

In quest for sustainable quality assurance in higher education: An empirical investigation

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Abstract

The main intent of the present research is to explore the particular practices of human resource management (HRM) to impact on sustainable assurance in quality higher education. Specifically, how promotion opportunity, performance appraisal, work condition and payment package influence teachers' job satisfaction which, in consequence, impacts on education quality in the private universities. To attain this objective, this research applies the two factor theory of Herzberg as its theory background. Data ($n = 517$) were collected from 21 private universities' faculty following the technique of random sampling. The study analyzed the data utilizing structural equation modeling through the analysis of moment structure. Results demonstrate that all four HRM variables are statistically positively significant to influence faculty job satisfaction. It also indicates that faculty job satisfaction also influence positively quality education. The study also indicates that if proper HRM practices are nurtured in private higher education institutes (HEIs) that will enhance faculty satisfaction which will sustain the development of quality education.

Keywords: HRM practices; Faculty satisfaction; Sustainable quality

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1. Introduction

Bangladesh is one the most promising emerging economies of the world and its government is committed to attain that goal. In its effort, Bangladesh has also achieved a remarkable success in term of providing universal education to its people. As a part of this thriving movement, Bangladesh has established quite a large number of public educational institutes across the country. However, they are still not sufficient to accommodate all the students to have higher education enrolling in these public institutes.



Bangladesh government has issued the Private University Act in 1992, which paved the way for vibrant propagation of private universities in the country. At present, a total of 103 universities in the private sector in Bangladesh, but not without challenges of quality education and proper human resource management (HRM) practices. Be that as it may, faculty turnover intentions are relatively much greater in these private higher education institutes (HEIs) than public institutes (Joarder, 2012). Owing to this reason, sustainability in quality higher education particularly in the private universities remains at stake for which the present study provides some insights to overcome that problem.

1.1 Theoretical Underpinning

1.1.1 Herzberg's Two-Factor Theory

This study uses Herzberg's two-factor theory (HTT; Herzberg *et al.*, 1967) as its theoretical foundation (Figure 1), which brings forth the idea of employee satisfaction in the workplace. In the theory, Herzberg categorically explains motivation as well as hygiene factors which spur the physical and mental well-being of employees by which they become fully satisfied and happily perform their duty and responsibility on their utmost ability and efficiency. In the case, any organization does not care about these factors, and then the opposite could be happened bringing about employee less-satisfaction (i.e. de-motivation) and negligence in their duty (Herzberg, 1966). Consequently, employee performance and productivity could be affected adversely and even in the extreme case, the employees could leave the organization.

Figure 1 Herzberg's Two-Factor Theory

Hygiene Factors	Motivation Factors
 <ul style="list-style-type: none"> Working Condition Peer Relations Leadership Quality Job Security Compensation Status 	 <ul style="list-style-type: none"> Job Autonomy Responsibility Performance Appraisal Achievement Promotion Opportunity Advancement

Source: Herzberg et al. (1967)

In the present study, two of the key motivation factors such as promotion opportunity and performance appraisal as well as two of the vital hygiene factors such as working condition and compensation structure are selected for examining their impacts on faculty satisfaction (Herzberg 1966). Some studies examine teachers' satisfaction based on Herzberg's theory (Hee *et al.*, 2019; Anastasiou & Papakonstantinou, 2014).

1.2 Related Research

Some studies identified that teachers are the core role-player in the academia (Johnson, 2006; Rivkin, *et al.*, 2002; Rowan *et al.*, 2002; McCaffrey *et al.*, 2003). Many studies identify several factors that influence employee job satisfaction in the workplace (Herzberg *et al.*, 1967; Amin, 2015; Ashraf, 2019b; Balras, 2016; Castillo & Cano, 2004; Gazioglu & Tanselb, 2006; Hee *et al.*, 2019). However, in most of the cases, authorities and administrators ignore that reality and do not care about nurturing healthy HRM practices that can have enormous impacts on teachers' physical and mental well-being and their overall satisfaction which can influence sustainable quality education.

1.2.1 Quality Education

The term "quality" is a relative term (Harvey & Green, 1993; Gibbs, 2010), which has not yet attained any absolute definition to date. The same thing is true for quality education. There has been a celebrated dialogue between a disciple of a medical school in Athens (i.e. the Hippocrates School of Medicine) and Socrates about the subject matter of 'quality medicine'. During this long discourse Socrates wanted to know about the definition of the concept of 'quality'. In his answer, the student told Socrates that quality is the term which is subjective in nature. Finally, this discourse is ended up with a profound confusion about the term quality and for which Socrates concludes that this concept needs a lot more works in this area prior to have any value of it (Alpert, 2018). Unfortunately, we have been still working on it since then and lot more floundering about what the term 'quality' is.

Be that as it may, the concept of quality education is also rolling around a very similar faintly hazy circle, where we all are groping at some ill-defined idea, drifting past out of reach, in the foggy recesses of our mind. For this uncertain outcome about the concept of quality education, experts are different in their opinion. So, quality education has no single definition as well as no universal consensus can be made on how to assure and manage it in all levels of academia (Brucaj, 2014).

1.2.2 Sustainability in Quality Higher Education

Sustainable quality education in the HEIs is principally contingent on quality teachings provided by the quality teaching staff to students. If the teaching staff hold firm to their quality teachings and values, the HEIs will be able to generate and sustain the most effective quality education and learning to the students. Thus, the purposeful, conscious and active evolution of the quality education through quality teachings by the faculty must begin with the HEIs. If we can achieve the sustainability of this quality higher education, we will be able to enlighten our society by applying those teachings and values to build up a sustainable future. In this regard, it is important to note that only the HEIs bear this sole responsibility. No other academic institutions can play this role.

1.3 Purpose of the Study

Quality issues and their sustainability are extremely crucial in private HEIs in Bangladesh. However, empirical research works on sustainable quality education in private HEIs are sparse. The present research intends, therefore, to examine this sustainability of quality education issue in the private HEIs through analyzing a set of selected HRM practices to manage their faculty members. Specifically, it explores the effects of two of motivation factors and two of hygiene factors that can have impacts education quality in the private HEIs in Bangladesh.

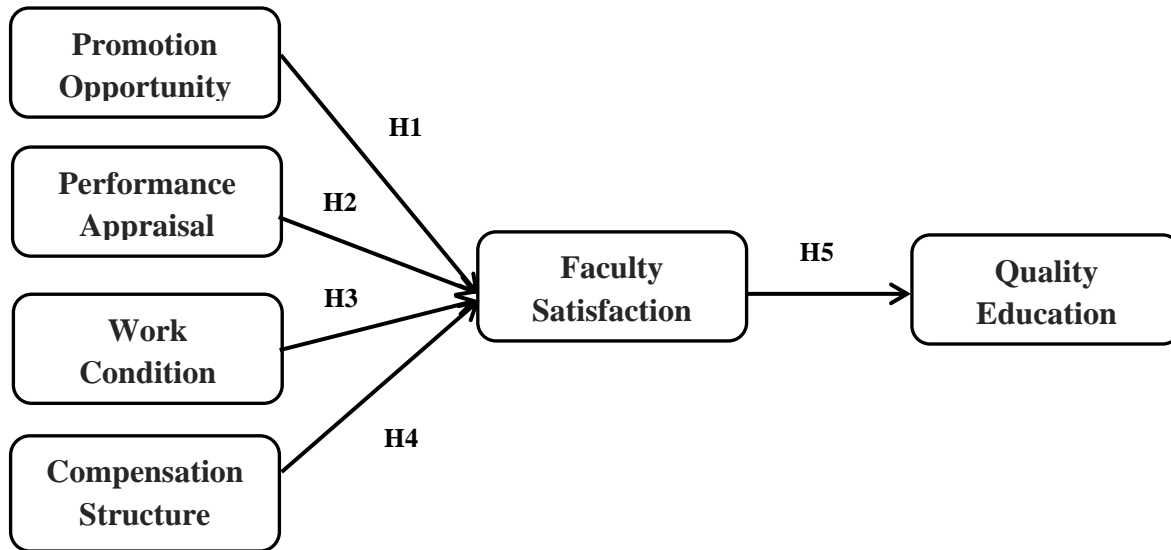
2. Method and Materials

2.1 Research Model and Hypotheses

The present study formulates the following research model (Figure 2) based on HTT and past research evidence (Ashraf, 2020; Joarder *et al.*, 2020; Joarder & Ashraf, 2012; Johnson, 2006).. Besides, there are

several studies that examine all these mentioned motivation and hygiene factors to influence teachers' satisfaction in the academic environment (Anastasiou & Papakonstantinou, 2014; Hee et al., 2019). There are also few studies that endeavored to find out the nexus between the HRM practices and education quality in HEIs in private sector (Ashraf, 2019a; Joarder et al., 2020). Based on these recent studies, this article also cherishes to find out the impacts of hygiene and motivation factors of Herzberg on teachers' job satisfaction which consequently influences education quality in the private HEIs in Bangladesh.

Figure 2 Research Model



2.1.1 Promotion Opportunity

In relation to faculty promotion, Gibbs (2010) presented the results of academic research which demonstrates that over 90 percent of the academic staffers think that teaching should be important in promotions. By this way, faculty of the HEIs can achieve mental satisfaction (Ashraf, 2019b). Few studies investigate the effect of career development on employee job satisfaction in the field of banking sector (Saleem et al., 2013), mobile phone company (Joarder & Ashraf, 2012) and manufacturing industry (Kaya & Ceylan, 2014). Several empirical research papers delineate the positive relationship between promotion opportunity and teachers' academic job satisfaction such as Hee et al. (2019), Mustapha and Zakaria (2013) and Malik et al. (2012). Based on all these studies, the postulated hypothesis is:

H1 Promotion opportunity is positively related to faculty job satisfaction.

2.1.2 Performance Appraisal

A large number of studies examine the nexus between employee performance appraisal and job satisfaction in the workplace (Green & Heywood, 2008; Jawahar, 2006; Sommer & Kulkarni, 2012; Whitman et al., 2010; Naji et al., 2015). Academic staffers also deserve similar recognition for their excellent academic performance that could be measured in terms of teaching and research (Johnson, 2006). There are also few articles that investigate and demonstrate the link between teachers' performance appraisals and job satisfaction (Anastasiou & Papakonstantinou, 2014; Amin, 2015). Hence, it can be conjectured:

H2 Performance appraisal is related positively to faculty job satisfaction.

2.1.3 Work Condition

Some research works have characterized the work condition in two dimensions such as work and context (Raziq & Maulabakhsh, 2015). Work comprises different aspects of activities carried out and completed such as duties and responsibilities, training and development (Raziq & Maulabakhsh, 2015; (Gazioglu & Tanselb, 2006; Sousa-Poza & Sousa-Poza, 2000; Skalli *et al.*, 2008). Several other studies demonstrate that work condition has positive significant influence on faculty job satisfaction (Balras, 2016; Castillo & Cano, 2004; Saeed & Nasir, 2016). Thus, it is postulated that:

H3 Work condition is positively related to faculty job satisfaction.

2.1.4 Compensation Structure

Many research papers which find that the package of compensation influence job satisfaction with a positive significance (Prasetio *et al.*, 2019; Hakim, 2020; Rood & Holdnak, 2013; Adeoye & Fields, 2014; Ibrahim & Boerhaneoddin, 2010; Iqbal *et al.*, 2017). By an extensive literature review, this study finds a few papers that investigate the influence of compensation structure on teachers' job satisfaction (Pepra-Mensah *et al.*, 2017; Malik *et al.*, 2012; Usman *et al.*, 2013). These studies find positive significant relations between teachers' compensation bundle and other benefits and their job satisfaction. Based on all this evidence, it is postulated that:

H4 Compensation structure is positively associated with faculty job satisfaction.

2.1.5 Job Satisfaction

Several studies provide comprehensive views about employee job satisfaction (Hoppock, 1935; Vroom, 1964; Davis & Nestrom, 1989; Mullins, 2007; Kaliski, 2007; George & Jones, 2008; Aziri, 2011). These scholars identify job satisfaction indifferent aspects, such as: the workers' perception of achievement and success on the job (Kaliski, 2007); the extent to which an employee is pleased with the rewards s/he gets out of the job and motivation of the employee (Mullins, 2007). However, there have been some studies that conduct to examine the factors affecting faculty satisfaction (Szromek & Wolniak, 2020; Bolliger & Wasilik, 2009), but no studies have been found that explores the influence of faculty satisfaction on sustainable quality education in HEIs. In this regard, this is a research gap which should be addressed. Thus, it can be conjectured hypothesized:

H5 Faculty job satisfaction is associated positively with quality education.

2.2 Participants

Participants of the study were full time university teachers of twenty-one private HEIs in the country. These universities are ranked in top twenty-five private HEIs in Bangladesh by the UGC- university grant commission in 2019. The UGC set an institute of quality assessment cell (IQAC) which monitors the quality issues in all HEIs in Bangladesh. Based on the report of this IQAC, quality issues are addressed by the UGC. The survey instrument of the current study included five types of professional full-time faculty members of these private universities such as lecturer, senior lecturer, assistant professor, associate professor and professor. There are some part-time and adjunct teachers, but they were excluded from the survey.

2.3 Data collection tools

This research employed a structured questionnaire, which has three parts: The first part consists of the questions on the outcome variable of quality education. The items of this construct are adopted from Ashraf (2019a). The second section includes the specific HRM practices. Measurement items of compensation structure (five items) were adapted from Tessema and Soeters (2006), work condition

(four) from Edgar and Geare (2005), performance appraisal (three) from Chang (2005), promotion opportunity (four) from Allen et al. (2003) and job satisfaction from Joarder and Ashraf (2012). This study used the measurement items by a 7-point Likert scale. The third portion included demographic characteristics of the respondents which are presented in Table I.

2.4 Data collection process

Data collection process took place during the 2019 winter. The teachers of 21 universities in private sector were selected for gathering data through closed-ended self-administered survey. The survey instruments were dispatched to the selected respondents via emails. A systematic random sampling method was employed to identify the respondents. The size of the sample was selected based on Cochran (1977) who suggested 384 respondents for the infinite population as adequate. A sum of 600 survey forms were distributed and fortunately a total of 523 (87%) respondents responded. While a few data were not usable for some errors, 517 returned survey instruments were selected finally for analyzing data. A preliminary test was manipulated to see the strength of cohesion between the variables set in the research framework. Results of descriptive statistics for the enlisted variables of the model are listed in Table II.

2.5 Data Analysis

The research model was run collating data in it following SEM - structural equation modeling through AMOS- analysis of moments structure (AMOS) software. These procedures and software has been effectively used in the business research during a long previous time (Hair, et al. 2010). It is also now extensively utilized in marketing, finance and education research (Ashraf *et al.*, 2016; Sarstedt *et al.*, 2016; Ringle & Sarstedt, 2016).

The results of exploratory factor analysis (EFA) are presented in Figure 3. Then loading values of the constructs' items were examined whether any values are below 0.60. One item of promotion opportunity and three items of quality education were identified as less than 0.60 and excluded from the model analysis. Next, the confirmatory analysis were manipulated and presented the results in Figure 4. Table IV exhibit the values of Cronbach alpha (α), CR and AVE. Table III shows the correlation ratios of different constructs of the model. The bootstrapping procedure through AMOS was followed to see the status of the hypotheses. The structural outputs show that all relationships between variables were statistically significant at the $p < 0.01$ level except one at $p < 0.10$ level. Thus, H1, H2, H3, H4 and H5 were supported. Figure 5 presents the evaluated research framework and Table VI represents the results of structural measurement outputs.

4 Results

Table 1 presents the socioeconomic profile of the participants in the study.

Table 1 Profile of the sample

Variables	Frequency	Percent	Variables	Frequency	Percent
<i>Age</i>			<i>Designation</i>		
18 to 24	182	35	Lecturer	134	26
25 to 30	130	26	Senior Lecturer	98	19
31 to 35	84	16	Assistant Professor	243	47
36 to 40	79	15	Associate Professor	26	5
> 40	42	8	Professor	16	3
<i>Gender</i>			<i>Monthly Income (BDT)</i>		
Male	362	70	< 20,000	16	3
Female	155	30	20,000 to 50,000	175	34

			50,001 to 70,000	233	45
			70,001 to 90,000	62	12
			> 90,000	31	6
<i>Education</i>			<i>Job Tenure</i>		
Master degree	476	92	< 1 year	109	21
PhD	41	8	1 – 2 years	84	16
			2 – 5 years	170	33
			5 – 10 years	140	27
			>10 years	14	3

Source: Field Survey

Table II and III demonstrate descriptive results and correlation ratios of the constructs employed in the research framework. In Table II, the constructs' mean scores show that they all are above the neutral scale implying that the respondents agree to the items of constructs. In Table III, it is evident that all the coefficients of correlation are statistically significant at the $p < 0.01$ level.

Table II Descriptive Statistics

Constructs	<i>n</i>	Minimum	Maximum	Mean	Std. Deviation
Promotion Opportunity (PO)	517	1.00	7.00	4.52	1.20
Performance Appraisal (PA)	517	1.00	7.00	4.76	1.43
Work Condition (WC)	517	1.00	7.00	5.11	1.39
Compensation Structure (CS)	517	1.00	7.00	4.55	1.45
Job Satisfaction (JS)	517	1.00	7.00	4.99	1.23
Quality Education (QE)	517	1.00	7.00	5.21	1.10

Table III Correlation Coefficients

Constructs	PO	PA	WC	CS	JS	QE
Promotion Opportunity (PO)	1					
Performance Appraisal (PA)	0.653**	1				
Work Condition (WC)	0.587**	0.607**	1			
Compensation Structure (CS)	0.600**	0.604**	0.616**	1		
Job Satisfaction (JS)	0.606**	0.656**	0.625**	0.515**	1	
Quality Education (QE)	0.506**	0.565**	0.617**	0.584**	0.581**	1

** Significant at the 0.01 level (2-tailed)

Figure 3: Path Analysis (EFA)

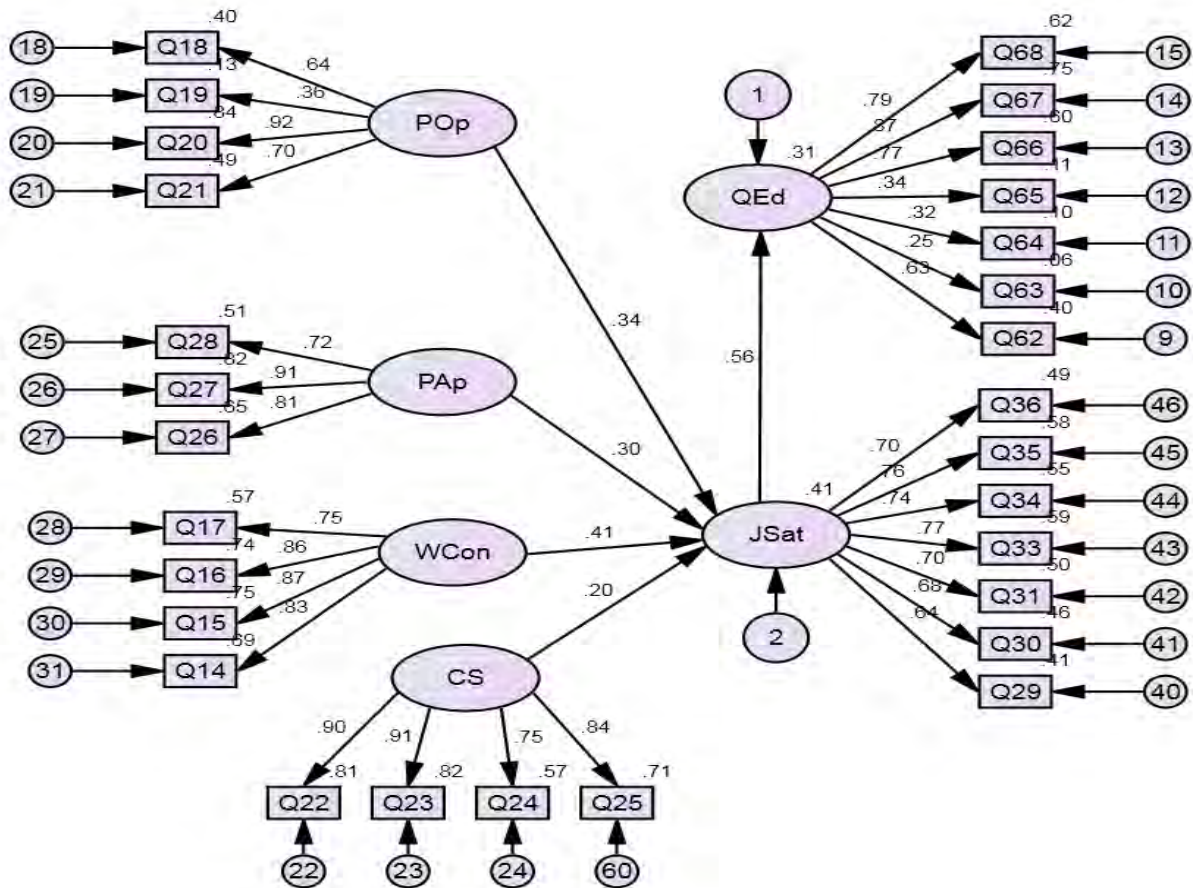


Figure 4: Path Analysis (CFA)

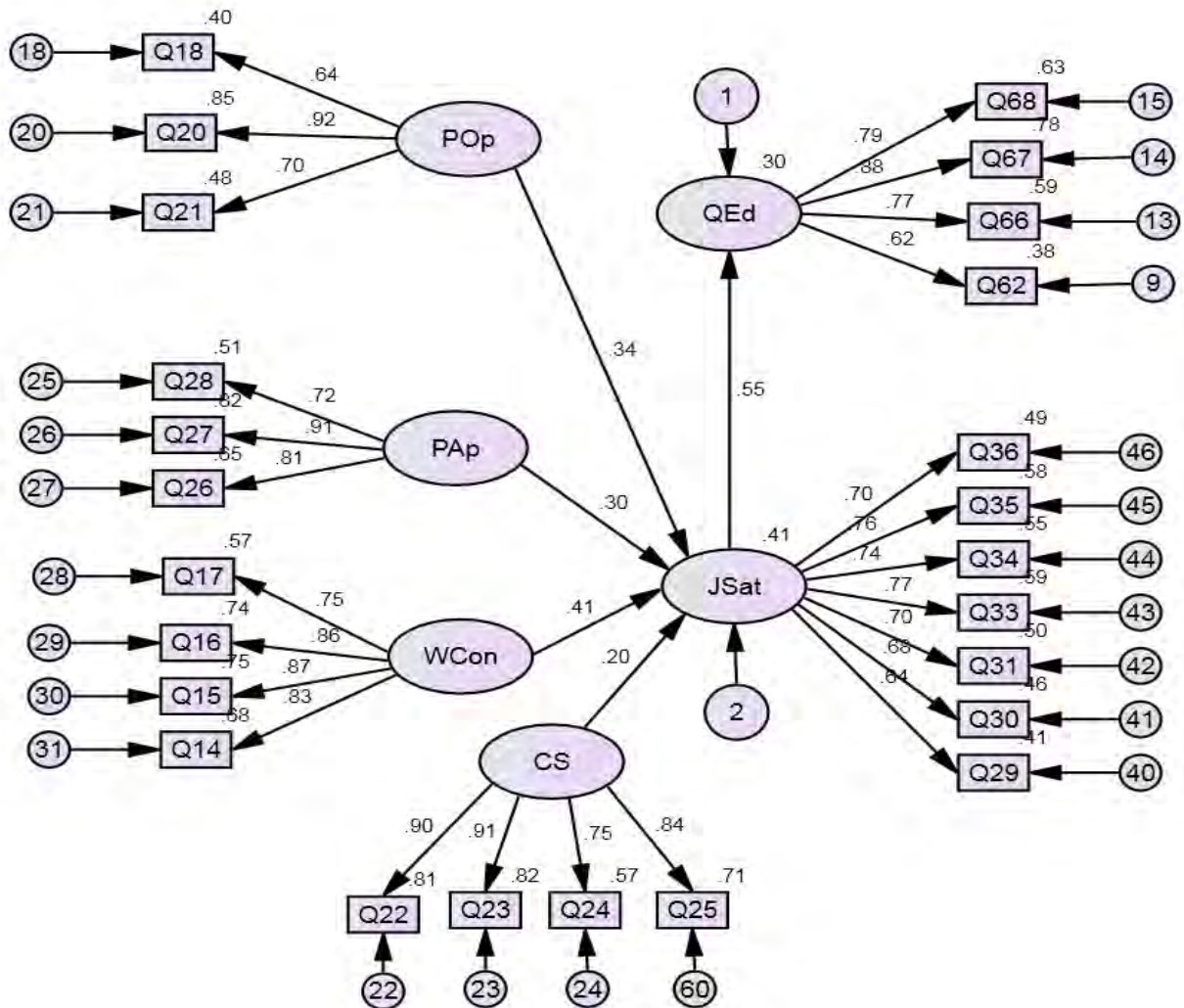


Figure 3 and Figure 4 present the results of EFA and CFA. In Figure 3, some items' values were found to be less than 0.60. According to Hair et al. (2010), these loading values are unsatisfactory. So, they are excluded from further analysis. In Figure 4, all the construct item loadings are above 0.60 which are satisfactory (Hair et al., 2010). This Figure also shows that all the paths are statistically significant and R^2 values (0.41 for job satisfaction and 0.31 for quality education) are substantially high which indicate that

the model can explain the substantial level of variability between the independent and dependent variables.

Table IV Construct Items, Loadings, Reliability and Convergent Validity (CFA)

Construct	Item	Loading	α	CR	AVE
Promotion Opportunity	Q18- Faculty have clear career path	0.64	0.80	0.80	0.58
	Q20- Faculty's career goals are known by the head	0.92			
	Q21- Faculty have multiple promotion options	0.70			
	Source: Allen et al. (2003)				
Performance Appraisal	Q26- Appraisals are based on specific objectives	0.81	0.85	0.86	0.67
	Q27- Provides enough information on appraisals	0.91			
	Q28- Results of appraisals are open to see	0.72			
	Source: Chang (2005)				
Work Condition	Q14- Work conditions are good in this institution	0.83	0.89	0.90	0.70
	Q15- I don't suffer due to work condition here	0.87			
	Q16- I always feel safe working here	0.86			
	Q17- Inst. does everything to ensure emp. well-being	0.76			
	Source: Edgar & Geare (2005)				
Compensation Structure	Q22- There is attractive compensation at my institute	0.90	0.90	0.89	0.63
	Q23- There is equitable internal salary here	0.91			
	Q24- Comp. package reflects indiv. emp. performance	0.75			
	Q25- Comp. pack. reflects the standard of living	0.84			
	Source: Tessema & Soeters (2006)				
Job Satisfaction	Q29- I am satisfied with my job in this institute	0.64	0.92	0.92	0.73
	Q30- I enjoy my job in this institute	0.68			
	Q31- I love to come to my working place	0.70			
	Q33- I like working here in this institute	0.77			
	Q34- I feel homely in the job here	0.74			
	Q35- I am satisfied with my job specifications	0.76			
	Q36- I will take retirement right from this institute	0.70			
	Source: Joarder and Ashraf (2012)				
Quality Education	Q62- My institution curriculum is very effective	0.62	0.87	0.85	0.60
	Q66- If I start fresh, I would select it for my education	0.77			
	Q67- I recommend this institute to friends or relatives	0.88			
	Q68- Overall, quality education is excellent here	0.79			
	Source: Ashraf (2019a)				

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

Table IV represents construct items, loading values, reliability and convergent validity obtained from the CFA. As guided by Hair et al. (2017), the values for Cronbach's Alpha, CR, and AVE are 0.70, 0.70, and 0.50 which confirm that the construct reliability, internal consistency, and convergent validity have been achieved. Besides, all the factor loadings are found to be above the minimum value of 0.60 which

is specified as good by Hair *et al.* (2010). So, it is evident that all the study constructs have achieved the acceptable reliability and convergent validity.

Table V Discriminant Validity (Fornell and Larcker method)

Constructs	PO	PA	WC	CS	JS	QE
Promotion Opportunity (PO)	0.761					
Performance Appraisal (PA)	0.653	0.818				
Work Condition (WC)	0.587	0.607	0.836			
Compensation Structure (CS)	0.600	0.604	0.616	0.793		
Job Satisfaction (JS)	0.606	0.656	0.6.25	0.515	0.854	
Quality Education (QE)	0.506	0.565	0.617	0.584	0.581	0.774

** Significant at the 0.01 level (2-tailed)

Table IV exhibit the discrimination validity of the constructs by based on the Fornell and Larcker technique which indicates that the correlation coefficient of any cell is smaller than the square root of AVE values in its respective row or column. Thus, the selected research framework has achieved its discriminant validity (Fornell and Larcker, 1981).

Table VI Standardized Estimate and Hypothesis Status

Hypothesis	Path	Beta	SE	t-Value	Supported
H1	PO => JS	0.34	0.039	7.285*	Yes
H2	PA => JS	0.30	0.033	6.751*	Yes
H3	WC => JS	0.41	0.039	8.871*	Yes
H4	CS => JS	0.20	0.027	4.889*	Yes
H5	JS => QE	0.55	0.055	10.260*	Yes

Note: *Significant at the $p < .001$ level

It is evident in Figure 2 and Table VI that all the conjectured associations are important. Particularly, faculty promotion opportunity has positive and meaningful influence on job satisfaction of the faculty ($\beta = 0.34$, $t = 7.285$, $p < 0.001$). Thus, H1 is supported. In the same fashion, performance appraisal ($\beta = 0.30$, $t = 6.751$, $p < 0.001$), work condition ($\beta = 0.41$, $t = 8.871$, $p < 0.001$) and compensation structure ($\beta = 0.20$, $t = 4.889$, $p < 0.001$) possess significant and positive influence on job satisfaction. Hence, H2, H3 and H4 are supported. Besides, job satisfaction has noteworthy impact on quality education ($\beta = 0.55$, $t = 10.260$, $p < 0.001$). Hence, it supports H5.

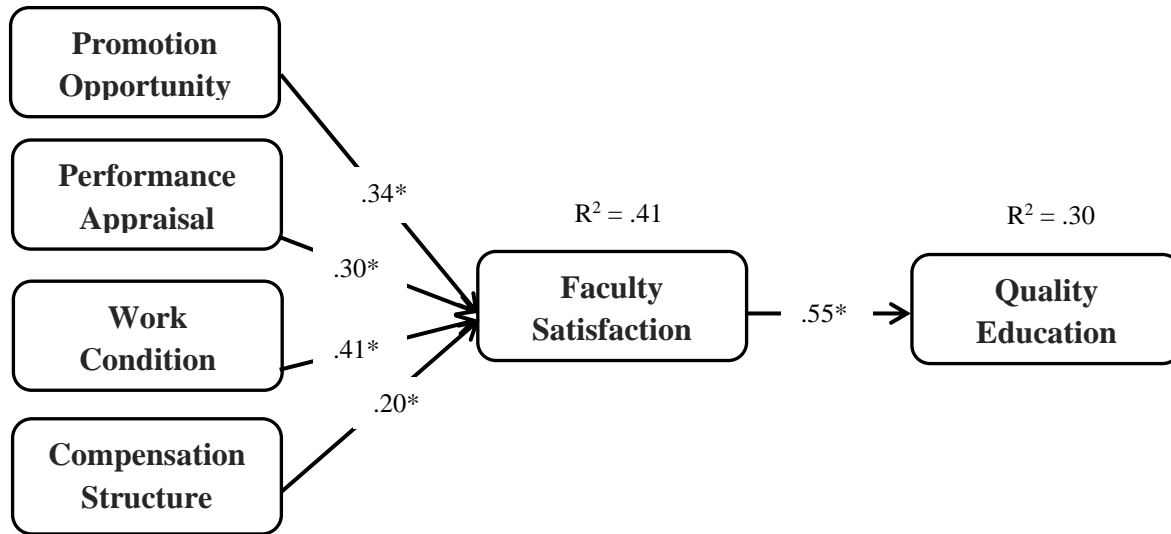
The structural path analysis indicates that the analyses possess acceptable fit criteria such as GFI, CFI, Tucker-Lewis values, Parsimonious Fit Ratio, and RMSEA (Hair *et al.*, 2010). The summary of results show that explanatory variables are yielding comparatively good fit indices as specified by their threshold levels such as CMIN/df ratio (< 2); p -value (> 0.05); $GFI > 0.90$ and $RMSEA < 0.08$ (Hair *et al.*, 2010). The values for GFI, CFI, TLI, parsimonious fit ratio, and RMSEA are 0.912, 0.920, 0.905, 0.935 and 0.056 respectively. These values are less than their corresponding acceptable limit as suggested by Hair *et al.* (2010). Thus, it achieves the validity of its goodness of fit.

4. Discussion

The evaluated measurement model has been represented in Figure 5 which reflects that the present study is particularly important for reflecting profound insights on nurturing proper HRM practices in

order to sustain quality education in HEIs. In order to cut the operating expenditure, the owners of the HEIs also show their negligence in terms of providing adequate pay and other benefits to the staff of the university. The important lesson here is that private university authorities must cultivate proper HRM practices by which the faculty members can be satisfied with their academic jobs. This factor would ultimately help to enhance a sustainable quality education in the private universities.

Figure 5 Evaluated Measurement Model



Note: *Significant at the 0.01 level;

From the research perspective, there are a couple of indications. Firstly, as a theoretical background, Herzberg's two factor theory helps to formulate a research framework that explains and predicts well about its outcome variable. Secondly, it also insinuates that the present study includes only four specific HRM factors to influence faculty job satisfaction which, in turn, can impact on sustainable quality education. There are many other HRM factors that can also be included to explore about the similar empirical outputs. From the practical perspective, this research has presented a unique result which would be helpful to the authorities and academics of the private HEIs to take care of formulating right HRM strategies to reduce high faculty turnover rates. This would ultimately aid to excel and sustain quality education in the HEIs.

5. Conclusions

This study primarily aims to examine the sustainable quality education in HEIs in the private sector in Bangladesh. To this end, the research empirically examined the effects of HRM factors selected grounding on the underlying theoretical base on overall faculty job satisfaction which, in turn, influences sustainability in quality education in these private universities. The findings show that all these four factors are statistically significant to influence faculty job satisfaction which is also observed to significantly influence sustainability in quality education. Thus, these results of the current study recommend a few things which are provided in the next section.

6. Recommendations

As many other studies, this paper consists of a few recommendations. First, this study has included the teachers of only the universities in the private sector and excluded the universities in the public sector.

Thus, the study recommends to include public universities in future similar studies. Second, the study subsumed only 21 private universities in its survey whereas there have been more than hundred private universities in Bangladesh. So, it would yield a better output if the study could enlist more universities in collecting information. Thus, it is evident that further research works can mitigate those curbs mentioned above in their future empirical research projects. Future research can also include other HRM variables that were not included in the present study in order to find the potential ways to attain the sustainable quality education goal which will excel the sustainable development of society as a whole.

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