

Employee Engagement and Job Satisfaction: Unraveling Their Relationship in the Fisheries Industry of Bangladesh

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Abstract: Employee Engagement (EE) is a key determinant of job satisfaction and organizational performance. This study examines the factors influencing employee engagement and their impact on job satisfaction among employees in Bangladesh's fisheries industry. A quantitative research design was employed, and data were collected from 118 employees of public and private fisheries organizations using a structured questionnaire and by capitalizing purposive sampling technique. Data analysis was done using SPSS using descriptive statistics, reliability analysis, correlation and regression. The empirical results of the study pointed that the chosen organizational and work-related factors namely Organization's Justice and Trust, Good Relationships, Promotion and Career Growth, Work-life balance, Fair Pay and Rewards, Role of Management and Good Human Resource Management Practices have a positive and statistically significant effect on employee engagement. Of the factors analyzed, organization's Justice and Trust proved to be the most important factor of the main model, *explaining* $\beta = 0.679$ and R^2 value for the main model (0.461), highlighting the importance of supportive interpersonal interactions, collaboration, trust, and positive climate of the organization for inducing employee involvement and commitment. Moreover, employee engagement was discovered as the cause of improving job satisfaction in general.

Keywords: Employee Engagement, Job Satisfaction, Fisheries Sector, Bangladesh.

Introduction

Conducting research of employee engagement within the fisheries sector is relevant because of its unique characteristics, which differ from manufacturing, information technology (IT), and other service industries. Unlike manufacturing and IT industries, those work normally in a controlled environment of standardized production system and have comparatively predictable schedule of work in the fisheries organizations operate in a complex, resource dependent and an environmentally sensitive environment. The work nature in this industry is physically demanding, hazardous and seasonally fluctuating, based on market volatility, climatic reasons and aquatic ecosystems as well as regulation policy. In addition, the fisheries industry consists of a diverse group of people who work in different occupations such as fisheries officers, field extension personnel, processing employees, researchers, aquaculture technicians and hatchery staff those face their own occupational demands and workplace challenges. Employee engagement has become an attractive corporate tool, which can help the organization to enhance workers' productivity and strengthen their core performance under a rapidly changing and highly competitive business environment (Ziegler, 2017; Bakker & Demerouti, 2008). Employees who are engaged seem to establish a strong emotional bond with their organization, which, ultimately in turn, reinforce their commitment to organizational goals and contribute to improved organizational performance (Bailey et al., 2017). Employee engagement is not only considered as a human resource concern but it is also counted as a strategic priority of the organization, which influences overall job satisfaction within the organization (Sharma et al., 2025). Industries those heavily rely on human labor, particularly the fisheries sector, are significantly affected by variations in employee engagement, as employee motivation, commitment, and involvement directly influence

productivity, operational efficiency, and organizational performance. This highlights the importance of examining employee engagement in both organizational and research contexts (Kahn, 1990; Bakker & Albrecht, 2018; Harter et al., 2020). "The fisheries industry of Bangladesh keeps role in the national economy, contributing 3.57% of the total GDP as well as creating direct and indirect employment opportunities for over 18 million people (DOF, 2022). Despite the tremendous economic significance of this sector, employees experience challenges such as a volatile workplace environment, insufficient career development getaways, and fewer recognition opportunities, which in turn influence employee engagement and job satisfaction as a whole. Therefore, it is crucial to identify and address the determiners that influence employee engagement in this sector and lead to job satisfaction as well as enhance organizational performance. Earlier studies emphasize several determinants of employee engagement, including opportunities for career development, locus of control, pay and benefit, transformational leadership, training and development, HRM practices, work-life balance, performance management system rewards, organizational culture, career development opportunities, empowerment and so on (Yee, 2012; Agrawal, 2016; Ibrahim et al., 2021; Kaaviyapriya & Xavier, 2021; Kundar & Pakkeerappa, 2022) across various sectors like finance, banking, healthcare, IT sector, corporate sectors etc. However, there was a considerable research gap in the labor-intensive sector particularly the fisheries sector in the context of developing countries like Bangladesh. Employees working in the fisheries sector often face limited opportunities for career advancement, an imbalance between work and Individual life, and less recognition, all of which may reduce their engagement and overall satisfaction of job. To address the identified research gap, this study examines the determinants of employee engagement (EE) and its impact on job satisfaction among employees in Bangladesh's fisheries industry. Specifically, the study investigates the factors that significantly influence employee engagement and evaluates how employee engagement affects employees' overall job satisfaction within the sector.

Review of the Literature

Overview of Employee Engagement (EE) in the Fisheries Sector

Employee Engagement (EE) is becoming a critical element of human capital management and now considered it a crucial of organizational success. High-performing organizations increasingly rely on employee engagement initiatives to attract, retain, and nurture top talent, thereby enhancing organizational performance and competitiveness (Schaufeli & Salanova, 2007). Over the last few decades, the fisheries industry has been considered one of the most productive and dynamic sectors that contributed a very vital role in the national economy (Uddin et al., 2023). However, the idea of EE in the fisheries sector, remarkably in the context of Bangladesh, has grabbed limited attention among scholars and policymakers, yet it has an important appeal to the respective sector's productivity and sustainability as a whole. Moreover, the employees in this sector often experience challenges such as long working hours, lack of effective HRM activities, less career development opportunities, ineffective performance management system, less organizational trust and justice, and so on (Hossain, 2014; Uddin et al., 2023).

Factors Affecting Employee Engagement

Organizations with highly engaged employees are better positioned to ensure better individual and group outcome and get a competitive advantage in an increasingly dynamic business environment (Mubashar et al., 2022). To sustain in the competitive business environment employee engagement is very crucial for the present organization. Several studies have identified various factors, which lead to employee engagement within the organization. Positive workplace relationships keep vital role in improving employee engagement by promoting trust, mutual support, effective communication, and organizational commitment.

Employees who experience strong relationships with their supervisors and coworkers are usually to expose top level of engagement, motivation, and high job performance. Sequeira and Dhriti (2015), suggest that every organization should ensure effective employee relationships to create and maintain an engaged workforce as well as productive work environment. According to Griffin et al. (2015), organizations that maintain strong employee relations practices are often obtain an unparalleled advantage in the workforce, thereby improving their capacity to motivate and retain employees. The Job Demands–Resources (JD-R) Theory (Bakker & Demerouti, 2007; Bakker & Demerouti, 2017) claims that every occupation has some job demands and job resources. Job demands mean required physical or psychological effort, which may contribute to create stress or burnout. Job resources help employees to reach the targeted goals, reduce the negative effects of job demands, and encourage individual growth, work engagement. Job resources include social aid, positive interpersonal relationships, supervisory support, autonomy, and opportunities for development. Within the fisheries industry, good relationships among colleagues, supervisors, and team members represent a critical job resource. Employees in the fisheries sector typically operate in collaborative, field-oriented work environments where effective communication, teamwork, mutual trust, and peer support are crucial for ensuring the safe and efficient completion of work-related tasks. JD-R theory States that, these social factors activate the motivational process that enhances employees' cognitive ability and attachment of individual with work, thereby increasing employee engagement. Therefore, employees who experience stronger workplace relationships are very often to expose higher level of vigor, commitment, and absorption to their jobs. Therefore, the following hypothesis is proposed based on JD-R theory.

H1: Good relationships have positive impact on employee engagement.

Another important element of EE is the organization's justice and trust (OJT). Justice perception of employees provides various outcomes to the organization and employee engagement is one of them. Transparent and unbiased organizational policies as well as decision-making processes lead to building employee's trust within the organization. A large number of study has explored the influence of organizational justice and trust on EE (Mubashar et al., 2022; Abbasi & Alvi, 2012; Rasheed et al., 2013; Ghosh et al., 2014; Javed & Tariq, 2015; Özer et al., 2017). Based on the JD- R Theory, organizational justice and trust are important organizational job resources. Organizational justice means the employees' perceptions of fairness in organizational procedures, policy of decision-making, resource allocation, and interpersonal treatment, whereas organizational trust refers employees' confidence in the integrity, competence, and reliability of their supervisors and the organization. Fair treatment in promotions, performance evaluations, workload distribution, and managerial decision-making enhances employees' confidence in the organization and encourages stronger commitment and engagement. Consistent with the JD-R theory, organizational justice and trust provide motivational resources that increase employees' vigor, commitment, and absorption, thereby strengthening employee engagement. Therefore, the following hypothesis is proposed based on JD-R theory.

H2: Organizational justice and trust have positive impact on employee engagement.

Promotion and career growth (PCG) opportunities have also a great influence on employee engagement within an organization. Several studies conducted in developed economies examined that employee's career growth opportunities have significantly influenced their level of work engagement within the organization (Zhou, Yu & Cao, 2015; Albrecht, 2021). Mokaya and Kipyegon (2014), conducted a study on the Kenyan perspective of employee engagement, which has also demonstrated a positive association between employees' career growth opportunities and work engagement. Anitha (2014) also highlighted the importance of employees' career growth opportunities and fairness in promotion policy on employee work

engagement based on the Asian perspective. Based on JD-R Theory, promotion opportunities and career growth are considered valuable organizational job resources, because they satisfy employees' needs for achievement, competence, and professional development. Employees who perceive that their organization offers fair promotion opportunities and clear career advancement pathways do much more feel valued and committed to contribute to organizational success. In line with JD-R theory, promotion opportunities and career growth work as stimuli that foster employee engagement by encouraging employees to remain dedicated, energetic, and fully involved in their work. Therefore, the following hypothesis is proposed based on JD-R theory.

H3: Promotion opportunities and career growth have positive impact on employee engagement.

Work-life balance (WLB) is another important factor that contributes to increased employee engagement (Sopian et al., 2022). The imbalance between employees' work and personal life causes higher stress, which tends to increase employee turnover intention (Jaharuddin & Zainol, (2019). However, employees who are capable to keep balance their job responsibilities and own life commitments tend to experience lower level of stress and greater well-being, which ultimately improves their level of job engagement (Schaufeli et al., 2002; Bakker & Demerouti, 2017). Based on JD-R Theory, work-life balance is considered as an important task resource because it helps individuals to maintain mental and physical well-being while meeting work expectations. Organizations those are practicing and maintaining employee friendly culture, such kind of policy help employees reduce work-family conflict and conserve their personal resources. JD-R theory tells us, the availability of these resources initiates a motivational process that enhances employees' energy, dedication, and commitment, thereby fostering higher levels of EE. In fisheries industry, maintaining work-life balance is particularly challenging due to irregular working hours, seasonal production cycles, field-based assignments, emergency responsibilities, and physically demanding tasks. Employees who are being able to keep balance their work and own lives are less often to face stress, emotional exhaustion, and burnout. Therefore, work-life balance serves as an important organizational asset that facilitates employees cope with occupational demands while strengthening their engagement with the organization. Therefore, the following hypothesis is proposed based on JD-R theory.

H4: Work-life balance has positive impact on employee engagement.

In Fisheries, workers often engage in physically demanding, technical, field-based activities in difficult working environments, and the need for fair pay and reward is essential in maintaining motivation and commitment of staff to the organization. Wages, commissions and benefits that are competitive with other jobs, and that are fair, can help recognize employees' work and results and make the job more attractive to work on. Research on employee engagement identified fair pay and reward (FPR) as an inseparable element that fosters employee commitment as well as overall work performance. According to Seid & Alemu, (2019), fair and competitive rewards packages enhance employees' loyalty towards the organization and encourage greater work engagement. In labor-intensive sectors like fisheries, where employees have to work for long hours, however, they often face irregular income flow. "The lack of fair compensation tends to increase employee turnover intentions and negatively affect employee engagement. Perceptions of pay inequity often lead to lower job satisfaction, reduced organizational commitment, and decreased work motivation, ultimately weakening employee engagement and increasing the likelihood of turnover (Saks, 2006; Albrecht et al., 2021; Karatepe, 2013). Based on JD-R Theory, fair pay and reward systems are regarded as important job resources because they provide employees with tangible recognition for their contributions while strengthening perceptions of organizational support and appreciation. Equitable compensation is more than just a monetary requirement; it's a psychological need as well because it is important that the employee does feel that their work is fairly rewarded. Employees are more likely to be

motivated, dedicated to the organization and put forth their "discretionary effort" when they feel their pay, bonuses, incentives and recognition are based on their performance and contributions. From JD-R Theory, fair rewards add to the motivational process and reinforce the employees' feelings of value and appreciation in the organization, to sustain employee engagement. Therefore, the following hypothesis is proposed based on JD-R theory.

H5: Fair pay and rewards have positive impact on employee engagement.

"The role of management (RM) is a vital contributory element in enhancing EE. Through supportive leadership, effective communication, employee recognition, and the provision of adequate resources, managers can nurse a conducive work environment that strengthens employees' commitment, motivation, and engagement (Saks, 2006; Anitha, 2014; Albrecht et al., 2021)." JD-R Theory addressed the role of management as a critical organizational work resource because managers directly influence employees' work environment, motivation, and access to organizational resources. Effective managers provide guidance, clear communication, constructive feedback, recognition, and emotional support by providing employees with necessary resources to perform their jobs successfully. Based on the JD-R theory, the function of these managerial resources is to enable employees to react better to workplace demands and stay fully engaged in their work thereby starting a motivational process. Within the fisheries sector, management is especially essential, since workers tend to be in the field and in physically demanding, technically specialized jobs those demand good coordination, prompt decision-making, and continuous organizational support. The manager's role is to manage resources, keep the worksite safe, arrange training programs, solve problems and play a liaison role between employees and the organization. A supportive and competent management helps workers to better deal with work stress, boosts their faith in the leadership of management and builds a positive atmosphere in the workplace. Managers that clearly define duties, provide timely feedback, recognition and resources, set up conditions that keep workers engaged and committed. In accordance with JD-R Theory, effective management is a key job resource in that it increases employee motivation, improves access to organization resources, and neutralises the negative impact of job demands, thereby ensuring employee engagement. Therefore, the following hypothesis is proposed based on JD-R theory.

H6: Role of management has positive impact on employee engagement.

Furthermore, effective Human Resource Management (HRM) can foster a supportive corporate culture through strategic acquiring (recruitment and selection), training and development, performance appraisal, career development, employee participation, motivational measures, and recognition and reward systems, which can enhance the sense of belonging and commitment of employees (Saks, 2022; Albrecht et al., 2021; Cooke et al., 2024). These activities provide employees with the knowledge, skills, resources and opportunities needed to do their jobs well, and strengthen perceptions of organizational support, fairness and investment in development. In the JD-R Theory, effective HRM practices are considered as complete job assets that trigger the stimuli and lead to increased cognitive, emotional, and physical effort in the job. These practices directly lead to increased employee engagement by building employee skills, confidence and access to other employee resources in the organization. HRM practices are particularly significant in the fisheries industry as employees undertake various kinds of technical, administrative, research, laboratory and operation-based tasks where they are physically exposed to tough working situations and operations are complex. A well-designed HRM system helps to build professional competencies in employees, adjust them to new technology and regulatory demands and ensure their high level of motivation in the face of difficult working conditions. Consequently, HRM practices that are seen as effective and

supportive are likely to increase employees' engagement, organizational commitment, and job performance. Therefore, the following hypothesis is proposed based on JD-R theory.

H7: Good Human Resource Management (HRM) practices have positive impact on employee engagement. Employee Engagement and Job Satisfaction

A large number of studies (Thakur, 2014; Jaiswal et al., 2017) have confirmed the positive relationship between EE and job satisfaction. According to Supriyanto et al. (2021), Engaged employees can develop strong organizational commitment by themselves, which encourages them to perform better and demonstrate higher loyalty and ultimately it enhances job satisfaction. In the fisheries industry, enhancing employee engagement through ensuring good relationships, organizational justice, providing career growth opportunities, and management support can positively influence the level of job satisfaction among the workers. By improving work engagement, an organization can not only improve employee performance but also foster their overall effectiveness, which in turn leads to a more stable and productive workforce. The following hypothesis has been formulated to examine the effect of employee engagement on job satisfaction:

H8: Employee engagement has positive impact on job satisfaction.

Methodology

Research Population and Sampling

Sekaran & Bougie, (2010), define population as a group of prospective participants whose responses are used to generalize the research output. The study population is comprised professional employees employed in Bangladesh's fisheries industry. There are various reasons for choosing the fisheries sector for this study. The fisheries sector is one of the most contributing sectors of our economy thus the role and influence of the employees in this sector is also significant. Nevertheless, the aspects of EE and job satisfaction in the fisheries sector have received limited scholarly attention. Hence, this study is conducted in the fisheries sector to identify the determinants of EE and how they relate to job satisfaction. The purposive sampling method is used in this research because of easiness of collecting and availability of data. The sample size of this study is 118 professional employees of different private and public fisheries institutions. The sample size is sufficient in this study as in multiple regression analysis, a commonly accepted rule of thumb recommends a minimum of 10–15 observations per predictor (independent variable) to obtain stable and reliable parameter estimates (Hair et al., 2019; Field, 2018). Since the present study includes seven independent variables good relationships, organizational justice and trust, promotion opportunities and career growth, work life balance, fair pay and rewards, role of management, and effective HRM practices the recommended minimum sample size ranges from 70 to 105 respondents. Therefore, the final sample of 118 respondents exceeds this recommendation, providing sufficient statistical power to estimate the regression model and test the proposed hypotheses reliably.

Data Collection Sources and Questionnaire Design

For this study, primary data (118) were obtained from the employees of different fisheries organizations in Bangladesh. A structured questionnaire was utilized to obtain primary data, where respondents were asked questions about factors affecting employee engagement and their impact on job satisfactions. The questionnaire was designed separately both for online survey and face-to-face survey. The secondary data has been collected from different journal articles, book chapters, newspapers, etc. Details of sample collection from different organization is given at annex section.

Statistical tools used for analysis

Collected data were analyzed through the program of the Statistical Package for the Social Sciences (SPSS). To get a summary and interpretation of the survey data, descriptive statistical techniques were used. First, raw data were analyzed to create the Frequency Distribution for each of the variables in relation to employee engagement. These distributions were then explored to determine patterns and trends in the data and to gain insights from them.

Table 01. Variable Identification

Variable	Symbol
Dependent Variable	
Employee Engagement	EE
Independent Variables	
Good Relationships	GR
Organization's Justice and Trust	OJT
Promotion and Career Growth	PCG
Work-Life Balance	WLB
Fair Pay and Reward	FPR
Role of Management	RM
Good HRM Practices	HRM
Job Satisfaction	JS

Source: Study 2025

Acknowledging the Limitations Related to Sample Characteristics

Though this study provides valuable information on factors affecting employee engagement in fisheries industry of Bangladesh, there are some limitations which we are addressing here. First, there was an imbalance in the demographic of the respondents, with 87.3% being male and almost 80% with a post graduate qualification. This profile reflects the characteristics of the individuals who took the survey, but may not represent the diversity of the overall fisheries workforce, especially the lower educated and female employees. The male predominance in the sample might have impacted the findings regarding the relationships between the variables included in this study, as such relationships can differ between men and women. Similarly, the large percentage of postgraduates, may mean that the results are concerned more with the experience and perceptions of professional, technical and managerial staff than with those of operational or less highly skilled staff. Therefore, the findings may have limited generalizability to other occupations in the fisheries industry. The other is that the sample did not discriminate between public and private fisheries organizations and the employees of these organizations in the empirical analysis. As public and private organizations may have varying organizational, leadership, HRM and compensation systems, promotion systems, and workplace cultures, the determinants of employee engagement can be different for both sectors. Therefore, the findings may be viewed as for the combined sample and not necessarily as a reflection of sector specific trends. Future studies should have larger and more representative samples to enhance their external validity by sampling more people using probability sampling. Future studies should also strive for increased diversity in terms of their demographic representation including a more even spread of gender, educational level, occupation and type of business/organisation. Additionally, comparative analyses between public and private fisheries organisations and subgroup analyses based on demographic and professional characteristics would help to gain deeper insights into the contextual factors influencing employee engagement and further increase the applicability of the findings.

Conceptual Framework

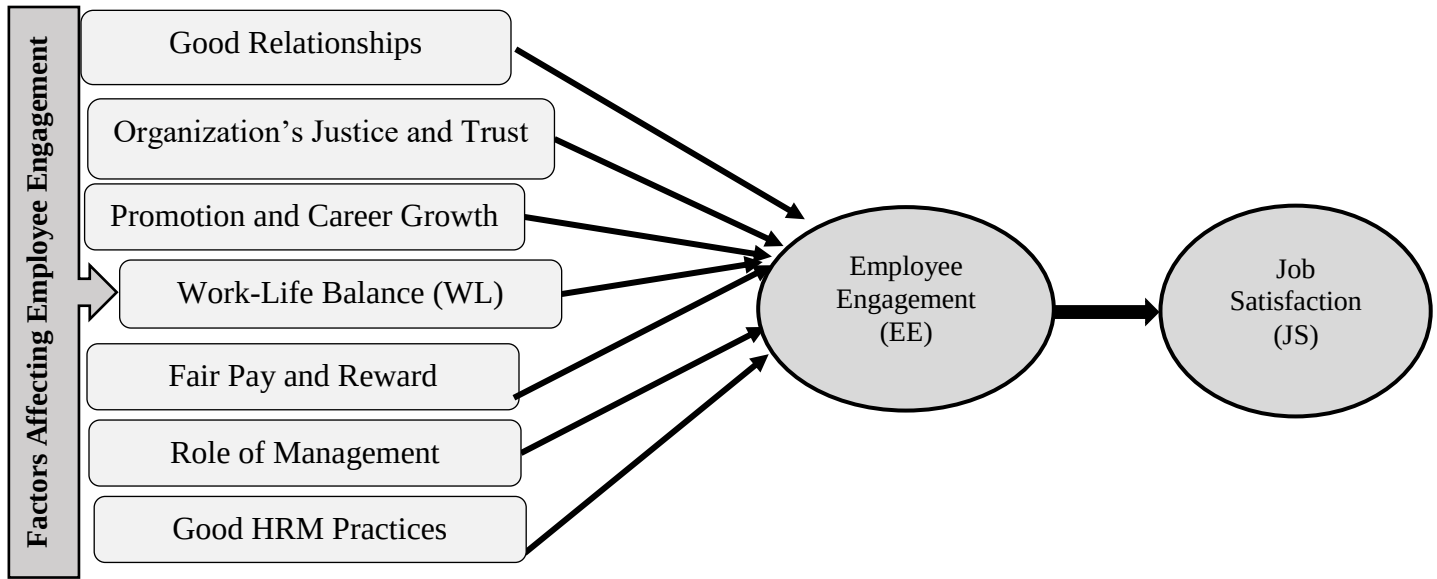


Figure 1. Conceptual Framework

Result & Discussion

Demographic Profile of the Respondents

Table 2. Demographic Profile of the Respondents

Variables	Frequency	Percentage
Gender		
Male	103	87.3%
Female	15	12.7%
Total	118	100%
Age		
20-30	35	29.7%
30-40	47	39.8%
40-50	21	17.8%
50-60	15	12.7%
Total	118	100%
Educational Qualification		
SSC	3	2.5%
HSC	1	0.8%
Graduate	16	13.6%
Post Graduate	94	79.7%
PhD	4	3.4%
Total	118	100%
Work Experience		
0-5 years	59	50%

6-10 years	26	22%
10-15 years	14	11.9%
More than 15 years	19	16.1%
Total	118	100%

Sources: Study 2025

Table 2 presents an overview of some of the important personal characteristics of the respondents. The majority of the participants in the sample were males (87.3%) while females (12.7%) made up the balance of the sample. As for age, the maximum percentage (39.8) fell under the age group of 30-40 followed by 29.7 (20-30), 17.8(40-50) and 12.7(50 and above). In terms of education, most of the respondents had a postgraduate degree (79.7%). Smaller percentages possessed graduate (13.6%) and doctoral (3.4%) degrees, Secondary School Certificate (SSC) (2.5%) and Higher secondary Certificate (HSC) (0.8%) degrees. When asked about professional experience in the fisheries sector, 50% had experience for up to 5 years, 22% had experience between 6-10 years, 11.9% had experience between 10-15 years, and 16.1% had over 15 years of experience. Altogether, the results reveal a highly educated workforce with different levels of experience in the sector.

Reliability Test

The interpretation of Cronbach's alpha for assessing internal consistency reliability is usually classified as: Excellent ($\alpha > 0.9$), Good ($0.7 < \alpha \leq 0.9$), Acceptable ($0.6 < \alpha \leq 0.7$), Poor ($0.5 < \alpha \leq 0.6$), and Unacceptable ($\alpha < 0.5$).

Table 3. Reliability Test of this Study

Cronbach's Alpha	Name of variables	No of items
0.826	Employee Engagement	4
0.835	Good Relationships	4
0.900	Organization's Justice and Trust	6
0.881	Promotion and Career Growth	6
0.856	Work-Life Balance	5
0.867	Fair Pay and Reward	3
0.880	Role of Management	4
0.912	Good HRM Practices	5
0.898	Job Satisfaction	5

Sources: Study 2025

To ensure internal consistency this research assesses the reliability of all variables using Cronbach's Alpha and the result is presented in Table 3. The result suggests a very high reliability across all constructs with alpha scores ranging from 0.826 to 0.912. Among the seven constructs, Good HRM Practices exhibited the highest reliability with an alpha value of 0.912, followed by Organization's Justice and Trust, showing an alpha score of 0.900, which falls under the category of excellent reliability ($\alpha > 0.9$). Cronbach's alpha value of Job Satisfaction is 0.898 and the Cronbach's alpha value of Promotion and Career Growth is 0.881. Other variables such as Role of Management, Fair Pay and Reward, Work-Life Balance, Good Relationships, and

Employee Engagements' Cronbach's alpha scores are 0.880, 0.867, 0.856, 0.835, 0.826, showing strong reliability falling within the category of "good" reliability ($0.7 < \alpha < 0.9$). The findings suggest that all the measurement items of each variable are internally consistent and reliable for further research.

Regression Summary

Table 4 presents the findings of the regression analysis, where each row represents a separate regression model along with its corresponding dependent variable. Coefficient of Determination (R^2) represents the portion of variance in the dependent variable that is accounted by the independent variable(s), while Adjusted R^2 is a more conservative estimate that accounts for the number of variables in the model. The F-statistic evaluates the overall goodness-of-fit and the significance level (Sig. or p-value) helps to determine whether the relationship observed in each regression model is statistically significant. Standardized beta (β) coefficients not only represent the strength of the relationship between each independent and dependent variable but also the direction of the influence, thus allowing a comparison of the relative effects.

Table 4. Regression Summary of all the variables

Hypothesis	Independent Variable	Dependent Variable	R Square	Adjusted R-Square	F-Value	Beta	Sig.	Hypothesis Tested
H1	Good Relationships	Employee Engagement	0.439	0.434	90.763	0.663	0.000	Accepted
H2	Organization's Justice and Trust	Employee Engagement	0.461	0.456	99.197	0.679	0.000	Accepted
H3	Promotion and Career Growth	Employee Engagement	0.408	0.403	79.854	0.639	0.000	Accepted
H4	Work-Life Balance	Employee Engagement	0.289	0.283	47.251	0.538	0.000	Accepted
H5	Fair Pay and Reward	Employee Engagement	0.270	0.263	42.815	0.519	0.000	Accepted
H6	Role of Management	Employee Engagement	0.291	0.285	47.565	0.539	0.000	Accepted
H7	Good HRM Practices	Employee Engagement	0.301	0.295	49.938	0.549	0.000	Accepted
H8	Employee Engagement	Job Satisfaction	0.380	0.375	71.188	0.617	0.000	Accepted

The first hypothesis assessed the influence of Good relationships on EE. The regression analysis indicated a significant and strong positive association between the dependent variable EE and independent variable (Good Relationships), this is evidenced by an R^2 value of 0.439 and a standardized beta coefficient of 0.663 for Employee Engagement. This positive beta coefficient indicates that an increase in Good Relationships is associated with higher Employee engagement among the study participants. Further, the F-value (90.763)

and significance level ($p = 0.000 < 0.05$) provide evidence that Good Relationships positively influence Employee engagement within the fisheries industry in Bangladesh.

The findings of the regression analysis support the second hypothesis, which examines the effect of Organizational Justice and Trust on Employee Engagement. The R^2 value of 0.461 suggests that 46.1% of the variation in the dependent variable (Employee Engagement) is explained by the independent variable (Organizational Justice and Trust). The standardized beta coefficient of 0.679 indicates that a one standard deviation increase in Organizational Justice and Trust leads to a 0.679 standard deviation increase in Employee Engagement. Furthermore, the F -value of 99.197 and a p -value of 0.000 demonstrate that the relationship between Organizational Justice and Trust and Employee Engagement is statistically significant at the 0.05 level.

The Regression Analysis also supports the third hypothesis, which states that Promotion and Career Growth have a great impact employee engagement. The higher value of the coefficient (0.639) indicates that the employee promotion and career growth has direct association with the enhancement of employee engagement in Fisheries industry in Bangladesh. The F -value (79.854) and p -value (0.000, less than the usual level of significance 0.05) suggest that the association between Promotion and Career Growth and Employee Engagement is significant.

The regression analysis also has support for the fourth hypothesis which states that Work-Life Balance positively impacts Employee Engagement. The coefficient value of 0.538 is positive and statistically significant, implying that higher Work-Life Balance can be associated with higher Employee Engagement among the employees in fisheries industry of Bangladesh. In addition, since the p -value is less than typically considered significance level of 0.05, Work-Life Balance can be considered a significant predictor of Employee Engagement.

The fifth hypothesis examined the effect of Fair Pay and Reward on Employee Engagement. The regression findings reveal a strong positive association between Fair Pay and Reward and the dependent variable, Employee Engagement. The standardized beta coefficient of 0.519 indicates that higher levels of Fair Pay and Reward are linked to greater Employee Engagement among employees in the fisheries industry. Additionally, the F -value of 42.815 and the significance level ($p = 0.000$, which is below 0.05) confirm that this relationship is statistically significant within the context of the fisheries industry in Bangladesh.

The sixth hypothesis, which reveals the effects of the Role of Management on Employee engagement is backed by the result of the regression analysis. The Beta coefficient is 0.539, stating that for each standard deviation increase in the Role of Management, there is a 0.539 standard deviation increase in Employee Engagement. Also, the F -value is 47.565, and the p -value is 0.000, indicating that the relationship between the Role of Management and Employee engagement is statistically significant at the 0.05 significance level. The results of the regression analysis provide support for the seventh hypothesis, showing that the effective HRM practices have a significant positive impact on employee engagement. The positive and significant coefficient (0.549) indicated that increasing the emphasis on HRM practices is also related to an increase in employee engagement for the fisheries sector in Bangladesh. The F value of 49.938 and a p value of 0.000 is far below the 0.05 level of acceptance, thus confirming the significance of this relationship.

In the same line, the regression result supports the 8th hypothesis, which is the relationship between employee engagement (independent variable) and job satisfaction (dependent variable). It is found that the coefficient of employee engagement is positive (0.538), meaning that as the level of employee engagement increases, the job satisfaction level also increases among employees in the Bangladeshi fisheries sector. The significance value was 0.000, which was below the critical value of 0.05, indicating that employee engagement significantly positively influences job satisfaction.

Correlation Analysis

Table 05. Correlation Analysis

		EE	GR	OJT	PCG	WLB	FPR	RM	HRM	JS
EE	Pearson Correlation	1								
	Sig.									
GR	Pearson Correlation	0.663	1							
	Sig.	0.000								
OJT	Pearson Correlation	0.679	0.821	1						
	Sig.	0.000	0.000							
PCG	Pearson Correlation	0.639	0.739	0.781	1					
	Sig.	0.000	0.000	0.000						
WLB	Pearson Correlation	0.538	0.573	0.675	0.713	1				
	Sig.	0.000	0.000	0.000	0.000					
FPR	Pearson Correlation	0.519	0.675	0.790	0.746	0.699	1			
	Sig.	0.000	0.000	0.000	0.000	0.000				
RM	Pearson Correlation	0.539	0.813	0.811	0.723	0.584	0.835	1		
	Sig.	0.000	0.000	0.000	0.000	0.000	0.000			
HRM	Pearson Correlation	0.549	0.794	0.800	0.764	0.647	0.814	0.903	1	
	Sig.	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
JS	Pearson Correlation	0.617	0.729	0.753	0.627	0.595	0.637	0.676	0.639	1
	Sig.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

[EE = Employee Engagement, GR = Good Relationships, OJT = Organization's Justice and Trust, PCG = Promotion and Career Growth, WLB = Work-Life Balance, FPR = Fair Pay and Reward, RM = Role of Management, HRM= Good HRM Practices, JS= Job Satisfaction]

Table 05 displays the results of the correlation analysis, with the correlation coefficient of each variable appearing in the corresponding cells. The statistical significance level for all of the correlations is $p < 0.01$, which means that there is a strong relationship between all the variables. A strong positive correlation was found between good relationships and employee engagement ($r = 0.663$, $p < 0.01$), highlighting the significance that good relationships within the organisation are important to increase employee engagement. The relationship between organizational justice and trust and employee engagement is moderately strong and positive ($r = 0.679$, $p < 0.01$) indicating that the employees' perception of organizational fairness and the trust in the organization rises as employees become more engaged. There is a moderate positive correlation between promotion and career growth and employee engagement ($r = 0.639$, $p < 0.01$), which

means promotion and career growth are key to increasing employee engagement. As well, there is a positive relationship between work-life balance and engagement ($r = .538, p < .01$), although this is less pronounced than other relationships, demonstrating that the balance between life and work can lead to engaged employees. There is a relatively low, but positive, correlation between fair pay and rewards and employee engagement ($r = 0.519, p < 0.01$), indicating that while important, pay and rewards is not as influential as other determinants. The role of management has a moderate positive correlation ($r = 0.539, p < 0.01$), which means that the positive influence of management and employees' engagement is moderate. Likewise, there is a positive correlation ($r = 0.549, p < 0.01$) between good HRM practices and engagement, underscoring the importance of well-planned HR practices in fostering employee engagement. Finally, job satisfaction shows a strong positive correlation with employee engagement ($r = 0.549, p < 0.01$), highlighting that higher employee engagement contributes significantly to overall job satisfaction within the organization.

Discussion

In this study, it has been found that multiple factors significantly affect employee engagement, which in turn enhances job satisfaction among the employees of the fisheries sector in Bangladesh. Among all the factors, Good Relationships exhibited the highest positive influences on employee engagement, indicating the significance of supportive interpersonal relationships within the organization. The result was also consistent with the findings of Sequeira and Dhriti (2015) and Griffin et al., (2015), where the researchers identified good relationship policy as a key factor for enhancing employee engagement as well as competitive advantages. Organization's Justice and Trust have also emerged as another significant factor contributing the employee engagement within the organizations, aligning with the outcomes of prior research (Mubashar et al., 2022; Rasheed et al., 2013; Özer et al., 2017). The result also showed that Promotion and Career Growth have a meaningful impact on employee engagement, reinforcing the view that when employees feel motivated and committed towards the organization as a result of growth opportunities, which in turn boosts employee involvement. Previous studies (Zhou et al., 2015; Mokaya & Kipyegon, 2014) also suggested that employees' career growth opportunities enhance their work involvement. Although slightly less influential than other factors, work-self life balance remains a vital contributor to employee engagement, particularly in labor-intensive sectors such as the fisheries industry. The findings of this study indicate that work-life balance has a positive impact on employee engagement, which is also consistent with the findings of Jaharuddin & Zainol, (2019); Sopian et al., (2022). Fair pay and rewards are also significant elements that positively influence employee engagement in the fisheries sector.

Recommendations

Based on the JD-R Theory, this study recommends that fisheries organizations strengthen employees' job resources while effectively managing job demands to enhance EE and job satisfaction. Given the physically demanding, field-oriented, and resource-constrained nature of fisheries work, organizational strategies should prioritize both employee well-being and motivation.

Fisheries organizations should facilitate a collaborative organizational culture by encouraging open communication, teamwork, knowledge sharing, and mentoring. Regular team interactions, cross-departmental collaboration, and effective conflict management can enhance social support, an important job resource that promotes employee engagement.

Managers should strive to make decisions, assign work, review performance and develop policies in an honest and equitable fashion. Employees' trust and sense of security in the workplace can be improved by having clear communication over promotions, rewards and organizational changes to minimize uncertainty. Promotion mechanism, succession plan and ongoing learning and development programs should be set up in public and private fisheries organizations. Through technical training, leadership development, and career counseling, staff can be empowered with the skills they need to move up the career ladder and augment their ongoing tenure at the company.

Due to the nature of fisheries work and seasonal characteristics, flexibilities in working hours should be considered as possible as it is, workloads should be reasonable, leave programs should be sufficient during peak seasons and employee wellness programmers should be established to reduce fatigue and prevent burnout.

Compensation systems should be reviewed on a regular basis to ensure that they are both internally and externally equitable. Other forms of recognition such as salary, recognition programs, performance awards, credentials and promotion should be used to recognize employee contributions and keep them motivated. Leadership development programs should provide managers and supervisors with coaching, communication, problem solving, and participative leadership skills. Supportive leadership is a key job resource that can assist employees in managing work demands, enhance psychological safety and promote increased engagement.

HR departments should put in place integrated HRM systems that involve competency-based recruitment, structured orientation, continuous training, fair performance evaluation, employee involvement and retention of talent. These practices boost organizational support and equip staff with the tools to do effective work. Fisheries organizations are encouraged to conduct periodic evaluations on workload, staffing, safety and occupational health, equipment availability, transportation and logistics in the field. Giving proper work equipment, protective gear and materials can minimize job demands and enhance employee performance and safety. Policies should be developed to support the needs of the fisheries sector, by government agencies and fisheries organisations, to take into account occupational health and safety, incentives for fieldwork, personnel support for remote assignments, continuous professional development, employee well-being, and recognition of technical and extension services. These efforts can bolster organizations' resources, employee retention, and better employee motivation.

In general, JD-R Theory indicates that employees are best engaged when organizations manage to combine the demands of the job with sufficient job resources. Fisheries organisations can build a more engaged workforce, increase job satisfaction and sustain organisational performance and service excellence by investing in supportive leadership, equitable HRM practices, career development, fair compensation, work-life balance and positive workplace relationships.

Conclusion

EE has now become a critical requirement for organizations, as they face intense global competition and rely on innovative employees to achieve a competitive advantage. Thus, employee engagement has become an essential component of study not just for academic researchers but also for the industry professional as well as top management level of any organization. This study focuses on seven engagement drivers that were Good Relationships, Organization's Justice and Trust, Promotion and Career Growth, Work-Life Balance, Fair Pay and Reward, Role of Management, and Good HRM Practices. The findings of the statistical analysis suggest that all of these drivers have a positive impact on employee engagement. Good relationships emerged as the highly influential factors of employee engagement, indicating that every

organization specifically the organizations in the Fisheries industry needs to ensure good interpersonal relationships among the workers from top to bottom. The findings also exposed EE has a positive impact on job satisfaction. This finding has a strategic implication for the organization especially the human resource management (HRM) department as well as the academic and industry scholars. Organizations, particularly in the fisheries industry, should focus on ensuring interpersonal relationships through open communication as well as teamwork, as good relationships have been identified as the most contributing factor. It is also vital to confirm organizational justice and trust by maintaining transparency as well as fairness in decision-making. In addition, the organization should provide career development prospects, such as training and promotion pathways, and ensure proper work- life balance by utilizing flexible schedules and wellness to maintain motivation among the workers. While this study adds valuable evidence about the elements of EE and the impact on job satisfaction in fisheries industry of Bangladesh, several limitations need to be considered while interpreting the evidence. The study was carried out with 118 staff of selected public and private fisheries organizations. Although the sample size was sufficient to undertake the statistical analyses in this study, the relatively small size of the sample may affect the generalisability of the results to the wider fisheries workforce in Bangladesh. Secondly, the study focused on a number of organizational determinants of employee engagement. The other important factors such as organizational culture, psychological empowerment, employee well-being, job stress, leadership style and organizational commitment were not examined because they were out of scope of the study. Finally, since the study has been undertaken from the perspective of the fisheries sector, results may not be directly relevant to other sectors with different organizational designs, workplaces and HRM practices. Suggestions for further studies include trying to address some of the limitations created by this study, including the use of larger and more representative samples of participants from a variety of geographic regions and organizational settings.

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Annex

Details of Sample Collection

Name of the Institutions	Number of Sample
Divisional Fisheries Office, Khulna	6
DOF, Khulna	7
BFRI, Khulna	7
Nihao Food Company Ltd., Chittagong	15
ACI Godrej Agrovet	05
Upazilla Fisheries Office, Dumki	02
Bangladesh Fisheries Research Institute	15
Bangladesh Fisheries Development Cooperation	16

Bangladesh Fisheries Research Forum	17
Bangladesh Oceanographic Research Institute	17
Bangladesh River Research Institute	11
Total	118