

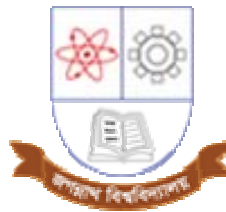
ISSN 2225-4439

Volume 9

Number 1

December 2019

Jagannath University
Journal of Psychology



A Research Journal of the Department of Psychology, Jagannath University
Dhaka-1100, Bangladesh

The **Jagannath University Journal of Psychology (JnUJP)** is an international research journal (blind-review), published by the Department of Psychology of Jagannath University, Dhaka-1100, Bangladesh. The journal is generally published once in a year (1 or 2) as a single volume. The current publication is issued in December 2019. The language of the journal must be in English. The journal is a publication outlet of original empirical and theoretical papers, critical reviews, case studies, and meta-analysis that are fundamentally related to any aspect of psychology.

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SUBSCRIPTION

Single Volume: BDT 500 for domestic and US \$50 for the international sale.

PUBLICATION

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PRINTING

Biswas Colour Process and Scan

21-22 Patuatuli Road, 3/4, Ramakanta Nandi Lene, Dhaka-1100

Mobile : 01979-111688, 01619-111688

Jagannath University Journal of Psychology (*JnUJP*)

ISSN 2225-4439

Vol. 9

No. 1

December 2019

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Jagannath University Journal of Psychology

ISSN 2225-4439

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Factors Influencing Workplace Performance among Female Garments Worker

Fatema-Tu-Zohra B. Zaman¹, Md. Masud Pervez², and Kamrul I. Fakir³

Abstract

Today women have broken the shackles of parochialism and the bovine image which was considered their synonym (Mehta, 2011). Traditionally, women were involved in feminine professions in schools and social work but now they are attaining respectable positions in other fields as well standing at an equal footing with men. In Bangladesh, intensive studies concerning garment industries and women's employment in the waged labor market were conducted (Zohir & Chowdhury, 2007). The study focuses on the relationship of organizational commitment, job involvement and job satisfaction with job performance of the female garment employees. One hundred employees were selected purposively from six garment factories located in Dhaka City. To measure employment factors a package of three questionnaires were administered on the respondents. Data were analyzed by applying Pearson product correlation and stepwise multiple regression. Results indicated that there were significant positive relationships among the employment factors (i.e., organizational commitment, job involvement and job satisfaction) with job performance. Further, multiple regression analyses indicated that organizational commitment and job satisfaction were the important predictors of job performance which jointly explained 60.4% of variance in job performance. R^2 change furthermore indicated that organizational commitment was the best predictor which alone explained 51.6% of variation in job performance. Confirming all the formulated hypotheses the study is suggesting that, to achieving the organizational goals committed, satisfied and involved employees are essential factors.

Keywords: garments, female worker, performance, organizational commitment, job involvement, job satisfaction

Introduction

The success of any organization is measured through its production and sales. The management and workers play equally important roles behind the success. Many factors work behind their level of performance among them organizational commitment (OC), job involvement (JI) and job satisfaction (JS) were few of them. OC has an important place in the study of organizational behavior which focuses on

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employees' commitment to the organization. In explaining the significance of the construct, Meyer and Allen (1997) refer to Morrow and McElroy's (1993) statement that OC is the most maturely developed of all the work commitment constructs. Bateman and Strasser (1984) operationally defined it as "multidimensional in nature, involving an employee's loyalty to the organization, willingness to exert effort on behalf of the organization, degree of goal and value congruency with the organization, and desire to maintain membership" (p.95). Industrial psychologists have identified three kinds of OC: affective, continuance, and normative commitment (Dunham et al., 1994). Employees with high level of OC have significant contributions to the achievement of the organization under competitive conditions (Feldman & Moore, 1982).

Job involvement is one of the major themes in the organizational literature. It is the internalization of values about the work or the importance of work according to the individual. Job involvement can be defined as the degree to which a person psychologically identifies with. It is related with the work motivation that a person has with a job (Hackett et al., 2001). People with high levels of JI tend to be satisfied with their jobs and highly committed to their careers, professions, and employing organizations (Cohen, 1999). As Mudrack (2004) explains highly involved people thus tend not to give up easily, may feel almost a moral obligation to be involved with their jobs. Due to its importance, job satisfaction is the most studied variable in the literature of organizational behavior. According to Nelson (2006) an employee's satisfaction is priceless. Here, job satisfaction has been defined as "feelings (positive or negative) or affective responses to facets of the (workplace) situation" (Smith, Kendall, & Hulin, 1969, p. 6). Job performance, on the other hand, consists of the observable behaviors that people do in their jobs that are relevant to the goals of the organization (Campbell, et al., 1990). Job performance is of interest to organizations because of the importance of high productivity in the workplace (Hunter & Hunter, 1984). According to Murphy (1989), performance definitions should focus on behaviors rather than outcomes, because a focus on outcomes could lead employees to find the easiest way to achieve the desired results, which is likely to be detrimental to the organization because other important behaviors will not be performed. Campbell et al. (1993) explains that performance is not the consequence of behaviors, but rather the behaviors themselves. Studies have highlighted that commitment has great impact on the successful performance. Recently, OC has become one of the most thoroughly investigated topics (Sikorska, 2005) which helps to increase employee performance (i.e., minimize turning up late to work, absenteeism, and leaving, Meyer et al., 1989, 2005). Suliman and Iles (2002) and Chen, Silverthorne and Hung (2006) concluded the same.

Studies have been concerned with the relationship of job involvement quality and quantity of performance, absenteeism, grievance, and so on. Individuals with high levels of both job involvement and organizational commitment should be the most

motivated to go to work and to go on time. Both highly motivated and non-motivated and OC may miss work or come late for excusable reasons (*e.g.* illness, religious holiday, vacation time, and transport problems). There is no evidence for a strong relationship between job involvement and performance (Cohen, 1999). However, Blau and Ryan (1997) found that job involvement is positively related to work effort and performance (Chughtai & Ali, 2008).

The satisfaction-performance relationship has been studied throughout the history of industrial psychology. Thorenson et al., 2001 conducted a meta-analysis and found correlation between job performance and global satisfaction. Since then other reviews of the satisfaction-performance relationship have also been published (*e.g.*, Schwab & Cummings, 1970). One of the most optimistic of these reviews is that of Herzberg et al. (1957) in which they express confidence in a relationship between job satisfaction and job performance. Iaffaldano and Muchinsky (1985) conducted an empirical investigation and found that satisfaction and performance are only slightly related. In the more recent meta-analysis, Judge et al. (2001) estimated the same.

In the present day women have become a force to be reckoned with in the job market. Until recently, women were stereotyped into social roles as wives, mothers, cooks and so forth. Female participation in the labor force is increasing rapidly. Today, we find more and more women in familiar and surprising places *e.g.* heads of giant conglomerates and in police stations, at the control of aircraft and petrol stations, in parliament and in the trenches. This is a result of increased female education, training and urbanization. Therefore, national economy cannot progress without the continuous involvement of women. Bangladesh's garment exports make up nearly 80% of the country's export income. The country has more than 4,000 factories employing between two and three million workers, approximately 80 % of whom are women. Thus, women workers play a vital role to our exporting activities through RMG (Ready Made Garment) industry. So, in order to increase their job performance it is essential to take care of their job related factors. Only then will they be able to maintain the equilibrium between their personal and professional lives.

Conceptual framework of the study. Based on the theoretical perspective, empirical evidences and observation following conceptual framework has been illustrated for the research purpose. The conceptual framework shows the relationship among predictor and outcome variables. This framework emphasizes that employment factors influenced job performance of female garment workers.

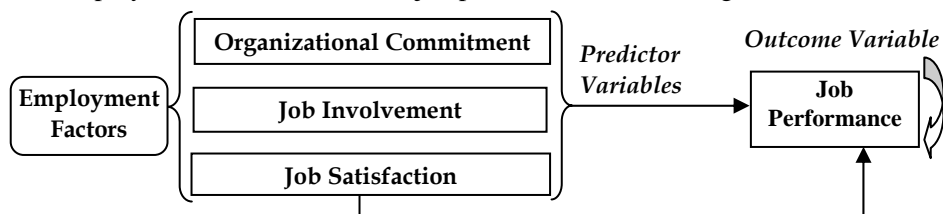


Figure 1. Conceptual framework of the study

Rationale of the study

Working women and their job related factors not only in Bangladeshi context, but also worldwide has become a most vital issue. Bangladesh needs not only to learn but to inherit the corporate culture compared to the other countries of the world. The personal and social aspects and backwardness of our culture regarding empowerment of women sometimes creates problems in women's personal and professional life. The factors in the workplace that affect the ease of completing the work have been described as "convenience" factors. These are factors that allow employees to better fit their in jobs with their other life obligations. The literature has revealed that convenience factors are an important determinant of women's job satisfaction. Many women value "convenience factors, such as shorter work hours and short journeys to work, that are important in accommodating paid employment with other activities and priorities". This paper was an attempt to investigate the organizational commitment, job involvement and job satisfaction with job performance of Bangladeshi female garment workers. Attention has been given by researchers in Bangladesh to this particular area but considering the changing face of the society and the emergence of women as dominant work force, the present investigation posed a challenge. Therefore, the investigators chose to carry out the present research in the above mentioned constructs of women employees. The results of the study may be helpful for the researcher, manager, supervisor and concerned persons to know the employees' psychological behavior, involvement, commitment and satisfaction; thereby helping them to create a convenient environment for the employees to work and increase their job performance.

Research Objectives (RO)

The main objective of the present study was to investigate relationship between employment factors (i.e., organizational commitment, job involvement and job satisfaction) with job performance among female garment workers. The specific objectives were to investigate:

- RO₁*: the relationship between organizational commitment and job performance among female garment workers;
- RO₂*: the relationship between job involvement and job performance among female garment workers;
- RO₃*: the relationship between job satisfaction and job performance among female garment workers;
- RO₄*: whether the organizational commitment, job involvement and job satisfaction predict the job performance.

Hypotheses (H)

In the light of the above literature and the objectives, the following hypotheses were formulated to test in the present study:

- H₁*: Significant relationship will be found between organizational commitment and job performance.

- H₂:** Significant relationship will be found between job involvement and job performance.
- H₃:** Significant relationship will be found between job satisfaction and job performance.
- H₄:** Organizational commitment, job involvement, job satisfaction will predict job performance individually and jointly.

Methods

Participants

A total of 100 women workers selected from six garment factories situated in the capital of Bangladesh participated in this study. The socio-economic status of the working women was lower class, from cutting section to packing section on the basis of income level *i.e.*, 3,000-6,000. Among them 50 respondents were married and 50 were single while their number of family members ranged from 3 to 8 persons. The age ranges of the respondents were from 18–30 years. As all the respondents were working in the garment sector. They were all literate with the minimum primary educational qualifications and the maximum of secondary level. These women were chosen as sample of the inquiry using purposive sampling method. All the respondents' participants willingly participated in the study.

Design

A cross-sectional survey design was used in the present study. According to this design data were collected at a single point in time.

Measures

For present investigation three key instruments and a personal information form were used for data collection. These are as follow:

Personal information form

The first section was used for primary data collection related to demographic information about the respondents. This PIF involved information about the respondents self and family history. These included respondents' age, socio-economic and marital status, designation, salary, number of family members, and educational qualifications.

The Bengla version of the employment factors related self-report instruments were employed is described below.

Organizational commitment questionnaire

Bangla adapted version of the organizational commitment questionnaire was used for the current investigation was originally developed by Mawday, Steer, and Porter (1979). The 15 items (9 positive and 6 negative) of this self-report questionnaire assesses employee's commitment about their current job. For each item respondents expressed their feelings in a seven point scale. For positive items, score "1" indicates

strongly disagree, score “2” indicate moderately disagree, score “3” indicate little disagree, score “4” indicate neutral, score “5” indicate little agree, score “6” indicate moderately agree, and score “7” indicate strongly agree. For negative items scoring was in reverse order. The sum of scores of all the items was the total score of the scale for an individual. High scores indicate high organizational commitment. The test-retest reliability of the Bangla version of organizational commitment scale (Muhammad, 2012) was found significant ($r = .85$). High Cronbach’s alpha ($\alpha = .86$) of Bengali version indicated internal consistency of the scale. Further, the content validity of the Bangla version of the tool was measured through the subject experts’ opinions selected from two public universities.

Job involvement questionnaire

The second adapted Bangla version (Khaleque, 1995) of the self-report tool was used which originally developed by Lodhal and Kejner (1965). This tool contains 6 item (5 positive and 1 negative) rated on a five point response. For positive items, score “1” indicates strongly disagree, score “2” indicate disagree, score “3” indicate undecided, score “4” indicate agree, score “5” indicate strongly agree. For negative item scoring was in inverse order. The sum of scores of all the items was the total score of the scale for an individual. High scores indicate high job involvement. The test-retest and split-half reliabilities of the Bangla version of job involvement scale (Muhammad & Huq, 2012) was found significant ($r = .85$, $r = .81$). Further, the content validity of the Bangla version of the tool was measured through the subject experts’ opinions selected from two public universities

Job satisfaction scale

The third self-report instrument of the research project was measured by the original Bangla version (Khaleque, 1995) of “Brayfield-Rothe Job Satisfaction Scale” (1951) containing 18 items. The statements of the questionnaire are formed both in the positive and negative. For each item the respondents expressed their feelings about the job in a five point scale. Both type of items was rated on a five point scale (5 = ‘strongly agree’, 4 = ‘agree’, 3 = ‘uncertain’, 2 = ‘disagree’, and 1 = ‘strongly disagree’). Total score was calculated by adding all the numbers from each answer rating. Higher scores meant positive attitude of the sample and lower score meant negative. The scale is considered to be quite sound in terms of its reliability and validity. Brayfield and Rothe (1951) reported split-half reliability co-efficient of .87 for a sample of 251 female clerical employees. Concerning validity, they reported a correlation of .93 between Brayfield-Rothe scale and Hoppock Blank (Khaleque, 1979) reported a correlation of .63 between Brayfield-Rothe scale and Job Description Index (JDI). The test-retest and split-half reliabilities of the Bangla version of job satisfaction scale (Zaman, 2016) was found significant ($r = .86$, $r = .83$). Further, the content validity of the Bangla version was measured through the subject experts’ opinions selected from two public universities.

Procedures

To conduct the research, three standardized self-report questionnaires and one personal information form (attached to the first page) were used after taking permission from the authority. Before administering the tools necessary rapport was established with the respondents. All the subjects were treated individually for each condition by the investigators. The respondents were informed that their responses were confidential and that they could not be personally identified in later publications. Finally respondents were encouraged to ask any questions they might have, and they were informed of their right to withdraw from the study at any time. It is also necessary to mention that performance was calculated from employees' performance record register with the permission of the authority. It took one hour on an average to complete the task. After the performance all the respondents were thanked by the investigators for their cooperation and participation in the study.

Results

The present study utilized the data gathered by the survey instruments to prove all the hypotheses. The data obtained from the returned surveys were analyzed using descriptive and inferential statistics. The obtained results are presented in Table 1 through 2. All statistical analyses were carried out using the statistical program SPSS version 22.0 for windows with the significance level of .01. The following chart indicates the mean scores of organizational commitment, job involvement, and job satisfaction with performance of women garments employee. Figure 2 shows that the mean scores was highest at 34.12 for organizational commitment, descending to 29.26 for job satisfaction, 20.18 for job involvement and a lowest of 13.12 for job performance of female garments workers.

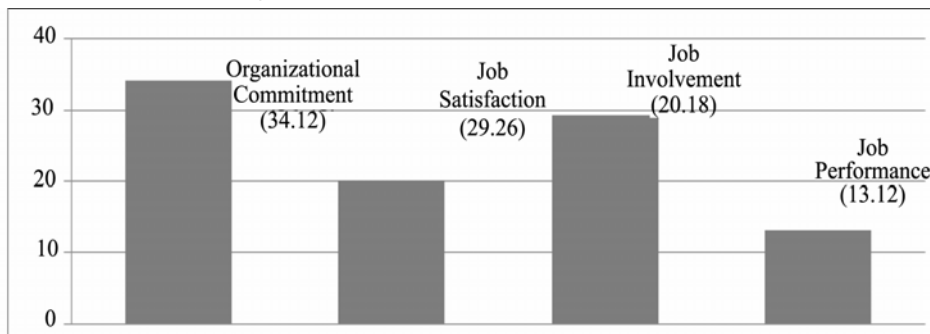


Figure 2. Mean of organizational commitment, job involvement, and job satisfaction with job performance among female garment workers

Further, correlation among the dependent and independent variables is shown in Table 1. Further, to consider the individual and joint effect of predictors on job performance, a stepwise regression analysis is performed (Table 2).

Table 1

Correlation of Job Performance with Organizational Commitment, Job Involvement and Job Satisfaction

Correlation of Job Performance with	<i>r</i>	<i>p</i>
Organizational commitment	.75	.01
Job involvement	.57	.01
Job satisfaction	.60	.01

According to the Table 1, findings indicated that the correlation of job performance with organizational commitment [$r_{(100)} = .75, p < .01$], job involvement, [$r_{(100)} = .57, p < .01$], job satisfaction [$r_{(100)} = .60, p < .01$] were positive and highly significant. Result indicated that a working women employee's performance would be high score on organizational commitment, job involvement, and job satisfaction.

Table 2

Regression of Job Performance on Organizational Commitment, Job Involvement and Job Satisfaction

Variables	<i>B</i>	<i>t</i>	<i>F</i>	<i>p</i>
1. Organizational Commitment	0.58 (51.6***)	7.08	47.67 (.05)	.01
2. Job Satisfaction	0.29 (.06***)	3.13		.01
	$R^2(60.4^{***})$			

Note: *** $p < .001$.

The standardized betas (β) indicated two significant predictors of job performance. These variables were organizational commitment ($\beta = 0.58, p < .01$) and job satisfaction ($\beta = 0.29, p < .01$). R^2 value indicated that organizational commitment and job satisfaction jointly explained 60.4% variance of job performance. R^2 Change furthermore indicated that among these two predictors organizational commitment was the strongest predictor which alone explained 51.6% of variance in job performance. Table 2 further indicated that [$F(3, 99) = 47.66, p < .01$] variation in job performance was accounted by joint linear influence of organizational commitment, job satisfaction and job involvement. So, it can be said that these variables were significant predictors of job performance. F-value also indicated that the model was significant. Therefore, organizational commitment, job satisfaction and job involvement were the important predictors, which influenced job performance among women garment workers.

Discussion

Organizational growth and strength depend on the workers' performance or success. It is not possible to achieve the organizational goals without the commitment, satisfaction and involvement of the workers. The current investigation was carried out on the female garments employees so that the managers and owners can acquire knowledge about their employees' necessities and fulfill them, thereby advancing their organization and the nation towards progress.

Four hypotheses formulated to test in this study. *First hypothesis* stated that significant relationship will be found between organizational commitment and job performance. The result presented in Table 1 *supported* the formulated hypothesis and found significant positive correlation ($r = .75, p < .01$) between organizational commitment and job performance. This finding is consistent with many investigators' research (for example Sikorska, 2005; Suliman & Iles, 2002; Chen, Silverthorne, & Hung, 2006) that there was a positive relationship between organizational commitment and employees' job performance. Moreover, in today's fast paced and dynamic business environment, organization can no longer guarantee "a job for life" which has made the notion of organizational commitment even more pertinent.

Second hypothesis formulated that significant relationship will be found between job involvement and job performance. The result presented in Table 1 stated that there is significant positive correlation $\{r_{(100)} = .57, p < .01\}$ between job involvement and job performance which also *supported* the 2nd hypothesis. According to Blau and Ryan (1997) and Chughtai and Ali (2008), job involvement was positively correlated with job performance. The job involvement of the individual seems to be potentially fundamental to the satisfaction of certain salient psychological needs that could lead to higher levels of job performance.

Finally, *third hypotheses* stated that significant relationship will be found between job satisfaction and job performance. The results presented in Table 1 suggests that there is significant positive correlation ($r = .60, p < .01$) between job satisfaction and job performance. The results of the present study *confirmed* the formulated hypothesis. This finding also found similar to the findings of many researchers (*i.e.* Iaffaldano & Muchinsky, 1985; Judge et al., 2001). All concluded in their studies that job satisfaction is positively co-related to job performance. When people are satisfied with their job they feel more obligated towards their organization. Therefore, they are highly motivated which results in higher levels of job performance.

Further, the standard betas showed in Table 2 that both organizational commitment ($\beta = 0.581, p < .01$) and job satisfaction ($\beta = 0.298, p < .01$) were the significant predictors of job performance. Furthermore, R value of the table 3 indicated that organizational commitment and job satisfaction jointly explained 60.4% of variance in job performance. R^2 change furthermore indicated that among these two predictors

organizational commitment was the strongest predictor which alone explained 51.6% of variance in job performance. However, it can be said that organizational commitment and job satisfaction are important predictors of job performance which confirmed the formulated *fourth* hypothesis. This is because a highly committed employee will identify the goals and values of the organization, has a strong desire to belong to the organization and is willing to display greater citizenship behavior e.g. a willingness to go over and beyond their require job duties, in addition, if human research should be regarded as an organization competitive advantages. Finally, employees with high level of organization commitment have significant contribution to be achievement (Meyer et al., 2005).

The present study has few limitations (i) the small sample size (ii) too large questionnaire, (iii) very few locations. For these limitations, drawing definite conclusion is not possible. Nevertheless, the findings of the present study are very interesting as well as it will contribute to develop insight to the workers, managers and industry authorities etc. about the importance of the human resource in industry.

Conclusion

It is very important for any organization to know about their employees' needs and demands, commitment towards organization, involvement at work and satisfaction towards their respective job. This would help the organization to make the working environment suitable for the workers and thereby increase their level of performance. Garment industries contribute the most to our national economy. If we want to progress towards a stronger economy it is important to strengthen our garment industry. About 50% of the garment employees are women. Their personal and professional life goes hand in hand. So, it is necessary to fulfill their needs and take care of their convenience at the same time. Only then it will be possible to increase their job performance and strengthen the garment industry thereby.

References

- Bateman, T., & Strasser, S. (1984). A longitudinal analysis of the antecedents of organizational commitment. *Academy of Management Journal*, 21, 95-112.
- Blau, G., & Ryan, J. (1997). On measuring work ethic; a neglected work commitment facet. *Journal of Vocational Behavior*, 51, 435-448.
- Brayfield, A. H., & Rothe, H.F. (1951). An index of job satisfaction. *Journal of Applied Psychology*, 35, 307-311.
- Campbell, J. P., McHenry, J. J., & Wise, L. L. (1990). Modeling job performance in a population of jobs. *Personnel Psychology*, 43, 313-333.
- Campbell, J. P., McCloy, R. A., Oppler, S. H., & Sager, C. E. (1993). A theory of performance. In: Schmitt, N. and Borman, W.C., Eds., *Personnel Selection in Organizations*, Jossey-Bass, San Francisco, 3570.
- Chen, J. C., Silverthorne, C., & Hung, J. Y. (2006). Organization communication, job stress, organizational commitment and job performance of accounting professionals in

- Taiwan and America. *Leadership & Organization Development Journal*, 27 (4), 242-249.
- Cohen, A. (1999). An examination of the relationships between work commitment and non-work domains. *Human Relations*, 48, 239 - 263.
- Chughtai., & Ali, A. (2008). Impact of job involvement on in-role job performance and organizational citizenship behavior. *Journal of Behavioral and Applied Management*.
- Chughtai, & Ali, A. (2008). Impact of Job Involvement on In-Role Job Performance and organizational Citizenship Behavior. *Journal of Behavioral and Applied Management*.
- Dunham, B., Gruber, A., & Castaneda, B. (1994). Organizational commitment: The utility of an integrative definition. *Journal of Applied Psychology*, 79(3), 370-380.
- Feldman, A. S., & Moore, W. E. (1982). Labor commitment and social change in developing areas. Connecticut: Greenwood Press Publishers.
- Hackett, R.D., Lapierre, L.M., & Hausdorf, P.A. (2001). Understanding the links between work constructs. *Journal of Vocational Behavior*, 58, 392-413.
- Herzberg, F., Mausner, B., Peterson, R., & Capwell, D. (1957). Job attitudes: Review of research and opinion. Pittsburg, PA: Psychological Service of Pittsburg.
- Hunter, J. E., & Hunter, R. F. (1984). Validity and utility of alternative predictors of job performance. *Psychological Bulletin*, 96, 72-98.
- Iaffaldana, M. T., & Muchinsky, P. M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin*, 97, 251-273.
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, 127, 376-407.
- Khaleque, A. (1979). Perceived important of job facts and overall job satisfaction of industrial.
- Khaleque, A. (1995). Industrial pollution and environmental protection in Bangladesh. *Indian Journal of Psychological Issue*, vol. 3, vol. 3, 12-19.
- Lodhal, T. M., & Kejner, M. (1965). The definition and measurement of job involvement. *Journal of Applied Psychology*, 49, 24-33.
- Mawday, R. T., Steers, R. M., & Porter, L.W. (1979). The measurement of organization commitment. *Journal of Vocational Behavior*, 14, 224-227.
- Mehta, S. (2011). Job involvement among working women. *International Journal of Multidisciplinary Research*, 1(2), 1-15.
- Meyer, J., & Allen, N. (1997). Commitment in the workplace. Thousand Oaks, CA: SAGE Pub.
- Meyer, J. P., Paunonen, S.V., Gellatly, I. R., Goffin, R. D., & Jackson, D. N. (1989). Organizational commitment and job performance: It's the nature of the commitment that counts. *Journal of Applied Psychology*, 74, 152-156.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2005). Affective, continuance, and normative commitment to the organization: A Meta-analysis antecedents Correlates, and consequence. *Journal of Vocational Behavior*, 61, 20-52.

- Morrow, P., & McElroy, J. (1993). Introduction: Understanding and managing loyalty in a multi commitment world. *Journal of Business Research*, 26, 1-2.
- Mudrack, P. E. (2004). Job involvement, obsessive-compulsive personality traits, and workaholic behavioral tendencies. *Journal of Organizational Change Management*, 17, 490 - 508.
- Muhammad, N. (2012). Bangla translation of the organizational commitment questionnaire. Bangladesh; Jagannath University, Dhaka, Department of Psychology.
- Muhammad, N. & Huq, A. (2012). Bangla translation of the job involvement questionnaire. Bangladesh; Jagannath University, Dhaka, Department of Psychology.
- Murphy, K. R. (1989). Dimensions of job performance. In R. F. Dillon and J. W. Pellegrino (Eds.) *Testing: Theoretical and Applied Perspectives*. New York: Praeger.
- Nelson, N (2006). A little appreciation can go a long way toward employee job satisfaction. *Wiley Periodicals* .
- Schwab, D., & Cummings, L. (1970). Theories of performance and satisfaction: *A Review*. *Industrial Relations*, 9, 408-430.
- Sikorska, E. (2005). Predictors of organizational commitment among staff in assisted living. *The Gerontologist*, 45 (2), 196-205.
- Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). The measurement of satisfaction in work and retirement. *Rand McNally & Company*: Chicago, IL.
- Suliman, A., & Iles, P. (2002). Is continuance commitment beneficial to organizations? Commitment-performance relationship: *Journal of Managerial Psychology*, 15 (5), 407-426.
- Thorenson, C. J., Bono, J.E., Patton, G.K., & Judge, T.A. (2001). The job satisfaction-job performance relationship: *A Qualitative and Quantitative Review*, Vol.127 (3), 376- 407.
- Zohir, & Choudhury, S. (2007). Research report on role of Dhaka export processing zone: Employment and Empowerment Dhaka: *Bangladesh Institute of Development Studies*.
- Zaman, F. T. Z. B. (2012). Reliability of the Bangla translated of the job involvement questionnaire. Bangladesh; Jagannath University, Dhaka, Department of Psychology.

Physical Activity, Mental Health and Academic Failure of Adolescents

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Abstract

The main objective of the present study was to investigate the relationship between physical activities, mental health, and academic failure among adolescents. The specific objective was to explore whether there was any significant difference in adolescent's mental health and physical activity in terms of academic failure and gender. The participants of the present study were the adolescents of old Dhaka city in Bangladesh. The sample comprised 250 adolescents, taken from three different schools of old Dhaka city. Adapted Bangla version of General Mental Health-12 and Physical Activity Questionnaire (PAQ) were used. Data were analyzed through correlation and independent-sample *t*-test. The results indicated that physical activity was negatively correlated ($r = -.288, p < 0.01$) with the mental health of adolescents. The results of the independent sample *t*-test indicated that there were significant differences in physical activity ($t = 3.194, p < .005$) and mental health ($t = 2.773, p < .05$) concerning academic failure. The result further indicated that there was no gender differences in physical activity ($t = 1.645$) and mental health ($t = 0.139$).

Keywords: adolescence, mental health, physical activity, academic failure

Introduction

Among the all stages of life span, the most challenging and important stage is the "Adolescence" period. The mental health as well as the physical health of any individual go through a numerous changes during this period. Adolescents need to cope with the changes to survive or lead a healthy life in toward. Among these changes the school performance or failure may also vary during these days. Adolescence, defined as the period between 10–19 years of age, is characterized by rapid social, physical, and emotional changes (Dube & Sharma, 2012). Bangladesh has an adolescent and youth population of approximately 52 million, amounting to 1/3rd of the country's total population. This significant percentage, however, will not remain unchanged for very long and it is projected that by 2050, only 10-19% of Bangladesh's population will consist of young people (UNFPA, 2014). What this means for a country like Bangladesh is that it needs to invest in the

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human capital of young people and focus on meeting their needs without further delay (The Daily Star, 2015).

To any individual, whatever his/her age is, one of the most important things to live a healthy life is the mental health. It is interrelated to our every action in our life, and at the age of adolescence the issues related with mental health is quite often to be faced. Mental health includes our emotional, psychological, and social well-being. Mental health is important at every stage of life, from childhood and adolescence through adulthood.

According to the WHO (World Health Organization, 2014), “Mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.” Mental health and mental disorder can be mixed up. When our mental health is ill we just can’t say it as mental disorder.

Physical activity simply means movement of the body that uses energy. Walking, gardening, briskly pushing a baby stroller, climbing the stairs, playing soccer, or dancing the night away are all good examples of being active. Physical activity should be viewed as a continuum ranging from virtually no movement at all (e.g., sedentary behavior or sitting time) through light physical activity (e.g., light ambulation) to moderate to vigorous physical activity, MVPA (e.g., exercise, playing sports, cycling to work). According to WHO- Physical activity is defined as any bodily movement produced by skeletal muscles that require energy expenditure. Physical activity encompasses all activities, at any intensity, performed during any time of day or night. It includes exercise and incidental activity integrated into daily activity. This integrated activity may not be planned, structured, repetitive or purposeful for the improvement of fitness, and may include activities such as walking to the local shop, cleaning, working, active transport etc. (Global Recommendations on Physical Activity for Health, 2009)

One of the major problems of adolescents is the academic failure which not only leads to the waste of current expenditure and time but also generates mental-psychological, social and family problems for them. According to studies, this problem is increasing every year so that many students cannot handle the curriculum (academic courses) or complete it in due time (Pagani, Boulerice, Vitaro, & Tremblay, 1999).

Academic failure includes various aspects of educational failure such as frequent absence from classes, dropping out, repeating the grade or low quality of education (McEvoy & Welker, 2000). UNESCO attributes the concept of academic failure to repeating the grade, early dropout and decline in the educational quality of learners (Delors, 1996).

Adolescence entails dramatic changes in behavioral expectations, opportunities, and consequences. As one example, schools become more differentiated, cumulative, and competitive, which increases the risk of academic failure as well as its long-term consequences (Dornbusch, Glasgow, & Lin 1996; Rosenbaum, DeLuca, & Miller 1999).

Rationale of the study

A few lifestyles related factors have consistently been found to be associated with smoking, education, social class, social support, marital status, alcohol etc. The absence of a physically active lifestyle can adversely affect health and well-being, increasing the risk of different failures on many aspects of life among the adolescents. Mental health problems emerge in late childhood and early adolescence. Poor mental health can have import effect on the wider health and development of adolescents and is association with several health and social outcomes. There is no such a research on adolescent's mental health and physical activity associating academic failure in Bangladesh context. Therefore, there is a need for research that is focused on adolescent's physical activity, mental health and their academic failure.

Research objectives

The main objective of the present study was to see the relationship between physical activities, mental health and academic failure among the adolescents. Specific objectives were to explore –

1. the relationship between physical activity and mental health among adolescents.
2. whether there is any significant difference in adolescent's mental health according to academic failure and gender.
3. whether there is any difference in adolescent's physical activity according to academic failure and gender.

Methods

Participants

Participants of the present study were the adolescents of old Dhaka City in Bangladesh, where they were taken from different schools randomly. The sample comprised two hundred fifty (250) adolescents from class seven to nine. Lists of all schools in Old Dhaka City were collected from Bangladesh Bureau of Educational Intimation and Statistics (BANBEIS) and then three different schools were randomly selected. Among 250 (two hundred fifty) participants, 131 (one hundred thirty one) were boys and 119 (one hundred nineteen) were girls.

Measures

For data collection the following assessment instruments were employed in this study:

Demographic and Personal Information Form

A demographic and individual data survey was utilized to gather information about age, gender, socio-economic status, types of institute, either have failed in any subject or not, etc.

Mental health Questionnaire

Mental health of the respondents measured by the translated and bangla adapted version (Sarker & Rahman, 1989) of the original GHQ (General Health Questionnaire)

was developed by Goldberg (1972). It is a self-administered screening test designed for detecting people with diagnosable psychiatric disorders. The GHQ-12 is concerned with two phenomena: the inability to carry out one's normal health functions and the new phenomena of a distressing nature. Each item of the scale consists of a question asking whether the respondent has recently experienced a particular symptom of behavior rated on 4 point scale. Responses were given weights of 0, 1, 2 and 3 respectively. Among the 12 items, 6 were positive (item-1, 3, 4, 7, 8, 12) and 6 were negative (item- 2, 5, 6, 9, 10,11). Positive items were scored in 4 points from 3-0 and negative items in the reverse order from 0-3, total score of the scale range from 0-36 with high score indicating better mental health. The reliability of the Bangla version GHQ-12 was measured by parallel form method and satisfactory ($r = 0.69$).

Physical Activity Questionnaires

The Physical Activity Questionnaire (PAQ) provides a general measure of physical activity for youth from grades 4-12 (approximately ages 8-20). The PAQ is a self-administered, 7-day recall instrument. It was developed to assess general levels of physical activity for high school students. The PAQ can be administered in a classroom setting and provides a summary physical activity score derived from eight items, each scored on a 5-point scale. Scoring can be done via finding an activity score between 1 and 5 for each item (excluding item 10). For, item 1 (Spare time activity, we need to take the mean of all activities (æno" activity being a 1, æ7 times or more" being a 5) on the activity checklist to form a composite score for item 1. For, Item 2 to 8 (PE, lunch, right after school, evening, weekends, describes you best) the answers for each item start from the lowest activity response and progress to the highest activity response. Simply we can use the reported value that is checked off for each item (the lowest activity response being a 1 and the highest activity response being a 5). When it is about item 9, we need to take the mean of all days of the week (ænone" being a 1, ævery often" being a 5) to form a composite score for item 9. The next item (item 10) can be used to identify students who had unusual activity during the previous week, but this question is NOT used as part of the summary activity score. After that to calculate the final PAQ activity summary score, we need to take the mean of these 9 items, which results in the final PAQ activity summary score. A score of 1 indicates low physical activity, whereas a score of 5 indicates high physical activity.

Significant positive correlation ($r = 0.801$, $p < .05$) was obtained between score of English and Bangla versions including high translation reliability of the scale.

Procedures

Data collection procedure was carried out in classrooms with kind permission from and operation of the institution authority. The students were informed of the purpose of the study and they were also informed that their names would not be used in the procedure of the whole research. Researcher administered the scale following a

detailed testing protocol. At the beginning of administration, the researcher read the instructions aloud in front of the students and they also were requested to read the written instruction very carefully and answer every question in the way that was most true of them. They were told that there was no right or wrong answer but it was important to answer honestly. They were assured that no one would know their responses since their names were not in the questionnaire and their responses would be treated as strictly confidential. They were also told that they face any difficulty in understanding an item they can ask the researcher.

Results

The objective of the current study was to investigate the relationship of physical activities, mental health and school failure among the adolescents. For this purpose correlation of adolescent's physical activities and mental health was calculated. To see the differences of adolescent's mental health and physical activity according to academic failure and gender independent sample *t*-test was also done.

To describe the physical activities and mental health among the participants, we computed the descriptive statistics, which is presented in Table 3.1.

Table 3.1

Mean and SD of Physical Activity and Mental Health

Name of the Variables	<i>M</i>	<i>SD</i>	<i>N</i>
Physical Activity	2.23	0.59	250
Mental Health	10.68	4.20	250

Table 3.1 indicates that the mean score of the physical activities was 2.23 (*SD* = .59) and the mean score of mental health was 10.68 (*SD* = 4.20).

Table 3.2

Correlation Coefficient of Physical Activity and Mental Health

Correlation of Physical Activity with	<i>r</i>
Mental Health	-.28**

*Note: **p* < .01.

In Table 3.2, it can be found that physical activity is negatively correlated with the mental health of the adolescents. Here, the Pearson correlation coefficient showed that physical activity and mental health was significantly correlated ($r = -.28$ $p < 0.01$).

To see the differences in adolescent's mental health according to academic failure, an independent sample *t*-test was done, which was presented in Table 3.3.

Table 3.3

Independent Sample t-test of Adolescent's Mental Health According to Academic Failure

Academic failure	Mean	SD	<i>t</i>	<i>p</i>
Yes	12.35	3.570	2.773	.006
No	10.37	4.244		

Table 3.3 indicates that the mean differences of mental health between the adolescents with academic failure and without academic failure were significant ($t = 2.773, p = .006$).

Table 3.4

Independent Sample t-test of Adolescent's Physical Activity According to Academic Failure

Academic failure	Mean	SD	<i>t</i>	<i>p</i>
Yes	1.96	.571	3.194	.002
No	2.28	.591		

Table 3.4 indicates that the mean differences in physical activity between the adolescents with academic failure and without academic failure were significant ($t = 3.194, p < .05$).

Table 3.5

Independent Sample t-test of Adolescent's Mental Health According to Gender Type

Gender Type	Mean	SD	<i>t</i>	<i>p</i>
Male	10.65	4.268	.139	.890
Female	10.72	4.143		

Table 3.5 indicates that there was no gender differences in adolescents mental health ($t = .139$).

Table 3.6

Independent Sample t-test of Adolescent's Physical Activity According to Gender Type

Gender Type	Mean	SD	<i>t</i>	<i>p</i>
Male	2.29	.640	1.645	.101
Female	2.17	.545		

Table 3.6 indicates that the mean differences in adolescents physical activity with respect to gender was not significant ($t = 1.645$).

Discussion

The purpose of the present research was to investigate the relationship of physical activity and mental health among the adolescents of old Dhaka city. The researcher also tried to see if there are any differences among adolescent's physical activity and mental health according to their academic failure and gender. As per the main objective of the study, the researcher explored the relationship between adolescent's physical activity and mental health. Table 3.2 indicates that, there is a negative correlation ($r = -.288, p < .01$) among physical activity and mental health, which is statistically significant. In a study of Hughes (1984), claimed that mental health in both clinical and nonclinical populations is affected by vigorous physical activity. So, we can say that this finding of the study is consistent with the outcome of Hughes previous research.

This study also indicates that there are significant differences among adolescent's physical activity and mental health on the basis of academic failure. Adolescents who have failed in any subject showed significantly different physical activity and mental health score than the other students without any fail. The mean on the independent sample t-test showed that the adolescents with academic failure got less score in physical activity, which indicates that they used to have less involvement on physical activity than the other adolescents who had no fail in last exam. Mental health ($t = 2.773, p < .01$) according to their academic failure also showed a significant differences among the students with and without academic failure. The mean on the independent sample t-test showed that the adolescents with academic failure got much score in mental health, which indicates a poor mental health than the other adolescents who had no fail in last exam. The participants with fail in any subject may undergo with mental pressure and many academic or family stress. But the normal students may not seem to have this kind of pressure as like as them. They also get more interest on doing physical activity than the others who got failed on any subject. So their amount of physical activity and state of mental health may be different from the others. In a previous study of Vander Stoep A, Weiss NS, Kuo ES, et al. (2003), suggested that almost half of all failures to complete secondary school is attributable to mental health symptoms. And it is also stated by Folkins and Sime in 1981 that enhanced cognitive functioning is associated with physical activity. So, we can say that this finding of the study is consistent with the outcome of some other research also.

On the other hand, the findings of the study indicate that there were no significant differences among adolescent's physical activity and mental health on the basis of gender. Physical activity had no significant differences on the basis of gender. It is also found that there are no significant differences among adolescent's mental health on the basis of gender. It might be happened due to the self-improvement of both gender in a school environment is about to equal. The facilities and the other helps they find however the person is a boy or girl is supposed to be same. So the result may get about to same for any male or female participant.

In conclusion it can be stated that, physical activity of adolescents has a great link to the mental health of themselves. Where there are significant differences on physical activity and mental health of adolescents with academic failure and without academic failure, the physical activity and mental health of adolescents have no differences on the basis of gender.

References

- Adolescents and young people of Bangladesh. (2015, May 23). The Daily Star. Retrieved from- <https://www.thedailystar.net/adolescents-and-young-people-of-bangladesh-54257>
- Delors, J. (1996). Learning: the Treasure Within. Report to UNESCO of the International Commission on Education for the Twenty-first Century, 22–8.
- Dornbusch, S. M., Glasgow, K. L., & Lin, I. C. (1996). The social structure of schooling. *Annual Review of Psychology*, Vol. 47. pp. 401-429.
- Dube, S., & Sharma, K. (2012). Knowledge, Attitude and Practice Regarding Reproductive Health among Urban and Rural Girls: A Comparative Study. *Studies on Ethno-Medicine*. Vol-6.Issue-2.
- Folkins, C. H., & Sime, W. E (1981): Physical fitness training and mental health. *Am Psychol*, 36, 373-389.
- Global Recommendations on Physical Activity for Health, 2009. World Health Organization. Geneva, Switzerland. Accessed 13/07/2018. Available at: <http://www.who.int/ncds/prevention/physical-activity/en>
- Goldberg, D. (1972). *The detection of psychiatric illness by questionnaire*. London: Oxford University press.
- Hughes, J. R. (1984). Psychological effects of habitual aerobic exercise: a critical review, 13, 66-78
- McEvoy, A., Welker, R. (2000). Antisocial Behavior, Academic Failure, and School Climate. *Journal of Behavioral Disorder*. 8:130–40.
- Pagani, L., Boulerice, B., Vitaro, F., & Tremblay R. E. (1999) Effects of poverty on academic failure and delinquency in boys: A change and process model approach. *Journal of Child Psychiatry*, 40, 1209–19.
- Rosenbaum J. E., DeLuca S., Miller S. R. (1999). Pathways to Work: Short- and Long-Term Effects of Personal and Institutional Ties. *Sociology of Education*, 72, 179–96.
- Saekar, N. R., & Rahman, A. (1989). Adapted Bangla version of Goldberg's General Health Questionnaire. Unpublished Manuscript, Department of Psychology, University of Dhaka.
- UNFPA Bangladesh (2014). Development of the Adolescent and Youth Reproductive Health. Demographic Impact Study, BBS.
- Vander Stoep, A., Weiss, N. S., & Kuo, E. S., (2003). What proportion of failure to complete secondary school in the US population is attributable to adolescent psychiatric disorder? *Journal of Behavioral Health Service*, 30, 119–24.
- World Health Organization (2014). Health for the world's adolescents: A second chance in the second decade. Retrieved from- <http://apps.who.int/adolescent/second-decade/>: Accessed November 16, 2015.

Adaptation of Binge Eating Scale for Use in Bangladeshi Context

Farzana Ahmed¹ and Tasnima Ahmod²

Abstract

A new measure of Binge Eating Scale (BES) was originally developed by Gormally et al. (1982). Later, the psychometric properties of a French version of the Binge Eating Scale (BES) by establishing its factor structure, internal consistency and construct validity in both a non-clinical and a clinical population was done by French people (Brunault et al., 2016). The present study assessed reliability and validity of Binge Eating Questionnaire in the context of Bangladesh. A total of 30 participants completed the questionnaire; the age range was 20-40. Both, internal consistency and test-retest reliabilities were highly satisfactory. Validity of the instrument was assured by face and content validity. Satisfactory level of validity was found for Bangla version of BES. Thus, the Bangla version of Binge Eating Scale appeared psychometrically sound and culturally appropriate. In sum, the present findings provide adequate support to measure the eating disorder of people in Bangladesh.

Keywords: binge eating scale, adaptation, reliability, validity

Introduction

Binge eating disorder (BED) is an eating disorder characterized by frequent and recurrent binge eating episodes with associated negative psychological and social problems, but without subsequent purging episodes (e.g. vomiting) National Collaborating Centre for Mental Health (UK), 2004). There are several other eating disorders as well. These are: pica, rumination disorder, avoidant/restrictive food intake disorder, anorexia nervosa, bulimia nervosa, other specified feeding or eating disorder, unspecified feeding or eating disorder etc.

The psychometric properties of a French version of the Binge Eating Scale (BES) by establishing its factor structure, internal consistency, and construct validity in both a non-clinical population and a clinical population (obese patients who are candidates for bariatric surgery) was done by French people (Brunault et al., 2016). A total of 553 non-clinical subjects and 63 morbidly obese patients who were candidates for bariatric surgery were assessed with BES and the Bulimic Investigatory Test, Edinburgh or BITE (which assesses both binge eating behaviours and inappropriate compensatory behaviours). They tested the factor structure of the instrument, internal consistency, and construct validity with measures of inappropriate compensatory behaviours to avoid weight gain. In 47 out of 63 obese patients, they assessed binge eating disorder (Severe combined immunodeficiency disease SCID). In the non-

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clinical population, the BES reveals one factor structure (which accounted for 61% of the variance), and has excellent internal consistency ($\alpha=0.93$), and high construct validity. In this population, construct validity with measures of inappropriate compensatory behaviours was confirmed in overweight and obese subjects, but not in underweight and optimal weight subjects. In obese patients candidates for bariatric surgery, they demonstrated that the BES had a one-factor structure (which accounted for 46% of the variance), had high internal consistency ($\alpha =0.88$) and high construct validity with measures of binge eating and good construct validity with measures of inappropriate compensatory behaviours to avoid weight gain. In the subpopulation of 47 obese patients, sensitivity, specificity, positive predictive value and negative predictive value were respectively 75%, 88.4%, 37.5%, 97.4% (BES threshold =18). In this study, they validated a psychometrically sound French version of the Binge Eating Scale, both in a non-clinical and a clinical sample. The psychometric properties of the French version of the BES are comparable to its original version with a one-factor structure. The BES is a useful tool to assess binge eating disorder in obese patients (e.g., bariatric surgery candidates), but might not differentiate between binge eating disorder and bulimia nervosa in underweight and optimal weight subjects.

Rationale of the study

There are certain specific reasons for conducting this study. Firstly, the BED is rapidly increasing in our country. People are suffering from this consciously or subconsciously. Secondly, according to Burton and Abbott (2019), binge eating behaviour is driven by core low self-esteem, negative affect, and difficulty with emotional regulation, restricted eating and beliefs about eating. Thirdly, Binge eating is relatively stable from late adolescence/early young adulthood to early/middle young adulthood, but less so from middle/late adolescence to late adolescence/early young adulthood. Self-esteem appears to be a particularly salient factor involved in binge eating cessation and should be targeted in prevention and treatment programs. (Goldschmidt et al., 2014) Fourthly, Prevalence of partial syndrome EDs is at least twice that of full syndrome EDs, in nonclinical populations. Binge eaters exhibit more disorderly eating habits, concerns about body shape, lower self-esteem, lack of family cohesion, impairment in social and work functioning, chronic dieting, substance abuse, emotional problems, and general psychopathology, as compared to normal eaters. (Fichter et al., 1993). However, in our country this disorder is increasing but yet people are not so much aware of it. For this reason, we adapted this scale to identify the group of people who are suffering from this disorder.

Purpose of the study

The main purpose of this study was to adapt Binge Eating Scale (BES) in the context of Bangladesh and to see whether there was any effect of Binge Eating Disorder within a certain time period of test-retest. To fulfil this purpose we used intra-class correlation, used reliability and for measuring validity, we used content validity.

Methods

The main purpose of the present study was to adapt Binge Eating Scale (BES) in the context of Bangladesh.

Participants

The total number of the participants of the present study was 30 (15 male and 15 female respondents). Their age range was from 20 to 40. From 20 to 30 year age group there were 10 and from 30 to 40 year age group there were 5 participants from each sex group. All of them belong to middle class. They were in normal health. The participants were taken purposively from around Dhaka city specifically from the area of Kakrail, Khilgaon, Dhaka University and Jagannath University.

Measures

Only one scale was used in this study, which is Binge Eating Scale. The original author of the Binge Eating Scale is (Gormally, Black, Daston, & Rardin, 1982). The scale consists of 16 items. There was no sub-scale. This scale is designed to capture the behavioural (eight items, e.g., large amount of food consumed), as well as the cognitive and emotional (eight items, e.g., feeling out of control while eating, preoccupation with food and eating), features of objective binge eating (OBE) in overweight and obese adults.

Scoring

Each question has 3-4 separate responses assigned a numerical value. The score for each item was 1, 2, and 3 except for item no 6 and 16. The score of those two were 0, 1, and 2. The score range is from 0-46. The sum of the score of all items was the score of individual. Marcus et al. (1988) created clinical cutoff scores for the BES representing Non-binging; less than 17; Moderate binging; 18-26; Severe binging; 27 and greater.

Procedures

Adaptation is a well-recognized way of maximizing the cultural appropriateness of psychological instrument and maximizing bias. It has become the generic term for any procedure in which an instrument that is developed for one language and cultural group is transferred in such a way that it becomes linguistically, culturally and psychometrically appropriate for using in another language and cultural group (Uddin, Haque, & Shimul, 2011). The procedure of this present study is explained below:

At first a forward Bangla translation of the items of the original scale was prepared. Then the forward translated form of Bangla items along with original version of the scale was given to two experts in the field of Psychology (teachers of the Department of Psychology, Jagannath University) to judge the appropriateness of each items of Binge Eating Scale. They were requested to check forward translated form of the original scale and compare with the original scale for its content, meaning, form, and clarity of expression and correct them if necessary. They prepared the first

synthesized version. Next, two language experts (teachers of Department of English, Jagannath University) were requested to identify whether there is any grammatical problems and correct them if necessary. On the basis of conclusion of their discussion the second synthesized version was prepared. After that, the third synthesized version of the scale was administered on a group of sample. These respondents were people aged between 20-40 years and were from Dhaka city. The participants were asked to choose the most appropriate answer by ticking (√) on each item including all the sub-items. After one week of their first participation each of them were requested to do the same again. They were assured that all the information they provided will remain confidential and would be used for research purpose only.

Results

In order to adapt and see if there was any effect of Binge Eating Scale in one week of time period, the following results were found.

Reliability

The reliability refers to a measurement that supplies consistent results with equal values (Blumberg et al., 2005). It measures consistency, precision, repeatability, and trustworthiness of a research (Chakrabartty, 2013). To determine this present study's reliability, we used following procedures. The results of these procedures are discussed along with the tables.

Item Analysis

Item analysis is generally the detailed analysis of the individual items of a test or scale with the purpose of assessing their reliability and validity (Reber, 1995). How individual items corrected with the total score was determined by corrected item-total correlation. For the Binge Eating Scale, 16 items were thoroughly analysed and corrected item total correlations were assessed. The item-total statistics of all test items of Binge Eating Scale is presented in Table 1.

Table 1

Item-Total Statistics and Reliability of the Binge Eating Scale Test and Re-Test Items

Test Items	Corrected Item- Total Correlation	Chronbach's Alpha if Item Deleted	Re-Test Items	Corrected Item-Total Correlation	Chronbach's Alpha if Item Deleted
ITEM1	.239	.832	ITEM1	.251	.842
ITEM2	.354	.823	ITEM2	.212	.844
ITEM3	.396	.821	ITEM3	.600	.823
ITEM4	.328	.825	ITEM4	.392	.835
ITEM5	.339	.825	ITEM5	.334	.838
ITEM6	.201	.829	ITEM6	.240	.841

(Continued)

ITEM7	.616	.807	ITEM7	.584	.826
ITEM8	.623	.807	ITEM8	.629	.822
ITEM9	.527	.813	ITEM9	.590	.823
ITEM10	.311	.826	ITEM10	.578	.824
ITEM11	.521	.815	ITEM11	.705	.821
ITEM12	.622	.807	ITEM12	.578	.824
ITEM13	.482	.816	ITEM13	.363	.838
ITEM14	.738	.797	ITEM14	.780	.812
ITEM15	.352	.824	ITEM15	.335	.838
ITEM16	.275	.827	ITEM16	.085	.846

The lowest reliability of these test items was .201 (ITEM 6) and the highest reliability of these items was .738 (ITEM 14). The Chronbach's Alpha if item deleted was all above .79. The lowest score of corrected re-test items total correlation was .085 (ITEM 16) and the highest was .780 (ITEM 14). All of the score of Chronbach's Alpha if item deleted was above .81.

Table 2

Intra-class Correlation of Test-Retest Items

	Intra-class Correlation	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	Df ₁	Df ₂	Sig.
Average Measures	.899	.839	.944	9.892	29	899	.000

The intra-class correlation of test-retest items' average measures was .899, which is satisfactory.

Table 3

Chronbach's Alpha (α) of Test & Retest's Items of Internal Consistency

Chronbach's Alpha of test items	Numberof items	Chronbach's Alpha of re-test items	Numberof items
.828	16	.840	16

The internal consistency of test items was .828, which is considered as significant. The Chronbach's Alpha of re-test items was .840, which is also considered as significant.

Validity

Validity is often defined as the extent to which an instrument measures what it asserts to measure (Blumberg et al., 2005). Validity of a research instrument assesses the extent to which the instrument measures what it is designed to measure (Robson, 2011). To determine this present study's validity, we used content or face validity. Face validity refers to the degree to which a test appears to measure what it claims to measure (Leedy & Ormrod, 2004). In our study, the experts of psychology field found this scale has content validity.

Discussion

The main aim of the present study was to adapt Binge Eating Scale for use with Bangladeshi people. Binge Eating Scale's adapted version was used for this purpose on 30 adult participant. Since we have done a pilot study, we did this study within a one week time period and with only 30 participants. At the time of test and retest we have seen that there is binge eating disorder among these people. There were three stages in conducting this study as discussed at procedure section. The results show acceptable and good results. The internal consistency of test-retest's item is more than .80. This result is similar to the study of French version of the Binge Eating Scale discussed earlier at literature review and the Malay version of BES (.890) (Robert et al, 2013). The test-retest reliability and internal consistency of BES were 0.71 and 0.85 respectively of Iranian version of Binge Eating Scale (Fereshteh Mootabi, et al, 2009). The content validity of this scale was determined during the translation process by the expert of Psychology field. These experts suggested that, this scale is apparently valid in the context of Bangladesh. They translated this scale in Bangla from the original version. So, it can be concluded here that this scale is very much appropriate to use in the context of Bangladesh.

References

- Amy, L. Burton, & Maree J. Abbott (2019). Processes and pathways to binge eating: Development of an integrated cognitive and behavioural model of binge eating. *Journal of Eating Disorders, 18* (7)
- Blumberg, B., Cooper, D. R., & Schindler, P. S. (2005). *Business Research Methods*. Berkshire: McGrawHill Education.
- Brunault, P., Gaillard, P., Ballon, N., Couet, C., Isnard, P., Cook, S., Delbachian I., Revellere, C., & Courtois, R. (2016). Validation of the French version of the Binge Eating Scale: Examination of its factor, structure, internal consistency and construct validity in a non-clinical and clinical population. *L'Encephale, 42*(5), 426-433
- Chakrabarty, S. N. (2013). Best Split-Half and Maximum Reliability. *IOSR Journal of Research & Method in Education, 3*(1), 1-8. Diagnostic and Statistical Manual of Mental Disorders (DSM-5)
- Fereshteh, M., Reza, M., Mahmood D., & Nasrin, O. (2009). Standardization of the Binge Eating Scale among Iranian Obese Population. *Iranian Journal of Psychiatry, 4*(4),

- Fichter, M. M. (1993). Drug treatment of anorexia nervosa and bulimia nervosa. *Review.Nervenarzt. Jan*, 64(1) 21-35
- Goldschmidt, A. B., Wall, M. M., Loth, K.A., Bucchianeri, M. M., Neumark-Sztainer, D. (2014). The course of binge eating from adolescence to young adulthood. *Health Psychol*, 33(5), 457-60
- Gormally, J. Black, S. Daston, & S. Rardin, D. (1982). "The assessment of binge eating severity among obese persons". *Addictive Behaviors*. 7(1): 47-55. doi:10.1016/0306-4603(82)90024-7. PMID 7080884.
- Leedy, P. D., & Ormrod, J. E. (2004). *Practical Research*, (8th Ed.). Upper 10 Saddle River, N. J: Prentice Hall.
- Marcus, M. D., Wing, R. R., & Hopkins, J. (1988). Obese binge eaters: Affect, cognitions, and response to behavioral weight control. *J Consult Clin Psychol*, 3, 433-439.
- Rebert, A. S. (1995). *The Penguin Dictionary of Psychology*. Penguin Books
- Robson, C. (2011). *Real World Research: A Resource for Users of Social Research Methods in Applied Settings*, (2nd Ed.). Sussex, A. John Wiley and Sons Ltd.
- Sarah, E., Antonina, F. & Robyn, M. (2013). A condensed dialectical behavior therapy skills group for Binge Eating Disorder. *Journal of Cognitive Psychotherapy*, 27(4), 338-358
- Uddin, M. K., Haque, A. U., & Shimul, A. M. (2011). Adaptation of the Beck youth inventories of emotional and social impairment for use in Bangladesh. *The Dhaka University Journal of Psychology*, 35, 65-80.
- Wikipedia. (https://en.wikipedia.org/wiki/Binge_eating_disorder), Eating disorders: core interventions in the treatment and management of anorexia nervosa, bulimia nervosa, and related eating disorders; National Clinical Practice Guideline No. CG9. Leicester [u.a.]: The British Psychological Society and Gaskell. 2004.

Appendix

আমি জগন্নাথ বিশ্ববিদ্যালয়ের মনোবিজ্ঞান বিভাগের এম.এস.সি এর একজন ছাত্র। কোর্স অস্তিত্ব গবেষণামূলক কিছু তথ্যের জন্য আপনার সাহায্য প্রয়োজন। এই তথ্য সম্পূর্ণ গোপন থাকবে এবং শুধুমাত্র গবেষণার কাজে ব্যবহৃত হবে।

ব্যক্তিগত তথ্যাবলী :

- বয়স :
- লিঙ্গ : ১। মহিলা ২। পুরুষ
- অধ্যয়নরত বিষয় :
- অধ্যয়নরত বর্ষ :
- পরিবারের আর্থ-সামাজিক অবস্থা : ১। নিম্নবিত্ত ২। মধ্যবিত্ত ৩। উচ্চবিত্ত

বিজ্ঞ ইটিং স্কেল

বিজ্ঞ ইটিং স্কেল একটি ১৬ দফা প্রশ্নাবলি, যা বিজ্ঞ আহার ব্যবহার এর উপস্থিতি পরিমাপ করে। এটি আহার ব্যাধিকে নির্দেশ করতে পারে।

নিচে ব্যবহার, চিন্তন, আবেগীয় অবস্থার কিছু বিবৃতি গুচ্ছ রয়েছে। প্রতিটি গুচ্ছের যে বিবৃতি আপনার অনুভূতিকে সবচেয়ে ভাল বর্ণনা করে দয়া করে তা চিহ্নিত করুন।

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- আমি অন্যান্য মানুষের সাথে থাকলে আমার ওজন ও উচ্চতা নিয়ে চিন্তা করি না।
- আমি আমার গড়ন নিয়ে চিন্তা করি, কিন্তু তা আমাকে বিচলিত করে না।
- আমি আমার গড়ন বা ওজন নিয়ে ভাবি এবং নিজের প্রতি হতাশ বোধ করি।
- আমি প্রায়ই আমার ওজন নিয়ে ভাবি এবং প্রচণ্ড লজ্জা ও বিরক্ত বোধ করি।

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- ধীরে খেতে আমার কোন সমস্যা হয় না।
- আমি দ্রুতখেতে পারি, কিন্তু আমার পেট ভরে না।
- মাঝে মাঝে দ্রুতখাবার পর আমার পেট বেশি ভরা মনে হয়।
- সাধারণত, আমি খাবার না চিবিয়েই খেয়ে ফেলি, তারপর মনে হয় আমি খুব বেশি খেয়ে ফেলেছি।

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- খাবারের প্রতি আবেগকে আমি নিয়ন্ত্রণ করতে সক্ষম।
- আমি মনে করি গড় মানুষের তুলনায় খাবারের প্রতি আমার নিয়ন্ত্রণ কম।
- খাবারের প্রতি আবেগকে আমি কোনোভাবে নিয়ন্ত্রণ করতে পারি না।
- আমার মনে হয় খাবারের সঙ্গে আমার সম্পর্ক নিয়ন্ত্রণ করতে আমি সম্পূর্ণরূপে অক্ষম এবং খাবারের প্রতি আমার আবেগের বিরুদ্ধে লড়াই করতে আমি প্রানপণ চেষ্টা করি।

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৪।

- যখন আমার একঘেয়েমি লাগে তখন আমার খাবার অভ্যাস নেই।
- মাঝে মাঝে একঘেয়েমি লাগলে আমি খাই কিন্তু প্রায়ই নিজেকে এ ধারণা থেকে দূরে রাখতে পারি এবং আমি খাবারের কথা ভাবি না।
- আমি প্রায়ই একঘেয়েমি বোধ করলে খাই কিন্তু মাঝে মাঝে নিজেকে দূরে রাখতে পারি এবং আমি খাবারের কথা ভাবি না।
- একঘেয়েমি লাগলে আমার খাবার অভ্যাস আছে এবং কোনোকিছু আমাকে বিরত রাখতে পারে না।

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- সাধারণত আমি ক্ষুধার্ত থাকলে খাই।
- মাঝে মাঝে ক্ষুধা না লাগলেও আমি বোক বশত খাই।
- আমি ভরপেট খেয়েছি এটা জানা সত্ত্বেও প্রায়ই আমি ক্ষুধা নিবারণে খাই।
এ সময় আমি এমনকি কি কি খাচ্ছি তাও উপভোগ করতে পারি না।
- যদিও আমি শারীরিকভাবে ক্ষুধার্ত না, তবুও আমার কিছু খাওয়া উচিত মনে হয় এবং আমি কিছু খাচ্ছি বোধ করে সন্তুষ্ট হই (উদাহরণস্বরূপ, এক টুকরোরটি)।

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৬। খুব বেশি খাওয়ার পরঃ

- আমার নিজেকে একেবারেই দোষী বা অনুতপ্ত লাগে না।
- আমি মাঝে মাঝে নিজেকে দোষী বা অনুতপ্ত মনে করি।
- আমি প্রায় সবসময় খুব বেশি দোষী বা অনুতপ্ত বোধ করি।

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- যখন আমি খাদ্যসংযম অভ্যাস করি, আমি কখনো পুরোপুরি খাবারের উপর থেকে নিয়ন্ত্রণ হারাই না, এমনকি আমি খুব বেশি খাদ্য গ্রহণ করলেও।
- খাদ্যসংযম অভ্যাস এর সময় যখন আমি কোনো নিষিদ্ধ খাবার খাই, তখন মনে হয় আমি ব্যর্থ হয়েছি এবং আরো বেশি খাই।
- যখন আমি খাদ্যসংযম অভ্যাস করি এবং খুব বেশি খাই, আমার মনে হয় আমি ব্যর্থ এবং আরো বেশি খাই।
- আমি সবসময় হয় বিজ্ঞ খাদ্যাভ্যাস করি না হয় উপবাস।

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- এটা খুব বিরল যে আমি খুব বেশি খাই এবং আমার অস্থিতকর পেট ভরা লাগে।
- মাসে একবার হলেও খুব বেশি খাবার পর আমার অস্থিতকর পেট ভরা লাগে।
- মাসে প্রায় সবসময় এমন হয় যে আমি খুব বেশি পরিমাণে খাদ্য খাবারের সময় অথবা পরবর্তী খাবারের আগে খাই।
- সাধারণত আমি খুব বেশি খাই এবং খাবার পর আমার খুব বমি বমি ভাব হয় এবং খারাপ লাগে।

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- আমি যে পরিমাণ ক্যালরি গ্রহণ করি তা সর্বদা একই থাকে।
- মাঝে মাঝে আমি খুব বেশি খাবার পর চেষ্টা করি কিছু ক্যালরি গ্রহণ করতে যা আগের খাবারকে সংগঠিত করে।
- আমার রাতে খুব বেশি খাবার অভ্যাস আছে। সাধারণত আমার সকালে ক্ষুধা লাগে না এবং রাতে খুব বেশি খাই।
- আমার এক সপ্তাহের মত একটি সময়কাল আছে যেখানে আমি অনাহার খাদ্যসংযম করি, একইভাবে খুব বেশি খাবার খাওয়ার সময়কালও আছে। আমার জীবন বিজ্ঞ ও সংযম এর সমন্বয়ে তৈরি।

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- সাধারণত আমার পেট ভরে গেলে আমি খাওয়া বন্ধ করতে পারি।
- মাঝে মাঝে খাওয়ার জন্য আমি খুব তাড়না অনুভব করি যা আমি নিয়ন্ত্রণ করতে পারি না।
- প্রায়ই খাবারের প্রতি আমার আবেগ এতো শক্তিশালী থাকে যে আমি আবেগের সাথে যুদ্ধে জিততে পারি না কিন্তু মাঝে মাঝে নিজেকে নিয়ন্ত্রণ করতে পারি।
- খাবারের প্রতি আমার আবেগকে আমি কিছুতেই নিয়ন্ত্রণ করতে পারি না।

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- আমার পেট ভরে গেলে খাওয়া শেষ করতে আমার কোনো সমস্যা হয় না।
- সাধারণত পেট ভরে গেলে আমি খাওয়া শেষ করতে পারি কিন্তু মাঝে মাঝে এত বেশি খাই যে তা খুব অশান্তিদায়ক।
- একবার খাওয়া শুরু করলে আমার পক্ষে থামা মুশকিল, সাধারণত আমি খুব বেশি পেট ভরে খাওয়া শেষ করি।
- খাবার একবার শুরু করলে থামানোটা আমার জন্য আসল সমস্যা এবং মাঝে মাঝে বমি বমি করে ফেলি।

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- আমি বন্ধু ও পরিবারের সামনে যে পরিমাণ একা থাকলেও সেরকম খাই।

- মাঝে মাঝে লোকের মাঝে থাকলে আমি আমার ইচ্ছেমত খাই না কারণ আমি আমার সমস্যা সম্পর্কে আমি অবগত।

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- আমি প্রায়ই অন্যদের সামনে কম খাই কারণ আমি বিব্রত বোধ করি।

- আমি অতিরিক্ত খাওয়া নিয়ে খুব লজ্জিত, আমি তখন ই খাই যখন কেউ আমাক দেখে না। আমি গোপনে খাই।

১৩।

- আমি দিনে তিনবার ভারী খাবার এবং মাঝে মাঝে হালকা নাস্তা করি।

০	১	২	৩
০	১	২	৩
০	১	২	৩
০	১	২	৩

- আমি দিনে তিনবার ভারী খাবার ও সাধারণত হালকা নাস্তা করি।

- আমি নিয়মিতভাবে অনেকবার দিয়ে ভারী খাবার খাই অথবা ভারী খাবার বাদ দেই।

- কিছু সময় আছে যখন আমার মনে হয় নিয়মিত ভারী খাবার ছাড়া অনবরত খাই।

১৪।

- আমি খুব বেশি খাবার আবেগ নিয়ে ভাবি না।

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০	১	২	৩
০	১	২	৩
০	১	২	৩

- মাঝে মাঝে আমার মন কিভাবে খাবারের তাগিদকে নিয়ন্ত্রণ করা যায় এ নিয়ে

বাধ্যবাদকতা ভাবনায় থাকে।

- আমি প্রায় বেশিরভাগ সময় কি খেয়েছি এবং কিভাবে না খাওয়া যায় তা নিয়ে চিন্তা করি।

- আমার মন বেশিরভাগ সময় খাবারের চিন্তানিয়ে ব্যস্ত থাকে।

১৫।

- আমি অধিকাংশ মানুষের তুলনায় খাদ্য নিয়ে বেশি চিন্তা করি না।

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০	১	২	৩
০	১	২	৩
০	১	২	৩

- খাবারের প্রতি আমার তীব্র বাসনা আছে কিন্তু সেটা সীমিত সময়কালের জন্য।

- কিছু কিছু দিন আছে যখন আমি খাবার ছাড়া আর কিছু নিয়ে ভাবতে পারি না।

- আমার বেশিরভাগ দিন খাবারের চিন্তায়পরিপূর্ণ থাকে। আমার মনে হয় আমি খাবারের জন্য জীবন ধারণ করি বসবাস করি।

১৬।

- সাধারণত আমি জানি আমি ক্ষুধার্ত কি না। আমি জানি কোন অংশের আয়তন যতার্থ।

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০	১	২
০	১	২

- মাঝে মাঝে আমি জানি না আমি শারীরিকভাবে ক্ষুধার্ত কি না। এসময় কতটুকু খাবার যতার্থ তা আমার বুঝতে কষ্ট হয়।

- আমি যদিও জানতাম কতটুকু ক্যালোরি আমার খাওয়া দরকার, তবুও সঠিক মাত্রার খাবার কতটুকু সে সম্পর্কে আমার ধারণা স্পষ্ট না।

Adaptation and Validation of Parental Bonding Instrument in Bangladeshi Context

Kishor Roy¹ and Jannatul Ferdous²

Abstract

The present study aimed to adapt and validate the Parental Bonding Instrument (PBI), originally developed by Parker, Tupling and Brown (1979), in the context of Bangladesh. PBI is a tool that is used to measure the parent-child bonds from the perspective of the child. The process of translation, adaptation and cross-cultural validation of the “Parental Bonding Instrument (PBI)” were conducted following and accepting the guidelines of standard procedure through the subsequent steps (Sousa & Rojjanasrirat, 2011). To determine the reliability of PBI, internal consistency and test-retest reliability were assessed. Cronbach Alpha for PBI were .92 for mother form (.88 and .86 for care and overprotection subscale respectively) and .94 for father form (.92 and .87 for care and overprotection subscale respectively), which is satisfactorily significant. Test-retest reliability coefficients within the PBI for mother and father form were .934 and .969 respectively with an interval of 15 days, which indicates that both forms of parental bonding instrument were highly reliable. Validation of the instrument was assured by content and convergent validity. Satisfactory level of validity was found for the Bangla version of PBI. Significant correlations between the two subscales (care and overprotection) of both mother ($r = .717, p < .01$) and father ($r = .865, p < .01$) forms provided the evidence for convergent validity. Thus, the Bangla version of PBI appeared psychometrically sound and hence ethnically apposite.

Keywords: parental bonding, adaptation, validation

Introduction

Parental bonding can be described as the formation of a reciprocal emotional and psychological proximity between parents and child. Usually, we tie with our parents in the minutes, hours, or days following our birth. The importance of parental bonding is beyond our imagination. It is a unique connection that every child and parent can foster. One’s individuality and overall behavior depends on his or her affiliation with parents (Cassidy & Shaver, 2008). The brain development of children, as well as their physical, social, emotional and cognitive progress, depends on a loving bond or attachment relationship with parents (Winston & Chicot, 2016). According to Bowlby (1977), attachment is determined by the parent’s attitude and

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behavior towards the child's needs. When parents remain aware in responding to their child's need, secure attachment occurs and securely attached adults tend to be more competent, sociable and comfortable in dealing with different kinds of relationship in life (Halfit & Slade, 1987). There is increasing evidence that parents who often ignore or decline their child's need for attention will lead to insecure attachment and insecurely attached adults showed higher tendency to engage in antisocial behaviors (Brennan & Shaver, 1991). They have a lower level of self-reliance and self-esteem compared to securely attached counterparts (Steinberg, 2001). Parental inconsistency and deficiencies in maternal and paternal bonding can lead to long-term social, physical, emotional and mental health problems such as depression, anxiety, eating disorders (Tetley, Moghaddam, Dawson, & Rennoldson, 2014), schizophrenia (Helegeland & Torgersen, 1997) etc.

Apprehending the consequence of parental bonding that provides a lot of insight into parent-child relationship, Parker, Tupling, and Brown (1979) developed the most widely used Parental Bonding Instrument (PBI) to assess the perceptions of parenting received in childhood. It yields a two-dimensional four-category model. The 'care' dimension has one pole defined by affection, emotional warmth, empathy and closeness and the other by emotional coldness, neglect and indifference. The 'overprotection' dimension has one pole defined by control, intrusion and prevention of independent behavior and the other by allowance of independence and autonomy. When children receive high care and low overprotection, it is optimal parenting, high care and high overprotection is for affectionate constraint, low care and low overprotection is for neglectful parenting, and low care and high overprotection is for affectionless control (Parker et al., 1979).

Rationale of the study

Parental bonding is an imperative forecaster that proffers imminent into parent-child affiliation. It plays indispensable role on children's adjustment as well as on their physical, social, emotional and psychological development and wellbeing. Every child and parent can enjoy this precious bonding. In Bangladesh, there appears to be lack of available instrument for assessing parental bonding. As a result, the need for adaptation and validation of Parental Bonding Instrument (PBI), the widely used instrument over the past decades, into the Bangladeshi cultural context is felt so much important. It is an internationally renowned, structured, easily understandable and meaningful measurement tool for assessing parental bonding. It has been adapted, validated and used in different cultures, without significant modification of the construct (Qadir, Serwart, Khan, & Prince, 2005; Kitamura & Suzuki, 1993). Moreover, emotional factors and mood changes do not seem to affect the perception of such bonds, even when the instrument is primarily applied to populations with severely diseased, and after considerable time intervals (Lizardi & Klein, 2005). So, the present authors intended to adapt the original PBI into the Bangla version and to validate it in our culture.

Objectives of the study

The present study was intended to adapt the widely used Parental Bonding Instrument (PBI) to administrate in Bangla language in the context of Bangladeshi culture and to determine the psychometric properties of the Bangla version of the Parental Bonding Instrument.

Methods

Participants

A total of 120 university students, age ranging from 17 to 20 years, were selected on the basis of a purposive sampling technique from two public universities of Dhaka city. Among them, 60 were males (50%) and 60 were females (50%). The participants were of different socio-economic background, race and religion. Those 120 students were considered as the most consistent with their recollections of their own parenting, before they had contact with children in their work or as parents.

Description of the Measures

The Parental Bonding Instrument (PBI) was originally developed by Parker et al. (1979). It is a 25-item self-report measure of two parenting styles- care and overprotection, which was designed to measure perceptions of parenting to the first sixteen years of life. The 'Care' subscale comprises of 12 items (items 1, 2, 4, 5, 6, 11, 12, 14, 16, 17, 18, 24) which represent a continuum of parental style from coldness and neglect to affection and emotional warmth. The 'Overprotection' subscale comprises of 13 items (items 3, 7, 8, 9, 10, 13, 15, 19, 20, 21, 22, 23, 25) representing a continuum ranging from independence to control and intrusion. Each of the items is rated on a 4-point scale, ranging from 'very unlikely' to 'very likely'. For a positive item (1, 5, 6, 8, 9, 10, 11, 12, 13, 17, 19, 20, 23) participant's responses are scored as 0 = very unlikely, and 3 = very likely; for a negative item (2, 3, 4, 7, 14, 15, 16, 18, 21, 22, 24, 25) responses are scored in reversed fashion. The total 'care' score ranges between 0 and 36, and the total 'overprotection' score ranges between 0 and 39. A higher score on the 'care' subscale indicates higher parental care and a higher score on the 'overprotection' subscale indicates higher parental control. The combined 'care' and 'overprotection' assessments allow parents to be allocated into one of the four categories, such as affectionless control, affectionate constraint, optimal parenting, and neglectful parenting. Affectionless control equates to low care and high overprotection; affectionate constraint has high care and high overprotection; neglectful parenting equates to low care and low overprotection; whereas optimal parenting has high care and low overprotection. The cutoff scores of the mother version 'care' and 'overprotection' subscales are 27.0 and 13.5 respectively. The original PBI demonstrated high construct validity in correlation with other measures of parental behavior which ranged from .69 to .85, with a test-retest reliability of .63-.76. In parental bonding scale high score indicates positive parental bonding and low score indicates negative parental bonding.

Procedures

The process of translation, adaptation and cross-cultural validation of the ‘Parental Bonding Instrument (PBI)’ were conducted following and accepting the guidelines of standard procedure (Sousa & Rojjanasrirat, 2011) through the subsequent stages:

Stage 1: Forward translation. At first, two forward translations were made from the original language (English) to the target language (Bangla). Both translators were proficient in English and Bangla language, and were well-known to the steps of scale adaptation.

Stage 2: Comparison of the two translated versions (TL1 and TL2): synthesis I. Next, the instructions, the items and the response format of the two forward translated versions of the original version of the instrument were compared. Instead of a word-to-word translation, researchers checked the language constitution, translation quality, and conceptually suitable words. Then this synthesized version was given to the expert panel and essential modification was made according to their significant suggestions.

Stage 3: Back-translation. The initial synthesized translated version of the scale was given to two other persons, who were unfamiliar with the original scale, for back translation. It was a process of validity check to ensure that the translated version was reflecting the similar item content as the original one.

Stage 4: Comparison of the two back-translated versions (B-TL1 and B-TL2): synthesis II. Initially, the instructions, items and response format of the two back-translations were compared with those of the original instrument. All the ambiguities and discrepancies regarding cultural meaning and idioms in words and sentences of the instructions, the items, and the response format between the two back-translations and between each one of the two back-translations and the original instrument were discussed and resolved to derive a pre-final version of the instrument in the Bangla language.

Stage 5: Pilot testing of the pre-final version of the instrument in the target language. The pre-final Bangla version of the instrument was administered to 20 students from the target population, to check the appropriateness of items concerning their meaning and complexity. Each participant was asked to rate the instructions and items of the scale using a dichotomous scale (clear or unclear). Participants who rated the instructions, response format or any item of the instrument as unclear were asked to provide suggestions as to how to rewrite the statements to make the language clearer. Instructions, response format and items of the instrument that were found to be unclear were re-evaluated. It was done to further support the conceptual, semantic and content equivalency of the translated instrument and to improve the structure of sentences used in the instructions and items of the pre-final version. So that, it could be easily understood by the target population prior to psychometric testing.

Stage 6: Psychometric testing of the pre-final version of the translated instrument with a sample of the target population. After synthesizing all the documents, the final

Bangla version of the Parental Bonding Instrument was prepared and administered to 120 participants, who were spontaneous and showed positive attitudes towards the research. For taking consent at the beginning, participants were briefed about the general purpose of the study and were requested to cooperate. They were also assured that all information given by them would be kept confidential and would be used only for research purpose. Both written and verbal instructions were provided to them for clarification about what to do, and how to fill up the questionnaire. As the participants may become emotional while filling the questionnaire, they were verbally informed about the sources from which they could receive mental health services if needed. All the participants were given thanks for their cooperation. After fifteen days, retest was done with interested 30 participants who had filled up the Bangla version of the “Parental Bonding Instrument” earlier.

Results

Item Analysis

To determine if an item is useful and/or how it performs in relation to the other items on the instrument, corrected item-total correlation was computed. The item-total statistics of all items of Parental Bonding Instrument is presented in Table 1.

Table 1

Item-Total Statistics and the Reliability of the Parental Bonding Instrument (120 Cases)

Items	Mother		Father	
	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
Item 1	.516	.919	.670	.940
Item 2	.759	.915	.493	.942
Item 3	.661	.917	.578	.941
Item 4	.704	.916	.561	.942
Item 5	.381	.922	.729	.940
Item 6	.784	.914	.698	.940
Item 7	.731	.915	.675	.940
Item 8	.739	.915	.705	.940
Item 9	.310	.922	.618	.941
Item 10	.316	.923	.644	.941
Item 11	.260	.923	.698	.940
Item 12	.277	.923	.777	.939
Item 13	.368	.921	.652	.940

(Continued)

Item 14	.610	.918	.679	.940
Item 15	.532	.919	.586	.941
Item 16	.352	.922	.692	.940
Item 17	.675	.916	.669	.940
Item 18	.724	.915	.705	.940
Item 19	.494	.920	.343	.944
Item 20	.382	.922	.483	.943
Item 21	.537	.919	.554	.942
Item 22	.689	.917	.442	.943
Item 23	.498	.920	.484	.943
Item 24	.652	.917	.668	.940
Item 25	.623	.918	.671	.940

Note: All the items were retained for the adapted version of Parental Bonding Instrument as they have corrected item-total correlation above .2 (Everitt, 2002; Field, 2005).

Reliability

Reliability of the parental bonding instrument were assessed by using Cronbach Alpha for the two sub-scales separately for both mother and father form. Reliability statistics of the parental bonding instrument is presented in Table 2.

Table 2

Cronbach's Alpha within the Parental Bonding Instrument and Two Sub-Scales of it for Both Mother and Father Form (120 Cases)

Form	Total Scale	Care Subscale	Overprotection Subscale
Mother	.922	.880	.864
Father	.943	.919	.872

These findings are quite comparable with the original version of the instrument.

In order to assess the temporal stability of the PBI, a sample of 30 university students completed the PBI for the second time with an interval of fifteen days. Results from the test-retest correlations appear in Table 3.

Table 3

Test-Retest Reliability Coefficients within the Parental Bonding Instrument for Mother and Father Form with an interval of 15 Days (n = 30)

Parental Bonding Instrument	Test-Retest Correlations
Mother Form	.934**
Father Form	.969**

Note: ** $p < .01$.

Table 3 indicates that both form of parental bonding instrument were highly reliable which support the temporal stability of the Bangla version of the instrument.

Validity

The validity of the Bangla version of the PBI was measured by using content and convergent validity. Content validation of the adapted version of the scale was determined by the experts' essential opinions that the translated items, instructions, response formats and scoring were relevant to the insight of the original scale

Convergent validity is one method to determine the construct validity of the scale (Colman, 2008). It was assumed that if the score of two subscales of both mother and father form significantly correlate with each other, then it could be said that the inventory will have convergent validity. To assess the convergent validity of PBI, correlations between the individual sub-scales of both forms were measured by Pearson product moment correlation. The correlations among the subscales are presented in Table 4.

Table 4

Correlations within the Parental Bonding Instrument for Mother and Father Form (n = 120)

	Mother Form		Father Form	
	1	2	1	2
1. Care Sub-scale	-		-	
2. Over protection Sub-scale	.717**	-	.865**	-

*Note: ** $p < .01$*

Results indicate that the correlations between the two sub-scales (care and overprotection) of both mother ($r = .717, p < .01$) and father ($r = .865, p < .01$) form were significant which specify that the adapted version of the PBI had a high level of convergent validity.

Discussion

The present study was intended to adapt the widely used Parental Bonding Instrument (PBI) to administrate in Bangla language in the context of Bangladesh and to determine the psychometric properties of the Bangla version of the PBI. It is complex and time consuming to develop a new instrument (Hossain, Islam, & Zohra, 2017), that is why the present authors selected the original Parental Bonding Instrument to adapt and validate in Bangla, which is already reliable and valid. The process of translation, adaptation and cross-cultural validation of the "Parental Bonding Instrument (PBI)" were conducted following and accepting the guidelines of standard procedure through the subsequent steps (Sousa & Rojjanasrirat, 2011).

The findings of the present study ensure the usability of Parental Bonding Instrument in Bangladesh. The reliability coefficient (internal consistency and test-retest reliability) for each of the sub-scales of both mother and father forms of PBI is highly satisfactory. The internal consistency was computed by Cronbach's alpha, and its value for PBI was .92 for mother form (.88 and .86 for care and overprotection subscale respectively) and .94 for father form (.92 and .87 for care and overprotection subscale respectively), which is satisfactorily significant. The criteria for evaluating alpha coefficients were derived from George and Mallery (2003) who provided the following rules of thumb: " $\alpha \geq .9$ (Excellent), $.9 > \alpha \geq .8$ (Good), $.8 > \alpha \geq .7$ (Acceptable), $.7 > \alpha \geq .6$ (Questionable), $.6 > \alpha \geq .5$ (Poor), and $.5 > \alpha$ (Unacceptable)". It is notable that the coefficients of alpha of the adapted Bangla version of PBI were ranged from .86 to .94. Test-retest reliability coefficients within the PBI for mother and father form were .934 and .969 respectively with an interval of 15 days, which indicates that both forms of parental bonding instrument were highly reliable.

Validation of the instrument was assured by content validity and convergent validity. Satisfactory level of validity was found for the Bangla version of PBI. Significant correlations between the two sub-scales of both mother ($r = .717, p < .01$) and father ($r = .865, p < .01$) form provided the evidence for convergent validity. Thus, the findings can be taken to suggest that the Bangla version of Parental Bonding Instrument is suitable for assessing the parent-child bonds from the perspective of the child and youth in Bangladesh. The studies on parental bonding are necessary for understanding the underlying patterns of parent-child relationships. More research is still required in this field to discover the relationship with lot more other factors. Some limitations like economical, time, and manpower hindered the study in different ways. Future researchers may include the relationship studies of parental bonding with different variables or situations. Moreover, this research will help future researchers to be inspired researching on this field. The adapted Bangla version of the PBI can help to identify parental bonding more accurately and give suggestions and recommendations.

Conclusion

The Bangla version of PBI can be widely used to point out individuals' insight of their parental attachment. Based on the scores, counselors or concerned authority may design interventions that fit the specific needs of individuals. Although the reliability coefficient of the instrument is satisfactory, but further studies on large sample from different types and levels of participants is required. Moreover, data were collected only from the Dhaka city. A larger and more exhaustive sample of all over Bangladesh would be taken for more amendment results. It means that the validation studies over the general population should be conducted by taking a countrywide sampling. Supplementary research is compulsory to refine the PBI.

Additionally, qualitative investigation should be undertaken in the future to provide sufficient evidence of aptness in the Bangladeshi culture and population. Despite of all these boundaries, it is the fact that the present findings can serve as a base or open the door of further research on parental bonding and parent-child relationship in Bangladesh. It is expected that the Bangla version of the PBI will facilitate the assessment of parent-child bonds from the perspective of the child by the youth and adults of Bangladesh.

References

- Bowlby, J. (1977). The making and breaking of affectional bonds. *British Journal of Psychiatry*, 130, 201-210.
- Brennan, K. A., & Shaver, P. R. (1991). Dimensions of adult attachment and dynamics of romantic relationships. *Personality and Social Psychological Bulletin*, 99, 66-77.
- Cassidy, J., & Shaver, P. R. (2008). *Handbook of attachment: Theory, research and clinical applications*. New York, NY: The Guilford Press.
- Colman, A. M. (2008). *A dictionary of psychology* (3rded.). Oxford University Press.
- Everitt, B. S. (2002). *The Cambridge Dictionary of Statistics* (2nded.). CUP ISBN 0-521-81099-X
- Field, A. (2005). *Discovering Statistics Using SPSS*. London: Sage.
- George, D., & Mallery, P. (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference. 11.0 update* (4th ed.). Boston: Allyn & Bacon.
- Half, W. L., & Slade, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511-524.
- Helgeland, M. I. W., & Torgersen, S. (1997). Maternal representations of patients with schizophrenia as measured by the parental bonding instrument. *Scandinavian Journal of Psychology*, 38(1), 39-43.
- Hossain, K. N., Islam, M. N., & Zohra, F. T. (2017). Adaptation of academic motivation questionnaire for use in Bangladesh. *Jagannath University Journal of Psychology*, 7(1), 61-78.
- Kitamura, T., & Suzuki, T. (1993). A validation study of the parental bonding instrument in Japanese population. *The Japanese Journal of Psychiatry and Neurology*, 47(1), 29-36.
- Lizardi, H., & Klein, D. N. (2005). Long-term stability of parental representations in depressed outpatients utilizing the Parental Bonding Instrument. *The Journal of Nervous and Mental Disease*, 193(3), 183-188.
- Parker, G., Tupling, H., & Brown, L. B. (1979). A parental bonding instrument. *British Journal of Medical Psychology*, 52, 1-10.
- Qadir, F., Stewart, R., Khan, M., & Prince, M. (2005). The validity of the parental bonding instrument as a measure of maternal bonding among young

- Pakistani women. *Social Psychiatry and Psychiatric Epidemiology*, 40(4), 276-82.
- Sousa, V. D., & Rojjanasrirat, W. (2011). Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline. *Journal of Evaluation in Clinical Practice*, 17, 268–274.
- Steinberg, L. (2001). We know some things. Parent-adolescent relationship in retrospect and prospect. *Journal of Research on Adolescence*, 11(1), 1-19.
- Tetley, A., Moghaddam, N. G., Dawson, D. L., & Rennoldson, M. (2014). Parental bonding and eating disorders: A systematic review. *Eating Behaviors*, 15(1), 49-59.
- Winston, R., & Chicot, R. (2016). The importance of early bonding on the long-term mental health and resilience of children. *London Journal of Primary Care*, 8(1), 12–14.

Parental Bonding Scale (Mother Form)

নিচের প্রশ্নমালাটি পিতা-মাতার মনোভাব এবং আচরণ সম্পর্কিত। জীবনের প্রথম ষোল বছর বয়স পর্যন্ত আপনি আপনার মাকে স্মরণ করে নিম্নের প্রতিটি প্রশ্নের ক্ষেত্রে সম্ভাব্য উত্তর গুলো থেকে আপনার জন্য প্রযোজ্য উত্তরটিকে টিক (✓) চিহ্ন দিন।

ক্রমিক নং	আমার মা	প্রায় সর্বদাই	কখনো কখনো	খুব কম সময়	প্রায় কখনই নয়
০১	আমার সাথে উষ্ণ ও বন্ধুত্বপূর্ণ স্বরে কথা বলতেন।				
০২	আমার প্রয়োজন অনুযায়ী আমাকে সাহায্য করতেন না।				
০৩	আমি যা পছন্দ করতাম আমাকে তা করতে দিতেন।				
০৪	আমার প্রতি অবেগীয়ভাবে শীতল ছিলেন।				
০৫	আমার সমস্যা এবং উদ্বেগগুলো বুঝতে পারতেন।				
০৬	আমার প্রতি স্নেহশীল ছিলেন।				
০৭	আমার নিজের সিদ্ধান্ত গ্রহণ করাকে পছন্দ করতেন।				
০৮	আমাকে বড় হতে দিতে চাইতেন না।				
০৯	আমি যা করতাম সবকিছু নিয়ন্ত্রণ করতে চেষ্টা করতেন।				
১০	আমার গোপনীয়তা লঙ্ঘন করতেন।				
১১	আমার সাথে কথা বলা উপভোগ করতেন।				
১২	প্রায়ই আমার দিকে তাকিয়ে হাসতেন।				
১৩	শিশুর মতো আমাকে আগলে রাখতেন।				
১৪	আমার প্রয়োজন বা চাওয়া গুলো বুঝতে পারতেন না।				
১৫	আমাকে আমার নিজের সিদ্ধান্ত নিতে দিতেন।				
১৬	আমি আকাঙ্ক্ষিত ছিলাম না এমনটা আমাকে অনুভব করাতেন।				
১৭	যখন আমি বিপর্যস্ত থাকতাম তখন আমাকে ভালো অনুভব করতে পারতেন।				
১৮	আমার সাথে খুব বেশি কথা বলতেন না।				
১৯	আমাকে তার প্রতি নির্ভরশীল করতে চেষ্টা করতেন।				
২০	তিনি আমার কাছে না থাকলে আমি নিজের দেখাশুনা করতে পারবো না এমনটা অনুভব করাতেন।				
২১	আমার যতটুকু স্বাধীনতা প্রয়োজন আমাকে তা দিতেন।				
২২	যখন আমি বাইরে যেতে চাইতাম আমাকে প্রায়ই যেতে দিতেন।				
২৩	আমার প্রতি অতিরিক্ত যত্নশীল ছিলেন।				
২৪	আমার প্রশংসা করতেন না।				
২৫	সবসময়ই/ সর্বদাই আমার পছন্দ অনুযায়ী আমাকে পোশাক পরতে দিতেন।				

Parental Bonding Scale (Father Form)

নিচের প্রশ্নমালাটি পিতা-মাতার বিভিন্ন মনোভাব এবং আচরণ সম্পর্কিত। জীবনের প্রথম ষোল বছর বয়স পর্যন্ত আপনি আপনার বাবাকে স্মরণ করে নিম্নের প্রতিটি প্রশ্নের ক্ষেত্রে সম্ভাব্য উত্তর গুলো থেকে আপনার জন্য প্রযোজ্য উত্তরটিকে টিক (✓) চিহ্ন দিন।

ক্রমিক নং	আমার বাবা	প্রায় সর্বদাই	কখনো কখনো	খুব কম সময়	প্রায় কখনই নয়
০১	আমার সাথে উষ্ণ ও বন্ধুত্বপূর্ণ স্বরে কথা বলতেন।				
০২	আমার প্রয়োজন অনুযায়ী আমাকে সাহায্য করতেন না।				
০৩	আমি যা পছন্দ করতাম আমাকে তা করতে দিতেন।				
০৪	আমার প্রতি অবৈগীয়ভাবে শীতল ছিলেন।				
০৫	আমার সমস্যা এবং উদ্বেগগুলো বুঝতে পারতেন।				
০৬	আমার প্রতি স্নেহশীল ছিলেন।				
০৭	আমার নিজের সিদ্ধান্ত গ্রহণ করাকে পছন্দ করতেন।				
০৮	আমাকে বড় হতে দিতে চাইতেন না।				
০৯	আমি যা করতাম সবকিছু নিয়ন্ত্রণ করতে চেষ্টা করতেন।				
১০	আমার গোপনীয়তা লঙ্ঘন করতেন।				
১১	আমার সাথে কথা বলা উপভোগ করতেন।				
১২	প্রায়ই আমার দিকে তাকিয়ে হাসতেন।				
১৩	শিশুর মতো আমাকে আগলে রাখতেন।				
১৪	আমার প্রয়োজন বা চাওয়া গুলো বুঝতে পারতেন না।				
১৫	আমাকে আমার নিজের সিদ্ধান্ত নিতে দিতেন।				
১৬	আমি আকাঙ্ক্ষিত ছিলাম না এমনটা আমাকে অনুভব করতেন।				
১৭	যখন আমি বিপর্যস্থ থাকতাম তখন আমাকে ভালো অনুভব করতে পারতেন।				
১৮	আমার সাথে খুব বেশি কথা বলতেন না।				
১৯	আমাকে তার প্রতি নির্ভরশীল করতে চেষ্টা করতেন।				
২০	তিনি আমার কাছে না থাকলে আমি নিজের দেখাশুনা করতে পারবো না এমনটা অনুভব করতেন।				
২১	আমার যতটুকু স্বাধীনতা প্রয়োজন আমাকে তা দিতেন।				
২২	যখন আমি বাইরে যেতে চাইতাম আমাকে প্রায়ই যেতে দিতেন।				
২৩	আমার প্রতি অতিরিক্ত যত্নশীল ছিলেন।				
২৪	আমার প্রশংসা করতেন না।				
২৫	সবসময়ই/ সর্বদাই আমার পছন্দ অনুযায়ী আমাকে পোশাক পরতে দিতেন।				

Impact of Teaching Method on Academic Achievement

Munira A. Urmee¹ and Md. Feroz Ahmed²

Abstract

The present experimental study hypothesized that academic achievement of secondary school students varies under lecture and discussion method. A total of 50 female students of class seven were purposively selected and then they were randomly assigned within two groups. Their age range was between 13 and 14 years. Students' number of siblings, family members, parental occupation, monthly family income and socio-economic status were approximately same but educational qualification of their parents was different. Personal and Socio-Cultural Information Form (PSCIF) and Self-developed Instruments for Secondary School Students' Academic Achievement (SDISA) were used to assess. The obtained score was analyzed by applying *t*-test. The result revealed that students under discussion method had better academic achievement than students under lecture method ($t = 23.28$ at .01 level).

Keywords: teaching, academic achievement, lecture, discussion method

Introduction

Academic achievement is the extent to which a student, teacher or institution has achieved their short or long-term educational goals. Academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important. Procedural knowledge such as skills or declarative knowledge such as facts. In this study academic achievement is measured on the basis of students' competences on a specific topic from their text book of a specific class.

The lecture is one of the oldest and may be still, the most widely used teaching method in educational institutions. The word lecture comes from the Latin word "lectus" from the 14th century, which translates roughly into "to read." The term lecture then in Latin means "that which is read." It wasn't until the 16th century that the word was used to describe oral instruction given by a teacher in front of an audience of learners. Today, lecturing is a teaching method that involves, primarily, an oral presentation given by an instructor to a body of students. Lecture is a teaching method where an instructor is the central focus of information transfer. Typically, an instructor will stand before a class and present information for the students to learn.

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Sometimes, they will write on a board or use an overhead projector to provide visuals for students. Students are expected to take notes while listening to the lecture.

Group discussion may refer to a communicative situation that allows its participants to express views and opinions and share with other participants. It is a systematic oral exchange of information, views and opinions about a topic, issue, problem or situation among members of a group who share certain common objectives. The discussion method is appropriate for teaching when a teacher is concerned about interaction, involvement and good feedback.

Randall (1978) indicated the lecture method was an inefficient way of instruction because it does not involve the students. Also, he stated that lecture can be used to introduce a new subject and for making a summary at the end of a session. This method, as the author highlighted, permits the teacher to cover a great deal of material in the least amount of time, and enables the teacher to go directly to his/her objectives. When there is a large number of students, lecture method is a good method for a teacher to use. On the other hand, the author concluded that in the discussion method a teacher leads his/her class and steers the group in order to accomplish the objectives. Discussion method involves thinking, and any student can participate. As the author stated, the discussion method leads to better learning and retention. However, this method is more time consuming than the lecture, and it is more adaptable to a small group of 25 students or less. According to Mayer (1968) lecture method discourages creativity and encourages passivity.

Jones, Bagford, and Wallen (1979) stated that the discussion method had some advantages such as: students learned better through discussion, the discussion helped students raise questions and answer them, the students were free to give comments or not, and discussion had a positive effect upon the mental activity of the students. Blizek, Jakson and Lavoie (1974) found that the discussion method allows students to be active and creative. Moreover, there were some disadvantages such as: discussion methods need a lengthy time, some students may never participate, and there were problems in evaluating the students. Also, they said the lecture method had some advantages such as: the lecture method was very helpful in introducing a new topic, it allowed many students to receive information quickly, and it helped the students to develop note-taking. There were also some disadvantages like: the teacher was not able to know if the students understood the lecture or not, the students were not permitted to ask 10 questions or share opinions.

Tomm and Leahey (1980) pointed out that the lecture method tends to be more effective in teaching factual knowledge, and the discussion method tends to be more effective in teaching intellectual abilities and skills. Peterson (1979) investigated that students in lecture were significantly lower in their average score on achievement. Atherton (1972) had a study comparing the effect of teaching methods on recall of

facts, understanding of content, and application of principles. He concluded that the students' mean scores for recalling and understanding were higher in the discussion method than the lecture method, but for application the scores were higher in the lecture method than the discussion method. McKeachie and Kulik (1975) found that the lecture method was superior in performance on examination than the discussion method. But, for retention and a higher level of thinking, the discussion method was superior. The lecture method is the appropriate one when there are large numbers of students and/or subject objectives are based on new knowledge. However, when the objectives are based on new and old attitude or old knowledge, the discussion method is the most appropriate for teaching (Whitman, 1981). On the other hand, some researches done by Blezer and Conti (1973), Corey (1967), Nolan (1974), Kanzenas and Frezier (1982), and McRae and Young (1988) indicated that there were no significant difference between lecture and discussion methods in terms of students' academic performance.

Objective

To find out whether there is a significant difference in academic achievement of secondary school students under lecture and discussion method.

Hypothesis

There is a significant difference in academic achievement of secondary school students under lecture and discussion method.

Rationale

Lecture method is a traditional method to teach the students which does not allow students to express or share their own thinking with others. In other words, through discussion students get huge opportunity to disclose their own views and ideas and they can share their brainstorm with their peers. Through such expression and sharing various types of ideas and thinking are exchanged within the students. Whether such opportunity is enhance for the academic growth of secondary school students will be identified by this present experiment. This experimental study will be able to identify which teaching method is helpful for the secondary students of Bangladesh to understand their subject-content in classroom more easily. Through which teaching method the secondary school students will be able to achieve higher marks and they will be able to participate more actively in their classroom-this experimental study is able to identify it. Teaching can be provided through discussion within students themselves-this work displays such activities in classroom. This means, teaching can be done without lecturing, there is another way to do teaching—such thinking will be established among our teachers by this study. This will motivate teachers to conduct class in secondary school through committing discussion within students in classroom. So teachers in secondary level will know

about a new method of teaching. Through this way stereotyped ideas about teaching will be diminished in future. These are the reasons of why this study is necessary in secondary school setting as well as in our culture.

Methods

Participants

A total of 50 female secondary school students were purposively selected from a secondary school of Dhaka city. And then equal numbers of student were randomly assigned within two groups under lecture and discussion method. The students' age ranges were between 13 and 14 years and they all were from class VI. Under lecture method, 2 students got A+ in their previous final exam. There were 12 and 5 students under this method got A and A- respectively. The rest of 6 students got B grade under this same method. On the other hand, no students under discussion method got A+ but 14 and 7 students got A and A- respectively and the rest of 4 students got B grade under this method. So it can be said that students under both lecture and discussion methods are approximately similar in terms of their previous exam grade. Their parental academic qualification was from below SSC to Master degree but none of their mothers had Master degree. However, mothers of students under discussion method were academically higher in comparison with mothers of students under lecture method. Fathers of students under both methods were involved in government and non-government job. On the other hand, all mothers were housewives but among of them only one mother of a student who was under lecture method had government job. All students had approximately equal number of siblings ranged from one to four including her. There was approximately no difference in family size of all students under both methods as they were from small (parents and their children) and large (parents, children and grandparents) families. The monthly income of families of all students was approximately equal as more or less ranged from ten to fifty thousand. Most of the students were followers of Hindu religion and came from middle class families.

Design: The design of the present study is presented in Table 1.

Table 1

Design of the Experimental Study

Teaching Methods	Time	Rest	Test
Lecture Method	30 minutes	24 hours (1 day)	30 minutes
Discussion method	30 minutes	24 hours (1 day)	30 minutes

From the above table, it is seen that two randomized groups design is used in this experimental study.

Measures

For data collections following instruments were used in the present experiment.

Personal and Socio-cultural Information form (PSCIF)

The Personal and Socio-cultural Information Form (PSCIF) contains these information-age, sex, class, final exam grade, number of siblings, number of family members, fathers academic qualification, mothers academic qualification, fathers profession, mothers profession, monthly family income, family socioeconomic status.

Self-developed Instrument for Secondary School Learners' Academic Achievement (SDISA)

This instrument was used for measuring whether there is any significant different in academic performance in terms of different teaching method. This instrument mainly contains 4 types of questions. Those questions include with 5 short questions, 5 MCQ, 5 fill in the gaps, and 5 matching as sub question. Questions were organized by easy to difficult level. Here 0 is lowest mark and 1 is the highest mark. Total mark range from 0-20. Higher scores indicate better academic achievement and lower scores indicate low academic achievement.

Procedures

A topic has been selected at first from the text book for lecture and group discussion method. On this topic teacher has given his lecture for 30 minutes in section A, class VIII. At the same time group discussion has been conducted on that same topic on a different group of students for 30 minutes. Then 24 hours have given to both groups of learners for taking preparation for the test. Next day students under both methods have been seated for a 30 minutes test on that selected, specific topic. Through this way the learners' academic achievement is evaluated.

Data analysis

For analyzing the data, at first data were assembled and coded, and then the data were input into SPSS 16.0 for windows data sheet with the help of the computer. After preparing data analysis format, data were analyzed through the help of SPSS program. The data were finally analyzed by *t*-test. Moreover, mean and standard deviation are also calculated. That is both descriptive and inferential statistics are used in the present experimental study.

Results

A study was conducted on 50 female secondary school students. They were divided equally into lecture and discussion method groups. To investigate whether the hypothesis is confirmed or not, *t*-test is being used. The *t* table is given as follows:

Table 2

Sample t-test of Secondary School Students Academic Achievement under Lecture and Discussion Method

Teaching Methods	N (Total number of students)	M	SD	df	t	p
Lecture Method	25	10.80	3.11	24	23.28	.001
Discussion Method	25	13.12	2.82	24		

From the above table, it is clear that academic achievement of secondary school students was better under discussion method than lecture method ($t = 23.28$ at .01 level, $M = 10.80$ & $SD = 3.11$ in lecture method group and $M = 13.12$ & $SD = 2.82$ in discussion method group).

Discussion

This experimental study consists of 50 female students. They all are chosen purposively from a secondary school. These 50 students are randomly divided in lecture and discussion method groups. They all are studying in class VIII and their age range is between 13 and 14 years. Their previous final exam grade is very similar with one another. Students under both methods have approximately equal number of siblings, family members and type of parental occupation. Maximum of them under both groups have come from middle class family and their family's monthly income is also approximately equal. Moreover, they are belonging tentatively in same culture as most of them are followers of same religion Hinduism. By considering the above issues, it can be confidently said that students of this experiments are approximately matched in terms of their personal and socio-cultural factors. Though they are very much similar with one another, their academic achievement is varied in the present study shows students under group discussion method have higher score than students under lecture method. The result of present study is similar with the studies conducted by McKeachie and Kulik (1975), Peterson (1979), Whitman, (1981), Atherton (1972), Jones, Bagford, and Wallen (1979), Blizek, Jakson and Lavoie, (1974), Tomm and Leahey (1980) on lecture and discussion method.

From this circumstance it can be said in this stage due to different teaching method, secondary school students' academic achievement is varied. As students are treated differently in classroom, their achievement becomes different.

Moreover, there may be another probable reason for such result. Students under group discussion method, parental academic qualification is better than the students

under lecture method. May be this highly educated parent's guide their children properly in their academic field? May be students under group discussion method got proper academic instructions from their father and mother which helped them to achieve higher score in the test.

Finally, group discussion method is an exploratory method where students have opportunity to explore themselves to discuss about a topic and also they can create new and broad knowledge. On the other hand, lecture method itself is a way of teachers' domination. Students are dominated and biased by a teachers' lecture as well as a teachers' point of view which is the barrier of student's self-exploration and creation. It may be a reason for their poor academic achievement at the present experimental test.

The major limitation of the present study is small sample size. Data are collected only from a secondary school of Dhaka city. Pretest has not been taken for both groups of learners. So comparison between pre and post-test is absent here.

Conclusion

As an exploratory teaching method, discussion method should be practiced in educational institutions. In lecture method students should be given to explore themselves also. Teacher should not be very restrictive in their lecture. In view of students' preference for the lecture it is necessary for lecturers to lookout for ways and means of making the lecture more interesting and for the involvement of the students. It should be necessary for lecturers to prepare adequately and give students advance reading assignment. Lectures should also not be for a long time in order for students not to lost focus of the lesson. Further study may be conducted to examine gender differences and locality differences in the use of different teaching methods. In view of the effectiveness of discussion method in the teaching it may be tried out in other subjects and levels.

References

- Atherton, C. R. (1972). Lecture, Discussion and Independent Study Instructional Methods Revisited. *The Journal of Experimental Education*, 40 (4), 24-28.
- Blezer, T. J., & Conti, M. R. (1973). *A Comparison of Grades Achieved, Attrition Rates and Teacher Evaluation in a Traditional Biology Course Versus a Non-traditional. Audio-tutorial Biology Course*. Practicum presented to Nova University in partial fulfillment of requirement for Doctor of Education. (ERIC Document No. ED094810).
- Blizek, W. L., Jackson, K., & Lavoie, J. (1974). Short Course Vs Conventional Structure for Teaching Philosophy. *Journal of Experimental Education*, 43(1), 25-33.
- Corey, G. F. (1967). *An Investigation of the Outcomes of Introductory Psychology*. (ERIC Document No. EDOI4966).

- Jones, A.S., Bog Ford, L.W., & Wallen, E.A. (1979). *Strategies for Teaching*.
- Kanzanas, H. C., & Frezier, E. L. (1982). A Comparison of Instructional Approaches. *Journal of Studies in Teaching Careers*, 4(4), 312-319.
- Mayer, C. R. (1968). Discussion and Lecture: Authority and Autonomy. *Journal of General Education*, 20 (2), 109-118.
- Mc Keachle, W. J., & Kulik, J. A. (1975). *Effective College Teaching*. Review of Research in Education.
- Mcrae, L. S., & Young, J. D. (1988). Student Satisfaction in Introductory Business Courses Taught by Lecture and Discussion Methods. *Journal of Education for Business*, 6, 252- 255.
- Nolane, D. J. (1974). *Are Lectures Necessary? Improving College and University Teaching*, 22 (4), 253-256.
- Peterson, P. L. (1979). *Treatment Interaction Effects of Three Teaching Approaches: Lecture-Recitation, Inquiry, and Public Issues Discussion*. (ERIC Document No. ED186427).
- Randall, J. S. (1978). You and Effective Training Part 5: "Methods of Teaching." *Training and Development Journal*, 32 (10), 8-11.
- Tomm, K., & Leahey, M. (1980). A Comparison of Three Teaching Methods. *Journal of Marital and Family-Therapy*, (4), 453-458.
- Whitman, N. (1981). Choosing and Using Method of Teaching. *Performance and Instruction*, 20 (5), 16-19.

Personality Traits as Related to Organizational Commitment and Job Involvement

Hamida Akter¹, Samsad A. Himi², and Shibraj R. Kakan³

Abstract

The present study was designed to investigate the relationship between personality traits and organizational variables—organizational commitment and job involvement. For that purpose, 77 participants were selected purposively. Three questionnaires were used to collect information from the respondents. These are: (1) the Bangla version of big five personality test, (2) the Bangla version of the organizational commitment questionnaire, and (3) the Bangla version of job involvement questionnaire. Correlation and multiple regression analyses were performed for displaying the results. The findings showed that there were positive and negative correlations between conscientiousness, openness to experience, extroversion, agreeableness, neuroticism, organizational commitment and job involvement. Conscientiousness had the highest positive correlation with both organizational commitment and job involvement, whereas neuroticism was negatively correlated with these organizational variables. The regression analysis indicated that conscientiousness, extroversion, and neuroticism were the predictor of organizational commitment; and conscientiousness was proved only one significant predictor of job involvement. Consequently, conscientiousness was the strongest predictor of both organizational commitment and job involvement. However, openness to experience and agreeableness showed no predictive power in explaining any of the variables. The implications of findings have been interpreted in the light of previous studies.

Keywords: big five personality traits, organizational commitment, job involvement

Introduction

Today organizations are facing multiple challenges in the rapidly changing business environments not only for increasing productivity but also for maintaining and managing different dispositional characteristics of human resources, such as recruitment, training and development, and retaining the skilled employees. In this regard, understanding the personality factors of the employees has gained rapid prominence on the strategic roadmap of the organization. Personality refers to cognitive and behavioral patterns that show stability over time and across situations

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(e.g., Cattell, 1965), thus leading to success and prosperity in life. Olver and Mooradian (2003) suggested that personality traits influence personal values and attitudes. Therefore, it is logical to investigate the relationship between the big five traits and vital organizational behavior variables—organizational commitment and job involvement.

Organizational commitment represents the degree to which the employees identify with the organization where they work (Greenberg & Baron, 2008). It is considered as one of the essential variable for positive and negative outcomes in the organizational studies (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Organizational commitment can be thought of as an extension of job satisfaction, as it deals with the positive attitude that an employee has not toward her own job, but also toward the organization (Porter, Steers, Mowday, & Boulian, 974).

It can be measured through a threefold way, developed by Meyer and Allen in 1990: affective commitment, continuance commitment, and normative commitment. *Affective commitment* refers to how much an employee is emotionally or psychologically attached to a business or organization in a positive manner, and is influenced by personality, organizational goals, as well as the overall work environment associated with the job position. *Continuance commitment* refers to how much an individual "needs" to work at a company or organization. An employee who feels a high level of continuance commitment represents the need to continue their employment due to a necessity or necessities. *Normative commitment* refers to how much an individual feels obligated to work in an organization. An employee who feels a higher level of normative commitment feels that he or she is obligated to continue working for an organization.

Another organizational behavior variable-job involvement reflects attitudes and values towards a particular aspect of life, and hence relating to personality traits (Lawler & Hall, 1970; Elloy & Terpening, 1992). However, one of the most important predictors of organizational commitment and job involvement is the personality characteristics of employees. The "big five" model of personality comprehensively describes human personality, whose validity is strongly supported by several empirical evidences (e.g., Digman, 1990; Goldberg, 1993; McCrae & Costa, 1996; O'Connor, 2002). The big five model consists of following traits: neuroticism, extroversion, openness, agreeableness, and conscientiousness (e.g., Digman, 1990). Because of its validity and wide acceptance, the big five has been widely utilized in recent organizational and other applied research (e.g., Barrick & Mount, 1991; Hertz & Donovan, 2000; Judge, Higgins, Thoresen, & Barrick, 1999; Judge & Ilies, 2002; Salgado, 1997). *Neuroticism* encompasses characteristics that include excessive worry, pessimism, low confidence, and tendencies to experience negative emotions. Past works identified neuroticism personality trait as a negative and significant predictor of organizational commitment

(e.g., Pasha & Khodadadi, 2008; Parvin, 2008). *Extroversion* is characterized by sociability, assertiveness, social dominance, ambition, tendencies towards action, sensation-seeking, and the experience of positive affect. Extroversion is proved to be positively related to a preference for innly motivtrinsicaating job features (Furnham, Forde, & Ferrari, 1999) and to work performance motivation (Judge & Ilies, 2002). *Openness* includes multiplicity of interests, receptivity of new ideas, flexibility of thought, inventiveness, and the tendency to develop idealistic ideas and goals. Openness partly overlaps with work involvement (Lounsbury, Sundstrom, Loveland, & Gibson, 2003). *Agreeableness* is associated with altruism, friendliness and modesty, while low agreeableness includes antagonism, impression management and selfishness. Conscientiousness is associated with industriousness, perseverance, and sense of duty. Previous works suggested that individuals high in extroversion and conscientious show more willingness to be committed to their organization than those, who are not (Morrison, 1997; Syed, Saeed, & Farrukh, 2015; Labatedmediene, Endriulaitiene, & Gustainiene, 2007).

Employees who exhibit the traits of openness, neuroticism, extraversion and conscientiousness find a greater sense of commitment (Kumar & Bakhshi, 2010) and job satisfaction (Ganu & Kogutu, 2014). Regarding the three dimensions of commitment, Erdheim, Wang and Zicker (2006) found that neuroticism has a positive relationship with continuance commitment. Extraversion has positive relationship with affective commitment and normative commitment, but negative relationship with continuance commitment. Openness to experience is found to have a negative relationship with continuance commitment. However, agreeableness has a positive relationship with normative commitment while conscientiousness had a positive relationship with affective and continuance commitment. Additionally, Kumar and Bakhshi (2010) showed that openness to experience negatively predicts continuance and normative commitment, while conscientiousness positively predicts affective and normative commitment. Agreeableness positively predicts normative commitment, and neuroticism has significant positive relationship with continuance commitment. They identified extraversion as the most reliable predictor of the three dimensions of commitment. Using 922 Turkish professionals, Çelik and Oral (2016) examined the relationship between personality traits, demographic characteristics, and organizational commitment, and found that agreeableness and consciousness personality traits are correlated with organizational commitment. They further identified a positive relationship between personality traits and affective and normative commitment, but negative relationship with continuance commitment.

Although a large number of studies have been conducted to examine the effect of personality traits on organizational commitment and job involvement, the findings of these are mixed. Moreover, so far all studies are conducted in different cultures on

different levels of work context, which is different from Bangladeshi culture. Considering the above issues, it is a scientific curiosity to investigate the relationship among personality traits, organizational commitment, and job involvement. Therefore, the objectives of the present study were: (1) to investigate whether there was any relationship between organizational commitment and big five personality traits; (2) to investigate whether there was any relationship between job involvement and big five personality traits. The finding of the present study might be helpful to the employees and the managers in order to understand the nature of relationship among employee's personality trait, organizational commitment, and job involvement. Additionally, it may add new knowledge to existing literature relevant to employee's job performance.

Methods

Participants

A total of 77 adult participants (45% female) were selected purposively from different organizations at the Dhaka city. All participants were educated and belonged to the same socio-economic status.

Measures

The following instruments were used for data collection in the study:

Demographic and Personal Information Form (PIF)

It gathered information related to the personal life of the participants, for example, sex, age, job types, work types, academic qualification, salary and sibling numbers.

The Bangla version of big five personality traits

In the present study, the Bangla version of big five personality test (Muhammad, Rahman, & Houque, 2011) was used to measure the respondents "big five" personality factors. This test was originally developed by McCrae and Costa (1999). It contains 45 items. It has five dimensions such as openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. There are nine items in each dimension and five alternative options to give answer in each statement. Among nine items four are negative and remain five are positive. The lowest possible score in each dimension is 9, highest possible score 44 and neutral point is 27. In the case of four dimensions (O, E, A, C) high score indicates positive symptoms of the personality characteristics and in the case of neuroticism, people who score high in neuroticism tend to be anxious, hostile and self-conscious. The English and Bangla versions were administered on 50 participants with a gap of seven days. Significant correlations between scores of English and Bangla versions indicated translation reliabilities of the scale. The

correlation coefficients [r (open) = .93, $p < .01$; r (cons) = .83, $p < .01$; r (extra) = .82, $p < .01$; r (agree) = .91, $p < .01$ & r (neuro) = .86, $p < .01$] of both forms of big five personality factors were found significant. The test-retest reliabilities of the Bangla version of big five personality factors [r (open) = .87, $p < .01$; r (cons) = .82, $p < .01$; r (extra) = .90, $p < .01$; r (agree) = .86, $p < .01$, & r (neuro) = .92, $p < .01$] were also found significant. To assure the content validity of a scale, the Bangla version of the scale was given to Subject Matter Expert (SME), the Subject Matter Expert gave their essential remarks during the translation of the items from English to Bangla. Their essential remarks also assure the content validity of the adapted version of the scale. Finally, to assess the construct validity of the scale correlation coefficients between score of each item and the total score of the scale were determined. The correlation coefficients [r (open) = .94, $p < .01$; r (cons) = .86, $p < .01$; r (extra) = .84, $p < .01$; r (agree) = .79, $p < .01$; r (neuro) = .92, $p < .01$].

The Bangla version of organizational commitment questionnaire

The Bangla version of the Organizational Commitment Questionnaire (Muhammad & Semul, 2012) was used for the current investigation. The originally scale was developed by Mowday, Steer and Porter (1979). The organizational commitment questionnaire is composed of 15 items of which 9 are positive and 6 are negative. It makes use of a 7-point Likert type scaling method: 'strongly disagree', 'moderately disagree', 'slightly disagree', 'neither disagree nor agree', 'slightly agree', 'moderately agree' and 'strongly agree'. For the positive items, score values range from 7 (for strongly agree) to 1 (for strongly disagree). A reverse order was followed for negative items. The internal consistency reliability measures were reported by the original investigators. Coefficient alpha of the scale ranged from 0.82 to 0.93 with a median of 0.90. Significant evidences of convergent validity, discriminant validity, and predictive validity were found for the original scale. The Cronbach alpha and test-retest reliabilities coefficient for the bangla version were 0.74 and 0.58, respectively. Significant evidences of concurrent and congruent validity were found for the bangla version of the organizational commitment questionnaire.

The Bangla version of job involvement questionnaire

To measure employees' level of job involvement in an organization, an adapted Bangla version of job involvement Scale (Muhammad & Semul, 2012), originally developed by Lodhal and Kejner in 1956, was used. This self-reporting measuring tool was containing 6 items. It had 5 positive and 1 negative items. The items were rated on a five response format (strongly agree, agree undecided, disagree, strongly disagree). For positive items, score "1" indicated strongly disagree, score "2" indicated disagree, score "3" indicated undecided, score "4" indicated agree, score

“5” indicated strongly agree. For negative items scoring was in inverse order. The sum of score of all items was the total score of the scale for individual. High score indicated high job involvement. The Cronbach Alphas was .70. The test-retest and split-half reliabilities of the Bangla version of the job involvement scale were found significant ($r = .85$, & $r = .81$).

Procedures

For collecting proper information from participants, at first, permission was taken. The participants were informed about the purposes and necessity of the present research. In the beginning, they simply briefed about the questionnaires and how to fill those questions. Then participants filled the PIF form, big five personality questionnaire, organizational commitment questionnaire, and job involvement questionnaire accordingly. The participants were assured that their information only used in research purposes and were kept confidential. Finally, they were thanked for their participation.

Results

In the present study, the obtained data were analyzed by using correlation and regression analysis. The findings are presented in the following tables:

Table 1

Mean and Standard Deviation Scores of Big Five Personality Traits, Organizational Commitment and Job Involvement.

Variables	Mean	Std. Deviation	N
Extraversion	26.36	3.72	77
Agreeableness	26.23	3.33	77
Conscientiousness	27.23	4.54	77
Neuroticism	26.05	4.86	77
Openness	26.44	4.37	77
Organizational Commitment	67.62	14.89	77
Job Involvement	19.14	4.06	77

As shown in the Table 1, the Mean (*SD*) scores of extraversion, agreeableness, conscientiousness, neuroticism, openness, organizational commitment, and job involvement were as follows: $M = 26.36$ (3.72), $M = 26.23$ (3.33), $M = 27.23$ (4.54), $M = 26.05$ (4.86), $M = 26.44$ (4.37), $M = 67.62$ (14.89), and $M = 19.14$ (4.06), respectively.

Table 2

Correlations Matrix among Big Five Personality Traits, Organizational Commitment, and Job Involvement.

Variables	1	2	3	4	5	6
Extraversion	-					
Agreeableness	.36**	-				
Conscientiousness	.53**	.45**	-			
Neuroticism	-.24*	-.50**	-.69**	-		
Openness	.44**	.39**	.52**	-.43**	-	
Organizational commitment	.63**	.53**	.79**	-.68**	.56**	-
Job involvement	.49**	.42**	.79**	-.64**	.49**	.85**

Note. ** $p < .01$, * $p < .05$

Simple correlations of personality traits, organizational commitment, and job involvement are presented in Table 2, and showed there was significant inter-correlation among the variables. The result indicated that conscientiousness highly correlated with organizational commitment [$r = .79$, $p < .01$], whereas neuroticism negatively correlated [$r = -.68$, $p < .01$]. Extroversion, openness, and agreeableness also significantly correlated with organizational commitment. Further, the result also indicated that conscientiousness personality trait showed high correlation [$r = .79$, $p < .01$] with job involvement. Neuroticism, openness, extraversion, and agreeableness also correlated with job involvement [$r = -.64$, $p < .01$], [$r = .49$, $p < .01$], [$r = .49$, $p < .01$], and [$r = .42$, $p < .01$], respectively. Additionally, organizational commitment highly correlated with job involvement [$r = .85$, $p < .01$].

Table 3

Multiple Regression of Organizational Commitment and Big Five Personality Traits.

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	<i>B</i>	<i>Std. Error</i>	β		
(Constant)	7.20	15.45		0.46	.643
Conscientiousness	1.17	.31	.36	3.75	.001
Extraversion	1.22	.29	.31	4.18	.001
Neuroticism	-.85	.27	-.27	-3.18	.001
Openness	0.30	.24	.09	1.27	.207
Agreeableness	-.39	.31	.09	1.27	.208

Note. Adjusted $R^2 = .75$, $F(5, 71) = 46.39$, $p < .001$.

Result of the regression analysis indicated that the personality traits explained 75% of variance in organizational commitment, $F(5, 71) = 46.39, p < .001$. Additionally, the standardized betas indicated three significant predictors of organizational commitment. The variables were conscientiousness ($\beta = .36, p < .001$), extroversion ($\beta = .31, p < .001$), and neuroticism ($\beta = -.27, p < .001$). It seems that conscientiousness was the strongest predictor. However, openness and agreeableness showed no predictive power in this regard.

Table 4

Multiple Regression of Big Five Personality Traits and Job Involvement.

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	B	Std. Error	β		
(Constant)	5.14	5.05		1.02	.313
Conscientiousness	.50	.10	.55	4.87	.000
Extraversion	.13	.09	.12	1.38	.172
Neuroticism	-.17	.09	-.21	-1.98	.052
Openness	.05	.08	.06	.68	.499
Agreeableness	.04	.10	.00	.04	.963

Note. Adjusted $R^2 = .64, F(5, 71) = 27.97, p < .001$.

The above table suggested that 64% of variance in job involvement was explained by personality traits, $F(5, 71) = 27.97, p < .001$. The standardized beta indicated that conscientiousness was the significant predictor ($\beta = .55, p < .001$). However, the other four personality traits (extroversion, neuroticism, openness, and agreeableness) had no predictive power in explaining job involvement.

Discussion

The present study was mainly planned to investigate the relationship between big five personality traits, organizational commitment, and job involvement. The first objective was to investigate whether there was any relationship between organizational commitment and personality traits. According to Table 2, there were significant positive and negative relationships between organizational commitment and personality traits. Result presented in Table 3 indicated that conscientiousness was the strongest predictor of organizational commitment. Extroversion and neuroticism was the second and third predictor of organizational commitment, respectively. The five personality traits accounted for 75% of variance in

organizational commitment. Recently, Emecheta, Awa and Ukoha (2016) revealed that a positive and significant relationship exists between the five personality dimensions and organization commitment. According to standardized beta coefficient (Table 3), if conscientiousness of the employee' increased by one standard deviation, employee organizational commitment increased by .36 standard deviation. The result indicated that conscientiousness was the strongest predictor of organizational commitment, suggesting that employee who has perseverance and sense of duty; he or she is obligated to continue working for an organization. Darbanyan, Samavatyan, Oreyzi and Mousavirad (2014) investigated the simple and multiple relationships between the five-factor model of personality and organizational commitment. They found that conscientiousness and openness to experience predicted organizational commitment.

The second objective was to investigate whether there was any relationship between job involvement and personality traits. Result presented in Table 2 indicated that there were significant positive and negative relations between job involvement and personality traits. Additionally, Table 4 indicated that the personality traits accounted for 64% of variance in job involvement, and conscientiousness-personality trait was the only one significant predictor of job involvement. There was no previous empirical study conducted on the relationship between big five personality traits and job involvement. Nevertheless, meta-analytic studies suggested that conscientiousness is the most potent and consistent correlate of job performance across all types of jobs and occupations (Barrick & Mount, 1991; Mount & Barrick, 1995; Salgado, 1997). Hence, individuals, who report high scores on conscientiousness should report more involvement in their work due to their sense of duty towards every role they assume.

Of course this study had number of limitations. One of the most serious limitations was the difficult to collect information from participants in wider region. When some participants know that they would not be benefitted from this research directly, usually they tend to show their unwillingness and do not cooperate properly. As a result, there is a possibility to get fake information. Moreover, the sample size was small in number, thereby not properly representative. Future studies should be addressed these issues.

In conclusion, by investigating the influence of the big five personality dimensions on organizational commitment and job involvement, this study confirms that neuroticism relates negatively to organizational commitment and job involvement which indicates a neurotic employee is less efficient in his or her work. However, extroversion, openness, and conscientiousness all related positively to organizational commitment and job involvement. According to the present findings, an employee with higher extroversion, openness, agreeableness, and conscientiousness tends to exhibit high levels of sociability, dutifulness, cooperation, broadmindedness,

performance, and career goals, thus leading to positive relationships with organizational commitment and job involvement. Therefore, when a manager assesses the degree of staff's organizational commitment and job involvement, he or she should not address only environmental impact factors but also employee personalities in order to ensure the effective and efficient achievement of organizational goals.

References

- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, *63*(1), 1-18.
- Barrick, M.R., & Mount, M.K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, *44*, 1-26.
- Cattell, R. B. (1965). *The scientific analysis of personality*. Baltimore, MD: Penguin.
- Çelik, G.T., & Oral, E.L. (2016). Big five and organizational commitment – The case of Turkish construction professionals. *Human Resource Management Research*, *6*(1), 6-14
- Darbanyan, M., Samavatyan, H., Oreyzi, H. R., & Mousavirad, S. M. (2014). Simple and multiple relationships between the five factor model of personality and organisational commitment. *Advances in Natural and Applied Sciences*, *8*(14), 12-17.
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, *41*, 417-440.
- Emecheta, B.C., Awa, H.O., & Ukoha, O. (2016). Personality characteristics and employee affective commitment: Nigeria experience. *International Journal of Business and Management Review*, *4* (6), 69-92.
- Erdheim, J, Wang, M., & Zickar, M. J. (2006). Linking the Big Five personality constructs to organizational commitment. *Personality and Individual Differences*, *41*, 959-970.
- Elloy, D. F., & Terpening, W. D. (1992). An empirical distinction between job involvement and work involvement: Some additional evidence. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, *24*(4), 465-478.
- Furnham, A., Forde, L., & Ferrari, K. (1999). Personality and work motivation. *Personality and Individual Differences*, *26*, 1035-43.
- Ganu, D., & Kogutu, C.N. (2014). Effect of the big five personality traits on job satisfaction and organizational commitment in the healthcare industry: The case of Kenya. *American Journal of Health Science*, *5*(2), 145 –154.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48* (1), 26–34.

- Greenberg, J., & Baron, R. A. (2008). *Behavior in organizations: Understanding and managing the human side of work*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Hurtz, G. M., & Donovan, J. J. (2000). Personality and Job Performance: The Big Five Revisited. *Journal of Applied Psychology*, 85, 869-879. <http://dx.doi.org/10.1037/0021-9010.85.6.869>
- Judge, T. A., Higgins, C. A., Thoresen, C.J., & Barrick, M.R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology*, 52, 621-52.
- Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology*, 87, 797-807.
- Kumar, K., & Bakhshi, A. (2010). The five-factor model of personality and organizational commitment: Is there any relationship? *Humanity & Social Sciences Journal*, 5(1),24-34.
- Labatedmediene, L., Endriulaitiene, A., & Gustainiene, L. (2007). Individual Correlates of Organizational Commitment and Intention to leave the organization. *Baltic journal of management*, 2 (2), 196-212.
- Lawler, E. E. III, & Hall, D.T. (1970). Relationship of job characteristics to job Involvement satisfaction and intrinsic motivation, *Journal of Applied Psychology*, 54, 305012.
- Lodahl, T. M., & Kejner, M. (1965). The definition and measurement of job involvement. *Journal of Applied Psychology*, 49(1), 24-33.
- Lounsbury, J.W., Sundstrom, E., Loveland, J. M., & Gibson, L.W. (2003). Intelligence, 'big five' personality traits, and work drive as predictors of course grade. *Personality and Individual Differences*, 35, 1231-9.
- McCrae, R. R., & Costa, P. T. (1996). *Toward a new generation of personality Theories: Theoretical contexts for the five-factor model*. In Wiggins, J.S. (Ed), *The five-factor Model of Personality: Theoretical Perspectives* (pp. 51-87). Guilford, New York, NY.
- McCrae, R. R., & Costa, P. T., Jr. (1999). *A Five-Factor theory of personality*. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 139-153). New York: Guilford.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates and consequences. *Journal of Vocational Behavior*, 61(1), 20-52.
- Morrison, K. (1997). Personality correlates of the five-factor model for a sample of business owners/managers: Associations with scores on self-monitoring, type A behaviour, locus of control, and subjective well-being. *Psychological Reports*, 80, 255-272.

- Mount, M. K., & Barrick, M. R. (1995). The Big Five personality dimensions: Implications for research and practice in human resources management. In K. M. Rowland & G. Ferris (Eds.), *Research in personnel and human resources management*, 13, 153-200. Greenwich, CT: JAI Press.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The Measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.
- Muhammad, N., Rahman, M. E. A., Houque, A., & Semul, A. S. P. (2011). Bangla adaptation of Big Five personality test. Unpublished manuscript, Department of Psychology, Jagannath University, Dhaka, Bangladesh.
- Muhammad, N., & Semul, A. S. P. (2012). Bangla adaptation of rganizational commitment test. Unpublished manuscript, Department of Psychology, Jagannath University, Dhaka, Bangladesh.
- Muhammad, N., & Semul, A. S. P. (2012). Bangla adaptation of job involvement test. Unpublished manuscript, Department of Psychology, Jagannath University, Dhaka, Bangladesh.
- Olver, J. M., & Mooradian, T. A. (2003). Personality traits and personal values: A conceptual and empirical integration. *Personality and Individual Differences*, 35(1), 109-125.
- O'Connor, B.P. (2002). A quantitative review of the comprehensiveness of the five-factor model in relation to popular personality inventories, *Assessment*, 35, 109-25.
- Parvin, A. (2008). Study of the relationship between the structures of five personality factors and organizational commitment in middle school and high school teachers in Kashan, Unpublished Master Thesis, Department of Educational Science and Psychology, University of Isfahan.
- Pasha, G., & Khodadadi A. F. (2008). The relationship of personality traits, the job characteristics of the staff to their organizational commitment in Water, Power organization in Ahwaz. *New findings in psychology*, 2(6), 54-65.
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59, 603.
- Syed, N., Saeed, A., & Farrukh, M. (2015). Organization commitment and five factor model of personality: Theory recapitulation. *Asian Economic and Social Society*, 5(8), 183-190.
- Salgado, J. F. (1997). The five-factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, 82, pp. 30-43.

Perceived Corporal Punishment as Related to Children Emotional and Behavioral Problem

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Abstract

Though sufficient work on corporal punishment and children's emotional and behavioral problem has been conducted worldwide but the number of studies are very limited in context of our country. Additionally, culture shapes human behavior, therefore it is necessary to understand this behavior in the context of Bangladesh. So, the main purpose of the present study was to see the relationship between corporal punishments with children emotional and behavioral problem. The data were collected from 422 participants by purposive sampling technique; age range of them was from 11 to 14 years. Mean, standard deviation, and independent *t*-test was performed. The mean score of the result shows corporal punishment of father was 28.91 and mother was 28.19 indicating parents were involved in corporal punishment because the cut point of corporal punishment is 26. On the other hand, the mean score of children emotional problem found lower in self-concept ($M = 11.53$) but higher in anxiety ($M = 22.91$), depression ($M = 23.45$) and anger ($M = 23.44$). Additionally, higher mean score was found in disruptive behavior ($M = 33.15$). Significant positive correlation was also found between corporal punishments given by father and mother with their children anxiety, depression, anger and disruptive behavior. In terms of sex significant difference was found in perceiving corporal punishment. It is boys were perceived to be more punished than girls. So, the findings point out that it is urgent to apply appropriate interventions as well as counseling programs for parents on using some other positive strategies to control child behavior rather corporal punishing behavior for not heading way the children to emotional and behavioral problem.

Keywords: corporal punishment, emotional problem, behavioral problem

Introduction

Corporal punishment (CP) is well-defined as “the use of physical force with the intention of causing a child pain, but not injury, for the purposes of correction or control of the child's behavior” (Straus, 2001). The UN Committee on the Rights of

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the Child (2012) defined corporal punishment as "any punishment in which physical force is used and intended to cause some degree of pain or discomfort, however light." It includes a wide variety of methods such as hitting, slapping, spanking, punching, shaking, shoving, choking, use of various objects (i.e., wooden punching, belts, pins, or others), painful body postures (such as placing in closed spaces), use of electric shock, use of excessive exercise drills, or prevention of urine or stool elimination. The majority of children have experienced physical punishment by the time they reach adolescence. Corporal punishment may be occurred in three main contexts: i) parental or domestic corporal punishment: within the family typically, children punished by parents or guardians; ii) school corporal punishment: within schools, when students are punished by teachers or school administrators, or, in the past, apprentices by master craftsmen; iii) judicial corporal punishment: as part of a criminal sentence ordered by a court of law. Closely related is prison corporal punishment, ordered either directly by the prison authorities or by a visiting court. Corporal punishment is also still allowed in some military settings, and banned in others. So, corporal punishment is a form of physical punishment that involves the deliberate infliction of pain as retribution for an offence, or for the purpose of disciplining or reforming a wrongdoer, or to discourage attitudes or behavior considered unacceptable.

More than 90% of children and approximately 50% of adolescents during their adolescent years have experienced parental CP at least once (Straus & Stewart, 1999). This form of discipline is administered frequently an average of three times per week during the preschool children (Straus, 2001) and it is used more often with male, African American, and poor children (Straus & Stewart, 1999). Thus, for many children, CP represents an important component of their socialization experiences within the family. However, because of limitations in most of the relevant research, relatively few definitive conclusions can be drawn about the effects of CP on child adjustment.

Several studies were conducted to know the impact of corporal punishment on children. Some literature, explain that because of physical punishment children were shown internalizing and externalizing problem. Social learning theory (Bandura & Walters, 1977) suggests that physically punishment enables children to learn aggressive behavior through modeling. If parents try to modify their children's behavior through inflicting pain, then those children are likely to do the same to others when they want to influence other people's actions. Study found that, parental corporal punishment was associated with all child constructs, including higher levels of immediate compliance and aggression and lower levels of moral internalization and mental health (Gershoff, 2002). A growing body of research suggests there may be unintended negative consequences, including increasing children's aggressive behavior and their likelihood of becoming delinquent and contributing to poorer

psychological and cognitive functioning (Gershoff, 2002; Smith & Brooks-Gunn, 1997). The strongest link between CP and behavior problems, especially aggression was found in the study of Strassberg, Dodge, Pettit, and Bates (1994) and Straus and Kantor (1994). On the other hand emotional problems, such as depression and lower self-esteem, and behavioral problem have also been found to be linked to CP (Turner & Finkelhor, 1996). In a longitudinal analyses indicate that parental CP uniquely contributes to negative behavioral adjustment in children at both 36 months and at 1st grade, with the effects at the earlier age more pronounced in children with difficult temperaments (Mulvaney & Mebert, 2007). Some contrary findings were also found for example corporal punishment did not substantially increase the risk to youth of developing affective, cognitive, or behavioral pathologies (Paolucci & Violato, 2004; Simons, Johnson, & Conger, 1994). Most available research indicates that there are few, if any, positive developmental outcomes associated with CP beyond immediate compliance with a parent's directive (Gershoff, 2002). On the other hand some handful research found that girls were more affected by corporal punishment than boys (Miller, 2006).

Bangladesh Legal Aid and Services Trust (BLAST) with supports from Save the Children (SCI) has conducted the survey on parent and revealed that 69% of parent thought that using corporal punishment on children was a useful tool to bring discipline to the classroom, 55% considered it to be an effective way of ensuring their children's proper development, and 27% thought that children would be disrupted if parents did not use physical punishment (Hasnat, 2017). Another study shown widespread use of corporal punishment in Bangladesh in which 74 percent of children reported that they were receiving physical punishment at home (Unicef, 2008). The negative effects of corporal punishment on individual children and adults add up to negative effects on society as a whole.

Rationale of the study

Such research would contribute to the field of understanding of corporal punishment and children emotional and behavioral problem in general. The results of this study might have important implications for parents and policy makers. If a parent involved in physical punishment short term and long term outcome may occur. Present study will enable the researchers and policy makers to develop awareness about detrimental effects of corporal punishment on children psychological health. It will help them to apply appropriate interventions as well as counseling programs on how to intervene parental behavior regarding corporal punishing and its impact on children.

Research Questions

The research questions of the present study were

1. Is there any relationship between corporal punishments and children emotional problem?

2. Is there any relationship between corporal punishments and children behavioral problem?
3. Which gender is found to be corporally punished?
4. Is there any difference in children emotional and behavioral problem due to corporal punishment in terms of their sex?

Objectives of the study

The main objective of the present study was to see the relationship between corporal punishments and children emotional and behavioral problem. The specific objectives were-

1. To investigate the relationship between corporal punishments and children emotional problem.
2. To investigate the relationship between corporal punishment and children behavioral problem
3. To see whether there is any differences in corporal punishment between boys and girls.
4. To see whether there is any differences in children emotional and behavioral problem due to corporal punishment in terms of their sex

Hypotheses of the study

In light of the previous researches, following hypotheses were formulated

- H₁: Children emotional problem would be positively correlated with corporal punishments
- H₂: Children behavioral problem would be positively correlated with corporal punishments
- H₃: Girls would perceive to be punished more than boys
- H₄: Significant differences would found in children emotional and behavioral problem due to parental corporal punishment in terms of their sex.

Methods

Participants

A total number of 422 children from different areas of Dhaka city were selected by purposive sampling technique on the basis of some characteristics of participant's like any children age between 11 years to 14 years was considered eligible. Among them 29.9% participants' socioeconomic status were upper class and the rest were in middle class (70.1%). 35.1% mothers of the participants were in job, and 64.9% were housewives. 48.1%, 40.8% and 46% fathers of the participants were engaged in different jobs, business and farming respectively.

Research design

Cross sectional survey research design was used to meet up the research objectives. This design indicates that all data have been collected at a single point of time.

Measures

For data collection, following instruments were used.

Consent form

Two consent letters were used in this study. One is collected from the parents of child and another one is collected from the child. After getting permission from parents and child information is collected from the participants.

Demographic Information Form

This form was used to collect primary data about the respondents. This form collects about the respondents' personal and familial information like age, sex, studying class, socioeconomic status and parent educational qualification etc.

Physical Punishment Questionnaire (PPQ)

In the present study the adapted Bangla version of PPQ (Uddin, Zaman, & Semul, 2012) was used to measure children's perceptions of their current experiences of corporal punishment which is originally developed by Rohner, Ripoll-Núñez, Moodie, and Ruan (2005). This questionnaire contains 26-item. The measure contains a variety of response options used for different items. Children were asked to make overall judgments about nine issues related to their experiences of corporal punishment by their mothers (major girl's caregivers) and fathers (major boy's caregivers). These issues are (a) *overall frequency of punishment received* (i.e. how often was the respondent punished?); (b) *overall severity of punishment received* (i.e. how hard or severe does the punishment tend to be?); (c) *consistency of punishment* (i.e. does the caregiver sometimes punish a given misbehavior and sometimes not?); (d) *predictability and punishment received* (i.e. when respondents are punished, can they tell or predict from one time to another whether they will be punished?); (e) *overall incidents of punishments received* (i.e. how many times in any given week does the respondents tend to be punished?); (f) *Perceived fairness of punishment received* (i.e. as a general rule, to what extent does the respondent feel the punishment is fair?); (g) *perceived deservedness of punishment received* (i.e. as a general rule, to what extent does the respondent feel the punishment is deserved?); (h) *timing of punishment received* (i.e. is the punishment administered at the moment the parent discovered the children has done something wrong, or is it delayed for a period of time?); and (i) *parents use of explanation or reasoning* (i.e. to what extent does the caregiver explain to the children before punishing them-what they did that was wrong why it was wrong?). In addition to these nine theoretical issues, the PPQ asks 13 more specific form of punishment that they may have experienced at least

once. These are spanking, slapping, shoving, yanking, kicking, beating (severely with an object that leaves a mark, welt, or bruise), hitting (firmly but not severely with an object that leaves no mark, welt or bruise), pulling (hair), twisting (ear), kneeling, standing, pinching, and shaking. The questionnaire additionally asks respondents to volunteer up to four other forms of punishment they may have experienced at least once. Summing of the two scores (father and mother) to create a composite measure of perceived harshness and justness (which can spread from a low of 2 through a high of 9 and from a low of 2 through a high of 8, respectively) of punishment. The higher the score is on the harshness and the justness variables, children perceived the punishment to be harsher and more just respectively. Alpha coefficients were found 0.55 and 0.62 for maternal and paternal harshness 0.33 and 0.45 for maternal and paternal justness in respectively.

The Bangla version of BECK Youth Inventories of children and adolescent Emotional and Behavioral Impairment

BECK Youth Inventories of children and adolescent emotional and behavioral Impairment are five self-report measures that used to assess a child expression of self-concept, anxiety, depression, anger and disruptive behavior. The inventories are intended to use with children and adolescents between ages of 7 to 18. Any one of them may be used separately or in any combination to assess child experience of depression, anxiety, anger, disruptive behavior and self-concept. The Beck Youth Inventories are easy to administer and give brief (approximately 5-10 minutes each) assessment of distress of both boys and girls. Each inventory contains 20 statements about thought, feelings or behaviors associated with emotional and behavioral impairment in children. Every items consisted of a 4 point response format ranging from 0 (never), 1 (sometimes), 2 (often), 3 (always). The total raw score of the inventory was obtained by adding the scores. The range of possible total raw score on the inventory was 0 to 60, where higher score indicates a more and a lower score indicates a less of the component of the participants. Test- retest reliability of Bangla version of those scale was found 0.94 which was significant at $\alpha=.01$. Among the inventories correlation between the BAI-Y, BDI-Y, BANY-Y, are the highest, particularly for youth aged 11-14, which range from .74 to .81.

Procedures

After getting permission from parent and child two standardized self-report questionnaires and personal information form were used. Before administering the scale necessary rapport was established with the respondents. Respondents completed the Bengali version of the questionnaires in a relaxed setting. All the subjects were treated individually condition by the investigators. Respondents were encouraged to ask any questions they might have, and they were informed of their right to withdraw from the study at any time. It took one hour on an average to

complete the task. After the performance all the respondents were thanked by the investigators for their cooperation and participation in the study. In this study ethical issues were carefully handled and provided personal information by the participants' were strictly protected. The major ethical aspect considered in the present study is maintaining the ethical standard was parental consent or ascent was taken for child participant. In ascent procedure, written consent was taken from parent along with consent from child.

Results

According to the research objectives of the present study descriptive statistics, correlational analysis and independent sample t-test were done to analysis the data by using SPSS 20.0 version. The mean and standard deviation are shown in the following tables.

Table 1

Mean and SD of Perceived Corporal Punishment Scores of Father and Mother, Self-concept, Anxiety, Depression, Anger and Disruptive Behavior (N=422) among Children.

	Variable	<i>M</i>	<i>SD</i>
Corporal Punishment	Corporal Punishment By Father	28.91	2.85
	Corporal Punishment by Mother	28.19	4.00
Children emotional problem	Self-concept	11.53	3.18
	Anxiety	22.91	4.24
	Depression	23.45	6.84
	Anger	23.44	7.88
Children behavioral problem	Disruptive behavior	33.15	7.83

As shown in Table 1, the mean scores of children's perception of corporal punishment by father was found ($M=28.91$) and mother was ($M=28.19$). The mean score of the result indicates that parents were involved in corporal punishment because the cut point of corporal punishment is 26. The mean scores of the result also shows lower level of self-concept ($M= 11.53$), higher level of anxiety ($M=22.91$), depression ($M=23.45$), anger ($M=23.44$) and disruptive behavior ($M=33.15$) among children. It describe that children have higher level of emotional (self-concept, anxiety and depression) and behavioral (disruptive behavior) problem.

Table 2

Correlation of Corporal Punishment (Father and Mother) with Children Emotional Problem (Self-concept, Anxiety, Depression, Anger) and Disruptive Behavior

Variable		Corporal Punishment by Father	Corporal Punishment by Mother
Children emotional problem	Self-concept	-0.322**	-0.041*
	Anxiety	0.387**	0.157**
	Depression	0.382**	0.117*
	Anger	0.467**	0.217**
Children behavioral problem	Disruptive behavior	0.087*	0.124*

Note: * $p < .05$; ** $p < .01$.

As shown in the table 2 significant negative correlation was found between perceiving corporal punishment by children of both father (CPF) and mother (CPM) with their emotional and behavior problem. Children self-concept was found to be negatively correlated with corporal punishment given by father ($r = -0.322, p < 0.01$) and mother ($r = -0.041, p < 0.05$). Significant positive correlation was found between anxiety and corporal punishment given by father ($r = 0.387, p < 0.01$) and mother ($r = 0.157, p < 0.01$). Depression was also found significantly positively correlated with corporal punishment given by father ($r = 0.382, p < 0.01$) and mother ($r = 0.117, p < 0.05$). Anger of children was found to be significantly positively correlated with corporal punishment given by father ($r = 0.467, p < 0.01$) and mother ($r = 0.217, p < 0.01$). Disruptive behavior of children was found to be significant positive correlation with corporal punishment of father ($r = 0.080, p < 0.05$) and mother ($r = 0.124, p < 0.05$).

Table 3

Mean Difference of Perceived Corporal Punishment Given by Father and Mother, Self-concept, Anxiety, Depression, Anger and Disruptive Behavior of Children in terms of their Sex.

Variable	Gender	N	Mean	t	p
Perceived Corporal Punishment by Father	Boy	211	29.02	2.92	.013
	Girl	211	28.80		
Perceived Corporal Punishment by Mother	Boy	211	28.19	.012	.990
	Girl	211	28.18		

Self-concept	Boy	211	11.50	.16	.873
	Girl	211	11.58		
Anxiety	Boy	211	23.62	1.6	.109
	Girl	211	22.20		
Depression	Boy	211	24.32	2.16	.031
	Girl	211	22.57		
Anger	Boy	211	22.83	1.44	.149
	Girl	211	24.05		
Disruptive behavior	Boy	211	32.64	1.48	.142
	Girl	211	32.67		

As shown in Table 3, significant difference was found in perceived corporal punishment (father) in terms of children's gender. The mean score of perceived corporal punishment (father) indicates that the boys ($M=29.02$) perceived to be more punished than the girls ($M=28.80$). Also, significant difference was found in children emotional problem (depression) in terms of sex. It indicates that boys ($M=24.32$) were more depressed than girls ($M=22.57$).

Discussion

The aim of the present study was to see the relationship between corporal punishments with children emotional and behavioral problem. In this study, the mean score shows that parents were involved in corporal punishment because the cut point of corporal punishment is 26. The mean scores of the result also describe that children have higher level of emotional (self-concept, anxiety and depression) and behavioral (disruptive behavior) problem. These findings explain that corporal punishment have a negative impact on children's emotional and behavioral problem. The result also found significant positive correlation between corporal punishment given by both father and mother with children's anxiety, depression, anger and disruptive behavior. As hypothesized (one and two) corporal punishment was significantly positively correlated with children's emotional and behavioral problem. This finding is in agreement with those of Mulvaney and Mebert (2007) who also found corporal punishment was linked with emotional or internalizing and externalizing behavioral problems in children. These findings illustrate that corporal punishment does have harmful consequences on children's behavioral adjustment. The current research findings extend this body of research by showing that parental corporal punishment is linked with behavioral maladjustment in early childhood. In explaining the above finding, a meta-analysis conducted by Gershoff (2002) on

parental corporal punishment and child behaviors and experiences, concludes that corporal punishment promotes hostile attributions, which predicts violent behavior. First, it initiates coercive cycles of aversive behaviors between the parent and child. Then, it erodes the parent-child relationship and in turn decreases children's motivation to internalize parents' values and those of the society, which in turn results in low self-control. Furthermore, corporal punishment can evoke feelings of fear, anxiety, and anger in children. So, it is also linked with decreases in children's feelings of confidence and assertiveness and increases in feelings of humiliation and helplessness. Finally, it may lead victims to be more likely to resort to aggression and violence during conflicts with their children. In addition, studies found physical punishment has been linked with higher levels of physical aggression, verbal aggression, antisocial behavior, and behavior problems (Gershoff, 2008; Mulvaney & Mebert, 2007; Swinford, DeMaris, Cernkovich, & Giordano, 2000). Furthermore, frequent and harsh physical punishment addressed by parents has been linked with impairments in children's mental health, including depression and anxiety, alcohol and drug misuse, and general psychological maladjustment (Gershoff & Bitensky, 2007; Harper, Brown, Arias, & Brody, 2006). Moreover in this study, there was significant difference found in perception of corporal punishment (father) in terms of children's sex differences. On the other hand, in case of children emotional problem significant difference was found in depression in terms of their sex.

Another hypothesis stated that girls perceived to be more punished than boys. The findings contradict the hypothesis that boys perceived to be more punished than girls. It can be explained that boys at all ages were more likely to receive harsh physical discipline which was more likely to be given by mothers than by fathers (Grogan - Kaylor & Otis, 2007). Furthermore, harsh discipline in the context of the same sex dyads, such as mothers and daughters and fathers and sons, were more strongly correlated with externalizing problems than in mixed sex dyads (McKee et al., 2007).

Limitations of the study

There were several limitations to the generalizability of our findings. Most of the children came from middle-class families. Therefore generalization can't be done on socioeconomic status. Another limitation was that measures of behavioral and emotional problems and the degree of corporal punishment administered by parents were taken solely from children.

Though the present research has some limitation but it has made important practical contributions. The findings of present research can be considered as a contribution to knowledge on the effect of corporal punishments on children emotional and behavioral problem. The study findings point out that it is urgent to apply appropriate

interventions as well as counseling programs for parents on using some other positive strategies to control child behavior rather corporal punishing behavior for not heading the children in emotional and behavioral problem.

Recommendations

Several studies currently focus solely on harsh physical discipline on school-aged children and how it later impacts them during adolescence (Rodriguez, 2003; Stouthamer-Loeber, Loeber, Homish, & Wei, 2001; Swinford et al., 2000). However, research must also focus on the possible interaction between harsh punishment and how this interaction relates to psychopathology in preschool-aged children. In addition, studies should not only use children reports, but reports from parent, teachers, and other caretakers. Studies should also examine the parent's gender and whether the parent's gender influences a child's internalizing and externalizing outcomes. Although several research have been done on associations between corporal punishment and socioeconomic status further studies are needed in order to clarify these relationships.

References

- Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1): Prentice-hall Englewood Cliffs, NJ. Convention on the Rights of the Child Archived (2012).
- Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: a meta-analytic and theoretical review. *Psychological bulletin*, 128(4), 539.
- Gershoff, E. T. (2008). Report on physical punishment in the United States: What research tells us about its effects on children.
- Gershoff, E. T., & Bitensky, S. H. (2007). The case against corporal punishment of children: Converging evidence from social science research and international human rights law and implications for US public policy. *Psychology, Public Policy, and Law*, 13(4), 231.
- Grogan - Kaylor, A., & Otis, M. D. (2007). The predictors of parental use of corporal punishment. *Family Relations*, 56(1), 80-91.
- Harper, F. W., Brown, A. M., Arias, I., & Brody, G. (2006). Corporal punishment and kids: How do parent support and gender influence child adjustment? *Journal of Family Violence*, 21(3), 197-207.
- Hasnat, M. A. (2017). Corporal punishment is rooted in Bangladesh's culture. *Dhaka Tribune*.
- McKee, L., Roland, E., Coffelt, N., Olson, A. L., Forehand, R., Massari, C., Zens, M. S. (2007). Harsh discipline and child problem behaviors: The roles of positive parenting and gender. *Journal of Family Violence*, 22(4), 187-196.
- Miller, A. (2006). Corporal Punishment and Gender Alice Miller en *Child abuse and mistreatment*.

- Mulvaney, M. K., & Mebert, C. J. (2007). Parental corporal punishment predicts behavior problems in early childhood. *Journal of Family Psychology, 21*(3), 389.
- Paolucci, E. O., & Violato, C. (2004). A meta-analysis of the published research on the affective, cognitive, and behavioral effects of corporal punishment. *The Journal of psychology, 138*(3), 197-222.
- Rodriguez, C. M. (2003). Parental discipline and abuse potential affects on child depression, anxiety, and attributions. *Journal of Marriage and Family, 65*(4), 809-817.
- Rohner, R., Ripoll-Núñez, K., Moodie, N., & Ruan, C. (2005). Physical Punishment Questionnaire (PPQ): Test manual. *Handbook for the study of parental acceptance and rejection, 251-317*.
- Simons, R. L., Johnson, C., & Conger, R. D. (1994). Harsh corporal punishment versus quality of parental involvement as an explanation of adolescent maladjustment. *Journal of Marriage and the Family, 591-607*.
- Smith, J. R., & Brooks-Gunn, J. (1997). Correlates and consequences of harsh discipline for young children. *Archives of pediatrics & Adolescent medicine, 151*(8), 777-786.
- Stouthamer-Loeber, M., Loeber, R., Homish, D. L., & Wei, E. (2001). Maltreatment of boys and the development of disruptive and delinquent behavior. *Development and psychopathology, 13*(4), 941-955.
- Strassberg, Z., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Spanking in the home and children's subsequent aggression toward kindergarten peers. *Development and Psychopathology, 6*(3), 445-461.
- Straus, M. A. (2001). *Beating the devil out of them: Corporal punishment in American families and its effects on children*: Transaction Publishers.
- Straus, M. A., & Kantor, K. (1994). Corporal punishment by parents of adolescents: A risk factor in the epidemiology of depression, suicide, alcohol abuse, child abuse and wife beating. *NH: Durham*.
- Straus, M. A., & Stewart, J. H. (1999). Corporal punishment by American parents: National data on prevalence, chronicity, severity, and duration, in relation to child and family characteristics. *Clinical child and family psychology review, 2*(2), 55-70.
- Swinford, S. P., DeMaris, A., Cernkovich, S. A., & Giordano, P. C. (2000). Harsh physical discipline in childhood and violence in later romantic involvements: The mediating role of problem behaviors. *Journal of Marriage and Family, 62*(2), 508-519.
- Turner, H. A., & Finkelhor, D. (1996). Corporal punishment as a stressor among youth. *Journal of Marriage and the Family, 155-166*.
- Uddin, M. K., Zaman, F. T. Z. B., & Semul, A. S. P. (2012). Corporal Punishment by Parents and Negative Personality Dispositions in Adolescents. *Indian Social and Psychological Studies, 5*(2).
- Unicef. (2008). Opinions of children of Bangladesh on corporal punishment: Children's opinion poll 2008: Online. www.unicef.org/bangladesh/Opinion_Poll_2009.pdf (accessed 12 March 2012).

Personality Traits and Technology Involvement among College and University Students

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Abstract

The usages of information technology have extended radically in today's everyday lives. The current study aimed to contribute to the literature by exploring the link between the traits of personality and the use of different technology. A total of 200 college and university students were purposively selected as respondents from different college and university in Dhaka city. Adapted Bangla version of Media and Technology Usages and Attitude Scale (Rosen, Whaling, Carrier, Cheever, & Rokkum, 2013), Big Five Personality Scale (McCrae & Costa, 1992) and personal information form were administered to measure the variables. Obtained data were analyzed by both descriptive and inferential statistics with the help of SPSS version 25. Results indicated that college students were significantly more involved in technology-based activities compared to university students. Specifically, significant difference was observed in watching TV, media sharing and video gaming of them. Moreover, significant difference was also found in five personality traits of the both categories students. In addition, no significant difference was found in technology uses between male and female students, also no significant association was found between technology involvement and five personality traits of the college and university students.

Keywords: personality traits, technology involvement, students

Introduction

Technology denotes to methods, systems and devices which are the results of scientific knowledge being used for practical purposes (Collins Dictionary). It has become a main component of our daily life for a long period (Halac & Cabuk, 2013) and now a new generation has grown up under the influence of computers, mobile devices and the internet (Gu, Zhu, & Guo, 2013). Uses of technology has many dimensions (*i.e.*, E-mail, Mobile phone, watching TV, media sharing, internet searching, video sharing, social media and so on) by which people interact with each other. Understanding how and why users accept and not use technology is of critical

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interest to information systems (IS) research (Barnett, Pearson, Pearson, & Kellermanns, 2015). Researchers have proposed that individual differences of various kinds should be incorporated into studies of technology use (Pramatari & Theotokis, 2009). Although, personality differences were previously ignored (Agarwal & Prasad, 1999), but at present have received increased scholarly attention within the broad domain of technology use (Liu, Li, & Hu, 2013).

Personality is a steady, stable, and conventional relationship of individual with his internal and external environments and is interrelated with all of the personal characteristics (Erkuş & Tabak, 2009). Personality also addressed as 'a dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thoughts' (Allport, 1937). Moreover, the five-factor model (FFM) is an 'integrative personality taxonomy that offers a common nomenclature for scientists working the field' (John & Naumann, 2010). This theory uses descriptors of common language and therefore suggests five broad dimensions (extraversion, neuroticism, agreeableness, conscientiousness and openness to experience) commonly used to describe the human personality and psyche (Goldberg, 1993; Costa & McCrae, 1992).

Extraversion is characterized by sociability, assertiveness and gregariousness (Barrick & Mount, 1991). These individuals tend to be optimistic, enthusiastic, and have a can-do attitude. Moreover, neuroticism is commonly associated to feelings of anxiety, worry, insecurity, and depression among others (Barrick & Mount, 1991). Neurotic people are less likely to try new experiences and are more likely to have self-efficacy and confidence issues. Agreeableness is associated with being courteous, flexible, trusting, good-natured, forgiving, cooperative, soft-hearted and tolerant (Barrick & Mount, 1991). People that demonstrate this trait also can be considered optimistic and value getting along with others. Conscientiousness refers to dependability; such as, being careful, thorough, responsible, organized, and planful (Barrick & Mount, 1991). On the other hand, openness individuals are rule followers and persistent, characterized by curiosity, originality, inquisitiveness and creative sensitivity (McCrae & Costa, 1989).

Personality variables act as predispose to attitudes, cognitive behaviors, and a priori involvement with information technology (Zmud, 1979). Furthermore, Svendsen, Johnsen, Almas-Sorensen & Vitterso (2013) focused on the impact of the FFM traits on behavioral intentions to use a hypothetical software tool, finding that perceived usefulness and ease of use mediated the effects of conscientiousness and extraversion on intentions, while emotional stability directly affected intentions. While the Devarj, Easley, and Crant (2008) supposed that extroversion moderates the relationship between social norms and intention to use technology but Ross, Orr, Sistic, Arseneault, Simmering, and Orr (2009) found extraversion traits had no connection with having the number of FB friends, in contrast, other empirical studies

revealed that extraverted individuals normally tend to use social network sites (Wehrli, 2008) and have more FB friends (Amichai-Hamburger & Vinitzky, 2010). Aside from extraversion trait, the relationship between neuroticism and technology use is less clear (McElroy, Hendrickson, Townsend, & Demarie, 2007). However, positive connection was found between neuroticism and social network sites use (Wehrli, 2008) whereas, Svendsen et al., (2013) did not find significant association between neuroticism and intentions to use hypothetical software technology. Similarly, Ross et al. (2009) also found no association between agreeableness and FB usage particularly with the number of FB friends, this finding was supported by Amichai-Hamburger et al. (2010) who also found no association between agreeableness and FB friends. Moreover, Landers, and Lounsbury (2006) found that highly conscientious students were more likely to use the internet for academic purposes than leisure, which is consistent with earlier research suggesting that conscientiousness is linked to a learning goal orientation (Payne, Youngcourt, & Beaubien, 2007). Further, study Svendsen et al., (2013) found that conscientiousness was associated with behavioral intentions to use a hypothetical software technology. Furthermore, McElroy et al. (2007) found that openness to experience was associated with self-reported internet use, for instance, people who are more open are more expressive on their FB profile (Amichai et al., 2010).

In the last decade, over twenty new academic institutions opened their doors to students from across the globe (Khan & Subramanian, 2011.) Numerous studies have been conducted to determine the technology usage levels of the new generation and affecting factors (Gu et al., 2013; Margaryan, Littlejohn, & Vojt, 2011). For instance, today's college students have used technology for a number of reasons (i.e., entertainment, academics, communication with friends and family) starting from a very early age and believe that technology enhances their learning (McCabe & Meuter, 2011). The importance of technology use to college students is to accomplish several crucial developmental goals, such as identity development and establishment or maintenance of intimate relationships (Arnett, 2004). On the other hand, Margaryan et al. (2011) found that university students' technology usage may be influenced by the necessity of technology in university courses; and there was a complex relationship between ages, subject, technology use and university support for technology usage in learning. Furthermore, students adopted mobile devices, such as smart phones and tablet PC, in higher education and among 67% of them used mobile devices for academic activities and thought that these devices played an important role in their academic success (Educes Center for Applied Research, 2012).

It has been observed in few perspectives that gender also plays an important role in determining the intention of accepting new technology and there are cases where gender differences cannot be discerned (Goswami & Dutta, 2016). Moreover, in various areas for instance, electronic mail, information retrieval, e-learning,

communication technologies and online purchasing behavior, the studies revealed more favorably towards men as compared to women (Orji, 2010). The reason behind this may be said that females are more anxious than men when it comes to IT utilization and this nature of the females reduced their self-effectiveness which in turn led to increased perceptions of the effort required to use IT (Venkatesh, Morris, Davis, & Davis, 2003). In contrast, gender difference is not being observed with respect to interaction via social media, but the males and females do have different agenda in using social network sites (Goswami & Dutta, 2016).

Rationale of the study

The current students were born in a technology-rich era so computers, including tablet PCs, and the internet were a part of their life all the time (Gu et al., 2013). This generation is given different names, such as “Millennials”, “Net Generation”, and “Digital Natives” (Salajan, Schönwetter, & Cleghorn, 2010). Interestingly, based on the birth date the generations born after 1980 are called “Digital Natives”, whereas the generations born before 1980 are called “Digital Immigrants” (Prensky, 2001). Gaston (2006) stated that the new generation not only requires technology in class, but also needs to be engaged with the topic. Not surprisingly, there are numerous conceptual models that attempt to describe how and why individuals use technology. Until now, however, the role of personality in general, and the five-factor dimensions of personality, had remained largely unexplored (Barnett et al., 2015). Moreover, most of the studies have conducted on the western context but no mentionable studies have found regarding this issue in the Bangladeshi context. So, researchers felt interest to conduct this research to find out the picture of technology involvement according to personality type from the perspective of Psychology.

Research Objectives (RO)

From the rich research foundation researchers of this study set out the following specific objectives to examine:

Table 1

Specific research objectives of the study

<i>RO</i>	<i>Research Objectives</i>
<i>RO₁</i>	whether there is any difference in technology involvement between college and university students;
<i>RO₂</i>	whether there is any difference in technology involvement between male and female students;
<i>RO₃</i>	whether there is any difference in personality traits and technology involvement constructs (E-mail, mobile phone, watching TV, media sharing, internet searching, video gaming, general social media) of college and university students; and
<i>RO₄</i>	whether there is any relationship exists between personality traits and technology involvement

Methods

Participants

A total of 200 college and university students (Male = 100, Female = 100) from class XI to Under Graduate (age ranged between 16-26 years) completed the questionnaires. Participants were selected by purposive sampling method from different college and University in Dhaka city. The data were collected from May to July in 2019. It is to be noticed that all members energetically turned in the study and were affirmed that their cooperation was intentional, and their answers could stay confidential.

Measures

Following instruments were used to conduct this study:

Personal Information Form

This form was used to collect personal and demographic information such as age, gender, socio economic status and educational qualification.

The Media and Technology Usage and Attitude Scale (MTUAS)

The Media and Technology usage and attitude scale (MTUAS) was originally developed by Rosen, Whaling, Carrier, Cheever, & Rokkum(2013). This scale originally consisted of 68 items in total, where 50 items were for determining media and technology usage levels and 18 items for determining attitudes. As in the present study only media and technology usage subscale was used so this part is described here. However, the media and technology usage subscale consists of 11 factors (44 items) as a result of exploratory factor analysis, which are accounted for 68% of the variance, including smartphone usage (9 items accounting for 11.94% of the variance), general social media usage (9 items; 11.61%), Internet searching (4 items; 7.15%), e-mailing (4 items; 6.94%), media sharing (4 items; 5.81%), text messaging (3 items; 5.56%), video gaming (3 items; 4.69%), online friendships (2 items; 4.23%), Facebook friendships, (2 items; 3.69%), phone calling (2 items; 3.35%), and watching television (2 items; 3.07%). A 10 item frequency response scale was used for these items including: never (1), once a month (2), several times a month (3), once a week (4), several times a week (5), once a day (6), several times a day(7), once an hour (8), several times an hour (9) and all the time (10).

Moreover, this scale was adapted in Bangla by Shahinuzzaman (2017), consists of 7 factors (40 items): e-mail 4 items (01-04), mobile phone 14 items(05-18), watching TV 3 items (19-21), media sharing 3 items (22-24), internet searching 4 items (25-28), video gaming 3 items (29-31) and general social media 9 items (32-40).Significant correlation between English and Bangla version [$r(40) = .839$, $p < .0005$] was found. Bangla version indicates that the English and Bangla version measured the same thing. Cronbach's Alpha (.86) was computed to measure the inter-item consistency of the adapted version (Rahim, 2019).

Big Five Personality Test (BFPT)

The Bangla version of the big five personality test (Muhammad, Rahman, Hoque, & Semul, 2011) was used to measure the respondents "Big Five Personality factors", originally developed by Costa and McCrae (1992). It is a Likert type scale, consists of 44-items, including five dimensions: extraversion (8 items), agreeableness (9 items), conscientiousness (9 items), neuroticism (8 items) and openness to experience (10 items). In the case of four dimensions (O, E, A, C) high score indicates positive symptoms of the personality characteristics and in the case of neurotic people who score high in neuroticism tend to be anxious, hostile and self-conscious. BFI scale scoring ("R" denotes Reverse scored items): Extraversion: 1, 6R, 11, 16, 21R, 26, 31R, 36; Agreeableness: 2R, 7, 12R, 17, 22, 27R, 32, 37R, 42; Conscientiousness: 3, 8R, 13, 18R, 23R, 28, 33, 38, 43R; Neuroticism: 4, 9R, 14, 19, 24R, 29, 34R, 39; Openness: 5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44.

For each item respondent were required to respond with answer like- strongly agree (5pts) to strongly disagree (1pts). The significant correlation coefficients [r (open) = .93, $p < 0.01$; r (cons) = .83, $p < 0.01$; r (extra) = .82, $p < 0.01$; r (agree) = .91, $p < 0.01$ & r (neuro) = .86, $p < 0.01$] of both forms (English and Bengali) were found. The test-retest reliabilities of the Bangla version of the scale [r (open) = .87, $p < 0.01$; r (cons) = .82, $p < .01$; r (extra) = .90, $p < .01$; r (agree) = .86, $p < 0.01$ & r (neuro) = .92, $p < .01$] was also found significant. Content validity of the adapted version of the scale was also found. Finally, to assess the construct validity of the scale correlation coefficients between score of each item and the total score of the scale were determined [r (open) = .94, $p < .01$; r (cons) = .86, $p < .01$; r (extra) = .84, $p < .01$; r (agree) = .79, $p < .01$; r (cons) = .86, $p < .01$; r (extra) = .84, $p < .01$; r (agree) = .79, $p < .01$ & r (neuro) = .92, $p < .01$]. The value of coefficient alpha for this scale was .894.

Procedures

Permission was taken from the concerned authority of the organizations in order to collect information from the participants. The purpose of this study and any information concerning confidentiality were clearly explained to the participants before administrating the questionnaire. Respondents were unwilling to share any information regarding their personal issues. However, they agreed after the researcher built a rapport with them. Respondents' were asked to follow the instructions carefully, which were given in the questionnaire. First they were to fill out the personal information form (PIF) which was attached with the questionnaires. The respondents were encouraged to ask questions coming in their mind during the task and they were informed of their right to withdraw form, the study at any time. After completing the questionnaires, the respondents were thanked for their kind cooperation. Ethnical issues on this study were handled with extra care as the research deals with very sensitive issue and the participants' personal in information was strictly protected.

Results

The objectives of current study were an empirical investigation on the relationship of personality type and technology involvement. The collected data were analyzed by using mean, standard deviation, t-test and Pearson product moment correlation. All statistical analyses were carried out using the statistical program IBM SPSS Version 25.0.

Table 2

Difference in Technology Involvement in term of Level of Education and Gender

<i>Variables</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
<u>(Education Level)</u>				
College	226.96	70.89	2.105	.037
University	209.11	45.77		
<u>(Gender)</u>				
Male	218.80	57.43	.17	.87
Female	217.33	62.88		

The result indicated that the difference among college and university students in terms of technology involvement was significant ($t = 2.105, p < .05$). Further, the findings revealed that the mean score of college students ($M = 226.96$) was higher than the university students ($M = 209.11$). Moreover, the result indicated that the difference between male and female students in technology involvement was not significant.

Table 3

Differences in Personality Traits and Technology Involvement Constructs among College and University Students

<i>Variables</i>	<i>College (M₁)</i>	<i>University (M₂)</i>	<i>t</i>
Extraversion	25.12	22.51	4.41**
Neuroticism	22.52	24.32	-2.81**
Conscientiousness	30.69	24.30	9.83**
Agreeableness	30.45	21.33	13.20**
Openness	34.86	24.32	14.84**
Email	15.94	13.81	1.34(.18)
Mobile	86.17	85.27	.01(.77)
TV	17.87	13.41	3.92**
Media Sharing	14.87	9.61	4.59**

(Continued)

Internet Searching	23.98	24.11	-.09(.93)
Video game	12.63	8.31	3.58**
Social Media	55.80	53.97	.74(.46)

Note. ** $p < .01$.

Results in above the table illustrated that, significant difference is seen among five personality traits [extraversion ($t = 4.41, p < .01$); neuroticism ($t = -2.81, p < .01$); conscientiousness ($t = 9.83, p < .01$); agreeableness ($t = 13.20, p < .01$) and openness ($t = 14.84, p < .01$)] of the both college and university students. Similarly, significant difference is observed in watching TV ($t = 3.92, p < .01$), media sharing ($t = 4.59, p < .01$) and video gaming ($t = 3.58, p < .01$) of them.

Table 4

Correlation of Technology Involvement with Personality Traits

Variables	1	2	3	4	5	6
1. Extraversion	-					
2. Neuroticism	-.35**	-				
3. Conscientiousness	.65**	-.36**	-			
4. Agreeableness	.38**	-.41**	.68**	-		
5. Openness	.43**	-.35**	.65**	.72**	-	
6. Technology Involvement	-.02	.05	.10	-.01	.02	—

Note. ** $p < .01$.

As shown in Table 4, findings demonstrated that there was no significant relationship exist between technology involvement and five factors of the personality [extraversion ($r = -.02$), neuroticism ($r = .05$), conscientiousness ($r = .10$), agreeableness ($r = -.01$), and openness ($r = .02$),] of both college and university students. In addition, the result indicated that personality traits were significantly associated with each other.

Discussion

The present study was carried out to explore the relationship between personality type and involvement with technology of college and university students. To examine this objective, data were collected form student of different university and college.

First objective was to explore the difference in technology involvement between college and university students. Table 2 indicated that significant difference between university and college students in technology involvement was found. Moreover, college students were found more involved in technology-based activities comparing university students. Regarding this finding it can be mentioned that, to accomplish

various developmental goals college students use more technology, for instance, identity development and establishment or maintenance of intimate relationships (Arnett, 2004). Moreover, most of the college students were belonged in the adolescence period so, most of them, can't cope up with their family members, relatives, friends and others account of their emotional instability and others changes. So, they feel lonely, depressed and anxious about their surrounding matters and to get rid of this situation they engaged in different technology activities (*i.e.*, face book, internet browsing, video games, E-mail etc.).

Second objective was to explore the difference in technology activities between male and female students. There was no significant gender difference observed in technology involvement (Table 2). This finding is supported by previous researches (Goswami & Dutta, 2016). Now-a-days technology has become easily accessible for everyone so, the uses of information technology have expanded dramatically for both male and female. Though in many cases, the purposes of technology usages are different for male and female individuals but due to diverse necessity their involvement is equal in this advanced culture. That's why the discrepancy between male and female found indifferent in the usages of different technologies.

Third objective was to explore whether there is any difference in personality traits and technology involvement constructs (E-mail, mobile phone, watching TV, media sharing, internet searching, video gaming, general social media) of college and university students. Findings revealed that, regarding five personality traits (extraversion, neuroticism, conscientiousness, agreeableness and openness) significant difference was found among college and university students. Further, significant difference was also observed in watching TV, media sharing, and video gaming of them. These findings supported by previous study (McCabe & Meuter, 2011, Margaryan et al., 2011)

Finally, **fourth objective** was to see whether any relationship exist between personality traits and technology involvement of the college and university students. Result presented in table 4 revealed that big five personality dimensions have no significant association with technology involvement of the students. This finding is partially consistent with previous studies (*i.e.*, McElroy 2011, Svendsen et al., 2013).

The present study is not beyond the limitations, Firstly, the sample of the present study was selected only from Dhaka city, Secondly, the media and technology usage were only measured to see the involvement if the attitude was measured as well the picture might be found different.

To reiterate, as technology use continues to rise, especially among young people (Rideout, Foehr, & Roberts, 2010), college and university administrators increasingly are feeling pressure to keep their institutions at the cutting edge in technology and urge faculty to utilize technology in their teaching to attract students and facilitate learning. In light of above findings, it is therefore concluded

that while many researchers, education psychologists, teachers, policy makers, students as well are trying to find out the most important determinants related to technology involvement this study will help them to comprehend the importance of personality traits factors.

References

- Agarwal, R., & Prasad J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences*, 30(2), 361–391.
- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: Holt, Rinehart, Winston.
- Amichai-Hamburger, Y., & Vinitzky, G. (2010). Social network use and personality. *Comput. Hum. Behav*, 26(6), 1289-1295.
- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York, NY: Oxford University Press.
- Barnett, T., Pearson, A. W., Pearson, R., & Kellermanns, F. W. (2015). Five-factor model personality traits as predictors of perceived and actual usage of technology. *European Journal of Information Systems*, 24, 374-390.
- Barrick, M., & Mount, M. (1991). The big five personality dimensions and job performance: A meta analysis. *Personnel Psychology*, 44(1), 1-26.
- Costa, P. T. Jr., & McCare, R. R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual. Odessa, Florida: Psychological Assessment Resources, Inc.
- Devaraj, S., Easley, R. F, & Crant J. M. (2008). How does personality matter? Relating the five-factor model to technology acceptance and use. *Information Systems Research*, 19(1), 93-105.
- Educause Center for Applied Research [ECAR] (2012). ECAR study of undergraduate students and information technology. Louisville, CO: Educause Center for Applied Research.
- Erkuş, A., & Tabak, A. (2009). Beş faktör kişilik özelliklerinin çalışanların çatışma yönetim tarzlarına etkisi: Savunma sanayiinde bir araştırma. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 23(2), 213-242.
- Gaston, J. (2006). 'Reaching and Teaching the Digital Natives'. *Library Hi Tech News*, 23(3), 12-13.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *The American* (1), 26- 34.
- Goswami, A., & Dutta, S. (2016). Gender Difference in Technology Usage- A Literature Review. *Open Journal of Business and Management*, 4, 51-59.

- Gu, X., Zhu, Y., & Guo, X. (2013). Meeting the "Digital Natives": Understanding the acceptance of technology in classrooms. *Educational Technology & Society, 16*(1), 392-402.
- Halac, H. H., & Cabuk, A. (2013). Open courseware in design and planning education and utilization of distance education opportunity: Anadolu University experience. *Turkish Online Journal of Distance Education, 14*(1).
- John, O. P., & Naumann, L. P. (2010). Surviving two critiques by block? The resilient big five have emerged as the paradigm for personality trait psychology. *Psychological Inquiry 21*(1), 44–49.
- Khan, Z. R., & Subramanian, S. (2011). Libraries opt for more online sources, in: IEEE International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 11), University of Bridgeport.
- Landers, R. N., & Lounsbury, J. W. (2006). An investigation of big five and narrow personality traits in relation to internet usage. *Computers in Human Behavior, 22*(2), 283–293.
- Liu, Y., Li, H., & Hu, F. (2013). Website attributes in urging online impulse purchase: An empirical investigation on consumer perceptions. *Decision Support Systems 55* (3), 829–837.
- Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers and Education, 56*, 429-440.
- McCabe, D. B., & Meuter, M. L. (2011). A student view of technology in the classroom: Does it enhance the seven principles of good practice in undergraduate education? *Journal of Marketing Education, 33*(2).
- McCrae R. R., & Costa P. T. (1989). Rotation to maximize the construct validity of factors in the NEO personality inventory. *Multivariate Behavioral Research, 24*(1), 107-124.
- McElroy, J. C., Hendrickson A. R, Townsend, A. M., & Demarie, S. M. (2007). Dispositional factors in internet use: Personality versus cognitive style. *MIS Quarterly, 31*(4), 809-820.
- Muhammad, N., Rahman, M. E. A., Hoque, A. & Semul, A. S. P. (2011). Bangla adaptation of Big Five Personality test. Unpublished manuscript, Department of Psychology, Jagannath University, Dhaka, Bangladesh.
- Orji, R. (2010). Impact of Gender and Nationality on Acceptance of a Digital Library: An Empirical Validation of Nationality Based UTAUT Using SEM. *Journal of Emerging Trends Computing and Information Sciences, 1*, 68-79.
- Pramatari, K., & Theotokis, A. (2009). Consumer acceptance of RFID enabled services: A model of multiple attitudes, perceived system characteristics, and individual traits. *European Journal of Information Systems 18*(6), 541–552.

- Payne, S. C., Youngcourt, S. S., & Beaubien, J. M. (2007). A meta-analytic examination of the goal orientation nomological net. *Journal of Applied Psychology, 92*(1), 128-150.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 1–6.
- Rahim, R. (2019). Correlation coefficient of adapted scale of media and technology usages and attitude. Unpublished research work, Jagannath University Seminar Library, Dhaka.
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). *Generation M2: Media in the lives of 8- to 18-year-olds (Publication Number 8010)*. Retrieved from the Kaiser Family Foundation website: <http://www.kff.org/entmedia/8010.cfm>
- Rosen, L. D., Whaling, K., Carrier, L.M., Cheever, N.A., & Rökkum, J. (2013). The media and technology usage and attitudes scale: An empirical investigation. *Comput Human Behav. 29*(6), 2501–2511.
- Ross, C., Orr, E. S., Sistic, M., Arseneault, J. M., Simmering, M.G., & Orr, R. R. (2009). Personality and motivations associated with FB use. *J. Comput. Mediate Commun. 25*(2), 578-586.
- Salajan, F. D., Schönwetter, D. J., & Cleghorn, B. M. (2010). Student and faculty inter-generational digital divide: Fact or fiction? *Computers & Education, 55*, 1393-140.
- Shahinuzzaman, M. (2017). Adapted scale of media and technology usages and attitude. Unpublished research work, Jagannath University Seminar Library, Dhaka.
- Svendsen, G. B., Johnsen, J. K., Almas-Sorensen L., & Vitterso, J. (2013). Personality and technology acceptance: The influence of personality factors on the core constructs of the technology acceptance model. *Behavior and Information Technology, 32*(4), 323-334.
- Venkatesh, V., Morris M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425-478.
- Wehrli, S. (2008). *Personality on social network sites: An application of the Five Factor Model*, 9, 38.
- Zmud, R. W. (1979). Individual differences and MIS success: A review of the empirical literature. *Management Science, 25*(10), 966-979.

Human Capital as a Predictor of Job Performance of the Executive Level Employees

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Abstract

The present study was designed to investigate the relationship between human capital and job performance of the executive level employees. A questionnaire package comprising of: 1) Job Performance Scale, 2) Work Motivation Scale, 3) Organizational Commitment Scale, 4) Social Skill Scale and a Personal Information Form were used to collect data from a sample of 200 executive level employees of Dhaka city. The obtained data were analyzed by applying descriptive and inferential statistical techniques. Results of correlation coefficients showed that human capital (i.e., work motivation, organizational commitment, and social skill) and job performance were positively correlated with one another. The findings of multiple regression analysis indicated that human capital could predict job performance both individually and jointly where work motivation ($\beta = .295, p < .001$) was found to be the strongest predictor of job performance. Therefore, these findings would help researchers, practitioners and managers to have better and clearer understanding on the nature of human capital and its relationship with job performance. The implications of the findings have been interpreted in the light of previous studies.

Keywords: human capital, work motivation, social skill, organizational commitment, job performance

Introduction

Job performance plays an important role for growth and development of an organization, where an individual's job performance contributes highly to overall organizational effectiveness and success (Korkaew & Suthinee, 2012). It refers to how well someone performs at his or her work. A good employee performance is necessary for the organization, since an organization's success is dependent upon the employee's creativity, innovation and commitment (Kreisman, 2002). It is one of the most important dependent variables of interest to educators, the government, businesses and society for assessing the performance of an entity over longer term horizon. It is found in empirical studies that human capital is the key driver among the variables driving job performance. Although job performance is dependent on various aspects, there is a strong relationship between human capital and employee

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job performance (Milkovich & Wigdor, 1991). Human capital is described as the combination of abilities and knowledge that an employee achieves from his or her prior academic achievement, training on the job and other complementing skills (Unger, Rauch Frese, & Rosenbusch, 2009). It is an important input for organizations especially for employees' continuous improvement mainly on knowledge, skills, and abilities (Rastogi, 2000). It has several dimensions i.e. intelligence, knowledge, visions, technical skills, social skills, confidence, self-stem, flexibility, creativity, enthusiasm, motivation, commitment, persistence, honesty and emotional maturity (Adler & Kwon, 2002). These features are quite necessary to improve the competency of the workforce (Shih, Liu, Jones, & Lin, 2010). In the present study, work motivation, organizational commitment, and social skill are used as the dimensions of human capital.

Work motivation is a set of energies that originate both within as well as beyond an individual being, to initiate work-related behavior and to determine its form, direction, intensity, and duration (Pinder, 2008). Organizational commitment is considered as most important concept which influences turnover and job performance (Chen & Francesco, 2003). It is believed that employees with strong organizational commitment will work harder in order to contribute to organization's performance. Commitment refers to a person's dedication to a person, job or organization (Meyer & Allen, 1997). Social skills are also called people skills. The set of social skills include respect for others, mutual regard, commitment, openness, tolerance, empathy, negotiation, communication etc. (Schultz, 2011). These are the ability to interact with others that are considered as fundamental to human development (Odom, McConell, & McEvoy, 1992).

Nowadays, work motivation becomes a very important element in every employee because it can influence employees to perform well in their job. It can increase an employee's ability and strengthens in his/her interest work so that the employee can work properly. Said, Zaidee, Zahari, Ali, and Salleh (2015) conducted a study on 169 nonacademic staff in UiTMT and said that motivation can be a valuable tool in measuring the level of job performance because it can boost up the level of performance. Supriadi and Sefnedi (2017) also observed that motivation have a positive and significant effect on job performance. It means employees who motivated to have high achievement, affiliation, and power; they could achieve high job performance.

Suliman and Lles (2000) investigated the organizational commitment and employee performance in three industrial units and found positive relationship between them. Becker (1993) conducted a study on 1803 members of graduating class and found positive relationship between commitment and job performance. Research also showed that people with strong social skill also reported higher performance ratings (Ferris, Perrewé, & Douglas, 2002). Individuals with strong social skill are more successful at maintaining intimate, high quality relationships and are more likely to

receive higher performance evaluations from their supervisors (Riggio & Zimmerman, 1991). Ferris, Witt and Hochwarter, (2001) conducted a study on customer service employees of a telecommunications firm and found that social skill has both main and interactive effects on job performance.

Figure 01 represents the proposed research framework in this study. Based on the framework, it can be seen that human capital, namely work motivation, organizational commitment and social skill, is associated with job performance directly and indirectly.

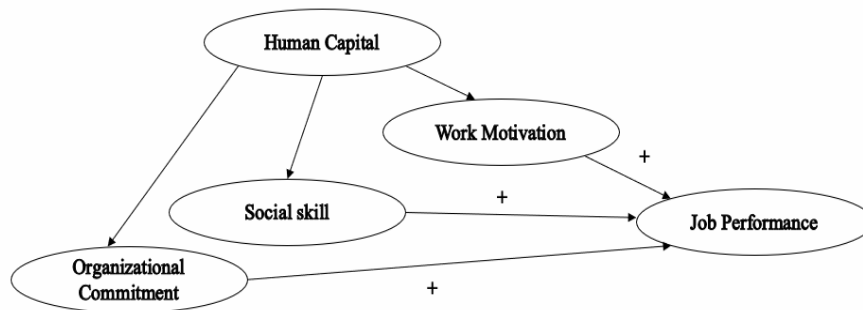


Figure 1: Theoretical framework based on the nature of relationship

Rationale of the study

In the present globalized market, it is essential for organizations to reach the best performance level because day-by-day organizations are constantly exposed to heightened level of competitions (Owen, Munday, Guild, & Guild, 2001). So, it has become essential for organizations to rely on their human capital as resourceful assets (Marimuthu, Arokiasamy, & Ismail, 2009). There is considerable research evidence suggested that human capital like work motivation, organizational commitment and social skill has significant impact on job performance of the employees. For example, Chaudhary and Sharma (2012) stated that employee motivation is positively correlated to job performance. Suliman and Lles (2000) investigated that organizational commitment is positively correlated with job performance. Research has shown social skill to demonstrate main effect associations on training efficacy (Ferris, Davison, & Perrewe, 2005) and main and interactive effect relationships on job performance (Witt & Ferris, 2003). However, all these studies so far have been conducted in foreign cultures to see the direct relationship between human capital and job performance. The previous researchers were not able to find out the relative importance of predictors as well as the individual effect of each predictor on job performance. So, the present study was designed to investigate relationship between human capital and job performance as well as to explore the predictors and their relative importance in the context of Bangladesh. This knowledge may be beneficial not only to academicians but also to employers and employees in every enterprise. The study will help the researcher to widen his/her

understanding of the link between employee performance and the human capital potential. It creates an opportunity to develop the research skills which will be relevant in future undertakings in academia or business institutions. The findings of this study will also add to the body of knowledge in the academic world as the finding of the study will serve as a stepping stone for further researchers on the same or similar topics by guiding towards areas for further studies.

Objectives

The objectives of the present study were to explore

1. the relationship between human capital (i.e., work motivation, organizational commitment and social skill) and job performance.
2. whether human capital predicts the job performance individually and jointly.

Hypotheses

On the basis of the above discussion and literature review the following hypotheses were formulated to examine for the present study:

- H₁: Human capital (i.e. work motivation, organizational commitment and social skill) will be positively associated with job performance.
- H₂: Human capital will predict the job performance individually and jointly.

Methods

Participants

A total of 200 executive-level employees who worked in corporate settings where job appraisals are structured and objective (e.g., large private commercial bank and financial institutions, multinationals, and top local corporations) were selected for this study. Both male and female participants were taken from different areas of Dhaka city following the purposive sampling technique. The details of sample characteristics are shown in Table 1.

Table 1

Brief Description of Sample According to Demographic, Personal and Social Variables

Variables	Levels	N	Percentage
Gender	Male	174	87
	Female	26	13
Age	25 to 35	129	64.5
	36 to 45	58	29.0
	46 to 55	13	6.5
Educational Qualification	Honors/BBA	59	29.5
	Masters/MBA	140	70.0
Job Experience	Less than 5 years	143	71.5
	5 Years to 10 Years	55	27.5
	11 Years to 20 Years	2	1.0

Design

A cross-sectional survey design was used for conducting the present study. This design indicates that all data were collected at a single point in time.

Measures

All participants in this research responded to the following four self-report questionnaires along with the demographic form. All questionnaires were administered in Bangla version. The four measures and a demographic form are included below:

Personal Information Form (PIF)

The PIF was used to elicit demographic, personal, and social information about respondents age, gender, educational qualification, socio-economic status, marital status, experience as manager, total length of service, name of institution, monthly income etc.

Job Performance Scale (JPS)

This scale was used to measure to employees' performance at their work place. The scale originally developed by Wiedower, (2001) and adapted by Semul and Muhammad (2013) in terms of socio-cultural context of Bangladesh. The original scale has reported to good reliability co-efficient ranging from .88 to .96. The scale is a 5-point Likert types consisting of 5 items. The response options are unsatisfactory = 1, averagely satisfactory = 2, satisfactory = 3, highly satisfactory = 4, extremely satisfactory = 5. The sum of the scores of all the items was the total score of this scale for an individual. The possible score ranges from a low of 5 to a high of 25. High scores indicate high job performance. The test-retest and split-half reliabilities of the Bangla version of job performance scale (Semul & Muhammad, 2013) were found significant ($r = .82$ & $r = .84$). High Cronbach's alpha ($\alpha = .88$) of Bangla version indicated internal consistency of the scale. In this research, coefficient of alpha ($\alpha = .73$) was calculated through pilot study. The value of alpha further suggests that inter-item consistency of this scale was very high.

Work Motivation Scale (WMS)

To measure employees' work motivation Bangla version of this scale (Zaman & Khanam, 2013) was used in the present investigation. Original version of this validated scale was developed by Patchen (1970); Patchen, Plez and Allen (1965); Baldwin (1990). Patchen's original four-item scale and achieved an acceptable level of internal reliability ($\alpha = .68$). In 2003, again Bradley added another item to assess the degree of persistence in an employee's work-related behavior ("I am willing to start work early or stay late to finish a job"). The statements of the questionnaire are formed both in the positive and negative. For each item the respondents expressed their feelings in a five-point scale ('totally disagree' = 1, 'disagree' = 2, 'not sure' = 3, 'agree' = 4, 'totally agree' = 5) to increase its sensitivity. Among the 6 items, three

items were positive and three were negative. The sum of the scores of all items was the total score for an individual. A high score indicates high work motivation. In this research, coefficient of alpha ($\alpha = .67$) was calculated through pilot study.

Organizational Commitment Scale (OCS)

Bangla version of this scale was used for the current investigation that was originally developed by Mowday, Steer, and Porter (1979). The 15 items (8 positive and 7 negative) of this self-report questionnaire assess employee's commitment about their current job. For each item the respondents expressed their feelings about their job in a seven-point scale (i.e. 'strongly disagree' = 1, 'moderately disagree' = 2, 'little disagree' = 3, 'neutral' = 4, 'little agree' = 5, 'moderately agree' = 6, 'strongly agree' = 7). For positive items, scoring is 1 to 7 and for negative items scoring is reversed in order (7 to 1). The sum of scores of all the items was the total score for an individual. The possible score ranges from a low of 1 to a high of 105. High scores indicate high organizational commitment. The test-retest reliability of the Bangla version of organizational commitment scale (Muhammad & Shemul, 2012) was found significant ($r = .85$). High Cronbach's alpha ($\alpha = .86$) of Bengali version indicated internal consistency of the scale. In this research, coefficient of alpha ($\alpha = .85$) was calculated through pilot study and it suggests that inter-item consistency of this scale was very high.

Social Skill Scale (SSS). The Social skill scale originally developed by Wu (2008) and adapted in Bangla by Muhammad and Rathi (2017). This scale was developed to measure the social skill of adults. It comprises of 30-item questions. Those items are social presentation, social scanning and social flexibility related. It takes 5-7 minutes to complete. The possible score ranges from a low of 30 to a high of 150. To ascertain the reliability of the instrument, it was administered on 30 respondents who were executive level employees. Analysis of the social skill scale revealed that internal consistency (Cronbach's Alpha, $\alpha = 0.89$) was very high. This value indicated that the Bangla version of social skill scale was reliable and valid. The guidelines of the International Test Commission (ITC) (2010) were followed to adapt the social skill scale in the context of Bangladesh.

Procedures

For collecting proper information from participants, at first, permission was taken from concerned authority for data collection and rapport was established with participants. Participants were informed about the purpose and necessity of the present research in the context of Bangladesh and also assure them the confidentiality of the responses. After that, the respondents were requested to fill up personal information fields. When the personal information fields were filled up, the booklet containing the four scales in Bangla version were given to them. The respondents went through with the instructions given on the front page of the booklet. After the respondents completing the task according to the instructions, the inventory booklet

was collected from the respondents. After collecting information, the respondents were thanked for their cooperation in the study. To complete the entire questionnaire, approximately 30 - 40 minutes were required.

Results

According to objectives of the study the results have been presented into two parts. In the first part, mean, standards deviations and correlation coefficients of the dependent and independent variables were presented in Table 2. In second part, the individual and joint effects of predictor variables on job performance were reported in Table 3 and Table 4.

Table 2

Mean, Standard Deviation and Correlation Matrix of the Work Motivation, Organizational Commitment, Social skill and Job Performance

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
1. Work motivation	22.01	3.13	-			
2. Organizational commitment	74.24	13.84	.387**	-		
3. Social skill	108.96	14.60	.440**	.236**	-	
4. Job performance	15.58	3.35	.488**	.389**	.429**	-

Note: ** $p < .01$.

As shown in Table 2, the mean scores of work motivation, organizational commitment, social skill and job performance of executive level employees were 22.01, 74.24, 108.96, and 15.58 respectively. Pearson Product Moment correlations of each independent variable with dependent variable are also presented in Table 2. The results indicated that work motivation had the largest correlation [$r(200) = .488$, $p < .01$] with managers job performance (dependent variable), social skill had second largest correlation [$r(200) = .429$, $p < .01$] with managers job performance and finally organizational commitment had the lowest correlation [$r(200) = .389$, $p < .01$] with managers job performance. That means, these variables were significantly and positively correlated to job performance. Results of Table 2 further indicated that there were strong inter-correlations among independent variables.

Table 3

Regression Coefficients of Job Performance on Human Capital Dimensions

Variable	<i>B</i>	<i>SEB</i>	Standardized beta (β)	<i>t</i>
Constant	-1.445	1.747		-.83
Work motivation	.315	.073	.295	4.29***
Social skill	.057	.015	.249	3.82***
Organizational commitment	.052	.015	.216	3.42**

Note. Dependent variable: Job performance; *B* = Unstandardized beta; *SEB* = Standard error; ** $p < .01$, *** $p < .001$.

The standardized betas (β) indicated that three variables in the model were predictors of employee job performance. Those variables were work motivation ($\beta = .295, p < .001$), social skill ($\beta = .249, p < .001$) and organizational commitment ($\beta = .216, p < .01$). Thus, work motivation was the strongest predictor. Standardized beta indicates that as work motivation increases by one standard deviation job performance increases by .295 standard deviation.

Table 4*Individual and Joint Effect of Human Capital on Job Performance*

Variables	R	R ²	Adjusted R ²	R ² Change	F Change	ANOVA for model fit
W.M.	.488	.238	.234	.238	61.78***	61.78***
W.M. & S.S.	.543	.295	.288	.057	15.99***	41.23***
W.M., S.S., & O.C.	.578	.334	.324	.039	11.61**	32.83***

Note. ** $p < .01$, *** $p < .001$.

W. M. =Work motivation; S. S.= Social skill; O. C.= Organizational commitment; R =Multiple correlation coefficient; R²=Variability; Adjusted R²=Model generalization.

Results of the regression analysis indicated that the strongest predictor of job performance was work motivation which alone explained 23.8% of variance. R² change indicated that 5.7% of variance in job performance was accounted for by the social skill and 3.9% of variance in job performance was accounted for by the organizational commitment. R² further indicated that these three variables accounted for 33.4% of variance in job performance. This interpretation was true if the effects of other predictors were held constant. Also, the significant F-test [$F(3, 196) = 32.83, p < .001$] of Table 4 indicated that the variation in job performance was accounted for by joint linear influences of work motivation, social skill and organizational commitment. Finally, values of ANOVA indicated that all the models fit significantly.

Discussion

The present study was designed to verify the two research objectives. In order to measure the variables of the present study four questionnaires with personal information form were applied on two hundred executive level employees selected from different business organizations in Dhaka city. The obtained data were analyzed by applying Pearson product moment method to determine the correlation coefficients among the dependent and independent variables which have been

presented in Table 2. To consider the individual and joint effects of independent variables on respondent's job performance, a stepwise multiple regression analysis was carried out. Results of multiple regression analyses have been presented in Table 3 and Table 4.

Two hypotheses were formulated to examine the present study. The first hypothesis stated that human capital (i.e. work motivation, organizational commitment and social skill) will be positively associated with job performance. Results presented in Table 2 indicated that work motivation ($r = .488, p < .01$) was significantly and positively correlated with job performance. This result is consistent with many investigators' research findings (e.g., Supriadi & Sefnedi, 2017). The reason behind this could be interpreted that employees who motivated to have high achievement, affiliation, and power, they could achieve high job performance. In favors of this finding, it can be assumed that a highly motivated employee tries his or her best in carrying out every aspect of his or her duties and responsibilities.

Table 2 indicated that social skill ($r = .429, p < .01$) and organizational commitment ($r = .389, p < .01$) were also significantly and positively correlated with job performance. These results were supported by some researchers' research findings (e.g., Suliman & Lles, 2000). It can be said that commitment can enhance feeling of security, efficacy, loyalty and duty and reduce absenteeism (Meyer & Allen, 1993). Research shows that people with strong social skill also reported higher performance ratings, number of promotions, and salaries (Ferris, Perrewé, & Douglas, 2002). Individuals with strong social skill are more successful at maintaining intimate, high quality relationships and are more likely to receive higher performance evaluations from their supervisors (Riggio & Zimmerman, 1991).

The second hypothesis states that human capital (i.e. work motivation, organizational commitment, and social skill) would predict job performance individually and jointly. Results presented in Table 3 and Table 4 indicated that work motivation, social skill and organizational commitment can predict job performance where work motivation ($\beta = .295, p < .001$) was the strongest predictor of job performance which alone explained 23.8% of variance in job performance. These findings are also supported by past research findings (e.g., Said, Zaidee, & Zahari, 2015). To explain this result, it may be said that employees' work motivation affects their performance. It is a concept used by one to utilize his work potential within himself to initiate and direct his attitude in work performance (Gibson Ivancevich, Donnelly, & Konopaske, 2009), thus it will affect employees' performance (Mindarti, 2005). This finding is also supported by a study conducted by Department of Educational Foundations and Counseling, Faculty of Education, Obafemi Awolowo University and found that intrinsic motivation significantly predicted job performance of industrial workers. This showed that 61.3 % of variance in industrial worker' job performance was accounted for by their intrinsic motivation. The findings therefore imply that intrinsic motivation would predict performance of industrial workers.

The second and third important predictors of job performance were social skill ($\beta = .249, p < .001$) which alone explained 5.7% of variance and organizational commitment ($\beta = .216, p < .01$) which alone explained 3.9% of variance in job performance respectively. These results are also supported by the findings of previous studies (e.g. Becker, 1993; Ferris, Witt & Hochwarter, 2001). From the research findings it may be said that employees who are committed to their organization, they are hard worker. As a result, their performance would be better. Again, individuals with strong social skill are more likely to receive higher performance evaluation.

The present study had some limitations. First, the study was conducted by way of gathering data through purposive sampling. It inherently assumes that no significant difference exists among executives working across organizations covered in this study. Thus, this doesn't capture the cross-sectional differences in the sample data. Second, the sample size was limited to 200; while the population of executive level employees is much larger resulting in sparse coverage. Third, the respondents were collected only from respondents based in Dhaka city. Thus, the results were very specific and may suffer from some degree of generalization issue. Four, among a number of aspects shaping up human capital, only three aspects were used to come up with this study.

Conclusion

The study may be carried out on broader set of respondents to come up with more generalized conclusion that can be utilized by HR managers and supervisors to augment the performance of the executives. They can regularly monitor motivation level of executives to identify the need of intervention when it falls below expected level. Further, they can provide training and guidance when the subject executives lack required level of work motivation, social skills and organizational commitment. These steps can greatly enhance individual as well as organizational performance.

References

- Adler, P. S., & Kwon, S. W. (2002). 'Social capital: prospects for a new concept'. *Academy of Management Review*, 27, 17-40. [http:// dx.doi= 10.11580.2211&rep=rep1&type=pdf](http://dx.doi.org/10.11580.2211&rep=rep1&type=pdf)
- Baldwin, J. N. (1990). Perceptions of public versus private sector personnel and informal red tape: Their impact on motivation. *American Review of Public Administration*, 20, 7-28.
- Becker, T. E. (1993). Foci and bases of commitment: Are they distinctions worth making? *Academy of Management Journal*, 35, 232-244.
- Chaudhary, N., & Sharma, B. (2012). Impact of employee motivation on performance (productivity) private organization. *International Journal of Business Trends and Technology*, 21(4), 29 – 35

- Chen, Z. X., & Francesco, A. M. (2003). The relationship between the three components of commitment and employee performance in china. *Journal of Vocational Behavior* 62, 490-510. DOI: 10.5897/AJBM10.1623
- Ferris, G. R., Davidson, S. L., & Perrewé, P. L. (2005). Political skill at work. Mountain View: Davies-Black Publishing.
- Ferris, G. R., Perrewé, P. L., & Douglas, C. (2002). Social effectiveness in organizations: Construct validity and research directions. *Journal of Leadership & Organizational Studies*, 9, 49-63.
- Ferris, G. R., Witt, L. A., & Hochwarter, W. A. (2001). Interaction of social skill and general mental ability on job performance and salary. *Journal of Applied Psychology*, 86, 1075–1082. Retrieved from <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/5542/research.pdf?sequence=3>
- Gibson, J. L., Ivancevich, J. M., Donnelly, J. H., & Konopaske, R. (2009). *Organisations: Behaviour, Structure, Processes* (14th ed.). New York, NY: McGraw- Hill.
- Korkaew, J., & Suthinee, R. (2012). Factors affecting job performance: A review of literature. Silpakorn University. *Journal of Social Sciences, Humanities, and Arts*, 12(2), 115-127.
- Kreisman, B. J. (2002). Identification of the drivers of employee dissatisfaction and turnover. Doctoral dissertation, University of Texas. DOI =10.1.1.582.5654.
- Marimuthu, M., Arokiasamy, L., & Ismail, M. (2009). Human capital development and its impact on firm performance: Evidence from developmental economics. *Journal of International Social Research*, 2(8), 265-272.
- Meyer, J.P., Allen, N.J., & Smith, C.A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78(4), 538-51.
- Meyer, J., & Allen, N. (1997). *Commitment in the Workplace: Theory, research, and application*, Sage Publications.
- Milkovich, G. T., & Wigdor, A. K. (1991). Pay for performance: Evaluating performance appraisal and merit pay. National academy press: Washington.
- Mindarti, L. I. (2005). *Revolusi Administrasi Publik: Aneka Pendekatan dan Teori*. Malang: Partner Press.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.
- Muhammad, N. & Rathi, S. R. (2017). Bangla adaptation of the Social Skill Scale, Unpublished research project. Department of Psychology. Jagannath University, Dhaka.
- Muhammad, N., Rahman, M. E. A., Hoque, A., & Semul, A. S. P. (2012). Bangla adaptation of the Organizational Commitment Scale. Department of Psychology. Jagannath University, Dhaka.
- Odom, S.H., McConell, S. R., & McEvoy, M. A. (1992). *Social Competence of Young Children with Learning Disabilities: Issues and Strategies for Intervention*. Baltimore: Brooks.
- Owen, K., Mundy, R., Guild, W., & Guild, R. (2001). Creating and sustaining the high-performance organization. *Managing Service Quality*, 11(1), 10-21.

- Patchen, M. (1970). *Participation, achievement, and involvement on the job*. Engelwood Cliffs: Prentice-Hall.
- Patchen, M., Pelz, D., & Allen, C. (1965). Some questionnaire measures of employee motivation and morale. Institute for Social Research: Ann Arbor, MI.
- Pinder, C. C. (2008). *Work motivation in organizational behavior* (2nd edition). New York, NY: Psychology Press. doi: 10.1146/annurev.psych.55.090902.142105
- Rastogi, P. (2000). Sustaining enterprise competitiveness—is human capital the answer? *Human Systems Management, 19*(3), 193-203.
- Riggio, R. E., & Zimmerman, J. (1991). Social skills and interpersonal relationships: Influences on social support and support seeking. *Advanced in Personal Relationships, 2*, 133-155.
- Said, N. S. M., Zaidee, A. S. E. A., Zahari, A. S. M., Ali, S. R. O., & Salleh, S. M., (2015). Relationship between employee motivation and job performance: A study at Universiti Teknologi MARA (Terengganu). *Mediterranean Journal of Social Sciences, 6*. Doi:10.5901/mjss. 2015.v6n4s2p632
- Schultz, H. (2011). Acquiring social skills - the key to professional success. Retrieved from *Magazine for International Management*.
- Semul, A. S. P., & Muhammad, N. (2013). Bangla version of Employee Job Performance Scale, Department of Psychology, Jagannath University, Dhaka, Bangladesh.
- Shih, K., Liu, Y., Jones, C., & Lin, B. (2010). The indicators of human capital for financial institutions. *Expert Systems with Applications, 37*(2), 1503-1509.
- Suliman, A., & Iles, P. (2000). Is Continuance Commitment Beneficial to Organizations? Commitment- Performance Relationship: A New Look. *Journal of Managerial Psychology 15*, 407-426.
- Supriadi & Sefnedi (2017). The Effect of Emotional Intelligence and Organizational Cynicism on Job Performance: The role of motivation as mediator. *IOSR Journal of Business and Management, 19*(3), 101-107. DOI: 10.9790/487X-190302101107
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2009). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing, 26*(3), 341-358. <https://books.google.com.bd/books>
- Wiedower, K. A. (2001). Development of a scale for measuring employee job performance. *Journal of vocational Behaviors, 19*, 215-229.
- Witt, G. R., & Ferris, L. A. (2003). Social skill as moderator of the conscientiousness performance relationship: Convergent results across four studies. *Journal of Applied Psychology, 88*, 809-820.
- Wu, Y. H. (2008). Social skill in the workplace: What is social skill and how does it matter? University of Missouri, Columbia. Retrieved from <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/5542/research.pdf?sequence=3>
- Zaman & Khanam (2013). Bangla adaptation of the Work Motivation Scale, Department of Psychology. Jagannath University, Dhaka, Bangladesh.

Stress and Life Satisfaction of Parents of Autism Spectrum Disordered Children

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Abstract

The present study aimed to compare stress and life satisfaction of parents of autism spectrum disordered children with parents of normal children. Parents in general are apt to experience parenting stress (Anthony, Anthony, Glanville, Naiman, Waanders, & Shaffer, 2005), while parents of children with developmental disorders, such as cerebral palsy (CP), autism, and intellectual disabilities, tend to suffer from higher parenting stress (Baker, McIntyre, Blacher, Crnic, Edelbrock, & Low, 2003). The sample comprised of conveniently selected 60 parents (30 parents of normal children and 30 parents of ASD children) from different areas of Dhaka City. The instruments used were Bangla version (Ilyas, 2001) of Diener, Emmons, Larsen, and Griffin's (1985) Satisfaction with Life Scale (SWLS) and translated version of Parenting Stress Scale (PSS) (Berry & Jones, 1995). Results indicated that, parental stress and life satisfaction have significant negative correlation with child's ASD. It is also found that there is a significant difference in stress and life satisfaction of parents with and without ASD children.

Keywords: autism spectrum disorder, stress, life satisfaction

Introduction

Parenting is an amazingly complex, exhausting, responsible, and at times unrewarding job, yet is accomplished with dedication, pleasure, and love. While parenting is a challenging task in general, it can be further complicated by child or parent difficulties such as developmental disorders in the child as well as in the parent, and their interaction. For example, a child with autism spectrum disorder may require more consistent parenting than other children. Autism spectrum disorder (ASD) is a complex neurological and developmental disorder that begins early stage in life and affects how a person acts and interacts with others, communicates, and learns. ASD affects the structure and function of the brain and nervous system. ASD can last throughout a person's life. People with this disorder have problems with communication and interaction with other people, restricted interests and repetitive behaviors (APA, 2013). Different people with ASD can have different

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symptoms. Symptoms can range from mild to severe and often change over time. Some identifiable symptoms are:

1. Social interaction and communication problem, including difficulties in normal conversation, lack of sharing of interests or emotions, challenges in understanding or responding to social cues such as eye contact and facial expressions, deficits in developing, maintaining, understanding relationships, and others.

2. Difficulty relating to people, things and events, including trouble making friends and interacting with people, difficulty reading facial expressions and not making eye contact.

3. Restricted and repetitive pattern of behaviors, interests and activities, including hand-flapping and toe-walking, playing with toys in an uncommon way (such as lining up cars or flipping objects), speaking in a unique way (such as using odd patterns or pitches in speaking or "scripting" from favorite shows), having significant need for a predictable routine or structure, exhibiting intense interests in activities that are uncommon for a similarly aged child, experiencing the sensory aspects of the world in an unusual or extreme way (such as indifference to pain/temperature, excessive smelling/touching of objects, fascination with lights and movement, being overwhelmed with loud noises, etc.), and others. While many people with ASD have normal intelligence, many others have mild or significant intellectual delays. Also, those with ASD are at greater risk for some medical conditions such as sleep problems, seizures and mental illnesses (Frieden, Jaffe, Cono, Richards, & Iademarco, 2014).

Parents who raise a child with autism are faced with unique challenges. Manifestations of ASD vary greatly depending on the developmental level and chronological age of the child and may include a number of behavioral symptoms such as hyperactivity, impulsivity, aggression, self-injurious behavior, temper tantrums, and delayed toilet training (Duarte, Bordin, Yazigi, & Mooney, 2005). Parents of autistic children tend to report lower quality of life, more depression, and greater pessimism about the future than parents of typically developing children, as well as parents of children with other developmental disabilities (Cappe, Wolff, Bobet, & Adrien, 2011; Johnson, Frenn, Feetham, & Simpson, 2011). A recent meta-analysis found that parents of autistic children also had higher levels of parenting stress compared to others, with large effect sizes indicated (Hayes & Watson, 2013). The severity of a child's autism symptoms and behaviors has consistently been found to be one of the strongest predictors of parental stress (Davis & Carter, 2008; Ingersoll & Hambrick, 2011; Lyons, Leon, Phelps, & Dunleavy, 2010).

Another factor impacting parental well-being is the shame often experienced by parents of children with autism. For instance, parents may receive censure and disapproval from strangers for not being able to "control" their child (Gray, 1993;

Mak & Kwok, 2010). Because they have no physical markers of their condition, many just assume that the child is misbehaving. Judgment from others is often internalized into self-blame for not being a more effective parent (Fernandez & Arcia, 2004). Parents may feel that they are not making the right treatment choices; especially given the constant advice from others about what treatments they "should" be trying (Miller, Schreck, Mulick, & Butter, 2012). They may also experience feelings of guilt for not doing enough for their autistic child and for not doing enough for their typically developing children (Kuhn & Carter 2006). Parents may even irrationally blame themselves for causing their child's condition in the first place (Fernandez and Arcia 2004). This cascade of shame, guilt, and self-blame is a major contributor to parenting stress, depression, and anxiety (Cappe et al. 2011; Mak & Kwok, 2010).

Having a child with an ASD also can affect other areas of family functioning (Gray, 1994; Hutton & Caron, 2005; Montes & Halterman, 2008). Among 21 families of children with autism (Hutton & Caron, 2005), the majority of primary caregivers (66%) reported that parenting stress affected family factors such as having little time for family activities, lack of spontaneity or flexibility (i.e., having to plan ahead), and stress surrounding the marital relationship. Parents of children with ASD report job-related stress, with fathers citing career restrictions and mothers reporting limitations on their ability to maintain employment or pursue outside activities (Gray, 1994; Montes & Halterman, 2008). Both spouses reported giving up other aspects of family life such as family outings and vacations (Hutton & Caron, 2005; Montes & Halterman, 2008). In the first large survey study of parents of children with autism, Gray (1994) identified several family life restrictions, including becoming socially reclusive rather than risk possible embarrassment from their child's problem behavior.

Hence, there are three major factors which contribute to increase stress in parents of children with autism:

1. Child characteristics (including particular behavioral symptoms that associated with autism and other behavioral problems).
2. Lack of adequate professional support and unsatisfactory relationships between parents and professionals from the stage of autism diagnosis to limited access to medical and educational services for the child.
3. Social attitudes towards individuals with autism and lack of understanding for problem which they and their families experience.

In conclusion, stress is a particular type of an individual's relationship with the environment, which the individual appraises as putting certain demands or overextending his/her resources, and thus threatening his/her well-being (Lazarus & Folkman, 1984). Unsurprisingly, life satisfaction is very important in today's stressful life. Without satisfaction man cannot lead a peaceful and prosperous life.

Otherwise these all will break him. It is well-known that, life satisfaction refers to an individual's well-being, quality of life and happiness (Noone, Stephens, & Alpass, 2009). It also implies an individual's personal judgment of wellbeing and quality of life, based on his or her own chosen criteria (Diener, 1984). Generally, life satisfaction can be described as emotional interaction that person shows to the life defined as job, leisure time and other out of work time (Sung-Mook & Giannokopoulos, 1994).

Life satisfaction is the degree of contentment with one's own life style. It is an assessment of the overall conditions of existence as derived from a comparison of one's aspiration to one's actual achievement (Cribb, 2000). Life Satisfaction generally implies the pleasure that a person gets from his/her life. There is eminent that, parents also vary substantially in their ability to successfully respond to the challenges of having an autistic child. Some parents experience significant mental health problems, while others may have relatively few difficulties (Hastings & Taunt, 2002). These may vary their perceived stress of both personal and family life as well as the level of life satisfaction considerably.

Present investigation of parental stress will be imperative to provide an outline that will help to identify the basic influences which may contribute to the experience of stress. Further it will lead to more targeted investigations to support families and facilitate family functioning of ASD children. There are insufficient evidences are available concerning parental stress and their life satisfaction of ASD children. The present research on parenting stress and life satisfaction is focused on families of children with ASD to explore a valuable source of information to increase communal awareness about ASD to be more supportive towards the families of autistic children. The objectives of present studies are to investigate whether there is any relationship between parental stress and life satisfaction in parents of children with ASD. Present research will also investigate whether there is any difference in perceived stress and life satisfaction between parents of children with ASD and parents of normal children.

Methods

Participants

A total of 60 respondents (30 parents who have a child with ASD and 30 parents who have a child without ASD) were selected conveniently from different schools of special children and resource center in Bangladesh, such as, Blessing Child Special School, Autism Welfare Foundation as well as mainstream schools in Dhaka city. Both fathers and mothers of the children participated in the current study who had their age ranges from 25 to 45 years. Participants were from various educational (Secondary to post graduation) and socio-economic backgrounds (Upper/middle/lower class).

Measures

Personal information form (PIF). included participants' gender, age, child's age, income, socio-economic status etc.

Parenting stress scale (PSS)

The Parenting Stress Scale (PSS) was used to measure the levels of stress experienced by parents. The scale was originally developed by Berry & Jones (1995) as an alternative to the 101-item parenting stress index. The short version of the scale was individually translated by four experts from department of Psychology, University of Dhaka from original language (English) to the target language (Bangla). The synthesis of these translations used to as preliminary Bangla version questionnaire which was then translated back to the original language by a bilingual expert from department of English, University of Dhaka. The final questionnaire was administered over 20 participants as pilot study. It is a total of 18-item self-report scale; items represent positive (emotional benefits, personal development) and negative (demand on resources, restrictions) themes of parenthood. Respondents agree or disagree in terms of their typical relationship with their child or children. It is a 5-point scale; strongly disagree, disagree, undecided, agree, and strongly agree. To compute the parental stress score, items 1, 2, 5, 7, 8, 17, and 18 should be reverse scored as follows: (1=5, 2=4, 3=3, 4=2, 5=1). The rest of items were scored normally. Overall possible scores on the scale range from 18-90. The higher the score, the higher the measured level of parental stress. The parental stress scale demonstrated satisfactory levels of internal reliability ($r = .83$), and test-retest reliability ($r = .81$).

Satisfaction with life scale (SWLS)

The Bangla version (Ilyas, 2001) of Satisfaction with Life Scale (SWLS) was used to measure global cognitive judgments of participant's life satisfaction. A 5 items SWLS, originally developed by Diener, Emmons, Larsen and Griffin, (1985) is a 7 points Likert type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Individuals on the SWLS can be classified as extremely dissatisfied (5-9), dissatisfied (10- 14), slightly dissatisfied (15-19), neutral (20), slightly satisfied (21-25), satisfied (26-30) and extremely satisfied (31-35). The average inter-item correlation coefficient for the Bangla version of SWLS was .44 and cronbach's α (standardized) was $r = .79$.

Procedures

Parenting Stress Scale (PSS) and Life Satisfaction Scale questionnaires were used to collect information about parental stress and life satisfaction from the participants. The data from the respondents were collected personally at different schools of special children and normal children and different resources center in Bangladesh. The questionnaires were administered individually with a brief instruction and an introduction about the purpose of the study. Questionnaires were given to those who provided their consent and interested to participate.

Results

In analyzing the data, descriptive statistics, independent sample *t*-test, and the Pearson Product-moment correlation were used to attain the objectives. An alpha level of .05 was used for the independent sample *t*-test. An alpha level of .01 was used for the Pearson Product-moment correlation coefficient.

Table 1

Pearson Product-moment Correlation Coefficient of Parental Stress and Life Satisfaction of Parent with ASD Child

Variables	Life Satisfaction
Parental Stress	-0.643**

Note. ** $p < .001$.

Table 1 presents a negative correlation between parental stress and life satisfaction in parents of children with ASD. Results indicated that the correlation was significant.

Table 2

Mean Difference of Parental Stress between Parents with and without Autistic Child

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	
Parental Stress	Without ASD	30	40.40	10.6	-2.5	.017
	With ASD	30	50.13	7.00		

Table 2 presents the mean difference of average parental stress between parents of children with normal and ASD. Results indicated that the difference in average parental stress was significant between the two groups of parents.

Table 3

Mean Difference of Life Satisfaction between Parents of Normal and Autistic Child

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	
Life Satisfaction	Without ASD	30	24.17	5.8	4.3	.000
	With ASD	30	18.17	4.9		

Table 3 presents the mean difference in average life satisfaction between parents of children with normal and ASD. Results indicated that the difference in average life satisfaction was significant between two groups of parents.

Discussion

A total of 60 respondents (30 parents who have a child with ASD and 30 parents who have a child without ASD) were selected from different schools of special children and resource center in Bangladesh, such as, Blessing Child Special School, Autism Welfare Foundation as well as mainstream schools in Dhaka city. Pearson Product-moment correlation coefficient and independent sample *t*-test were used to analyze the data. Results indicated that parental stress and life satisfaction have significant negative correlation with child's ASD which was found consistent with previous findings (Baker, McIntyre, Blacher, Crnic, Edelbrock, & Low, 2003). It is also found that there is a significant difference of parental stress between parents of children with normal and ASD (Estes, Munson, Dawson, Kocher, Zhou, & Abbott, 2009). The present study also found that the difference of average parental stress and life satisfaction were significant between two groups of parents.

Furthermore, significant difference was evident of life satisfaction between parents of children with normal and ASD. Present study indicated that parents of children with ASD experienced greater stress in daily parenting hassles, family life events and changes, parenting stress and health stress. In comparison, parents with children who did not have ASD had a higher level of coping and greater satisfaction with life. In other words, greater satisfaction with life was inversely related to health stress, parenting stress.

Those parents who had children with ASD had a lower level of coping and more parenting stress, both of which were related to lesser life satisfaction. In this study, parents of children with ASD appeared to have a difficult time with life and parenting stress, an inability to cope effectively and health reactions that were all related to their satisfaction with life. As a result this group of parents experienced more overall parenting stress due to the continuous and ongoing pressures associated with children with special needs.

Many of the routine daily hassles and life events that all parents encounter tend to be intensified for them having children with ASD. These parents also have additional strains due to their children with disabilities requiring specialized supervision and enhanced caretaking, such as assistance with task completion and daily living skills. The pile-up of all of these stressors underscores the overall intense parental pressure for parents who have children with exceptional needs, while also working to support their families. Because the comparison sample was obtained within the same surrounding area, the generalization potential of this study is somewhat limited and the results may not be indicative of all parents who have children with ASD. Although there was a limited representation of subjects with racially and

economically diverse backgrounds, there is a definite need for studies addressing this component. Clearly, there are distinct differences between parents of children who have or do not have ASD.

References

- Anthony, L. G., Anthony, B. J., Glanville, D. N., Naiman, D. Q., Waanders, C., & Shaffer, S. (2005). The relationships between parenting stress, parenting behavior and preschoolers' social competence and behavior problems in the classroom. *Infant and Child Development*, 14, 133–154
- American Psychiatric association, (2013). *Diagnostic and Statistical Manual of Mental Disorders (5th ed.)* Washington, DC.
- Baker, B.L., & McIntyre, L.L., Blacher, J., Crnic, K., Edelbrock, C. & Low, C., (2003). Pre-school children with and without developmental delay: behaviour problems and parenting stress over time. *Journal of Intellectual Disability Research*, 47(4), 217-230.
- Berry, J.O., & Jones, W.H. (1995). The Parental Stress scale: Initial psychometric evidence. *Journal of Social and Personal Relationships*, 12, 463-472
- Cappe, E., Wolff, M., Bobet, R., & Adrien, J. (2011). Quality of life: a key variable to consider in the evaluation of adjustment in parents of children with autism spectrum disorders and in the development of relevant support and assistance programmes. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation*, 20(8), 1279–1294.
- Cribb, K. (2000). Life Satisfaction and Who Has It. *National Undergraduate Research Clearinghouse*, 3.
- Davis, N.O., & Carter, A. S., (2008). Parenting stress in mothers fathers of toddlers with Autism Spectrum Disorder; associated with child characteristics. *Journal of Autism development disorder*, 38, 1278-1291.
- Diener, E. (1984). Subjective Well-Being. *Psychological Bulletin*, 95(3) 542-575.
- Diener, E., Emmons, R. A., Larson, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71 – 75.
- Duarte, C. S., Bordin, I. A., Yazigi, L., & Mooney, J. (2005). Factors associated with stress in mothers of children with autism. *Autism*, 9, 416–427.
- Estes, A., Munson, J., Dawson, G., Kocheler, E., Zhou, X., & Abbott, R. (2009). Parenting stress and Psychological functioning among Mother of preschool children with autism and developmental delay. *Autism*, 13, 375-387.
- Fernandez, M. C., & Arcia, E. (2004). Disruptive behaviors and maternal responsibility: a complex portrait of stigma, self-blame, and other reactions. *Hispanic Journal of Behavioral Sciences*, 26, 356-372.

- Frieden, T.R., Jaffe, W.H, Cono, J., Richards, C.L., & Iademarco, M.F., (2014). Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years – Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2010. *Surveillance Summaries*, 63, 2.
- Gray, D. (1993). Perceptions of stigma: the parents of autistic children. *Sociology of Health & Illness*, 15(1), 102–120.
- Gray, D. E. (1994). Coping with autism: stresses and strategies. *Sociology of Health & Illness*, 16, 275–300.
- Hastings, R. P., & Taunt, H.M. (2002). Positive perceptions in families of children with developmental disabilities. *American Journal on Mental Retardation*, 107(2), 116–127.
- Hayes, S. A., & Watson, S. L. (2013). The impact of parenting stress: a meta-analysis of studies comparing the experience of parenting stress in parents of children with and without autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 43(3), 629–642. doi:10.1007/s10803-012-1604-y.
- Hutton, A. M., & Caron, S. L. (2005). Experiences of families with children with autism in rural New England. *Focus on Autism and Other Developmental Disabilities*, 20, 180-189.
- Ilyas, Q. S. M. (2001). Bangla version of Satisfaction with Life Scale. Unpublished Manuscript, Department of Psychology, University of Dhaka.
- Ingersoll, B., & Hambrick, D. Z. (2011). The relationship between the broader autism phenotype, child severity, and stress and depression in parents of children with autism spectrum disorders. *Research in Autism Spectrum Disorders*, 5(1), 337–344.
- Johnson, N., Frenn, M., Feetham, S., & Simpson, P. (2011). Autism spectrum disorder: parenting stress, family functioning and health related quality of life. *Families, Systems and Health*, 29(3), 232–252.
- Kuhn, J. C., & Carter, A. S. (2006). Maternal self-efficacy and associated parenting cognitions among mothers of children with autism. *American Journal of Orthopsychiatry*, 76, 564–575.
- Lazarus, R.S., & Folkman, S., (1984). *Stress, Appraisal & Coping*. Springer Publishing Company, Inc., NY.
- Lyons, A. M., Leon, S. C., Phelps, C. E. R., & Dunleavy, A. M. (2010). The impact of child symptom severity on stress among parents of children with ASD: the moderating role of coping styles. *Journal of Child and Family Studies*, 19, 516–524.
- Mak, W., & Kwok, Y. (2010). Internalization of stigma for parents of children with autism spectrum disorder in Hong Kong. *Social Science & Medicine*, 70, 2045–2051.

- Miller, V. A., Schreck, K. A., Mulick, J. A., & Butter, E. (2012). Factors related to parents' choices of treatments for their children with autism spectrum disorders. *Research in Autism Spectrum Disorders, 6*(1), 87–95.
- Montes, G., & Halterman, J. S. (2008). Psychological functioning and coping among mothers of children with autism: A population-based study. *Pediatrics, 119*, 1040-1046.
- Noone, J.H., Stephens, C., & Alpass, F.M. (2009). Preretirement Planning and Well-being in Later Life. *Research on Aging, 31*, 3.
- Sung-Mook, H. and Giannakopoulos, E. (1994). The relationship of satisfaction with life to personality characteristics. *Journal of Psychology Interdisciplinary & Applied, 128*,547.doi:10.1080/00223980.1994.9914912.

Psychological Adjustment and Academic Achievement of Adolescents

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Abstract

The present study was designed to investigate the effect of psychological adjustment on academic achievement of adolescents. Two hundred adolescents (100 boys and 100 girls) were selected randomly from different schools of Rajshahi city, Bangladesh. Their age ranged from 15 through 16 years. Their education level varied from 9th to 10th grade. Bangla versions (Uddin & Ahmed, 2012) of Personality Assessment Questionnaire (PAQ) (Rohner & Khaleque, 2005) were administered to measure psychological adjustment of the respondents. In this study since the participants were students of class nine and ten, their previous board examination result were considered as academic achievement. The academic achievement was measured from Grade Point Average (GPA) of respondents' former class. The respondents were classified into high (above 75th percentile), medium (from 25th to 75th percentile) and low (below 25th percentile) psychological adjustment groups on the basis of their obtained scores on Personality Assessment Questionnaire (PAQ). Obtained data were analyzed by using one way ANOVA and *t*-test. The results suggested that there was direct and significant relationship between psychological adjustment and academic achievement. Respondents from higher psychological adjustment group were higher in academic achievement than those from poor psychological adjustment group and respondents from medium psychological adjustment group had higher academic achievement than the lower ones. Thus, the results of the study confirmed the hypothesis.

Keywords: academic achievement, adolescent, psychological adjustment

Introduction

Adolescence is a discrete and critical stage of development. In this period of transition occurs when the individual significantly changes physical, psychological and social growth. So adolescence is called by the period of storm and stress (Hall, 1916). This is a stage of life when an individual becomes an emerging adult: physically, emotionally, cognitively and socially. For the period of adolescents the individual arrives a cognitively formless state that results in tentatively of manners and adjustment and academic problems (Lewin, 1939). Academic achievement is the essential for the successful development of young people in society. Academic

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attainment is the outcome of education the magnitude to which a student, teacher or institution has achieved their short-term and long-term educational goals. Academic achievement means knowledge attained or skills developed in the school subjects, usually designated by test scores or by marks assigned by teachers or by both (Annie Ward, Stoker & Murray-Ward, 1996).

Achievement is an end practical of learning and its level and performance are affected by various conditions existing at the time of learning and its use (Mohanraj & Latha, 2005). This is measured either by examinations or continuous assessment and the goal may differ from an individual or institution to another (Source www.ask.com/question/definition-of-academic-achievement).

Academic achievement may reflect cognitive gains that help students better understand and act on information about healthy behaviors. Other hand, students with low academic achievement may be more vulnerable to problems such as stress, hopefulness, delinquency and substance abuse. Psychological maladjustment lead them to develop negative attitude, difficulties in decision making and adjustment to the family or others environment. If it happens during adolescents, it may lead to behavior problems (externalizing and internalizing), inability to develop appropriate self-knowledge and hamper the academic achievement that directs toward to success in different levels of our life (Hesami, Doulatian, Shams, & AlaviMajd, 2010).

The concept of psychological adjustment refers to an individual's state of mind and overall well-being. It reflects the relative adaptation of an individual to changing environmental conditions.

Psychological adjustment refers to general feelings of wellbeing and satisfaction comes to experience because of reduction of the stress of living in the new culture. It is broadly affected by personality, life changes, coping styles and social support (Ward & Kennedy, 1999). Psychological adjustment refers to emotional and affective components of the construct (Ward & Kennedy, 1999). Psychological adjustment focuses on psychological well-being and satisfaction and adaptation stresses on the ability of the adolescents to discover aesthetically appropriate skills and deal with interactive components of the host environment (Cetinkaya-Yildiz et al., 2011). In a study Yellalah (2012) found that adjustment and academic achievement cause significant difference between male and female students. It also found that there was a low positive relationship between adjustment and academic achievement. Gold (1978) concluded that there is significant positive relationship between psychological adjustment and academic achievement among O' level passed students. Larson and Richards (1991) found that there is significant positive relationship between psychological adjustment and academic achievement. Hinshaw (1992) showed that adolescents' problem with psychological adjustment brings negative outcomes, including low academic attainment. Poor school adjustment leads to low academic achievement, behavioral problems, dissonant educational desires and even school dropout (Vasalampi et al., 2009; Raju & Rahamtula, 2007).

Sarkar and Banik (2017) have found that there existed positive relationship between adjustment and academic achievement in adolescence period of West Tripura District. Hussain and Lakhani (2015) showed that adolescents' psychological adjustment was significantly related with their academic achievement. Adolescents' social functioning and adjustment, uniquely contribute to Adolescents' academic achievement (Chen, Rubin, & Li, 1997). Disruptive, aggressive, socially withdrawal and shy adolescents tend to perform poorly in academics (Dishion, 1990; Masten et al., 1995; Wentzel, 1991). Adolescents who have social and behavioral problems tend to be low achievers or even failed in academics in later years (Coie, Lochman, Terry, & Hyman, 1992; Masten et al., 1995; Ollendick, Weist, Borden, & Greene, 1992). Valas (2001) found that students' academic achievement was directly and indirectly related to their psychological adjustment. Psychological adjustment factors such as aggression is related to the various forms of poor academic outcomes such as lower academic achievement, truancy and lower graduation rates (Malinauskiene, Vosylis, & Zukauskiene, 2011). According to the findings of meta-analysis on students with emotional and behavioral problems reported that academic performance of students without behavioral complaints was significantly better than students with behavioral disorders. The complications of students with behavioral problems are not limited to their poor academic performance but they also have reported higher school absence rate (Apkan, Ojinnaka, & Ekanem, 2010). Gold (1978) ; Larson and Richards (1991) found that there was a significant positive relationship between psychological adjustment and academic achievement. Searle & Ward (1990) concluded a positive significant relationship between psychological adjustment and academic achievement among secondary level passed students.

Rationale of the Study

Nowadays, Bangladesh is going on development. For this situation, it is very important for the government to educate the young generation. If the parents, teachers, implementers, government etc. know about the bad effect of psychological maladjustment, they can planned or control the factors of inter-parental conflict and psychological maladjustment. By this study we can know the way of improve from psychological adjustment and the factors to optimize academic achievement. Academic achievement of the student helps him/her set up his/her career. Academic achievement is often a sign of an outstanding intellect which can help the students in all the fields of their lives. But review of the literature revealed that very few studies in Bangladesh focus in this area. In context to above studies were undertaken to the relationship psychological adjustment with academic achievement of adolescents. So this study will help us to understand the bad effect of maladjustment on adolescent academic achievement as well as to removing strategy from psychological maladjustment. It will expand our knowledge and to formulate proper strategy for accelerate academic achievement to help the parents and teachers. The study should be aimed at broadening the understanding of the policy makers, implementers, researchers, and all relevant members of the civil society about the linkages between

psychological well-being and academic achievement of adolescents. The present study may provide some new knowledge, which may help further research on this area in Bangladesh as well as foreign countries.

Objectives of the study

The objectives of the present study were –

1. To find out whether there is any relationship between psychological adjustment and academic achievement of adolescents.
2. To investigate if there is any difference in academic achievement among adolescents with different levels of psychological adjustment.

Hypothesis of the study

In relation to the objectives of the present study the following hypothesis was formulated : Academic achievement would be directly related to psychological adjustment.

Methods

Participants

A total of 200 respondents (100 boys and 100 girls) were selected randomly from different high schools (Two co-educational, four boys school and three girls schools) of Rajshahi city, Bangladesh. Their age ranged from 15 to 16 years. Their education level varied from 9th to 10th grades. They belonged to middle class socio-economic status.

Measures

In this study the following instruments were used to collect the data.

The Personal Information Form (PIF)

The PIF elicited demographic, personal, and social information about respondent's age, gender, class, name of school, structure of family and family socio-economic status.

Personality Assessment Questionnaire (PAQ, child version)

The Bangla version (Uddin & Ahmed, 2012) of the Child PAQ (Rohner & Khaleque, 2005) was used to measure children's overall psychological adjustment. Children respond to PAQ items on a 4-point Likert-type scale ranging from "4" (almost always true of me) to "1" (almost never true of me). A profile of a child's overall self-reported psychological adjustment is achieved by summing the seven scale-scores after reverse scoring appropriate items. They include: (1) hostility/aggression; (2) dependence; (3) impaired self-esteem; (4) impaired self-adequacy; (5) emotional unresponsiveness; (6) emotional instability; and (7) negative worldview. The possible scale score ranges from a low of 42 to a high of 168. Psychological maladjustment is indicated if the total PAQ score is at or above the scale midpoint 105. On the other hand, psychological adjustment is indicated if the total PAQ score is below the scale mid-point 105.

The PAQ has been used in several hundred studies internationally, and it has been shown to have high reliability and validity in cross-cultural research (Khaleque & Rohner, 2002; Rohner & Khaleque, 2005). The Cronbach alpha reliability and split-half reliability coefficient for the present study are .84 and .82 respectively. The content validity was determined by the relevant experts according to their comments and recommendations at the translating phase of the scales.

Measurement of Academic Achievement

In this study since the participants were students of class nine and ten, their previous board examination results were considered as academic achievement. The academic achievement was measured from Grade Point Average (GPA) of respondents' former class. For authentic measure, the GPA of JSC was taken into consideration that was collected from respondents' school records. Here, higher GPA indicated better academic achievement.

Design of the study

The present study was conducted to investigate whether academic achievement of adolescents was related to psychological adjustment. The independent variable was psychological adjustment. Academic achievement was regarded as dependent variable. The respondents were classified into three groups on the basis of their obtained scores on Psychological adjustment scale. The groups were: (1) High psychological adjustment group (above 75th percentile), (2) Medium psychological adjustment group (from 25th to 75th percentile) and (3) Low psychological adjustment group (below 25th percentile), respectively. An adapted Bangla version of (Uddin & Ahmed, 2012) Child form of PAQ (Rohner & Khaleque, 2005) was administered on two hundred students to measure their psychological adjustment. The students' previous board examination grade point average was considered as academic achievement.

Procedures

In this study standard data collection procedure was followed to collect information from the respondents. At first, rapport was established with the respondents and they were briefed about the purpose of the study. Then the above instruments were administered to each respondent. They were assured of the confidentiality of their answers. The respondents were instructed to read the items of the questionnaires attentively and to respond accordingly. They were also requested not to omit any item in the questionnaires and encouraged to answer all the items by telling that there was no right or wrong answer to any item, any difficulty on their part in understanding the instructions and in the method of answering the items were clarified. Although, there was no time limit for completing the whole task, the respondents were requested to finish it without wasting time. It took 30 to 40 minutes on average to complete the task. After completing the task they were thanked for their sincere participation.

Results

The present study was conducted to investigate whether the academic achievement of adolescents was related to their psychological adjustment. Obtained data were analyzed by employing the Pearson's product-moment correlation, one way ANOVA, and *t*-test through IBM SPSS version 22. The results of the present study are illustrated in the following tables.

Table1

Mean and SD of Academic Achievement Score of High, Medium and Low Psychological Adjustment Groups.

Group	<i>N</i>	<i>M</i>	<i>SD</i>
High	45	4.95	.153
Medium	106	4.85	.297
Low	49	4.76	.333
Total	200	4.85	.287

Results displayed in Table 1 indicate that the academic achievement of high psychological adjustment group was better than medium and low psychological adjustment groups.

Table 2

Correlation Between Academic Achievement and Psychological Adjustment of the Respondents

Variable	<i>N</i>	<i>R</i>
Academic achievement and Psychological adjustment	200	-.23*

Note. * $p < .01$.

Results in Table 2 show that academic achievement was negatively and significantly correlated with psychological adjustment scores ($r = -.227, p < .01$). It reveals that the adolescents with a higher level of academic achievement have a lower score of (good adjustment) psychological adjustment.

Table3

Summary of One-way ANOVA among Low, Medium and High Psychological Adjustment Groups on Academic Achievement Scores.

Group Compared	SS	<i>df</i>	MS	<i>F</i>	<i>p</i>
Between groups	.816	2	.408	5.152	.005
Within groups	15.603	197	.079		
Total	16.419	199			

Results displayed in Table 3 show a highly significant difference among the three groups-high, medium and low psychological adjustment groups ($F = 5.152, p < .05$) which indicates that academic achievement varies with the different levels of psychological adjustment.

Table 4

Results of Comparisons among Three Psychological Adjustment Groups on Academic Achievement Scores.

Group	<i>N</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
High	45	4.94	.153	149	2.030	.05
& Medium	106	4.85	.296			
High	45	4.94	.153	92	3.434	.001
& Low	49	4.76	.333			
Medium	106	4.85	.296	153	1.719	NS
& Low	49	4.76	.333			

Results in Table 4 indicate a significant difference in academic achievement ($t= 2.030$, $df = 149$, $p < .05$) between high ($M=4.94$) and medium ($M=4.85$) psychological adjustment groups. The results show a significant difference in academic achievement ($t= 3.434$, $df= 92$, $p < .001$) between high ($M=4.94$) and low ($M=4.76$) psychological adjustment groups and no significant difference in academic achievement ($t= 1.719$, $df= 153$) between medium ($M=4.85$) and low ($M=4.76$) psychological adjustment groups. So, the academic achievement of high psychological adjustment group was higher than that of the low and medium groups as well as the academic achievement of medium group is higher than that of the low psychological adjustment group.

Discussion

The present study was conducted to investigate whether academic achievement of adolescents' was related to psychological adjustment. Bangla version (Uddin & Ahmed, 2012) child form of PAQ scale (Rohner & Khaleque, 2005) was administered on 200 adolescents of different schools of Rajshahi city. Data were analyzed by using correlation, one way ANOVA and t-test.

The hypothesis of the present study stated "Academic achievement would be directly related to psychological adjustment". The results in Table 1, 2, 3, and 4 show that academic achievement is directly related to psychological adjustment. The results in Table 2 reveal that academic achievement is highly negatively related to personality assessment questionnaire score ($r= -.227$, $p < 0.01$). It reveals that the adolescents with higher level of academic achievement have lower score of (good adjustment) psychological adjustment.

The results in Table 3 shows that academic achievement of the respondents varies as a function of psychological adjustment. And the results in Table 4 reveal that academic achievement of the respondents with high psychological adjustment group is higher than that of the respondents with medium and lower psychological

adjustment group. The results also indicate that respondents with medium psychological adjustment group have higher academic achievement than that of respondents with lower psychological adjustment group. These findings confirmed the hypothesis. In explaining these findings it can be argued that psychological adjustment is positively related to academic achievement of adolescents. This result consistent of many other research like, Jacobson (2012); Gold (1978); Margetts (2002) and Chen (2010) conducted several studies on psychological adjustment and academic achievement of adolescents. They reported that there is strong positive association between psychological adjustment and academic achievement of adolescents. We can say that psychological adjustment significantly influences academic performance of adolescents. Academic achievement is often a sign of an outstanding intellect which can help the students in all the fields of their lives. Academic attainment is dependent on their ability to make appropriate psychological adjustments with regards to cognitive, affective and attitudinal and behavioral adjustments. When their psychological adjustment level is high or good, then parents, family and lecturer supports are greatly helpful in assisting them to achieve academic excellence. Gold (1978) and Larson and Richards (1991) found that there was a significant positive relationship between psychological adjustment and academic achievement. Searle and Ward (1990) concluded a positive significant relationship between psychological adjustment and academic achievement among secondary level passed students. The findings of the present study reveal that academic achievement is positively related to psychological adjustment which are consistent with some other findings (Jacobson, 2012; Margetts, 2002; Chen, 2010).

From the above discussion it can be concluded that, every child is born in family. Then gradually they grow up and enter into simplified, purified, better balanced culture which is school. In school the child not only fulfills their needs but also adjusts properly with the school environment. Academic achievement of the student helps their career.

References

- Annie Ward., Stoker, H. W., & Murray-Ward, M. (1996). *Achievement and Ability Tests - Definition of the Domain, Educational Measurement*, University Press of America, pp. 2-5, ISBN 978-0-7618-0385-0.
- Apkan, M. U., Ojinnaka, N. C., & Ekanem, E. E. (2010). Academic performance of school children with behavioral disorders in Uyo, Nigeria. *African Health Science*, 10 (2), 154-159.
- Cetinkaya-Yildiz, E., Cakir, S. G., & Kondakci, Y. (2011). Psychological distress among international students in Turkey. *International Journal of Intercultural Relations*, 35 (5), 534-539.
- Chen, C. P. (2010). *Integrative Qualitative and Psychometric Methods in Career Exploration*. Paper Presented at the Canadian Guidance and Counselling Association Annual Conference.

- Chen, X., Rubin, K.H., & Li, D. (1997). Relationship between academic achievement and social adjustment: Evidence from Chinese children. *Developmental Psychology*, 33 (3), 518-525.
- Coie, J. D., Lochman, J. E., Terry, R., & Hyman, C. (1992). Predicting early adolescent disorder from childhood aggression and peer rejection. *Journal of Counseling and Clinical Psychology*, 60, 783-792.
- Dishion, T. J. (1990). The family ecology of boy's peer relations in middle childhood. *Child Development*, 61, 874-892.
- Gold, M. (1978). Scholastic experiences, self-esteem and delinquent behavior: A theory of alternative schools. *Crime and Delinquency*, 24 (3), 290-308.
- Hall, G. S. (1916). *Adolescence*. New York: Appleton.
- Hesami, K., Doulatian, M., Shams, J., & AlaviMajd, H. (2010). Domestic violence before and during pregnancy among pregnant. *Iran Journal of Nursing*, 23 (63), 51-59.
- Hinshaw, S. P. (1992). Academic underachievement, attention deficits, and aggression: Comorbidity and implications for intervention. *Journal of Consulting and Clinical Psychology*, 60, 893-903.
- Hussain, S., & Lakhani, G. R. (2015). Psychological Adjustment as Predictor of Students Academic Achievement in Gilgit: Pakistan. *Bahria Journal of Professional Psychology*, 14 (2), 55 – 69.
- Jacobson, T. L. (2012). Academic Performance in Middle School, Friendship Influences. *Global Journal of Community Psychology Practice*, 2 (3), 1-12.
- Larson, R., & Richards, M. (1991). Boredom in the middle school: Blaming schools versus blaming students. *American Journal of Education*, 99 (4), 418-443.
- Lewin, K. (1939). The field theory approach to adolescence. *American Journal of Sociology*, 44, 868-897.
- Malinauskiene, O., Vosylis, R., & Zukauskiene, R. (2011). Longitudinal examination of relationships between problem behaviors and academic achievement in young adolescents. *Procedia Social and Behavioral Sciences*, 15, 3415-3421.
- Margetts, K. (2002). The developing child in today's world: Issues and care in education. *Educare News*, 127, 10-13.
- Mastern, A., Coatsworth, J. D., Neeemann, L., Gest, S. D., Tellegen, A., & Garmezy, N. (1995). The structure and coherence of competence from childhood through adolescence. *Child Development*, 66, 1635-1659.
- Mohanraj, R., & Latha (2005). Perceived family environment in relation to adjustment and academic achievement. *Journal of the Indian Academy of Applied Psychology*, 31, 18-23.
- Ollendick, T. H., Weist, M. D., Borden, M. G., & Greene, R. W. (1992). Sociometric status and academic, behavioral, and psychological adjustment: A five-year longitudinal study. *Journal of Counseling and Clinical Psychology*, 60, 80-87.

- Raju, M. V., & Rahamtulla, T. K. (2007). Adjustment Problems among School Students. *Journal of the Indian Academy of Applied Psychology*, 33, 173- 79.
- Rohner, R. P., & Khaleque, A. (2005). Personality assessment questionnaire (PAQ): Test manual. In R. P. Rohner & A. Khaleque (Eds.), *Handbook for the study of parental acceptance and rejection* (4thed., pp. 187, 205). Rohner Research Publications, Storrs, CT 06268, USA.
- Rohner, R. P., & Khaleque, A. (2002). 'Parental Acceptance-Rejection and Life-span Development: A Universal Perspective' in Lonner, W.J., Dinnel, D.L., Hayes, S.A. and Sattler, D.N. (eds.), *Online Readings in Psychology and Culture*, 11(4), Available at [<http://www.wvu.edu/culture>], Center for Cross-Cultural Research, Western Washington University, Bellingham, Washington.
- Sarkar, S., & Banik, S. (2017). A Study on the adjustment and academic achievement of adolescents' students. *International Journal of Research -Granthaalayah*, 5 (6), 659-668.
- Searle, W., & Ward, C. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations*, 14(4), 449-464. [https://doi.org/10.1016/0147-1767\(90\)90030-Z](https://doi.org/10.1016/0147-1767(90)90030-Z)
- Uddin, M. K., & Ahmed, F. (2012). *Bangla translation of the Personality Assessment Questionnaire (Child PAQ)*. Dhaka, Bangladesh: Department of Psychology, University of Dhaka.
- Valas, H. (2001). Learned helplessness and psychological adjustment: Effects of age, gender and academic achievement. *Scandinavian Journal of Educational Research*, 45 (1), 71-90.
- Vasalampi, K., Salmela-Aro K., & Nurmi, J. (2009). Adolescents self-concordance, school engagement, and burnout predict their educational trajectories. *European psychologist*, 14 (4), 332-341.
- Ward, C., & Kennedy, A. (1999). The measurement of socio-cultural adaptation. *International Journal of Intercultural Relations*, 23, 659-677.
- Wentzel, K. R. (1991). Relations between social competence and academic achievement in early adolescence. *Child Development*, 62, 1066-1078.
- Yellalah (2012). A study of adjustment on academic achievement of high school student. *International Journal of Social Science and Interdisciplinary Research*, 1(5).

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Two hard copies of manuscript along with a CD, and/or soft copy (through e-mail) (MS word versionas attached file) should be sent to the Editor-in-Chief (Prof. Dr. Noor Muhammad, Chairman, Department of Psychology, Jagannath University, Dhaka-1100, Bangladesh. E- mail: noormuhammad@psy.jnu.ac.bd).

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