall (1988) model and the Two-factor theory (XY theory), coined by Douglas McGregor in the year the 1960s (Boudrias, Trépanier, & Salin, 2021). The Job Demand Control Support (JDCS) model, proposed by Johnson and Hall in 1988, is a theoretical framework used to understand and explain the relationship between job characteristics and employee well-being (Johnson & Hall, 1988). The model is based on three key components: job demands, job control, and social support. The JDCS model suggests that the interaction between job demands and job control influences employee well-being and job satisfaction. When employees have high job demands but also high job control, they are more likely to experience positive outcomes such as reduced stress and higher job satisfaction (Van der Doef & Maes, 1999). On the other hand, when employees face high job demands but have low job control, they are more susceptible to experiencing negative outcomes, such as burnout and decreased well-being. Social support can moderate these relationships by providing resources and assistance to employees, helping them cope with job demands and enhance job satisfaction. Bullying occurrences in the working environment within the sub-continent can be attributed to factors such as financial and economic uncertainties, burdens, and other turbulent situations (Dåderman & Basinska, 2021; Dickson-Swift, Fox, Marshall, Welch, & Willis, 2014). Many employees in this region are uneducated or have limited education, which may lead to a lack of a sense of responsibility (Dåderman & Basinska, 2021; Dickson-Swift, Fox, Marshall, Welch, & Willis, 2014). Additionally, these workers often come from impoverished families and are underpaid (Karatuna, Jönsson, & Muhonen, 2020; Matsson & Jordan, 2022). The poor financial and economic conditions of the workers, coupled with the fear of job termination, give supervisors a sense of authority, leading them to resort to threatening, bullying, and aggressive behaviors to meet daily production targets (Karatuna, Jönsson, & Muhonen, 2020; Matsson & Jordan, 2022). Instead of adopting a more compassionate or democratic style of supervision, supervisors may choose intimidation tactics due to these challenging circumstances. The financial hardships faced by workers also lead many of them to take on multiple jobs, resulting in constant physical and mental engagement and an imbalance in their work-life situation (Teo, Bentley, & Nguyen, July 2020). Consequently, supervisors may perceive them as X-type employees and use force and bullying to keep them engaged in productive activities. While motivational approaches and incentives might have been used by supervisors, these mechanisms often fail when workers are financially underpaid (Teo, Bentley, & Nguyen, July 2020). The combination of financial and economic uncertainties, coupled with social and emotional deprivation, can result in psychological, ethical, and moral degradation, ultimately impacting work performance and contributing to workplace bullying and abuse (Rai & Agarwal, 2020; Ollo-López & Nuñez, 2018).

2.3. Hypothesis Development and Research Model

2.3.1. Workplace Bullying and Job Performance

Managers and HR practitioners aim to maximize job performance as a crucial factor in enhancing overall organizational performance (Somani, Muntaner, Hillan, Velonis, & Smith, 2021). The impact of workplace bullying has been recognized to have both individual and organizational implications (Hassanain & Ibrahim, 2021). Organizational-level outcomes of workplace bullying include increased absenteeism, reduced task performance, decreased productivity, lower employee morale, and overall diminished performance (Fernández-del-Río, Ramos-Villagrasa, & Escartín, 2021). Employees who become targets of workplace bullying experience severe detrimental outcomes and are more likely to be absent from work or consider quitting their jobs (Yun & Kang, 2018; Fernández-del-Río, Ramos-Villagrasa, & Escartín, 2021). Ignoring or passively resisting workplace bullying can also have negative consequences on an individual's work performance (Ariza-Montesa, Arjona-Fuentes, Radic, Hand, & Law, 2021; Dzurec, 2020). According to Cheung, Lee, & Yip (2018), workplace bullying significantly affects physicians' job performance, with belittlement having the most detrimental impact among the

various dimensions of workplace bullying. Studies have suggested that the loss of cognitive control resulting from bullying plays a major role in promoting poor employee conduct at work (Dåderman & Ragnestål-Impola, 2019; Dzurec, 2020). This negative perception of the workplace, characterized by more negative than positive interpersonal interactions and weak internal connections, leads to a superficial work attitude, as explained by ego depletion (Matsson & Jordan, 2022; Dåderman & Ragnestål-Impola, 2019). Ego depletion in stressful situations generates negative emotions, putting task performance at risk. The significant disparity between the perceived hostile workplace bullying and the individual's original psychological state induces intense discomfort, and subsequent ego depletion intensifies the individual's internal sense of situational anxiety, undermining behavioral motivation, and resulting in deteriorating performance (Obeidat, Qan'ir, & Turaani, 2018; Dickson-Swift, Fox, Marshall, Welch, & Willis, 2014). In conclusion, based on the detailed examination of the relationship between workplace bullying and job performance, H1 is proposed:

H1: Workplace bullying has a significant negative effect on employee job performance.

2.3.2. Workplace Bullying, Psychological Stress, and Job Performance

Research has shown that workplace bullying is associated with increased levels of psychological distress (Said & Tanova, 2021). The constant bullying experienced from colleagues or superiors leads to a rise in employee absenteeism and a decrease in job satisfaction (Rajalakshmi & Naresh, 2018). This abusive treatment exposes workers to prolonged stress and anxiety, which, in turn, fosters a desire to quit the organization. Consequently, motivation levels drop, and job performance is negatively affected. In some cases, stressed employees may become vulnerable to violence from their aggressive colleagues or superiors (Karatuna, Jönsson, & Muhonen, 2020). Moreover, long-term bullying can distort an individual's perception and judgment, resulting in suspicion and negative thoughts about others and the organization's actions (Boudrias, Trépanier, & Salin, 2021). The distress caused by constant bullying can lead the affected employee to engage in organizational retaliatory behaviors, such as focusing on the mistakes of others, feeling ignored and scolded, and being burdened with additional duties (Clercq, Fatima, & Jahanzeb, 2021). These retaliatory behaviors divert the employee's energy and resources away from their primary job tasks, leading to a decline in job performance (Fernández-del-Río, Ramos-Villagrasa, & Escartín, 2021; Hassanain & Ibrahim, 2021; Mount & Mazerolle, 2021). Thus, it is hypothesised:

H2: Psychological stress has a significant mediating role in the relationship between workplaceBullying and employee job performance

2.3.3. Workplace Bullying, Burnout, and Job Performance

Burnout, as defined by Dåderman and Basinska (2021), encompasses emotional exhaustion, a sense of alienation from one's surroundings, untreated or inadequately managed work-related stress, and feelings of diminished personal accomplishments and achievements. The concept of job burnout was initially introduced and addressed within the domain of clinical psychology during the early 1970s (Zachariadou, Zannetos, Chira, Gregoriou, & Pavlakis, 2018). Subsequently, it has been described as a "psychological condition in reaction to continuous interpersonal pressures at work" (Schoville & Aebersold, 2020). Existing literature has indicated that negative psychosocial and organizational job factors, such as high job demands, limited job control, and insufficient social support at work, constitute risk factors for both poor mental health and burnout (Munro & Phillips, 2020). Additionally, workplace bullying has emerged as another significant contributor to burnout, as evidenced by studies like the one conducted by Rai and Agarwal (2020), who found a strong association between workplace bullying and adverse mental health outcomes beyond the impact of other work-related and daily life stressors (Ågotnes et al., 2021). This association between workplace bullying and job burnout is particularly pronounced in the service sector due to its close interpersonal proximity (Herr et al., 2018). Numerous previous research endeavors have explored the effects of workplace bullying on psychological health, with results indicating its detrimental impact on job performance but a positive relationship with burnout (Österman & Boström, 2022). Boudrias, Trépanier, and Salin (2021) discovered that workplace bullying negatively predicts job performance in terms of autonomy, competence, and relationships, while positively predicting burnout, especially in relation to a lack of autonomy. As employees face workplace bullying, they expend their psychological and energy resources (López-Cabarcos, Paul, Vázquez-Rodríguez, Piñeiro-Chousa, & Caby, 2020), leading to resource depletion. This gradual resource loss (both mental and physical energy) eventually culminates in exhaustion and burnout (Keplinger & Smith, 2022), manifesting in physical, mental, and emotional collapse and a negative attitude toward work (Hartin, Birks, & Lindsay, 2018). The adverse outcomes associated with burnout, such as absenteeism and lack of motivation, further contribute to a decline in employee job performance (Cerit, Keskin, & Ekici, 2018; Dickson-Swift, Fox, Marshall, Welch, & Willis, 2014). Based on these observations, the present study hypothesizes that.

H3: Burnout has a significant mediating role in the relationship between workplace bullying and employee job performance

2.3.4. Workplace Bullying, Organizational Citizenship Behaviours, and Job Performance

According to Podsakoff et al. (2009), Organizational Citizenship Behavior (OCB) refers to discretionary

individual actions that are not explicitly recognized by the formal reward system but collectively contribute to the organization's efficiency and effectiveness. Examples of OCB include helping overworked colleagues, voluntarily assuming additional responsibilities, putting in extra effort, acquiring valuable skills for the business, and publicly defending the organization. Engaging in OCBs has been associated with increased productivity, efficiency, job satisfaction, commitment to the organization, and reduced counterproductive behavior (Herr et al., 2018). Georgakopoulos and Kelly (2017) found that one aspect of OCB that positively influences organizational performance and job performance is providing socio-emotional support to other employees. By fostering a supportive work environment, individuals are more likely to perform well and improve their job performance. OCB is regarded as a valuable organizational asset and a crucial element for employee success (Ågotnes et al., 2021; Ariza-Montesa et al., 2021; Georgakopoulos & Kelly, 2017). On the other hand, workplace bullying can have adverse effects on OCB and job performance. Studies have shown that perceived abusive monitoring of employees leads to reduced engagement in OCB activities (Dåderman & Ragnestål-Impola, 2019), and bullied victims may experience emotional exhaustion and burnout (Ibrahim & Hassanain, 2022). As a consequence, they may become less motivated, disengaged, and less likely to engage in OCBs or even exhibit organizational retaliatory behaviors (Keplinger & Smith, 2022; Georgakopoulos & Kelly, 2017). Georgakopoulos and Kelly (2017) and Matsson and Jordan (2022) demonstrated that OCB plays a mediating role between workplace bullying and job performance. Employees, who perceive their organization as supportive, providing relevant resources and assistance, are better equipped to handle bullying situations and are less likely to experience burnout (Fernández-del-Río et al., 2021). However, when perceived organizational support is low, bullied workers may feel unsupported and unable to compensate for their depleted resources, leading to poor OCBs, higher organizational retaliatory behaviors, and reduced work performance (Herr et al., 2018; Hartin, Birks, & Lindsay, 2018). In summary, Organizational Citizenship Behaviors (OCBs) have a significant mediating role in the relationship between workplace bullying and employee job performance (H4), as depicted in Figure 1. Thus, it is hypothesized:

H4: Organizational citizenship behaviours have a significant mediating role in the relationship between workplace bullying and employee job performance.

2.3.5. Perceived Organizational Support (POS) as a Moderator

According to Anasori et al. (2023), there exists a direct and significant negative relationship between employees' job performance and workplace bullying (WB). However, this negative impact of WB can be mitigated through the practice of positive organizational support (POS) if the organization's management provides adequate support to prevent WB. Several studies (Deschênes, 2023; Filipova, 2023; Kaur, 2023; Park et al., 2023) have found that POS plays a moderating role in preventing adverse or toxic practices like WB, which in turn leads to improvements in organizational citizenship behavior (OCB), job performance (JP), and employees' overall well-being (BO). Furthermore, the presence of POS has been associated with reduced workplace bullying (Anasori et al., 2023), decreased employee burnout (Park et al., 2023), and a reduction in psychological stress (Sheikh, 2023). Based on these findings, the current study proposes the following hypotheses for examination:

H5: Perceived Organizational Support plays a significant moderating role in the relationship between workplace bullying and employee job performance.

H6: Perceived Organizational Support plays a significant moderating role in the relationship between workplace bullying and psychological stress.

H7: Perceived Organizational Support plays a significant moderating role in the relationship between workplace bullying and employee burnout.

H8: Perceived Organizational Support plays a significant moderating role on the relationship between workplaceBullying and organizational citizenship behaviour.

2.4. Conceptual Framework

This study constructs a comprehensive conceptual framework that examines the relationship between workplace bullying and job performance in the ready-made garment (RMG) industry of Bangladesh. Grounded in the Job Demand Control Support (JDCS) model and two-factor theory (XY theory), the framework incorporates the moderating role of perceived organizational support (POS) and the mediating roles of psychological stress, burnout, and organizational citizenship behavior (OCB). The framework posits that workplace bullying negatively affects job performance both directly and indirectly, with POS acting as a buffer to mitigate these adverse effects.

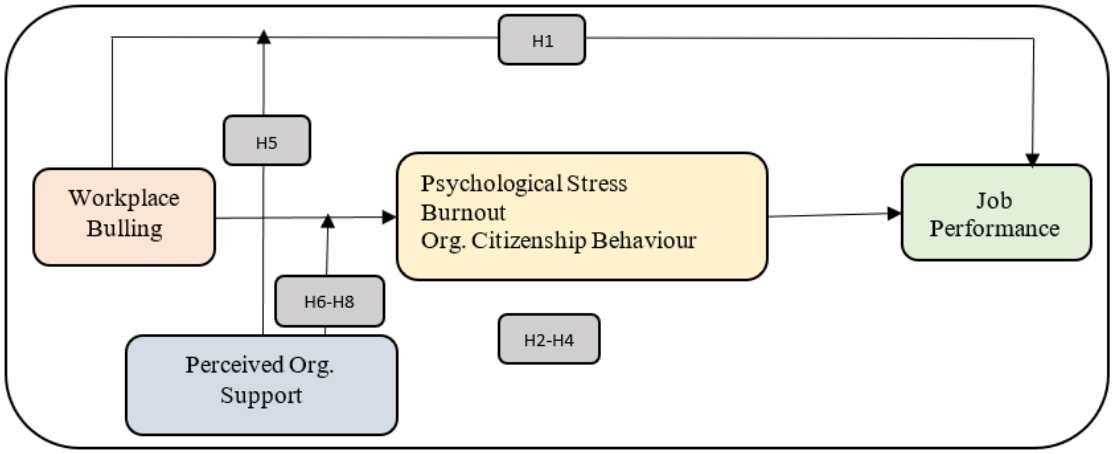


Figure 1: A Proposed Conceptual Framework.

3. METHODOLOGY

3.1. Measurements

We used a six-item workplace bullying scale adapted from Einarsen, Hoel, & Notelaers (2009), a sample item of which is "My supervisor insults me about my personality, attitudes, and private life." A six-item psychological stress scale adapted from Santor, & Coyne (1997); a sample item is "I had trouble keeping my mind on what I was doing." A six-item scale was adapted from Iverson, Olekalns, & Erwin (1998) to measure Burnout. One of these six items is "I feel emotionally drained from my work." We used a six-item scale adapted from Williams, & Anderson (1991) to measure Organizational Citizenship Behaviour; one item from it includes "I used to take time to listen to co-workers' problems and worries." A six-item Perceived Organizational Support scale adapted from Djurkovic, McCormack, & Casimir (2008); a sample item is "My organisation strongly considers my goals and values." A six-item scale was used to measure Job Performance adapted from Valaei, and Jiroudi (2016), the sample item is "My work efficiency is much higher than average". Each item had a five-point Likert scale ("1 = strongly disagree and strongly agree = 5").

3.2. Population, Sample, and Data Collection

The present survey study's respondents comprised of ready-made garment industry employees working in Gazipur District in Bangladesh. The total number of 1542 factories where 125422 employees are working in a different types of factories such as woven, neat, sweater, and jacket. So, the total number of employees as a study population is 125422. The sample size was calculated based on the Table of Krejcie and Morgan (1970), according to their recommendation 384 responses were collected through scheduled questionnaire technique. The questionnaire survey was distributed through face-to-face interections of the workers working in garment industry and the factories and workers were selected though two stages sampling technique using simple random probability sampling. The data was collected during the month of October, 2022.

4. DATA ANALYSIS

This study employed a two-stage method of data analysis named Partial Least Squares (PLS) Structural Equation Modeling-Artificial Intelligence Neural Networks (SEM-ANN) to test the model. Table 1 below indicates the existence of both linear and non-linear relationships in our model. Due to the presence of non-linear relationships, an SEM-ANN method is an appropriate approach as factor-based SEM and composite-based SEM are unable to handle non-linear relationships (Lee et al., 2020). The Smart-PLS was used to analyze the proposed hypotheses and the SPSS (v23) was employed for data treatment, CMB, and data linearity. The SEM-ANN method is preferred over multivariate logit or probit regression analysis due to its ability to handle complex relationships and capture nonlinearities in the data. SEM-ANN combines the advantages of both structural equation modeling and artificial neural networks, providing more flexibility and robustness in modeling intricate patterns within the data. It overcomes limitations of linearity assumptions in traditional regression approaches and allows for a more accurate and comprehensive analysis of interrelationships among variables. The ANN technique works like the human brain (Rehman et al., 2021), the ANN contains neurons, synopses, and axons and it can be trained to improve performance (Hew, Badaruddin, & Moorthy, 2017). The ANN links the input data to output data through artificial neurons and their interrelationships are kept in the hidden layers to increase the prediction capacity (Leong et al., 2019). According to V. H. Lee et al. (2020), the ANN cannot estimate the significance level of the relationships due to which ANN is unsuitable for hypothesis testing. Therefore, combining the two methods SEM and ANN are helpful to take advantage of both methods (Hidayat-ur-Rehman et al., 2022). First, the PLS-SEM is employed to estimate the significance of the exogenous variables, then the ANN is employed to examine the importance of the exogenous constructs in predicting the endogenous constructs (Lee et al., 2020).

Table 1: ANOVA Table.

ANOVA Table		Sum of Squares	df	Mean Square	F	Sig.	Linear
JP * BO	Deviation from Linearity	180.661	186	0.971	0.944	0.653	Yes
JP * OCB	Deviation from Linearity	189.625	213	0.890	0.844	0.880	Yes
JP * POS	Deviation from Linearity	120.820	132	0.915	0.881	0.792	Yes
JP * PS	Deviation from Linearity	235.446	189	1.246	1.705	0.000	No
BO * WB	Deviation from Linearity	235.988	199	1.186	1.727	0.000	No

4.1. Demographic Profile of the Respondents

After removing outliers and missing data, we obtained a valid and analysable sample size of 384 (response rate: 58.18%) to test our hypotheses. Most of the participants (i.e., 55.99%) were male; the rest (44.01%) were female; of these, age less than 20 was 10.94%, 20 to years was 54.69% which was height in percentage, 31 to 40 years was 28.65%, 41 to 50 was 5.21, and least was above 50 years that represent only 0.52%. The participant's income varies such as less than taka 15000 or fewer earners was 39.06%, taka 15000 to 20000 earners was 43.75% which was the height, taka 21001 to 25000 earners was 13.02%, and take above 25000 earners was only 4.17%. In the case of experience, the participants less than 1 year were 23.18%, 1 to 4 years' experience was 52.86%, 5 to 7 years' experience was 20.07%, 8 to 10 years' experience was 2.86% and the experience above 10 years was 1.04%.

4.2. Pre-Test and Pilot-Test

Since the workers cannot understand the English questionnaire, a Bengali version of questionnaire was employed to confirm proper understanding of the questionnaire for getting proper answers. We used Brislin's (1970) "committee approach," where one professor and one assistant professor in the related field, one bilingual lecturer, and two RMG industry managers were employed to evaluate the questionnaire. There are 10 garment workers were engaged who provided the ideas as how the other workers can easily understand, to prevent the confusion. We did modification on the questionnaire based on their opinions and recommendations. After the pre-test, we have collected 15 samples for the pilot study to see the internal consistency through Cronbach's alpha. However, all the constructs' reliability were higher than 0.70 which achieved the threshold of Sekaran (2003).

4.3. Common Method Bias (CMB)

The study examined the common method bias by observing the HTMT and inner VIF values. According to Nitzl (2016), CMB exists if the principal constructs are significantly correlated (r>0.90), however all the correlation values among the constructs are less than 0.90 (see table HTMT) confirming no CMB as the height correlation value is 0.549. Another way of observing CMB by examining the inner VIF values, if the VIF>3.30 indicates CMB may contaminate the model. For the current study, the height VIF is 1.870 (see table structural model assessment) which is less than the threshold values of 3.30 (Kock, 2015; Adedeji et al., 2020) confirming no issue of CMB.

4.4. Descriptive and Correlations of the Study

The descriptive statistics of the constructs and their intercorrelations are listed in Table 2 indicates that all of the constructs substantially correlated with job performance. The mean value of job performance had the lowest mean such as 2.535 while the burnout had the highest mean value, 3.632.

Table 2: Means, Standard Deviation, Reliabilities and Correlations of the Study Variables.

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	1.440	0.497	1.000									
2. Age	2.297	0.751	-.288**	1.000								
3. Income	1.823	0.811	-.201**	.459**	1.000							
4. Experience	2.057	0.799	-.248**	.689**	.559**	1.000						
5. WRB	3.220	0.706	0.043	.265**	-0.061	0.046	1.000					
6. PS	3.471	0.994	-0.029	.242**	-0.092	.114*	.550**	1.000				
7. BO	3.632	0.814	0.015	0.079	0.051	0.095	-.278**	.242**	1.000			
8. OCB	3.012	0.912	0.019	-.130*	0.048	0.029	-.470**	-.277**	.383**	1.000		
9. POS	2.585	0.869	-0.001	-.104*	.142**	0.051	-.388**	-.153**	.231**	.505**	1.000	
10. JP	2.525	1.170	-0.024	-0.013	.148**	0.057	-.235**	0.008	.235**	0.084	.783**	1.000

Note: n = 384, * p < .05, ** p < .01(2-tailed), CA are reported in the parentheses on the diagonal.

4.5. Data Analysis and Measurement Model Assessment Through Smart-PLS

After examining the preliminary data analysis such as the CMB, missing data, outliers, data normality and correlation of the variables, then we create a measurement model in Smart-PLS software 3.3.9 to assess the constructs' reliability, validity, convergent validity, discriminant validity, and internal consistency. When we find all the threshold values are achieved then we proceed for the second step in structural model to observe our proposed hypotheses are either supported or not (Hair, Hult, Ringle, &Sarstedt, 2017; Ringle, Wende& Becker, 2020). In measurement model, we run PLS-algorithm where we find the factor loadings of all the items were in between 0.675 to 0.901 obtained the cutoff values of Hulland (1999). The Average Variance extracted (AVE) values were greater than 0.5 (50%) that attained the threshold value recommend by Hair et al. (2017). These

confirmed the convergent validity of all items towards their constructs. In the case of internal consistency that was also confirmed as the Cronbach's Alpha and composite reliability were higher than 0.70 Hair et al. (2017). When all the required assessments like internal consistency and convergent validity are assured (see Table 3 and figure 2) then we check discriminant validity.

Table 3: Constructs validity and reliability.

Constructs	Items	Statement	FL	CA	CR	AVE
Burnout	BO1	I feel emotionally drained from my work.	0.842	0.908	0.928	0.684
	BO2	I feel burned out from my work	0.882			
	BO3	I've become more insensitive towards people since taking this job.	0.875			
	BO4	I really don't care what happens to other employees.	0.878			
	BO5	I don't feel good after working closely with my organization members.	0.733			
	BO6	I worry that this job is hardening me emotionally.	0.738			
Job Performance	JP1	My work efficiency is much higher than average.	0.834	0.932	0.946	0.745
	JP2	My work meets the expectations of my manager.	0.879			
	JP3	My standards of work quality are higher than the formal standards for this job	0.877			
	JP4	I strive for higher quality work than required.	0.891			
	JP5	I expect to be promoted faster than average because of my work performance.	0.844			
	JP6	I find real enjoyment and satisfaction in my job.	0.851			
Organizational Behaviour Citizenship	OCB1	I used to help others who have been absent.	0.831	0.920	0.938	0.715
	OCB2	I used to take time to listen to co-workers' problems and worries.	0.866			
	OCB3	I used to give my time willingly to help others who have work-related problems.	0.867			
	OCB4	I used to get support from supervisor with work (when not asked)	0.829			
	OCB5	I used to go out of way to help new employee	0.821			
	OCB6	I used to show genuine concern and courtesy toward my co-workers.	0.858			
Perceived Organizational Support	POS1	My organization strongly considers my goals and values.	0.845	0.937	0.950	0.761
	POS2	My organization helps me when I have a problem.	0.895			
	POS3	My organization really cares about my well-being.	0.901			
	POS4	My organization is willing to extend itself to help me perform to the best of my ability	0.900			
	POS5	My organization cares about my satisfaction at work.	0.875			
	POS6	My organization takes pride in my accomplishments at work.	0.816			
Psychological Stress	PS1	I felt that I could not shake off the blues even with help from my family or friends.	0.675	0.910	0.931	0.693
	PS2	I felt depressed.	0.875			
	PS3	I felt sad.	0.889			
	PS4	I felt that everything I did to perform a job, was a useless effort.	0.849			
	PS5	I had trouble keeping my mind on what I was doing.	0.836			
	PS6	My sleep was restless.	0.852			
Workplace Bulling	WB2	My colleagues refuse to share information with me which affects my work performance	0.890	0.943	0.955	0.779
	WB3	My supervisor gives me tasks with unreasonable deadlines	0.887			
	WB4	My supervisor insults me about my personality, attitudes, and private life	0.870			
	WB5	Having allegations made against me	0.880			
	WB6	I am the subject of excessive teasing and sarcasm	0.895			
	WB1	I got intimidating behaviors such as finger-pointing, invasion of personal space, shoving, blocking my way	0.873			

Note: CR: Composite Reliability; AVE: Average Variance Extracted; CA: Cronbach's Alpha

4.6. Discriminant Validity

We confirmed the discriminant validity through the Fornell Larcker and Hetrotrait and Monotrait (HTMT) Ratio. The Fornell Larcker results has been presented in Table 4 where it confirms the discriminant validity as the square root of AVE in the diagonal cells were higher than their below correlations values (Fornell & Larcker, 1981). In the case of HTMT, all the correlation values of all the constructs were less than 0.9 which confirms discriminant validity of all the constructs as per the recommendation of Hair et al. (2017). Check the discriminant validity in Fornell Larcker and HTMT in Table 4.

Table 4: Discriminant validity- Fornell Larcker and HTMT.

Constructs	Fornell Larcker						HTMT					
	BO	**JP**	**OCB**	**POS**	**PS**	**WB**	**BO**	**JP**	**OCB**	**POS**	**PS**	**WB**
BO	0.827											
JP	0.059	0.863					0.089					
OCB	0.017	0.205	0.845				0.081	0.219				
POS	-0.233	0.047	0.163	0.873			0.230	0.078	0.174			
PS	0.521	-0.140	-0.088	-0.412	0.832		0.549	0.147	0.099	0.441		
WB	-0.243	-0.237	-0.580	0.063	-0.240	0.883	0.260	0.253	0.619	0.069	0.252	

In Fornell larcker, the square root of AVEs are higher than the intercorrelation values.

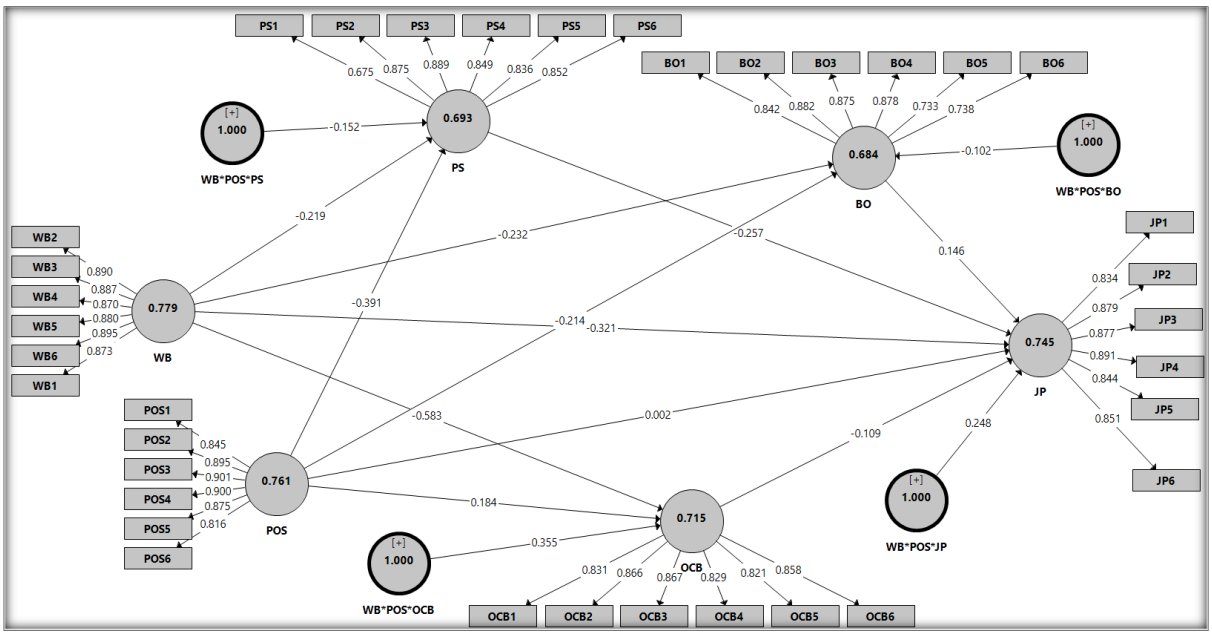


Figure 2: Measurement model with outer loadings and AVE values from PLS-Algorithm

4.7. Assessment of the Structural Model

In structural model assessment, we checked the inner VIF first to ensure the collinearity issue and it is been observed that the highest VIF value was 2.106 which is lower than the 5 confirms no collinearity issue recommended by (Hair et al., 2017). Similarly, we checked coefficient of determination through R^2, the effect size F^2, and the predictive relevance through Q^2. All these values were achieved their threshold values depicted in Table 5.

Table 5: Assessment of the structural model.

R-Square	**Endogenous Variables**	**R Square**		**R Square Adjusted**		0.26: Substantial, 0.13: Moderate, 0.02: Weak (Cohen, 1989)
	BO	0.118		0.111		
	JP	0.164		0.151		
	OCB	0.515		0.511		
	PS	0.241		0.235		
Effect Size (F-Square)	**Exogenous Variables**	**BO**	**JP**	**OCB**	**PS**	0.35: Large, 0.15: Medium effect, 0.02: Small effect (Cohen, 1989)
	BO		0.018			
	OCB		0.007			
	POS	0.052	0	0.069	0.201	
	WB	0.061	0.066	0.698	0.063	
Collinearity (Inner VIF)	**Exogenous Variables**	**BO**	**JP**	**OCB**	**PS**	VIF <= 5.0 (Hair et al., 2017)

	BO		1.404			
	OCB		2.106			
	POS	1.006	1.249	1.006	1.006	
	PS		1.660			
	WB	1.005	1.870	1.005	1.005	
	WB	**CCR**		**CCC**		
Predictive Relevance (Q-Square)	BO	0.074		0.563		Value larger than o indicates Predictive Relevance (Stone, 1974; Geisser, 1975)
	JP	0.117		0.637		
	OCB	0.363		0.596		
	PS	0.162		0.571		

Note: CCC=Construct Cross-validated Communality, CCR=Construct Cross-validated Redundancy.

4.8. Hypothesis Testing Results

For examining the proposed hypotheses, a 5000-resample bootstrapping procedure was used in Smart-PLS. The results are presented in Table 6 where the first prediction (H1), between workplace bullying and job performance, revealed significant since the value of p is 0.000 that is lower than 0.05, additionally the value of t is 4.828 that is greater than 1.96. The value of $\beta = -0.321$ that indicates that workplace bullying has a significant negative effect on job performance. However, the second assumption (H2) was related to the mediation role of psychological stress in between workplace Bullying and job performance and revealed significant as the $p < 0.001$, $\beta = 0.058$, $t = 3.364$. Since the t-value is greater than 1.96, and the p-value is lower than 0.05 that confirms a significant mediation effect. Additionally, both the value of LL (-0.027) and UL (-0.092) were found negative meaning zero not in between ensuring the mediation is significant. It also confirmed that the mediation is partial mediation due to their direct relation found to be significant. Additionally the second mediation prediction (H3) was related to the mediation effect of burnout in the relationship between workplace bullying and job performance. The revealed result showed a significant mediation of burnout since the value of p (0.007) is less than 0.05 and the t (2.687) is higher than 1.96. It also showed a partial mediation. However, the third mediation prediction (H4) was linked to the mediating effect of organizational citizenship behavior in between workplace bullying and job performance. The result showed no mediation effect since the p value (0.137) is higher than 0.05 and the value of t (1.490) is less than 1.96.

Furthermore, hypotheses H5, H6, H7, and H8 were related to the moderation effect of perceived organizational support (POS) on the relationship among workplace bullying (WB) and job performance (JP), WB and psychological stress (PS), WB and burnout (BO), and WB and organizational citizenship behaviour (OCB) revealed statistically significant as their p-values are 0.000, 0.002, 0.037, and 0.000 that are less than 0.05. However, POS strengthens the relationship between WB and JP, and between WB and OCB as the value of beta was positive. On the other hand, POS weakens the relationship between WB and PS, and WB and BO as their beta values are negative. It means the POS in RMG industry of Bangladesh is poor for which employees psychologically stressed and burnout. Table 6 and Figure 3 represent the proposed hypotheses results.

Table 6: Hypotheses testing result.

Hypotheses	**OS/Beta**	**Confidence Interval 95% Bias Corrected**		**T**	**P**	**Decision**
		LL	**UL**			
H1: WB -> JP	-0.321	-0.428	-0.177	4.828	0.000	Supported
H2: WB -> PS -> JP	-0.058	-0.027	-0.092	3.364	0.001	Supported
H3: WB -> BO -> JP	-0.034	-0.060	-0.011	2.687	0.007	Supported
H4: WB -> OCB -> JP	0.064	-0.014	0.154	1.490	0.137	Not Supported
H5: WB*POS -> JP	0.248	0.128	0.347	4.407	0.000	Supported
H6: WB*POS -> PS	-0.152	-0.246	-0.046	3.096	0.002	Supported
H7: WB*POS -> BO	-0.102	-0.196	-0.006	2.095	0.037	Supported
H8: WB*POS -> OCB	0.355	0.286	0.432	9.329	0.000	Supported

Note: OS: Original Sample; LL: Lower Limit; UL: Upper Limit; Significant; *$p < 0.05$

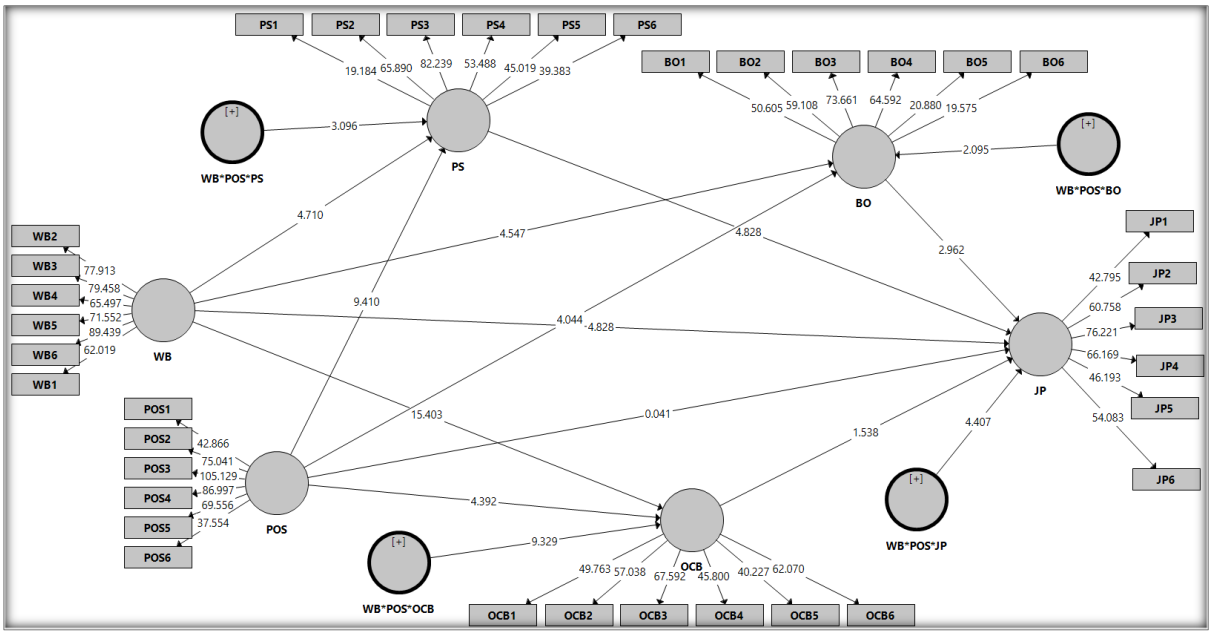


Figure 3: Structural model with inner model t-values

The interactive effect of POS on the relation between WB and JP is further illustrated in Figure 4. It revealed that the moderating effect of POS on the relationship between WB and JP. It explains that when the POS is high then the WB is low and subsequently the JP is high. Furthermore, when POS is low then the WB is high and eventually the JP is low. We conducted path analyses under both high (i.e., 1 SD above the mean) and low (i.e., 1 SD below the mean) levels of POS. The simple paths at low and high levels of POS for the relationship between WB and JP are shown in below Figure 4.

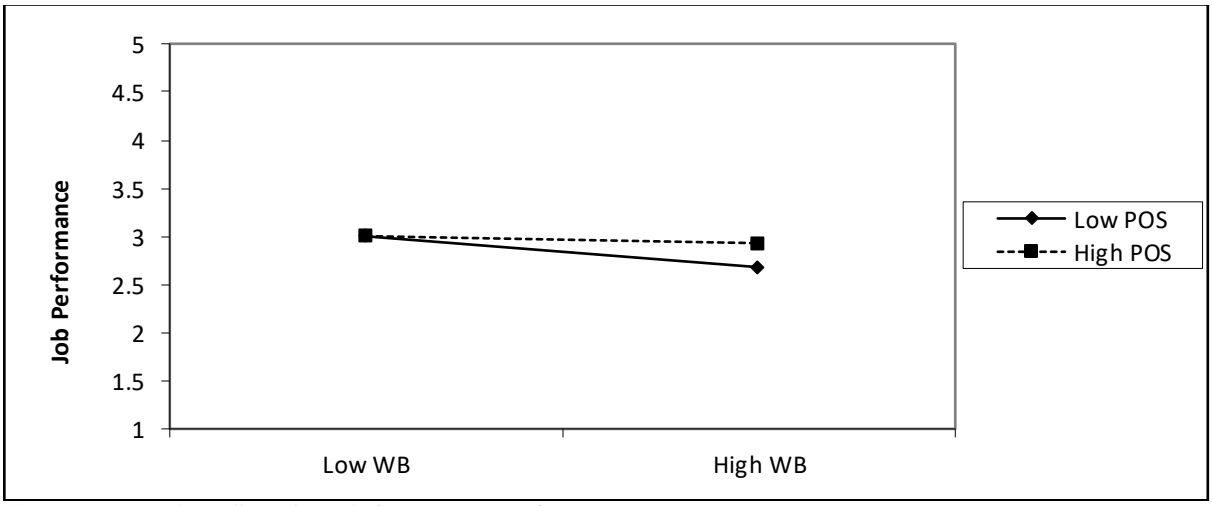


Figure 4: Interactive Effect of POS in between WB and JP.

In Figure 5, it explains the interactive effect of POS on the relationship between workplace WB and PS. It revealed that when the level of POS is high then the WB is low and the PS also less and when the level of POS was low then the WB was high and eventually the PS also high. We conducted the path analyses under both high (i.e., 1 SD above the mean) and low (i.e., 1 SD below the mean) levels of POS.

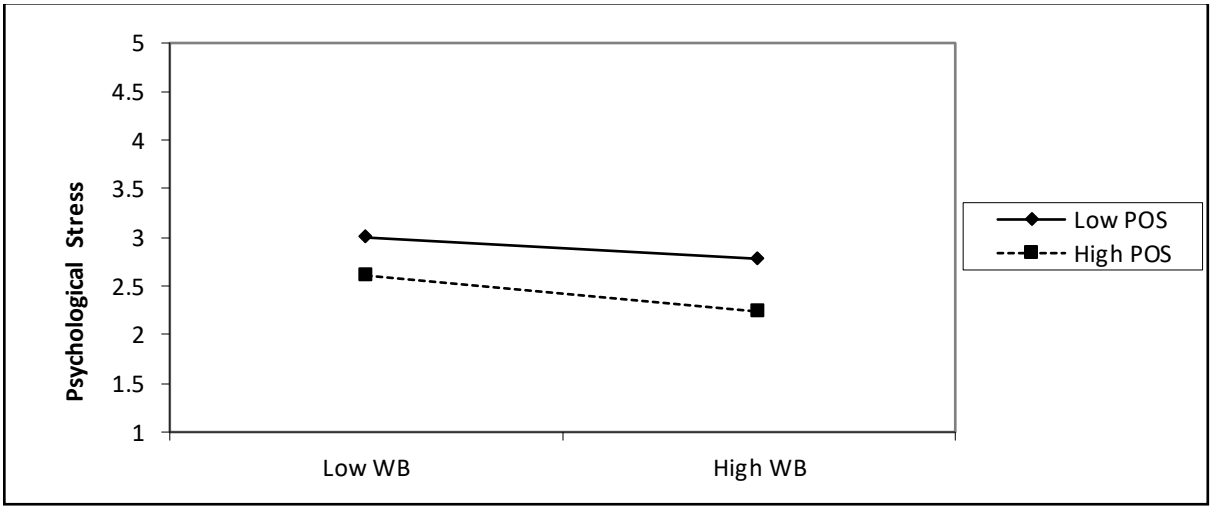


Figure 5: Interactive Effect of POS between WB and PS.

We also examine the interactive effect of POS on the relationship between BO and JP illustrated in Figure 6 further. It shows that when the POS was high then the low WB and subsequently low burnout. Furthermore, when the level of POS is low then the WB is high and eventually the BO also high. We conducted path analyses under both high (i.e., 1 SD above the mean) and low (i.e., 1 SD below the mean) levels of POS. The simple paths at low and high levels of POS for the relationship between WB and PS are shown in below Figure 6.

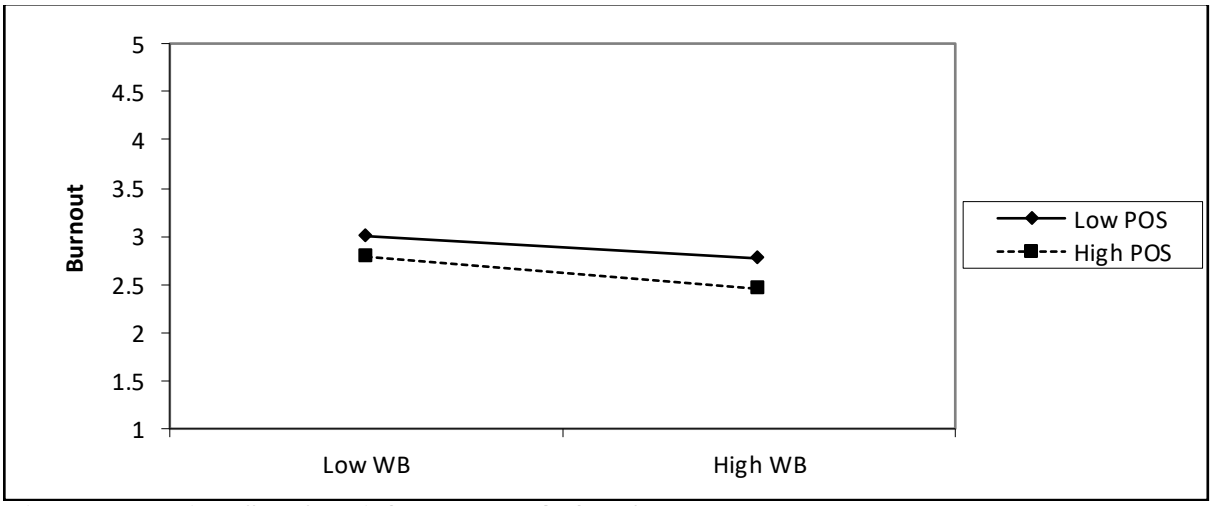


Figure 6: Interactive Effect of POS in between BO and Job Performance.

Furthermore, we examine the interactive effect of POS on the relationship between WB and OCB illustrated in Figure 7. It reveals that when the POS is high then the WB is low and the OCB also high, however when the POS is low then the WB is high and the OCB is low. We conducted path analyses under both high (i.e., 1 SD above the mean) and low (i.e., 1 SD below the mean) levels of POS. The simple paths at low and high levels of POS for the relationship between WB and OCB are shown in Figure 7.

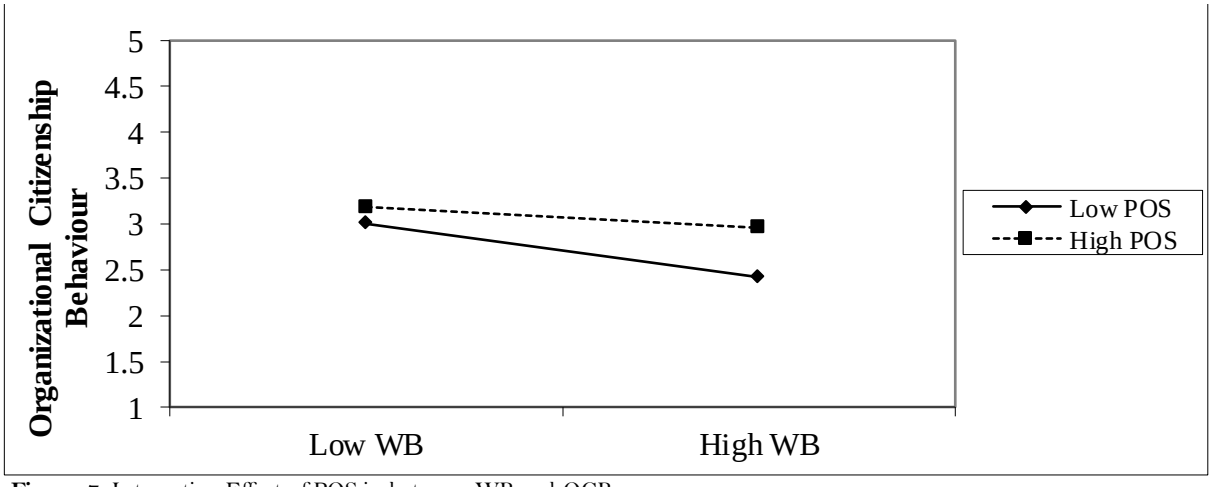


Figure 7: Interactive Effect of POS in between WB and OCB.

4.9. ANN Analysis

We employed multi-layer ANN containing input, hidden and output layers. For this purpose, statistical tool SPSS 23 was used. With the aim for deeper learning, two hidden layers of ANN architecture were employed for each output neuron (Mahdavifar & Ghorbani, 2019). To overcome the overfitting issue, a ten-fold cross-validation method was used. In terms of data allocation, 90% was allocated for training the ANN while 10% was assigned to test the prediction accuracy of the model. For hidden and output layers, the sigmoid activation function was sued and the generation of the number of hidden layers was set to automatics. As the JP and BO constructs have significant predictors, therefore two ANN models were created as shown in Figures 8 & 9.

For assessment of the predictive accuracy, we estimated the root mean squares of errors (RMSE) for training and testing processes. The RMSE results listed in Table 7 below indicate that the ANN models of the study have reasonable levels of predictive accuracy as the RMSE values are negligible (Leong et al., 2019). To assess the importance of exogenous constructs, sensitivity analysis was carried out using their normalized importance. The normalised importance results depicted in Table 8 indicate that OCB (86.4%) is the most important determinant of JP. The importance of other determinants of JP is ordered as BO (74.3%), PS (73.6%), and POS (57.9%). In ANN Model-B, WB is the only determinant of BO, therefore it is rational that the normalised relative importance of WB is 100%.

Table 7: RMSE Values during Training and Testing Stages.

	Model A						Model B					
	Training			Testing			Training			Testing		
	N	SSE	RMSE	N	SSE	RMSE	N	SSE	RMSE	N	SSE	RMSE
ANN1	262	7.737	0.172	122	3.484	0.169	267	8.314	0.176	117	3.959	0.184
ANN2	261	8.858	0.184	123	3.677	0.173	280	8.922	0.179	104	3.372	0.180
ANN3	261	8.965	0.185	123	4.270	0.186	265	9.003	0.184	119	3.288	0.166
ANN4	260	8.204	0.178	124	3.096	0.158	270	9.281	0.185	114	3.598	0.178
ANN5	263	8.776	0.183	121	4.161	0.185	279	8.950	0.179	105	3.344	0.178
ANN6	277	8.740	0.178	107	3.197	0.173	261	8.471	0.180	123	4.021	0.181
ANN7	264	8.232	0.177	120	3.602	0.173	265	8.642	0.181	119	3.893	0.181
ANN8	270	6.681	0.157	114	3.016	0.163	272	9.154	0.183	112	3.337	0.173
ANN9	268	7.664	0.169	116	3.316	0.169	251	8.194	0.181	133	4.091	0.175
ANN10	278	10.706	0.196	106	3.367	0.178	270	8.733	0.180	114	3.534	0.176
AVG		8.456	0.178		3.518	0.173		8.766	0.181		3.644	0.177
St Dev		1.058	0.011		0.423	0.009		0.360	0.003		0.317	0.005

Note:

1. N = number of samples, RMSE = root mean square of errors.
2. In Model A, BO, OCB, POS, and PS served as the input neurons; while JP served as the output neuron.
3. In Model B, WB served as the input neurons; while BO served as the output neuron.

Table 8: Sensitivity Analysis with Normalized Importance.

Neural Network	Model A (Output Neuron: JP)				Model B (Output Neuron: BO)
	BO	OCB	POS	PS	WB
ANN1	0.238	0.239	0.283	0.240	1.0
ANN2	0.260	0.351	0.161	0.227	1.0
ANN3	0.294	0.343	0.086	0.276	1.0
ANN4	0.180	0.300	0.410	0.110	1.0
ANN5	0.292	0.317	0.118	0.273	1.0
ANN6	0.208	0.352	0.233	0.207	1.0
ANN7	0.213	0.292	0.240	0.255	1.0
ANN8	0.219	0.247	0.308	0.226	1.0
ANN9	0.200	0.251	0.286	0.262	1.0
ANN10	0.079	0.344	0.250	0.327	1.0
Average relative importance	0.218	0.304	0.238	0.240	1.000
Maximum relative importance	0.294	0.352	0.410	0.327	1.000
Normalized relative importance (%)	74.3%	86.4%	57.9%	73.6%	100%

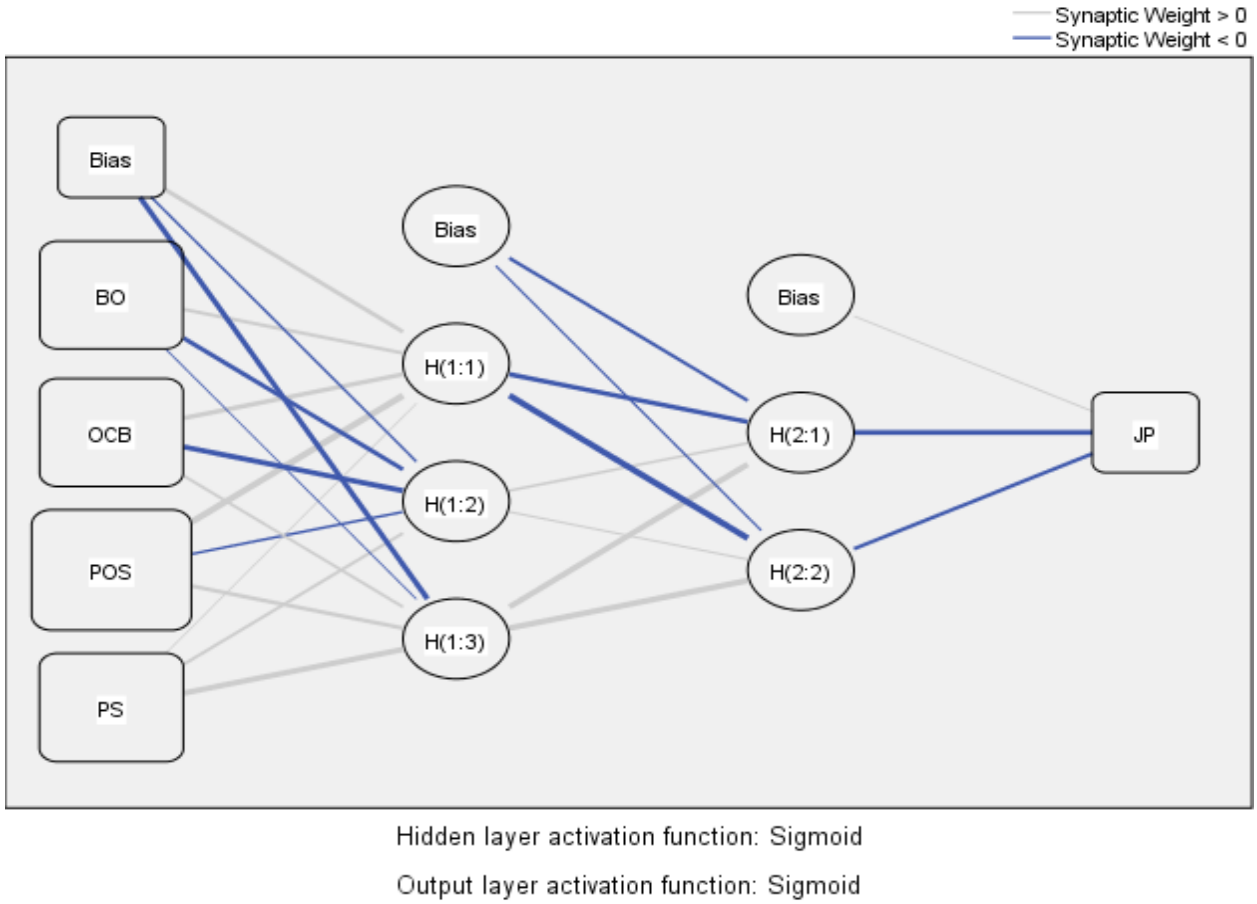


Figure 8: ANN Model-A.

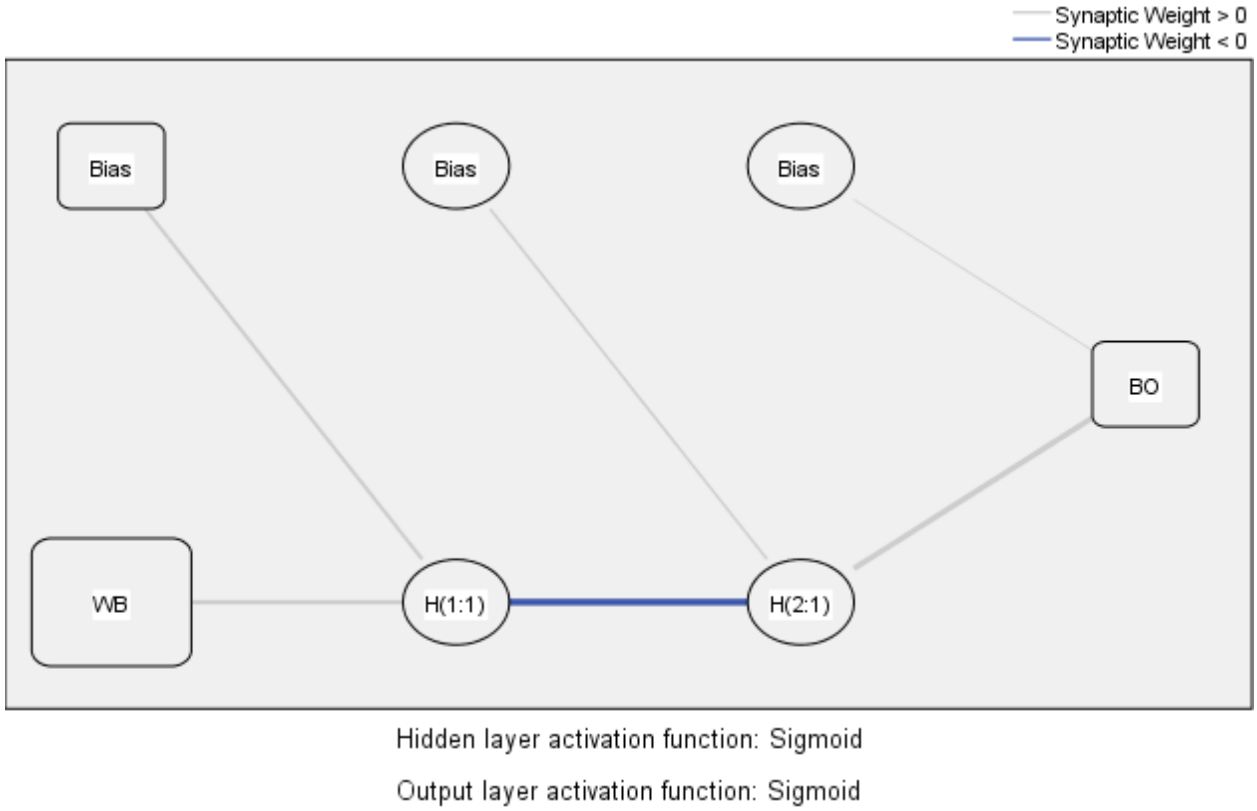


Figure 9: ANN Model-B.

5. DISCUSSION

The primary aim of this study is to investiagte the impacts of workplace bullying on employee job performance in the garment industry of Bangladesh. To attain this goal, the research suggested a framework that combines the Job Demand Control Support (JDCS) model and the two-factor theory (XY theory) with additional theories such as Organizational Citizenship Theory and Social Exchange Theory. To validate the proposed

model, a two-staged SEM-ANN approach was used. The SEM method assisted in testing the hypothesized relationships while the ANN method enabled the validation of SEM outcomes. Thus, this study inspires the use of multi-analysis which is capable to handle both linear and non-linear associations in the same model. Empirical results of the study present that the R^2 value of job performance (dependent variable) is 0.164. It indicates that validated model of the study has a moderate level explanatory capacity to portray the employee job performance in a workplace bullying environment. It is also evident from the results given in Table 5 that the organizational citizenship behaviour (OCB) has the largest effect size which means that removal of OCB can lead to extra-ordinary decrease in the R^2 value of JP. It is important and interesting to mention that the ANN results also provided support to this finding showing 86.4% normalized relative importance of OCB for the target construct JP.

This research proposed in hypothesis (H1) the negative impacts of workplace bullying on employee job performance which was confirmed. It indicates that workplace bulling is the mistreating act that exists in the work place of RMG industry in Bangladesh. Therefore, it creates stresses, anxiety and depression that negatively effects workers" efficacy and productivity. A recent study (Ahmed & Uddin, 2022; Gazi et al., 2021) found that the supervisor used bullying as a supervisory tool to control the workers. Since 80 percent of garment workers are women and most of them belong to a poor family, therefore no resist comes from the women workers if they are been bullied by supervisors or quality controllers or higher authority. It's a vulnerable situation where top management also support this kind of abusive supervision as the top management are just concerned about their production and exporting the goods. On the other hand, the government cannot impose the labour law properly to protect the workers' rights as because of the RMG industry plays a vital role of the country's economy as it contributes 81.82% of total export of the country. The first generation of the RMG owners were mostly illiterate and they were also garment employees before, for which they are really ignorant about the modern tools and techniques used to motivate the employees for improving workers' productivity. Though offspring of the garment industry owners' are literate and they have a strong feeling about the workers' right, creating good culture, treating the employees in a humanly manner. They possess knowledge of various management theories, such as organizational citizenship behaviors, servant leadership, soft-HRM practices, and social exchange theory. These theories aim to enhance employees' motivation, morale, happiness, and overall satisfaction, thereby fostering increased productivity and engagement in their work.

Additionally, this study draws on the JDCS model to explore the interplay between job demands, job control, and social support concerning workplace bullying and mistreatment. By utilizing this model, researchers can gain valuable insights into the factors that make certain employees more susceptible to bullying and abusive behaviors in their work environment. Within this context, financial and economic uncertainties, burdens, and turbulent conditions are regarded as job demands that can impose additional stress on employees. Certain workers' limited education and lack of responsibility might lead to reduced job control and decision-making power. Factors like poor financial conditions, job insecurity, and inadequate payment can significantly impact employees' sense of autonomy and control over their work. Furthermore, the presence or absence of social support from supervisors and colleagues plays a crucial role in how employees cope with job demands and mistreatment in the workplace. However, due to the scarcity of training to mid-level/ lower level management regarding to improve employees' performance through good and humanly behaviours with workers. Therefore, workers are still suffering by abuse, bullying, physical, psychological, and sexual harassment that are responsible for low workers' performance (Alam, Hassan, Bowyer, & Reaz, 2020; Yuan et al., 2022). The only way that is working to reduce this vulnerable situation is the social compliance audit done by the foreign buyers based on their Code of Conduct (COC). In auditing process, the COC auditor interview the workers about the human rights issues including bulling and harassment for which the factories may be banned for placing the work order if these issues found exsist (Alam et al., 2019; Gazi et al., 2022).

Findings of the study confirmed the mediating role of psychological stress in the relationship between workplace Bullying and employee job performance thus supporting the Hypothesis H2. The RMG workers in Bangladesh are psychologically stressed due to bullying at workplace by supervisors and simultaneously they are under pressured by the social element such as house rent owners due to delayed or non-payment of house rent, and groceries shop payment which are also due to low wage package. Sometime they become sexually victim by the local mustan (mafia). Therefore, they do not have any honour and dignity in the society. Thus, this situation creates a tremendous psychological stress. It is found from different studies that if the workers are psychologically stressed that make a negative effect on work performance and work quality. When their quality of work of daily production targets deteriorate due to psychological stress again the bullying starts. So, the loop continues for ever resulting the RMG employees performance is the lowest as compared with its competitors such as China, Vietnum, India, Pakistan, Indonesia, Srilanka, and Thailand etc. (Alam et al., 2021). Hence, it is recommended that the organizations should minimize psychological stress to improve the job performance of their employees. Organizations and the manager are supposed to recognize the inner and hidden potentials and capability of the workers and accordingly engaged them. It is a psychological phenomenon that workers deliver best when their interest, like and dislikes are care about. It will not only improve physical interactions, develop trust, and will create social, emotional, psychological, and ethical morals. This will help in reducing work place bulling and will improve workers' productivity and thought puts. The outcomes of this research confirmed the

mediating role of burnout between the relationship WB and JP supporting hypothesis H3. It is evident from the study that workplace bullying responsible for burnout. The result also in lines with other study findings such as Alam et al. (2017) found that workplace bullying seriously hampered to the workers physically, emotionally, and mentally caused to burnout. This burnout causes for tiredness, sickness for which workers cannot concentrate their works attentively that decline the workers' job performance (Alam et al., 2018). Empirical outcomes rejected the fourth hypothesis (H4) proposing the mediating role of Organizational citizenship behaviours (OCB) between the WB and JP. It is evident from the study that OCB does not play a significant mediating role in between WB and JP which is due to the worse situation of working culture and environment. The OCB exists when there is a strong humanly nurture of employees, employees to be treating as human capital. In contrary, they are being treating brutally and inhumanely for which workers does not have OCB. Although the OCB deceases the WB and increases JP, but due to minimal existence of OCB, WB prevails and JP is affected negatively. The next hypothesis H5 is about the moderating role of Perceived Organizational Support (POS) between the WB and JP which was also supported by empirical results. It indicates that for higher values of POS, lowering the WB and higherer the employee performance. The organizations should provide complete support to their employees if they aim to improve their job performance. Similarly, the employees should be given assurance that the organization will fully support him/her against any sort of WB.

Hypothesis H6 proposed moderating role of POS between the relationship WB and PS. Empirical outcomes supported this proposition which indicates that higher level of POS weaken the WB and its effect on PS and vice versa. Management must understand the psychological and human relation aspects of managing, supervising, and monitoring the workers to get the highest performance from them. Due to the bullying, workers mind become distorted and remain disturb that creates huge pressure on their psychology that negatively affect their performance. Thus the management sold take disciplinary action in against of any kind of bullying in their organization. The managers can utilise this finding to deal with the WB and decrease psychological stress of their subordinates. The moderating role of POS (H7) between the relationship WB and BO was also confirmed. Since the presence of POS reduces the bullying and BO that creates a peace of mind of workers ultimately positive effect on their performance. Therefore, it recommends that the perceptions of employees about the availability of organisational support in case of WB can lessen their burn out leading to enhance performance. The last hypothesis H8 proposing the moderating role of POS between the relationship of WB and OCB was also established by statistical analysis. It suggests that the POS can lead to higher organizational citizenship behaviour that in turn gives more confidence to employees resulting higher performance. Workers are considered as capital assets, which need to be retained and promoted for the synchronous organizational performance. The findings of the study indicate that the top management should develop a bully-free working environment in the garment industry in Bangladesh. The garment is the dominant sector in the Bangladesh economy and can be boosted if the workers are provided with social, emotional, moral, ethical, psychological, and economic support.

5.1. Theoretical Implications

The present study provides significant theoretical contributions by deepening the understanding of workplace bullying and its detrimental effects on job performance, particularly within the ready-made garment (RMG) industry in Bangladesh. Drawing from established frameworks such as the Job Demand Control Support (JDCS) model and the two-factor theory (XY theory), this research extends their applicability to the socio-economic landscape of developing nations. The integration of Social Exchange Theory (SET) and Organizational Citizenship Theory (OCT) into the analysis enriches the theoretical landscape, offering a multifaceted perspective on how workplace bullying influences job performance, psychological stress, burnout, and organizational citizenship behavior (OCB). This study's application of the twofold SEM-ANN (Structural Equation Modeling and Artificial Neural Network) approach represents a methodological advancement in the exploration of non-linear relationships in organizational behavior research. While traditional SEM methods have been instrumental in confirming hypotheses, ANN techniques facilitate the identification of complex, hidden patterns in data, thus enhancing the robustness of theoretical models. By demonstrating the viability of this hybrid approach, the research underscores the need for more sophisticated analytical frameworks in studying workplace dynamics. Moreover, the study highlights the mediating roles of psychological stress and burnout, reinforcing the argument that workplace bullying not only directly impairs job performance but also does so indirectly through psychological mechanisms. This adds to the growing body of literature that underscores the psychological toll of workplace mistreatment and expands the scope of JDCS by emphasizing the importance of social support as a moderating variable. The findings also challenge the conventional assumption that Organizational Citizenship Behavior (OCB) can consistently mitigate the negative effects of workplace bullying. Contrary to prevailing literature, the absence of a significant mediating role for OCB suggests that under certain adverse conditions, particularly in underdeveloped industries with weak organizational culture, OCB may not thrive as anticipated. This deviation calls for further theoretical refinement in the conceptualization of OCB's resilience in hostile work environments. In sum, this research enriches the theoretical discourse on workplace bullying by unveiling the nuanced interplay between various organizational factors, psychological states, and employee performance. It invites scholars to explore the contextual and cultural dimensions of workplace bullying, emphasizing the need for theory development that accounts for diverse industrial and socio-economic settings.

5.2. Practical Implications

The findings of this study yield critical insights for managers, policymakers, and organizational leaders striving to enhance employee well-being and productivity within the garment industry of Bangladesh. The negative correlation between workplace bullying and job performance underscores the urgent need for organizations to implement comprehensive anti-bullying policies. By fostering a culture of mutual respect and open communication, companies can mitigate the adverse effects of bullying, subsequently enhancing overall productivity. One of the primary practical takeaways is the importance of perceived organizational support (POS) as a buffer against workplace bullying. Organizations should prioritize the development of supportive mechanisms, such as confidential reporting channels, counseling services, and regular anti-bullying training for supervisors and employees alike. Such initiatives not only reduce psychological stress and burnout but also promote employee engagement and satisfaction. Additionally, the study highlights the critical role of leadership in shaping workplace dynamics. Managers should be trained to identify signs of bullying and intervene promptly to prevent escalation. Emphasizing leadership styles that align with empathy, active listening, and inclusive decision-making can help create a positive work environment, thereby reducing instances of bullying. Moreover, the implementation of employee assistance programs (EAPs) can offer professional support to workers experiencing psychological stress, further reinforcing the organization's commitment to employee well-being. The findings also suggest that interventions aimed at enhancing organizational citizenship behaviors (OCB) should focus on fostering a sense of community and shared purpose among employees. While OCB alone may not fully mediate the effects of workplace bullying, its promotion can still contribute to a healthier organizational culture in the long run. Lastly, this research underscores the importance of compliance with international labor standards and social audits. Garment factories must adhere to ethical guidelines set by global buyers, ensuring that workplace bullying and harassment are systematically addressed. By aligning business practices with international best practices, organizations can not only improve employee morale but also enhance their global competitiveness.

5.3. Limitations and Future Direction

Despite making significant theoretical and practical contributions, this study has several limitations that warrant consideration. Firstly, the research design relied on a cross-sectional survey, which hinders the establishment of causal relationships between variables. To overcome this limitation, future research should consider conducting longitudinal studies to observe the long-term effects of the variables on job performance and well-being (WB) over time. Longitudinal studies would provide a more comprehensive understanding of how these factors interact and evolve over an extended period. Dealing with causality and the lack of longitudinal data is challenging but not impossible. Strategies include using caution with cross-sectional data, employing experimental and quasi-experimental designs, using causal inference techniques, relying on prior research, considering simulations, and utilizing longitudinal surveying. It's vital to remain cautious and consult experts to strengthen findings.

Secondly, the study was confined to the Garment Industry in Bangladesh, which may limit the generalizability of the findings to other industries and geographical regions. To enhance the external validity of the results, researchers could test the proposed model in diverse industries and locations. Such replications could unveil potential variations and shed light on how contextual factors impact job performance and well-being on an international scale. Thirdly, while the study examined various factors influencing job performance and well-being, it did not explore the potential moderating role of employees' financial positions. Future research could investigate how financial stability or insecurity may influence the relationship between the identified factors and individuals' endurance capacity in the workplace. This addition would help provide a more nuanced understanding of the complex interplay between personal financial situations and work-related outcomes. Fourthly, this study predominantly employed a quantitative approach, limiting the depth of insights into the phenomenon under investigation. To overcome this limitation, future scholars could adopt mixed-method research, combining qualitative and quantitative data collection techniques. Qualitative methods such as interviews or focus groups could provide richer, contextualized insights into the experiences and perceptions of employees concerning job performance and well-being, complementing the quantitative findings.

5.4. Conclusion

The present study provides compelling evidence of the detrimental impact of workplace bullying on employee job performance in the Bangladeshi garment industry. By employing a twofold SEM-ANN approach, the research reveals that workplace bullying directly reduces job performance and indirectly contributes to poor outcomes through psychological stress and burnout. The moderating role of perceived organizational support highlights the potential for mitigating these adverse effects, emphasizing the importance of fostering a supportive and inclusive workplace culture. Key findings from this research suggest that while organizational citizenship behavior (OCB) plays a vital role in organizational success, it does not significantly mediate the relationship between workplace bullying and job performance within the garment industry. This underscores the pressing

need for targeted interventions that address workplace bullying directly, rather than relying solely on enhancing discretionary employee behaviors. The study's implications extend beyond academia, offering practical recommendations for industry leaders and policymakers. Addressing workplace bullying not only improves individual employee well-being but also enhances organizational productivity and sustainability. As Bangladesh continues to strengthen its position as a global leader in garment production, fostering a safe and supportive work environment will be essential in ensuring long-term growth and competitiveness. In conclusion, this study serves as a critical reminder of the pervasive issue of workplace bullying and its far-reaching consequences. By advancing theoretical understanding and offering actionable insights, the research paves the way for more resilient and employee-centric organizational practices, ultimately contributing to a more equitable and productive workforce.

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