How Do Job Happiness Factors Affect Building Construction Workers in Bangladesh?: The Moderating Role of Monitoring System


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Abstract: This study aims to investigate the factors that influence job happiness among building construction workers in Bangladesh. The research used a quantitative research design and collected data from 290 construction workers through a structured questionnaire. The collected data were analyzed using descriptive statistics and structural equation modeling. The study used both primary and secondary data sources. In this study, we used a structured questionnaire, with 1 indicating strongly disagree and 5 indicating strongly agree. A purposive sampling technique was used to collect data from Bangladesh construction sector. The research findings revealed several factors that contribute to the job happiness of construction workers. These factors include inspiration, personal traits, and working condition. This study also revealed that moderating factors such as the monitoring factor system can improve job happiness in this sector. Overall, the study suggests that employers in the construction industry should focus on providing inspiration, personal traits, and working conditions to their workers. By addressing these factors, construction companies can improve the job happiness of their workers, which can lead to increased productivity.

Keywords: human relations, inspiration, job happiness, monitoring, personal traits, working condition, construction worker, Bangladesh.

工作幸福感因素如何影响孟加拉国的建筑工人？：监控系统的调节作用

摘要：本研究旨在调查影响孟加拉国建筑工人工作幸福感的因素。该研究采用定量研究设计，通过结构化问卷收集了290名建筑工人的数据。使用描述性统计和结构方程模型对收集的数据进行分析。该研究使用了主要和次要数据源。在本研究中，我们使用了结构化问卷，1表示非常不同意，5表示非常同意。使用有目的抽样技术从孟加拉国建筑部门收集数据。研究结果揭示了影响建筑工人工作幸福感的几个因素。这些因素包括灵感、个人特质和工
1. Introduction

Job happiness is an essential factor in determining the well-being and productivity of workers in any industry. In the construction industry, job happiness is important not only for the individual worker but also for the success of the project and the safety of all those involved. In the literature review, we will explore the relationship between various factors, including human relations, personal traits, working conditions, inspiration, and monitoring, with job happiness among construction workers. Human relations, including communication, cooperation, and teamwork, have been found to have a positive impact on job happiness among construction workers [1]. Positive human relations can enhance job happiness and promote a sense of belonging among workers, leading to higher levels of job happiness. Personal traits such as optimism, self-efficacy and resilience have also been found to be positively associated with job happiness among construction workers. Workers who possess these traits are better able to cope with job demands and stress, leading to higher levels of job happiness. Working conditions, including safety, equipment, salary, workload, job security, and welfare facilities, have also been found to be important predictors of job happiness among construction workers [2]-[4]. Workers who have better working conditions are more likely to experience positive emotions and job fulfillment, leading to higher levels of job happiness. Inspiration, which includes job happiness, organizational commitment, and work inspiration, has been found to be positively associated with job happiness among construction workers [4]. Workers who are inspired by their work and committed to their organization are more likely to experience job fulfillment, leading to higher levels of job happiness. Monitoring, which includes supervision, feedback, and performance appraisal, has also been found to play a positive role in promoting job happiness among construction workers [5]-[6]. Workers who perceive higher levels of monitoring are more likely to experience positive emotions and job fulfillment, leading to higher levels of job happiness.

Overall, these studies suggest that various factors, including human relations, personal traits, working conditions, inspiration, and monitoring, can have a significant impact on job happiness among construction workers. By understanding these factors, employers can take steps to enhance job happiness, leading to a more productive and safer work environment for everyone involved.

1.1. Research Questions

✓ What are the factors that contribute to job happiness among building construction workers in Bangladesh?
✓ What strategies can construction companies in Bangladesh implement to improve the job happiness of their workers?
✓ How does the monitoring system as a moderator of building construction workers in Bangladesh influence their job happiness?

1.2. The Objective of the Study

The objective of the study on job happiness factors affecting building construction workers is to identify the key factors that contribute to the happiness of workers in the construction industry. This study aims to explore various factors such as inspiration, personal traits, human relations, monitoring, and working conditions that can influence the happiness of construction workers.

2. Literature Review

2.1. Personal Traits and Job Happiness

Numerous studies have examined the relationship between personal traits and job happiness. Positive traits such as optimism, self-efficacy, emotional intelligence, and work ethic have been found to be associated with higher levels of job happiness. Self-efficacy, which is the belief in one’s ability to perform tasks successfully, has been found to be positively associated with job happiness [7]. Emotional intelligence, which refers to the ability to recognize, understand, and manage emotions in oneself and others, has also been found to be positively associated with job happiness [8]. Workers with high emotional intelligence are better equipped to manage workplace relationships, handle stress, and communicate effectively, leading to higher levels of job happiness. However, not all personal traits have a positive
relationship with job happiness. For example, neuroticism, which is the tendency to experience negative emotions, has been found to be negatively associated with job happiness [9]. Similarly, individuals with a low level of conscientiousness, which refers to the tendency to be organized, responsible, and reliable, tend to have lower levels of job happiness [10]. To conclude, personal characteristics significantly impact job happiness. Optimism, self-efficacy, emotional intelligence, and work ethic have positive associations with job happiness, whereas negative traits such as neuroticism and low conscientiousness are negatively associated with job happiness. Employers can enhance positive personal traits by offering training, coaching, and mentoring to cultivate more positive and gratifying work atmosphere.

H1: There is a positive relationship between personal traits and job happiness.

2.2. Human Relations and Job Happiness

Human relations involve how people interact within an organization and their relationships with each other. The concept of human relations is linked to job happiness as it highlights the importance of establishing a positive and supportive workplace where employees feel respected and valued. Several studies have investigated the connection between human relations and job happiness. For instance, it was revealed that job happiness was linked to social support from colleagues and supervisors, which is a critical element of human relations [11]. As found in [12], staff who felt a sense of belonging to their organization were more likely to be satisfied with their work, demonstrating the significance of creating a favorable organizational culture that promotes community and belonging. Additionally, according to [13], communication, leadership, and teamwork were factors that contributed to job happiness in the manufacturing sector. These are all human relation aspects, implying that developing positive work atmosphere that supports teamwork, effective communication, and supportive leadership can improve job happiness. As proposed in [14], organizations can increase job happiness by using the skills and commitment of their entire workforce, which necessitates teamwork and collaboration, and provides employees with a greater say in decisions that impact their work. Job happiness can be enhanced by being part of a team, tackling challenging and innovative tasks, participating in decision-making, and being acknowledged for outstanding accomplishments [15]. To sum up, building positive human relations is crucial for improving job happiness among employees. Organizations that prioritize establishing a supportive and favorable work environment, encouraging a sense of community, and promoting effective communication, leadership, and teamwork can boost job happiness in their employees.

H2: There is a positive significant relationship between human relations and job happiness.

2.3. Inspiration and Job Happiness

Job happiness and inspiration are important factors that influence job happiness and employee well-being. Research in this area has focused on exploring the relationship between inspiration and job happiness as well as identifying the factors that contribute to both inspiration and job happiness. In this literature review, we examine the recent research on inspiration and job happiness, with a focus on studies published since 2021. Recent research suggests that inspiration is positively related to job happiness. For example, [16] found that inspiration was positively associated with job happiness among a sample of employees in the IT industry in China. Another study [17] found that inspiration mediated the relationship between job resources and job happiness among Pakistani healthcare workers. In addition, as found in [18], coworker support, transformational leadership, and meaningful work were all positively related to inspiration among Chinese employees [19].

H3: There is a positive significant relationship between inspiration and job happiness.

2.4. Working Conditions and Job Happiness

As stated by [14], the quality of working conditions and workplace facilities plays a vital role in influencing both job happiness and productivity. Employees are increasingly inclined to change jobs in pursuit of better working conditions. Hence, it is imperative to prioritize the provision of satisfactory work conditions and facilities to enhance job happiness. This was exemplified in the research on job happiness among South African Quantity Surveyors [15]. Despite working in consistently unsafe conditions, a significant number of respondents emphasized the significance of secure working conditions.

H4: There is a positive relationship between working conditions and job happiness.

2.5. Job Happiness

In addition to inspiration, several recent studies have explored the factors that contribute to job happiness. For example, as found in [19], job autonomy, job happiness, and social support were all significant predictors of job happiness among Chinese employees. According to [20], job resources, job demands, and job crafting were all important factors that contributed to job happiness among Korean employees. Recent research suggests that inspiration is positively related to job happiness and that both inspiration and job happiness are influenced by various factors in the workplace. Factors such as workplace spirituality, coworker support, transformational
leadership, meaningful work, job autonomy, job happiness, social support, job resources, job demands and job crafting have all been found to contribute to inspiration and job happiness. These findings have important implications for employers and managers who seek to promote employee well-being and job happiness.

2.6. Moderating Effect of the Monitoring Constructs on Job Happiness

The moderating effect of monitoring job happiness among Malaysian construction workers was investigated in [5]. The study found that monitoring had a significant moderating effect on the relationship between job happiness and turnover intention among construction workers. Workers who perceived higher levels of monitoring reported lower turnover intention, indicating that monitoring can play a positive role in promoting job happiness and job satisfaction among construction workers. According to [6], the moderating effect of monitoring was investigated on the relationship between job stress and job happiness among Korean construction workers. The study found that monitoring had a significant moderating effect on the relationship between job stress and job happiness. Workers who perceived higher levels of monitoring reported higher levels of job happiness, indicating that monitoring can mitigate the negative effects of job stress on job happiness. Overall, these studies suggest that monitoring can have a positive moderating effect on job happiness among construction workers. Workers who perceive higher levels of monitoring are more likely to experience positive emotions and job fulfillment, leading to higher levels of job happiness.

H5: There is a positive relationship between monitoring and job happiness.

H6: Monitoring constructs can moderate between personal traits and job happiness.

H7: Monitoring constructs can moderate inspiration and job happiness.

H8: The monitoring construct can moderate human relations and job happiness.

H9: The monitoring construct can moderate working conditions and job happiness.

3. Research Method

3.1. Conceptual Framework

The objective of this research study is to determine how five distinct factors, namely human relations, inspiration, personal traits, and working conditions, contribute to job happiness within the construction industry in Bangladesh. To explore the impact of these four factors (personal traits, inspiration, human relations, and working conditions) on job happiness, a single moderator, ‘monitoring,’ was introduced to examine the moderating effects. The model representing these relationships is illustrated in the accompanying Figure 1.

3.2. Nature of Data, the Selection of Respondents, and Sampling Technique

In this study, we decided to use primary data because secondary data was deemed unsuitable. We gathered perception-based data from 290 construction workers in various districts of Bangladesh. We employed purposive sampling to select participants because this study had a specific objective to achieve. Purposive sampling is appropriate when researchers need to collect specific preferred data from a particular group of people who meet certain criteria set by the researchers [21]. This sampling technique is convenient when researchers use the sample to conform to specific criteria [22]. We used this sampling technique to gather data from construction workers who could provide us with adequate information on various factors such as human relations, inspiration, job happiness, monitoring, personal traits, and working conditions as perceived by them.

3.3. Demographic Information

A total of 290 respondents were deliberately selected from diverse construction companies across various districts in Bangladesh (n = 290). The distribution of sample respondents based on demographic factors, including gender, age, education level, and years of experience in the sector, is presented in Table 1 as part of the questionnaire.

According to the data presented in Table 1, it can be observed that approximately 96% of the participants in the study were males. The age distribution of the respondents reveals that the largest portion, 145 individuals (50% of the total 290), falls within the age range of 21-30. Additionally, Table 1 indicates that 45% of the respondents (131 individuals) have completed their primary education, while 25% (73 individuals) have reached secondary or higher education levels. Furthermore, it shows that 40% of the respondents have accumulated 3-4 years of
professional experience.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>275</td>
<td>90%</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>4%</td>
</tr>
<tr>
<td>Total</td>
<td>287</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age of respondent</th>
<th>Number of respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30 years</td>
<td>143</td>
<td>50%</td>
</tr>
<tr>
<td>21-45 years</td>
<td>116</td>
<td>40%</td>
</tr>
<tr>
<td>45 years and above</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>289</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education status of the respondent</th>
<th>Number of respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary</td>
<td>87</td>
<td>30%</td>
</tr>
<tr>
<td>Primary</td>
<td>131</td>
<td>45%</td>
</tr>
<tr>
<td>Secondary and Higher</td>
<td>73</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>291</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience</th>
<th>Number of respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>12</td>
<td>5%</td>
</tr>
<tr>
<td>3-4 years</td>
<td>116</td>
<td>40%</td>
</tr>
<tr>
<td>5 years and above</td>
<td>73</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>296</td>
<td></td>
</tr>
</tbody>
</table>

3.4. Univariate Normality Test

According to [23], data is considered to exhibit normal distribution if the skewness falls within the range of -2 to +2 and the kurtosis falls within the range of -7 to +7. In the current table, both the skewness and kurtosis values fall within this threshold range. This indicates that our data can be classified as normally distributed.

3.5. Multivariate Normality Test

To identify potential influential outliers in our analysis, we conducted Cook’s distance analysis, as illustrated in Figure 2. Cook’s distance can serve multiple purposes, such as identifying noteworthy data points that greatly impact the validity of the analysis or highlighting areas in the dataset where collecting additional data points would be beneficial.

4. Results

4.1. Model Evaluation

4.1.1. The Measurement Model

Creating Validity and Reliability Table 3 displays the AVE, CR, and Cronbach’s alpha results for determining the research model’s convergent validity. All latent variables or model constructs have AVE values greater than 0.50. The values of AVE for human relation, inspiration, work happiness, monitoring, personal traits and working condition are 0.725, 0.821, 0.841, 0.637, 0.789, and 0.755, respectively because the AVE values for all constructs are greater than or equal to 0.50, which is acceptable. All model constructs have CR values greater than or equal to 0.80 (0.929, 0.958, 0.941, 0.839, 0.937, and 0.939). Because the CR value is greater than or equal to 0.80, it is acceptable. Cronbach’s alpha, on the other hand, was used to assess the internal reliability of the model structures. Cronbach’s alpha results are shown in Table 4 (0.906, 0.945, 0.905, 0.75, 0.911, 0.919) and they are all acceptable because they are greater than or equal to 0.70. These findings indicate a strong relationship between the model construction indicators (see Table 4). Furthermore, as shown in Table 3, the convergence validity of all model constructs is determined by examining their loading values; according to [24], the loading values of the constructs for each indicator of the latent variable should be greater than or equal to 0.70. In this study, four items were eliminated because of lack of factor loading values (ILV=0.60 -0.70). After the aforementioned items were removed, the structural model was run to determine the influential factors that actually cause the happiness of construction workers in Bangladesh. Also, these findings support the research model’s convergent validity, indicating a high level of correlation between all construct indicators (Table 3).
correlated, 1-5 moderately correlated, and greater than 5 represents highly correlated [29]. To examine the influence of multicollinearity among the variables, VIFs were calculated and found to have a maximum value of 1.63 (Table 7), which is at a permissible limit as recommended by [29]. Thus, there is no multicollinearity problem in the factors. A VIF larger than 3.3 is said to be a sign of pathological collinearity and a sign that a model might have common method bias. Here, our model (Table 7) is said to be free of common method bias because the values of all VIFs are equal to or lower than 3.3 [30].

Table 7 Regression weight (SmartPLS 3.2.9)

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Beta</th>
<th>Std. Error</th>
<th>t</th>
<th>p</th>
<th>Value</th>
<th>Decision</th>
<th>Sign</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality Traits &gt; Job Happiness</td>
<td>0.568</td>
<td>0.173</td>
<td>3.272</td>
<td>0.001</td>
<td>Supported</td>
<td>&gt;0.05</td>
<td>1.738</td>
<td>1.361</td>
</tr>
<tr>
<td>Stress &gt; Job Happiness</td>
<td>0.261</td>
<td>0.120</td>
<td>2.170</td>
<td>0.032</td>
<td>Supported</td>
<td>&gt;0.05</td>
<td>1.356</td>
<td>2.361</td>
</tr>
<tr>
<td>Personal Traits &gt; Monitoring &gt; Job Happiness</td>
<td>0.568</td>
<td>0.173</td>
<td>3.272</td>
<td>0.001</td>
<td>Supported</td>
<td>&gt;0.05</td>
<td>1.738</td>
<td>1.361</td>
</tr>
<tr>
<td>Monitoring &gt; Job Happiness</td>
<td>0.164</td>
<td>0.054</td>
<td>3.084</td>
<td>0.002</td>
<td>Supported</td>
<td>&gt;0.05</td>
<td>1.356</td>
<td>2.361</td>
</tr>
<tr>
<td>β square</td>
<td>0.164</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q^2 value</td>
<td>0.049</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.235</td>
</tr>
</tbody>
</table>

Notes: SRMR ≤ 0.08 [31]; R^2 > 0.30 [28]; Q^2 Value > 0 [32]-[33]; Collinearity Statistic (VIF) < 3 [34]

4.3. Structural Model Assessment

The structural model can be examined by incorporating the estimation of the path coefficients and the variance explained (R^2 values). Specifically, we measured all the relationships of the hypothesized model by describing unmediating relationships separately. Moreover, using the bootstrapping technique with (5,000 re-samples), we generated coefficients and t-statistics. The structural model represents the path coefficients among the dependent and independent constructs. This model suggested that four independent factors, human relations, inspiration, personal traits, and working conditions, were considered to relate to job happiness in construction workers in Bangladesh. Also, a single mediator construct (monitoring) was considered to relate to job happiness. As per our analysis of variance-based SEM using SmartPLS, the findings revealed that all hypotheses were supported except H3. Further, those corresponding relationships produced t-values higher than 1.96 at a 5% level of significance.

After applying structural equation modeling through SmartPLS software, personal traits were significantly positively related to job happiness (β = 0.169, t = 3.084, p < 0.01), inspiration was significantly positively related to job happiness (β = 0.241, t = 4.038, p < 0.01), and working condition was significantly positively related to job happiness (β = 0.350, t = 6.378, p < 0.01). So, our hypotheses H1, H3, and H4 were supported. But Human Relations and Monitoring were not had significant relationships with Job Happiness (β = 0.026, t = 0.419, p > 0.05), and (β = 0.094, t = 1.738, p > 0.05), respectively. Thus, our hypotheses H5 and H6 were supported.

As suggested in [35], R^2 values for endogenous variables of the model.
latent variables are considered 0.26 (significant), 0.13 (reasonable), and 0.02 (insignificant), whereas [36] recommended $R^2$ values for endogenous latent variables as 0.67 (significant), 0.33 (reasonable) and 0.19 (insignificant). Table 7 indicates that the coefficient of determination ($R^2$) is 0.316 for the dependent variable, i.e., Job Happiness, explaining that the five independent variables can explain 31.6% of the variance of Job Happiness for Bangladeshi construction firms. This result is accepted in compliance with [35].

The predictive variables in this model are characterized as having small, medium, or high impact sizes based on f2 values of 0.02, 0.15, and 0.35, respectively [35]. This model’s results indicate that all associations are extremely influential since all f2 values are more than 0.02.

Here, the model fit information shows that the standardized root mean squared residual (SRMR) is 0.043, which is also less than the suggested good fit to the data [31] (SRMR ≤ 0.08). The fit indices showed a good model fit for the data (Table 7). When PLS-SEM exhibits predictive relevance, it can well predict the data points of indicators. A $Q^2$ value larger than zero ($Q^2$ value ≥ 0) for a certain endogenous latent variable indicates that the PLS path model has predictive relevance for the constructs [37]. Table 7 shows that the four independent constructs were relevant to the single-dependent construct (Job Happiness) because the $Q^2$ value is greater than zero.

5. Discussion

The research findings largely correspond to prior research, providing further validation for existing knowledge regarding job happiness. Specifically, we observed a significant positive correlation between personal traits and job happiness, which is consistent with the findings of [7]-[10]. This suggests that individual characteristics, such as personality traits, strongly influence job happiness. Furthermore, we discovered a substantial positive association between inspiration and job happiness, supported by the research of [16]-[18]. This indicates that experiencing inspiration at work has a beneficial impact on job happiness.

Additionally, our study reveals that favorable working conditions have a significant positive effect on job happiness, in line with studies by [14] and [15]. This highlights the importance of comfortable physical surroundings in promoting individual job happiness. However, we unexpectedly found little impact on job happiness regarding interpersonal relationships, contradicting the results of other studies. This emphasizes the need for further research into the dynamics of interpersonal relationships and their influence on job happiness.

Regarding moderating effects, our study demonstrates that monitoring plays a crucial role in strengthening the relationships between human relations, inspiration, working conditions, and personal traits, which is consistent with the research conducted by [7]-[10], [14]-[18]. This implies that effective monitoring enhances the impact of these factors on job happiness, underscoring the significance of supervisory
This study aligns with previous research by confirming the positive relationships between personal traits, inspiration, and working conditions and job happiness. However, our finding of an insignificant influence of human relations on job happiness provides a fresh perspective. Additionally, we emphasize the significant moderating effect of monitoring on the relationships between various factors and job happiness, reinforcing the notion that effective monitoring practices can enhance job happiness. Further research is necessary to deepen our understanding of these relationships and explore other potential factors that contribute to job happiness among individuals in different contexts.

5.1. Managerial Implications

As revealed, several management ramifications from the study on job happiness elements impact building construction workers that might enhance the overall satisfaction and productivity of workers in the construction sector. Clear objectives should be set by managers and reflect their employees’ beliefs and aspirations. To promote employee engagement and motivation, they should also offer chances for advancement and development, rewards for excellence in work, and open lines of communication. By providing sufficient safety supplies and training as well as making sure that the working environment is secure and comfortable, managers should place a high priority on the welfare of their employees. They should also guarantee that workers have access to the tools and equipment they should perform their tasks properly and efficiently. By developing a culture of support, acknowledgment, and personal growth, managers may encourage good personality qualities such as resilience, flexibility, and positivism. Through instruction, coaching, and mentoring, they may help employees acquire these qualities. Managers in the construction sector may use these elements as a general framework for building a positive and fulfilling workplace that encourages employee satisfaction and job happiness. By doing this, they may raise the organization’s bottom line by enhancing productivity and decreasing turnover.

5.2. Practical Implications

The study has some useful ramifications that construction businesses could consider when promoting the well-being and happiness of their workers at work; each unique attribute of the output have already been covered. As a result, employers may think about selecting workers who have a good attitude and motivation for their work. To help staff members enhance their abilities and confidence, they may also provide training and development programs, which can improve their happiness at work. Working conditions are the second discovery. By doing this, businesses may guarantee that the workplace is secure, orderly, and furnished with everything needed for workers to do their jobs well. The provision of suitable safety gear and financial support for facility upkeep and maintenance may both enhance employee well-being. The third factor is inspiration. As a result, businesses may aid workers in discovering meaning and purpose in their jobs by offering them chances for professional growth and recognition. The development of a strong business culture and mission statement may also assist employees in making a connection with the bigger picture of their job. Monitoring is the last moderating component. As a result, businesses can effectively monitor and oversee employees and offer regular feedback and assistance. Employee motivation may be boosted by setting clear standards, mentoring, and rewarding good work. Additionally, variables including job happiness, character qualities, working environment, and motivational factors may function as moderators of the observation factor. Finally, we draw the conclusion that construction businesses may foster a productive work environment that is advantageous to both the employees and the business as a whole by emphasizing the health and happiness of their employees while they are at work.

5.3. Limitations and Further Scope for Research

It is important to acknowledge the limitations of this study, which was conducted in a single nation, as it poses several significant constraints. To gain a more comprehensive understanding, it is essential to compare the findings with studies conducted in different countries and cultural contexts. This will allow for a more robust analysis of workplace happiness among construction workers on a global scale. Additionally, while the study examined numerous work satisfaction variables that are applicable to real-life business settings, there may be other variables that were not explored in this research. Exploring additional moderating variables in future studies can provide further insights into the factors that influence workplace happiness among construction workers. The authors of this study encourage future researchers to consider these limitations and build upon them to enhance the knowledge surrounding the happiness of Bangladeshi construction workers in their work environment. Conducting further research will contribute to a more comprehensive understanding of the subject and facilitate the development of targeted strategies and interventions to improve job happiness and well-being within the construction industry in Bangladesh.

6. Conclusions and Recommendations

The study conducted on job happiness factors affecting building construction workers reveals that multiple elements play a role in shaping their overall job happiness. One significant factor is inspiration, as
workers who find motivation and inspiration in their work tend to experience higher levels of job happiness. This can be fostered through the establishment of clear goals and objectives, providing opportunities for personal growth and advancement, and recognizing and praising exemplary performance. When workers are inspired, they are more likely to feel a sense of purpose and satisfaction in their roles.

Building construction employees’ job happiness is significantly impacted by their working circumstances as well. Higher levels of employee happiness are correlated with access to secure and enjoyable working surroundings, suitable tools and equipment, and helpful coworkers. Employees’ general happiness with their jobs is significantly impacted when they feel safe and supported at work. Furthermore, among building construction employees, fair pay, benefits, and job security have a big impact on their happiness at work. Employees are happier and more satisfied in their jobs when they are paid fairly for their work and have a secure position. Personal qualities such as resiliency, flexibility, and optimism are also critical for happiness at work.

Workers that possess these traits are better equipped to handle the difficulties typical of the building construction sector, such as long hours, physically taxing activities, and tight deadlines. When people have these qualities, they are better able to deal with challenges and have a positive view, which increases their enjoyment at work. In conclusion, it is feasible to raise the job happiness of building construction employees by putting an emphasis on elements such as boosting motivation, improving working circumstances, and nurturing personal traits that promote resilience and optimism. Managers and employers may use these components as a roadmap to develop a happy and productive workplace that benefits both workers and the company as a whole.

Workers that possess these qualities are better prepared to deal with frequent issues in the building construction industry, such as long hours, labor demands, and tight deadlines. People that possess these characteristics are better at dealing with problems and have a positive attitude, which boosts their love for their profession. To summarize, increasing job happiness in the construction business is achievable by concentrating on components such as raising motivation, improving working circumstances, and cultivating character attributes that foster resiliency and optimism. These factors may be used as a guideline by managers and employers to build a productive workplace that benefits both employees and the firm as a whole. Organizations may foster an environment in which employees feel valued, motivated, and pleased by prioritizing these qualities, which leads to increased productivity and overall success.

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最小二乘法在各种领域的应用

小二乘法的应用

在化学领域，小二乘法常用于校正实验数据。例如，在一个实验中，测量了不同条件下的反应速率，为了寻找合适的反应速率方程，可以用小二乘法来拟合实验数据，从而确定方程中的参数。这种方法不仅可以提高数据拟合的准确性，还可以提高实验结果的可靠性。

在物理学领域，小二乘法也被广泛用于数据拟合和模型建立。例如，在天体物理学中，小二乘法被用来拟合行星轨道，以确定行星的运动规律。通过这种方法，科学家可以更准确地预测行星的运动轨迹，为研究宇宙提供了重要的数据支持。

在工程学领域，小二乘法同样被应用于数据处理和模型建立。例如，在土木工程中，小二乘法被用来拟合结构的变形数据，从而确定结构的强度和耐久性。这种方法不仅可以提高结构设计的精度，还可以提高结构的安全性。

小二乘法在生物学领域也得到了广泛的应用。例如，在遗传学中，小二乘法被用来拟合基因的突变数据，从而确定基因的突变速率。这种方法不仅可以提高基因突变的研究精度，还可以为遗传学研究提供重要的数据支持。

除此之外，小二乘法在经济学、心理学、社会学等领域也有广泛的应用。例如，在经济学中，小二乘法被用来拟合经济数据，从而确定经济变量之间的关系。这种方法不仅可以提高经济模型的精度，还可以为经济政策的制定提供重要的数据支持。

小二乘法的核心思想是，通过最小化误差平方和来寻找最佳的参数估计。这种方法不仅简单易行，而且具有广泛的应用价值。今后，随着数据科学的不断发展，小二乘法的应用领域将会更加广泛，其在科学研究中的作用也会更加重要。