



Variations of quality of work life of academic professionals in Bangladesh

A discriminant analysis

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Abstract

Purpose – The main purpose of this research was to analyze the key issues related to quality of work life (QWL), which have become increasingly important to HRD scholars and practitioners. In addition, the significant differences between the academic professionals of public and private universities in Bangladesh in terms of QWL were also addressed.

Design/methodology/approach – A total number of 202 academic professionals were selected as a sample based on stratified and random sampling techniques. Questionnaire survey method was used to gather primary data. Sirgy *et al.*'s survey instrument was adopted in this study. Discriminant analysis was utilized to differentiate QWL among academic professionals of the study sample and tested the hypotheses.

Findings – The study findings show that the job design of an organization can have a significant effect on its organizational performance (OP) and hence the need to give proper attention to the quality of work life (QWL). Moreover, the two factors like “creativity of outside work” and “payment for work” were significantly differentiated between academic professionals of public and private universities in Bangladesh.

Research limitations/implications – The main limitation of this paper is the relatively small sample size of only academic professionals in Bangladesh with regard to data concerning QWL, which limits the generalizability of the findings. However, the author feels that the outcomes of this research will be beneficial for policy makers and planners to formulate effective strategy of HRD in Bangladesh and other similar countries.

Originality/value – The paper discusses the role of QWL in managing human resources which determines organizational success. To make the best use of human resources, organizational leaders need to give more attention to the human network (interpersonal relationship), the nature and content of jobs performed.

Keywords Quality of work life (QWL), Academic professionals, Human resource, Need satisfaction, Spillover, Academic staff, Human resource management, Bangladesh

Paper type Research paper



Determining quality of work life (QWL) of employees is an important consideration for employers or management who are interested to improve the employees' job satisfaction and commitment. It involves the interplay between and among the employees, job content, and job context. So, every organization tries to achieve its vision, mission and objectives through effective utilization of human and material resources. Among the resources, the human resources are the important which determine organizational success. To make the best use of human resources, an organization must give more attention to the human network (interpersonal

relationship), the nature and content of their jobs being performed. The job design of organization can have a significant effect on organizational performance (OP) and thereby, the proper attention needs to be given to the quality of work life (QWL).

Researchers used the term of QWL in many ways, such as quality of work (Attewell and Rule, 1984), employment quality (Kraut *et al.*, 1989), and humane working life. Simply, QWL refers to an individual's evaluative reaction to, and satisfaction with, his/her work and the total working environment. Davis (1983) has defined QWL as "the quality of the relationship between employees and the total working environment, with human dimensions added to the usual technical and economic considerations."

QWL is a multi-dimensional construct usually referring to overall satisfaction with working life and with work-life balance, a sense of belonging to a working group, a sense of becoming oneself, and a sense of being worthy and respectable (Morin and Morin, 2004). It involves a focus on work design and all aspects (like, the physical aspects such as working conditions, managerial attitudes towards pollution and safety; the psychological aspects such as how the assigned work, method to do work and what kind of work?; and the economic aspects such as wage and salary, considerations for the standard of living that employees needs and enjoy) of working life that might conceivably be relevant to job satisfaction and motivation, and that QWL is related with the well-being of employees.

It is true that employees who possess meaningful work, experience good working conditions and are well paid can create a total quality situation. But, in practice, the organizational requirements and employees need are different when addressing the QWL issues. The demands of the organizations are too much and the compensation to the employees is too little and does not value the QWL issue (Pranee, 2010). As a result, employees may limit their efforts, slow down production, and in some cases, cease production completely to the frustration of the managerial efforts to maximize returns. These different needs lead to "us-and-them" attitudes in workplaces and thereby, both parties are failed to utilize their full creative potentiality. The critical improvement of QWL supports two way communication systems, development of a culture of excellence and innovation, and merit based rewards lead to maximizing the productivity of organizations that has captured the imagination of managers and employees alike (Pranee, 2010). Moreover, the QWL issues have become critical in the last two decades not only due to the increasing demands of today's business environment but also of the family structure. This gave rise to an increased interest in QWL not only in business but also for many professional fields (Akdere, 2006). But the empirical research in this area especially amongst academic professionals in Bangladesh and other Asian countries is still very scarce.

Overview of Bangladesh and university system

Bangladesh is a developing and agro-based country in South East Asian region. The total population is 160 millions of which 82 percent are Muslims and the rest are Hindus, Christians, Buddhists and so on. As per World Bank classification, Bangladesh categorized as lower – income country with per capita income in 2010 was less than \$1,000. The GDP growth in Bangladesh economy is 6.4 percent.

There are 31 public universities and 52 private universities under the University Grants Commission (UGC), a regulatory body of Bangladesh government, which provides the tertiary education in Bangladesh. In any country, the tertiary education



exerts a direct influence on the productive capacities of the country which largely determines the level of economic development and its ability to compete in the global economy. Sustainable economic development is not possible without contribution of an innovative tertiary education system.

Research purpose

The main purpose of this research is to fill the vacuum that currently exists in the areas of QWL research. Hence, the results of the survey are considered to be significant because, they will be intended to assist decision makers in identifying key workplace issues in order to develop strategies to address and improve the QWL in each university.

Research questions

Specifically, this study was undertaken to the answer the following research questions:

RQ1. What are the factors associated with QWL?

RQ2. Are there any differences between public and private university academics in terms of QWL?

Research hypothesis

The hypotheses formulated for this study are as follows:

H0. There is no significant difference in the factors that influence the QWL between public and private university academics.

H1. There is a significant difference in the factors that influence the QWL between public and private university academics.

Review of the literature

Work is an important constituent and integral to the life of all human beings. An individual's experiences in the workplace and his QWL influence the satisfaction at work and non-work life which ultimately affects organizational outcome. Researcher explained the QWL in different perspectives and have tried to identify the factors that determine such an experience at work (Bagtasos, 2011; Kalra and Ghosh, 1984; Mirvis and Lawler, 1984). Given the many perspectives by these researchers, the questions remain, what constitutes a high quality of work life? Generally the persons who are happy with their work are said to have a high QWL and those who are unhappy or unfulfilled by their work are said to have a low QWL.

A high QWL is essential for organizations to continue to attract and retain skilled employees. May *et al.* (1999) pointed out that companies offering better QWL and supportive work environments would likely to gain leverage in hiring and retaining valuable people and companies with high QWL enjoy exceptional growth and profitability (May *et al.*, 1999). The reality is that in the organization the sharing of social understanding and the participation of all parties concerned would constitute positive attitude for better QWL and higher productivity. Enhancing QWL will result in productivity improvement and gains from productivity improvements in turn will strengthen QWL (Walton, 1972; as cited in Sadique, 2007).

Robbins (1999) stated that QWL is a process by which an organization responds to employee needs by developing mechanisms to allow them to share fully in making the



decisions that design their lives at work (as cited in Islam and Siengthai, 2009). According to Straw and Heckscher (1984) QWL is a philosophy, a set of principles, which holds that people are the most important resource in the organization as they are trustworthy, responsible, capable of making valuable contribution and they should be treated with dignity and respect. QWL consists of opportunities for active involvement in group activities or problem solving that are of mutual benefit to employers, based on labor-management cooperation (Cunningham and Eberle, 1990). Hence, QWL is a comprehensive construct that includes work experiences that are rewarding, fulfilling and devoid of stress, and other negative personal consequences (Shamir and Salomon, 1985). According to Hanefah *et al.* (2003), QWL is a multi-dimensional construct comprised of seven dimensions, namely growth and development, participation, physical environment, supervision, pay and benefits, social relevance and workplace integration (as cited in Daud, 2010). Heskett *et al.* (1997) proposed that QWL which was measured by the feelings that employees have towards their jobs, colleagues and companies would enhance a chain effect leading to organization's growth and profitability (as cited in Daud, 2010).

QWL has been viewed from different angles. In line with the scholarly search for QWL, two approaches can be traced in the literature, such as: the need satisfaction approach; and the spillover approach. The need satisfaction approach is based on need-satisfaction models developed by Maslow (1954), McClelland (1961), Herzberg (1966), and Alderfer (1972). The basic assumption of this approach is that people have basic needs that they seek to fulfill through work. Extending this viewpoint, Sirgy *et al.* (2001) mentioned that employees derive satisfaction from their jobs to the extent that their jobs meet these needs. Whereas the spillover approach pointed out that satisfaction in one area of a person's life extends into other areas of life. Moreover, the spillover approach proposes that employees' experience on the job carryover in other life domains and influence his personal life (Schmitt and Bedian, 1982). This approach also signifies that dissatisfied employees are likely to experience unhappiness in non-work activities, whereas satisfied employees will also be happy of the job (Loscocco and Roschelle, 1991). Based upon these two approaches, Sirgy *et al.* (2001) proposed a new definition of QWL and they defined QWL as the, "Employee satisfaction with a variety of needs (such as health and safety needs, economic and family needs, social needs, esteem needs, actualization needs, knowledge needs, and aesthetic needs) through resources, activities, and outcomes stemming from participation in work and the workplace."

The key concepts captured in QWL include job security, better reward system, higher pay, opportunity for growth, and participative groups among others (Havlovic, 1991; Straw and Heckscher, 1984; Scobel, 1975). Walton (1972) proposed the conceptual categories of QWL. He suggested eight aspects in which employees perceptions towards their work organizations could determine their QWL were: adequate and fair compensation; safe and healthy environment; development of human capacities; growth and security; social integrative constitutionalism; the total life space and social relevance. Sadique (2007) indicated that the designation, experience and age of sugar mill employees in Bangladesh did not alter their rating of the existing and expected QWL.

Padala and Suryanarayana (2010) have proposed that the QWL dimensions be broadly divided into: classical dimensions and contemporary dimensions. Classical dimensions include physical working conditions, employee's welfare, employee assistance, job factors, and financial factors. Whereas contemporary dimensions

include collective bargaining, industrial safety and health, grievance redress procedure, quality circles, work-life balance, and workers' participation in management. Researchers have argued that the different dimensions of QWL programs have a strong correlation with productivity and also a positive correlation between work and non-work life (i.e. areas of life outside the work) and vice versa (Bagtasos, 2011; George and Brief, 1990).

Recently, every organization provides four necessary resources (such as good work environment, job requirements, supervisory behavior and ancillary program) to satisfy their employees' needs. Further, satisfaction with work life domain spillover to other life domains and thus influence overall life satisfaction of employees (as cited in Rathi, 2010). Available evidence indicates that satisfaction of employees' needs positively influence their health, psychological well-being, commitment to work, productivity and profitability of an organization (Bagtasos, 2011; Cheung and Tang, 2009; Daud, 2010; Jagannathan and Akhila, 2009; Pranee, 2010; Rathi, 2010).

There are number of studies that were undertaken on QWL. But there is no empirical study, which has been conducted using the inferential statistical tool (i.e. factor analysis and discriminant analysis) to analyze the QWL and its university-wise variations of academic professionals in Bangladesh. This research gap induces the researcher to undertake the present study.

Methods

Sampling procedure and sample size

A sampling frame of eleven public and private universities was prepared comprising of three public universities[1] and eight private universities[2] located in Chittagong (commercial capital and port city of Bangladesh) and approved by the University Grants Commission of Bangladesh (UGC). Based on stratified and random sampling, 300 academic professionals were selected from sample universities as sample of this study. A total of 300 structured questionnaires was distributed and 202 valid questionnaires were returned for analysis of which 69 from public and 133 from private universities, yielding an effective response rate of 68 percent. This response rate is similar to those obtained by others who have surveyed QWL (Rathi, 2010; Jagannathan and Akhila, 2009).

Survey instrument

The hard copy of survey instrument was distributed to the selected respondents to collect primary data in the present study. A 16-items Likert type questionnaire (ranging from "1" strongly disagree to "7" strongly agree) developed by Sirgy *et al.* (2001) were adopted in this study to measure the QWL (Appendix, Table AI).The QWL scale showed satisfactory internal consistency with an Cronbach alpha value of 0.78.

Data collection procedure

Both primary and secondary data have been used in this study. During data collection, the researcher was always careful of the objectives and hypotheses of the study. Secondary data were collected from research studies, books, journals, newspapers and on-going academic working papers. For primary data collection, researcher at first was contact with selected sample and takes their consent. The participants were also informed about the research purpose and assured regarding confidentiality of the responses. Secondly, the questionnaire were distributed to all selected samples and



requested to fill the questionnaire as soon as possible. Before collecting the completed questionnaire, participants were asked to check thoroughly whether they have left any item unanswered. If they left any statements unanswered then they were asked to fill up the left item with the appropriate response. After completion of this task, all of the completed questionnaires were collected back and the respondents were given thanks for their help and cooperation. All activities were done over telephone and thereby, there is no chance to break the confidentiality. The survey was conducted between November 2010 and December 2010. The collected data may be processed and analyzed in order to make the study useful to the practitioners, researchers, planners, policy makers and academicians.

Data analysis

All collected data were inserted into the SPSS 13 version. In this study, the data have been analyzed in three stages. First, descriptive statistical analysis was applied to explain the sample profile. In the second stage, an exploratory factor analysis with principal component analysis (varimax rotation) was used to separate the factors for further analysis. This study used the criteria suggested by Hair *et al.* (2005): factor loading equal to or above 0.5; Eigen value equal to or above 1; and results of the factor analysis explaining 54.978 percent of the total variance which indicates that common method bias may not be a problem in the sample data. Finally, the proposed hypotheses were testing by discriminant analysis.

Findings

The findings of the study have been discussed under the followings headings.

Sample profile

Table I shows the profile of the respondents. Of the respondents studied, 66.3 percent is male and 33.7 percent is female. The majority of the respondents were aged below 30-39 years (39.6 percent), followed by below 29 years (37.1 percent), 40-49 years (13.9 percent), 50-60 years (6.9 percent) and above 60 years (2.5 percent). 34.7 percent of the respondents is single and 65.3 percent is married. The majority has master's degree (77.2 percent), doctorate (12.4 percent), post-doctoral (5.4 percent) and honors (5 percent). In terms of length of service, 73.8 percent of the respondents have less than ten years of working experiences and 26.2 percent has greater than ten years of working experiences. The selected samples are broadly representative in terms of the profile and populations in public and private sectors.

Factor analysis

The appropriateness of factor analysis is dependent upon the sample size. In this connection, MacCallum *et al.* (1999) have shown that the minimum sample size depends upon other aspects study design. According to them, as communalities become lower the importance of sample size increases. They have advocated that if all communalities are above 0.5, relatively small samples (less than 300) may be perfectly adequate (for details please see Table II). It is clear that a sample size of 202 as is used in the present study is good for a suitable factor solution because all communalities are 0.5 and above. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is still another useful method to show the appropriateness of data for factor analysis. The KMO

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	Number	Percentage
<i>Gender</i>		
Male	134	66.3
Female	68	33.7
<i>Age</i>		
Below 29	75	37.1
30-39	80	39.6
40-49	28	13.9
50-60	14	6.9
Above 60	5	2.5
<i>Marital status</i>		
Single	70	34.7
Married	132	65.3
<i>Educational qualifications</i>		
Honors	5	10
Masters	156	77.2
Doctorate	25	12.4
Post-Doctorate	11	5.4
<i>Length of service</i>		
Less than ten years	149	73.8
Greater than ten years	53	26.2

Table I.

Profile of the respondents

Source: Filed study

Items related to QWL	1	Factor 2	3	Communalities (h ²)
QWL-14	0.753			0.675
QWL-15	0.736			0.604
QWL-12	0.720			0.564
QWL-11	0.544			0.584
QWL-13	0.543			0.505
QWL-6		0.872		0.785
QWL-4		0.783		0.693
QWL-5		0.691		0.528
QWL-2		0.577		0.506
QWL-1			0.743	0.644
QWL-3			0.694	0.546
QWL-7			0.583	0.538
QWL-10			0.569	0.535
QWL-9			0.517	0.506
Eigen value	5.546	1.538	1.363	
Percentage of variance	22.379	18.276	14.323	
Cumulative %	22.379	40.655	54.978	

Table II.

Rotated component matrix

Source: Field study



statistics varies between 0 and 1. Kaiser (1974) recommends that values greater than 0.5 are acceptable. Between 0.5 and 0.7 are mediocre, between 0.7 and 0.8 are good, between 0.8 and 0.9 are superb. In this study, the value of KMO for overall matrix is 0.885 (for details please see Appendix, Table AII). The criterion of Bartlett's test of sphericity (Barlett, 1950) Chi-Square value is 1007.907 at 0.05 level of significance (as also given in Appendix, Table AII). It is highly significant and indicating that the data is appropriate for the factor analysis. It is also suggested further investigation using principal component analysis with varimax rotation method.

All QWL's items are analyzed by the PCA (for details please see Appendix, Table AII). It is worth mentioning out here that factor loading greater than 0.30 are considered significant. A total of 0.40 are considered more important and 0.50 or greater are considered very significant (Hair *et al.*, 2005). For parsimony, only those factors with loadings above 0.50 were considered significant (Pal and Bagai, 1987; Hair *et al.*, 2005). Further then one item (i.e. QWL-8) is dropped from the analysis because of its low loadings and difficulty of interpretation, it is shown in Table II. The analysis of the remaining fifteen variables yielded three components which explained 54.97 percent of the total variance. Further, the communalities of the variables constituted the factors are found very strong which indicates good relationships among the variables regarding the issues of QWL.

Variable analysis using varimax rotated matrix

An examination of Eigen values led to retention of three components. These components have accounted for 22.37, 18.27, and 14.32 percent of variation, i.e. total variance accounted for by all the three components is 54.97 percent. On the other hand, the last column of rotated component matrix shows the sum of squared factor loadings of each variable. It varies from 0.785 to 0.505, suggesting that the extracted factors are sufficient to account for most of the variations of variables existing in the data. The factor loading greater than 0.50 was considered and all variables except one loaded on the three components. A description of the three components is given below.

Each of three QWL's factor listed in Table II is labeled according to the name of the value that loaded most highly for those QWL. The higher a factor loading, the more would its test reflect or measure as QWL (Pallant, 2005). The QWL's item getting highest loading becomes the title of each factor of QWL, e.g. "creativity of outside of work" – title of QWL factor-I and the like.

Factor-I: creativity of outside of work. This factor is represented by six items of QWL with factor loadings ranging from 0.773 to 0.543. They are "creativity of outside of work", "professional skills", "creativity involvement", "potential", "realization", and "learning new things".

Factor-II: payment for work. Four items of QWL ranging from 0.872 to 0.577 belongs to "payment for work", "jobs benefits", "jobs secure", and "healthy benefits".

Factor-III: better working environment. This factor comprises five items like "better working environment", "healthy and fit", "good friends", "respect", and "appreciation" ranging from 0.743 to 0.517.

Discriminant analysis and testing of hypothesis

After factor analysis, discriminant analysis (enter independent together) has been performed to differentiate between the public and private academic professionals in terms of QWL. It appears that the two groups are more widely separated in terms of

“creativity of outside of work” than other variables, obtained by examining the group means and standard deviations (for details please see Appendix, Table AIII). The significance of the uni-variate F ratios indicates that when the predictors are considered individually, “creativity of outside of work” and “payment for work” are significantly differentiate between these groups. Because there are two groups, only one discriminant function is estimated. The Eigen value associated with this function is 0.042 and it accounts for 100 percent of the explained variance. The canonical correlation associated with this function is 0.201. The square of this correlation, $(0.201)^2 = 0.040$, indicates that 4.04 percent of the variance in the dependent variable (QWL) is explained or accounted for by this model (for details please see Appendix, Table AV). It is helpful to compare the percentage of cases correctly classified by discriminant analysis to the percentage that would be obtained by chance. When the groups are equal in size, the percentage of chance classification is 1 divided by the number of groups. The classification results identified based on sample analysis. The hit ratio or the percentage of cases correctly classified, is $(40 + 67)/202 = 0.529$, or 53.0 percent (for details please see Appendix, Table AVI). One might suspect that this hit ratio is artificially inflated, as the data used for estimation was also used for validation. Leave-one-out cross-validation correctly classified only $(38 + 65)/220 = 0.509$ or 51.0 percent of the cases. Given two groups of equal size, by chance one would expect a hit ratio of $1/2 = 50$, or 50 percent (Malhotra, 2002). Hence, the improvement over chance is more than 50 percent, and the validity of the discriminant analysis is judged as satisfactory.

The significance level is estimated based on a chi-square transformation of the statistic. It may be noted that Wilks' λ associated with the function is 0.959, which transform to a chi-square of 8.163 with 4 degrees of freedom. This is significant beyond the 0.10 level. Hence null hypothesis is rejected, indicating significant discrimination between public and private university academics (for details please see Appendix, Table AV also).

Discussion

The goal of this study was to identify the key factors/workplace issues in order develop effective strategies to address the issues regarding the improvement of QWL. The importance of QWL has been examined thoroughly within the literature as a determinant of satisfaction of academic professionals at work place. This is one of the first studies to examine the factors that influence on QWL of academic professionals in the context of Bangladesh.

The study demonstrates that the job design of an organization can have a significant impact on its organization performance and thereby, the need to give proper attention to QWL. It is observed from the results of the study that there are positive relationship between QWL and employee's job satisfaction and commitment. In addition, the result of this study reveal that the significant association between QWL and job satisfaction may lead to feelings of happiness and commitment within the academic professionals in Bangladesh. Moreover, these findings of happiness of commitment extent into other life domains which further lead to an increased performance at different levels (individual, group, and organization). These findings of the study are well supported by spillover hypothesis and carryover effect (Schmitt and Bedian, 1982; Schmitt and Mellon, 1980) which asserts that an individual experiences in work life domain carryover in other life domain's and hence influence his or her personal life.

The present study found significant differences between academic professionals of public and private universities in Bangladesh on two factors like “creativity of outside work”, and “payment for work” out of four factors of QWL. As private universities of Bangladesh are quite younger than public universities that is why most of the private universities still do not have permanent campus. Private universities do not have service rules, career development programs, scholarship facilities, conducive working environment, research facilities, and the like for their academic professionals. On the other hand, except adequate financial facilities, the academic professionals of public universities of Bangladesh have been enjoying autonomy, high job security, avail national and international scholarships, research facilities, and excellent career advancement opportunities. So, it is clear that the academic professionals of private universities are only in better position than those of public universities with respect to remuneration.

Finally, an emphasis of QWL can contribute potentially not only in building an effective organization but it is also likely to facilitate training and development/HRD activities which is essential for formulation of healthy society and nation in upcoming days of Bangladesh.

Limitations

The present study has a number of limitations that are outlined below. Firstly, the study was based on data collected from academic professionals of Universities in Bangladesh. Thus, the implications of the study should be restricted to universities only. Secondly, the questionnaire was mainly constructed with Likert scale, there could be the chance of central tendency bias, acquiescence bias, and social desirability bias. Finally, the present research study was confined to 202 academic professionals of public and private universities located in Chittagong, Bangladesh and therefore it may not be representative one in terms of relationship in other emerging and developing countries. But, the sample size, dynamism and growing importance of QWL, it may well constitute an important exemplar for causal relationship in other developing nations. In spite of some limitations, the present study opened up a new door in the field of QWL for future research.

Implications

The study has some practical implications. Firstly, this study provide empirical evidence on the factors affecting QWL, thus contributing knowledge to the subject focus on HRD perspective. Secondly, the authorities of the academia should be advised to focus the important factors that are affecting the employee-employer relationship as well as overall improvement of QWL in the public and private universities in Bangladesh:

- (1) The authority of private universities should provide job security, conducive working environment, research facilities, and overall career advancement opportunities for their academic professionals and also needs to ensure sufficient balance between work life and personal life to achieve higher level of QWL.
- (2) Public universities should offer minimum reasonable salaries and benefits to their academic professionals for which they can utilize their own skills and abilities fully to ensure high level of QWL effectively.

Thirdly, academic professionals should be well trained to make them familiar with the updated knowledge related to QWL. Fourthly, Universities should ensure impartial



and unbiased promotion system for the academic professionals based on qualification, experience, research, social contribution and academic pursuit. Finally, the findings of the study will open up a new line of enquiry in the area of HRD for future research.

Directions for future research

In terms of future research directions, subsequent studies should attempt to examine the relationship between components of QWL and performance of individual, group and organizational levels. In addition, in order to increase the generalizability of the present study, more studies in various manufacturing and service sectors representing large sample size with diverse demographic groups are needed. The structural equation model (SEM), which requires large samples, generates more reliable conclusions in terms of the construct validity of the instrument used. Although this study only focused on academic professionals with higher educational levels, future research should be conducted with employees/officer's working at different levels from different educational backgrounds. Future research should also assess the impact of QWL focused on influencing employees' attitude and behavior, employee performance, and overall organizational effectiveness.

Conclusion

The findings of the present study have provided answers to the research questions and may greatly contribute to the literature of QWL in Bangladesh and other developing countries. The findings also provide some insights in the efforts of improving the QWL. The suitable policy formulation based on the study findings, to the best interest of the academic professionals as well as of the country will go a long way to open a new era in the field of the country's human resource development. Moreover, the exploring factors can be used in the strategy to improve the QWL and also may be used to formulating strategy for the retention of the academic professionals in Bangladesh. The present study explains the role of QWL in managing human resource which determines the success at different levels (individual, group and organizations). To make the efficient use of human resource managers need to give proper attention to the QWL as well as HRD activities. It is also expected that the outcome of this research will be beneficial for policymakers, planners and development economists to formulate effective strategy of human resources development in Bangladesh and other emerging and developing countries.

Notes

1. These three public universities are Chittagong University (CU), Chittagong University of Engineering and Technology (CUET) and Chittagong Veterinary and Animal Sciences University (CVAS).
2. These eight private universities are Independent University of Bangladesh (IUB), Premier University (PU), Southern University(SU), International Islamic University of Chittagong (IIUC), East Delta University (EDU), BCG Trust University, University Science and Technology University (USTC), University of Information Technology and Sciences (UITS).

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Appendix

Items related to quality of work life	
QWL1	I feel physically safe at work
QWL2	My job provides good health benefits
QWL3	I do my best to stay healthy and fit
QWL4	I am satisfied with what I am getting paid for my work
QWL5	I feel that my job is secure for life
QWL6	My job does well for my family
QWL7	I have good friends at work
QWL8	I have enough time away from work to enjoy other things in life
QWL9	I feel appreciated at work
QWL10	People at work and/or within my profession respect me as a professional and an expert in my field of work
QWL11	I feel that my job allows me to realize my full potential
QWL12	I feel that I am realizing my potential as an expert in my line of work
QWL13	I feel that I am always learning new things that help do my job better
QWL14	This job allows me to sharpen my professional skills
QWL15	There is a lot of creativity involved in my job
QWL16	My job helps me develop my creativity outside of work

Notes: Based on seven-point Likert scale, i.e. strongly disagree (1) to strongly agree (7)

Table AI.
Survey items/research
instrument

Table AII.
KMO and Bartlett's test

Kaiser-Meyer-Olkin measures of sampling adequacy	0.885
Bartlett's test of sphericity	
Approx. Chi-Square	1007.907
Df	0.120
Significance	0.000

Source: Field Study

Table AIII.
Group means and standard deviations

University	Creativity of outside of work		Payment for work		Physically safe		Job's benefits for family	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Public	5.845	0.761	4.714	1.142	5.688	0.921	5.870	8.850
Private	5.509	1.219	4.328	1.400	5.712	0.958	4.818	1.742

Source: Field study

Table AIV.
Tests of equality of group means

	Wilks' Lambda	F	Sig.
Creativity of outside of work	0.979	4.365	0.038
Payment for work	0.981	3.909	0.490
Better working environment	1.000	0.029	0.866

Source: Field Study

Table AV.
Canonical discriminant functions

Function	Eigen value	Percentage of variance	Cumulative %	Canonical correlation	After function	Wilks Lambda	Chi-Square	df	Sig.
1	0.042 ^a	100.0	100.0	0.201	0	0.959	8.163	4	0.086

Notes: ^aMarks the first canonical discriminant functions were used in the analysis



Type of university		Predicted group membership		Total
		Public	Private	
<i>Original</i>				
Count	Public	40	29	69
	Private	66	67	137
%	Public	58.0	42.0	100.0
	Private	49.6	50.4	100.0
<i>Cross validated*</i>				
Count	Public	38	31	69
	Private	68	65	137
%	Public	55.1	44.9	100.0
	Private	51.1	48.9	100.0

Notes: *Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case; 53.0 percent of original grouped cases correctly classified; 51.0 percent of cross-validated grouped cases correctly classified

Source: Field study

Table AVI.
Classification results

About the author

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