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Psychological Dynamics Among Bankers in Bangladesh: Exploring the Interrelationship of Self-esteem, Cognitive Distortion, and Depression

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Abstract

This study aimed to explore the relationship between self-esteem, cognitive distortion, and depression among bankers in Bangladesh. A sample of 200 respondents (120 male, 80 female) participated in the study, completing questionnaires including background characteristics, the Rosenberg self-esteem scale (RSES), the Dhaka University Cognitive Distortion Scale (DUCDS), and the depression scale (DS). This study explores the associations among self-esteem, depression, and cognitive distortion and examines the influence of monthly income and gender on these variables. Correlation analysis reveals that self-esteem is negatively correlated with both depression ($r = -0.220$, $p < 0.01$) and cognitive distortion ($r = -0.280$, $p < 0.01$), while depression is positively correlated with cognitive distortion ($r = 0.633$, $p < 0.01$). Gender differences reveal higher self-esteem among males and higher levels of depression and cognitive distortion among females. Income analysis shows no significant difference in self-esteem across income levels, while higher income is associated with lower depression ($p < .001$) and cognitive distortion ($p < .05$). These findings underscore the complex interactions among psychological variables in the banking sector, suggesting the need for targeted interventions to mitigate depression and cognitive distortions among bankers in Bangladesh and potentially in similar international contexts.

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Introduction

Cognitive vulnerability-stress theories of depression propose that negative cognitive appraisals and environmental adversity jointly contribute to the risk of depression.[1-4] Banking, as a profession, demands not only financial acumen but also resilience in coping with the dynamic nature of the industry. However, the demanding nature of banking roles, coupled with factors such as tight deadlines, stringent performance targets, and economic uncertainties, can exacerbate stress levels and contribute to the development of psychological distress among bankers.[5,6] As noted by Lazarus and Folkman (1984), individuals' perceptions of stress are influenced not only by external stressors but also by their cognitive appraisal of these stressors, highlighting the relevance of

cognitive processes in understanding psychological well-being and self-esteem.[7] Self-esteem, defined as one's subjective evaluation of their own worth and competence,[8] plays a pivotal role in shaping individuals' responses to challenges and setbacks.[9] Low self-esteem has been associated with increased vulnerability to depression[10-12] and maladaptive cognitive patterns,[13] potentially amplifying the impact of stressors encountered in the banking profession.

Furthermore, self-esteem is a fundamental concept in psychology, referring to an individual's perception of their own value or worth. It encompasses the extent to which a person values, approves, appreciates, prizes, or likes themselves.[8,13] Low self-esteem leads to delinquency, poor health, and limited economic prospects, while high self-esteem predicts better romantic relationships, job performance, and educational attainment.[11,14] That being said, self-esteem may play a role in determining oone's depression. In addition, there are gender differences in the level of self-esteem. Generally, men are more likely to have higher levels of self-esteem, especially physical appearance, self-satisfaction, and athletic prowess, as well as global self-esteem.[15,16] This gender difference may be one of the reasons why females usually have more psychological problems, such as higher incidences of suicide attempts, eating disorders, and depression.[17]

On the other hand, cognitive distortion, as defined by Beck (1976), refers to an exaggerated or irrational pattern of thought contributing to the onset or perpetuation of psychological states such as depression and anxiety.[18] Within the cognitive behavioral model proposed by Beck (1976), individuals possess three layers of thought: automatic thoughts, intermediate beliefs, and core beliefs.[18] These cognitive distortions, characterized as negatively biased thinking errors, are theorized to heighten susceptibility to depression.[19,20]

As a result, depression is a common spectrum of mood disturbance ranging from mild to severe that has significant impacts on cognition, academic performance, relationships with colleagues, death rates, and low self-esteem.[11,21,22] Studies have supported the vulnerability model, and theoretically, negative evaluations or beliefs about oneself are a significant factor related to depression.[9,10,23]

The present study investigated the intricate relationship between self-esteem, cognitive distortion, and depression among bankers, aiming to discern whether levels of self-esteem and cognitive distortion serve as potential risk factors for the onset of depression within this professional group. While previous research has explored various aspects of mental health, self-esteem, cognitive distortion, and depression in isolation,[9,11,14,24] our study seeks to bridge these gaps by examining their interconnections within the unique context of the banking profession. Through empirical inquiry and targeted interventions, we aim to create a supportive work environment that fosters the flourishing of all banking professionals, ultimately promoting mental well-being and productivity in the industry.

Method

Participants

In alignment with the study objectives, a cross-sectional study was undertaken among Bangladeshi bankers spanning from June 2023 to September 2023. Employing Cochran's formula with a 5% level of significance and an acceptable margin of error of 6% (d = 0.06), the desired sample size was estimated. Assuming a sample proportion of 0.5 to yield the maximum sample size, the calculated sample size was 200. Consequently, 200 respondents who completed the questionnaires were included in the final analysis.

Study design and procedure

The study employed a purposive sampling technique to select participants from the target population. All of the procedures for this study were approved by the Department of Psychology, University of Rajshahi Review Board (ERCRP-PSYRU-3(1)24). Questionnaires were distributed among bankers representing various public and private banks. Prior to the survey, participants were briefed on the research objectives and assured of the confidentiality of their responses. Verbal consent was obtained through two initial agreement questions (Yes/No) at the outset of the questionnaire, ensuring participants' understanding and voluntary participation. Additionally, participants were provided

with contact information for further clarification or queries.

Measures

In addition to a demographic information questionnaire, three self-report measures were administered to the participants. Each of these measures is described in more detail below.

Demographic sheet

A demographic sheet was designed to obtain information about participants. The demographic sheet includes age, gender, academic year, monthly income, marital status, religion, residence and member of siblings as shown in Table 1.

Bangladesh cognitive distortion scale

This is a 39 items five-point Likert scale for assessing different types of cognitive distortion. The score ranges from 0 to 156. Cutoff point is 56.[25] The norm of the scale for assessing cognitive distortion is mild, moderate, severe and profound when a range of the row score is 56 to 72, 73 to 91, 92 to 109 and 110 to above, respectively. The inter-item consistency and test-retest reliability were found to be 0.890 and 0.962, respectively. Concurrent validity is 0.828 and, convergent validity is 0.670, The area of the ROC curve of this scale is 0.949, which indicates excellent performance.

Self-esteem scale

The scale was adapted by the Bengali version[26] of RRosenberg's (1965). This is a self-esteem report questionnaire (10-items) designed to measure global self-esteem. The items were answered in a four-point response format (strongly agree, agree, disagree, strongly disagree). The scale contains 5 positive and 5 negative items. In this scale, total score ranges from 10 to 40, where a high score indicates a higher level of self-esteem and a low-score indicates a lower level of self-esteem. The English and Bengali Versions of the scale were administered to 50 participants within an interval of 4 days. Significant co-relation (r = 0.760, $p < .0005$) between scores of English and Bengali versions indicated translation reliability of the scale. High CCronbach'sAlpha (α = 0.87) of the Bengali version further indicated internal consistency of the scale. In addition, the items were short and concise, which help the respondents, especially the adolescents to answer easily.

Depression scale

The depression scale[27] was developed in the cultural context of Bangladesh to measure the level of depression of the Bangladeshi population. It is a self-report rating scale of 30 items on a 5-point Likert scale ranging from 1(Not at all Applicable), 2 (Not Applicable), 3 (Moderately applicable), 4 (somewhat applicable), 5 (Fully applicable). The reliability and validity of this scale was found high enough. The split half and test-retest reliability of the scale is 0.7608 and 0.599, at =0.01 level. In addition, the range of concurrent validity of the scale is 0.377 to 0.558 and construct validity is 0.716 at & = 0.01 level.

Statistical analysis

The data underwent comprehensive statistical analysis employing various tools. IBM Statistical Package for the Social Sciences (SPSS), version 26.0 for Windows, facilitated data analysis. Descriptive statistics, including frequencies and percentages, were utilized to characterize participant traits within categorical data. To assess the reliability and consistency of study variables, CCronbach'salpha coefficients (ranging from 0–1) were calculated. Significance was determined at $p < 0.001$. The Pearson Product-Moment Correlation Coefficient (Pearson *r*), the independent-sample *t*-test, and the one-way analyses of variance (ANOVA) test were used. These are parametric tests with higher statistical power and are useful for analyzing data on the interval scale. The researchers appropriately chose these tests for the data analyses because all the dependent variables in the study were measured on the interval scale, thus satisfying the assumption underlying their use. The Pearson *r*-test was used to find the correlation between self-esteem, depression and cognitive distortions among the participants (Table 2). The independent *t*-test, on the other hand, was used to compute the significant differences in scores on self-esteem, depression and cognitive distortions among male and female participants (Table 3). The one-way ANOVA test was also used to test the influence of the rrespondents'monthly

Table 1: Demographic distribution of participants

Characteristic	*Category*	*Sample (200)*	*Percentage (%)*
Age	30–55 Years	Mean (SD) 41.59 (6.80)	100.0
Gender	Male	182	64.0
	Female	72	36.0
Monthly income	20–40k	58	29.0
	40–60k	70	35.0
	Above 60k	72	36.0
Marital status	Single	42	21.0
	Married	158	79.0
Religious	Muslim	174	87.0
	Hindu	26	13.0
Residence	Rural	108	54.0
	Urban	92	46.0
Number of siblings	1	6	03.0
	2	48	24.0
	3	94	47.0
	4	52	26.0

income on self-esteem, depression and cognitive distortions (Table 4).

Results

The demographic characteristics of the sample (Table 1) reveal a diverse group of participants, predominantly male (64%) with a mean age of 41.59 years. The economic diversity, with varying income levels and a majority being married (79%), provides a comprehensive backdrop for understanding the psychological measures under study. The demographic composition of 87% Muslim and the rural-urban split (54% rural, 46% urban) are reflective of the broader Bangladeshi context.

Association among Self-esteem, Depression, Cognitive Distortion

Table 2 presents the correlation analysis among self-esteem, depression, and cognitive distortion for the participants. A significant negative correlation exists between self-esteem and depression (r = -0.220, p < 0.01). Depression is positively correlated with cognitive distortion (r = 0.633, p < 0.01), and there is also a significant negative correlation between self-esteem and cognitive distortion (r = -0.280, p < 0.01). The table shows significant relationships between the variables. Higher self-esteem is linked to lower depression and cognitive distortion, while higher depression is associated with higher cognitive distortion.

Table 2: Correlation matrix between different scales (Self-esteem, depression and cognitive distortion)

Variables	*Self-esteem*	*Depression*	*Cognitive distortion*
Self-esteem	1		
Depression	-0.220**	1	
Cognitive Distortion	-0.280**	0.633**	1

** Correlation is significant at the 0.01 level (2-tailed)

Measures of self-esteem, depression and cognitive distortion according to gender

Table 3 compares self-esteem, depression, and cognitive distortion between male and female participants. Males exhibit significantly higher self-esteem (mean = 23.74) than females (mean = 22.25), while females have higher mean scores for both depression (mean = 71.60) and cognitive distortion (mean = 58.36) compared to males (mean depression = 71.23; mean cognitive distortion = 49.20).

The findings of the study further reveal statistically significant gender difference in self-esteem t (198) = 3.194, p <0.01, depression t (198) = -3.901, p <0.001 and cognitive distortions t (198) = -4.294, p <0.001. These findings suggest that males tend to have higher self-esteem and lower cognitive distortion compared to females, while both genders show similar levels of depression, with slightly higher scores for females. The significant differences highlight pronounced gender disparities in these psychological measures within the studied sample. The statistical tests show that all these differences are significant, with particularly strong evidence for differences in depression and cognitive distortion

Table 3: Differences in self-esteem, depression and cognitive distortion according to gender

Variables	*Male n = 128*	*Female n = 72*	*t*	*df*	*p-value*
	Mean (SD)	*Mean (SD)*			
Self-esteem	23.74 (3.205)	22.25 (3.112)	3.194	198	.002
Depression	71.23 (9.61)	71.60 (13.32)	-3.901	198	.000
Cognitive distortion	49.20 (13.38)	58.36 (16.26)	-4.294	198	.000

*p <0.05; **p <0.01, ***p <0.001

Table 4: The influence of monthly income on self-esteem, depression and cognitive distortion

Variables	*20–40k*	*40-60k*	*Above 60k*	*F*	*p*
	Mean (SD)	*Mean (SD)*	*Mean (SD)*		
Self-Esteem	23.91 (2.99)	23.06 (2.94)	22.78 (3.64)	2.104	.125
Depression	77.45 (10.07)	76.66 (11.68)	67.31 (9.67)	19.688	.000
Cognitive Distortion	52.26 (13.70)	56.29 (15.15)	49.01 (15.10)	4.262	.015

(p <0.001). This suggests that gender differences in these psychological measures are pronounced and noteworthy in the studied sample.

Influence of Monthly Income on Psychological Variables

The analysis of variance (Table 4) reveals that there is no significant difference in self-esteem according to income level F (2,197) = 2.104, p = .125. However, significant variations were found in depression F (2,197) = 19.688, p < .001, indicating that higher income is associated with lower levels of depression among bankers in Bangladesh. Additionally, there are significant differences in cognitive distortion across income groups F (2, 197) = 4.262, p <0.05, suggesting that income levels may influence the prevalence of cognitive distortions. These findings underscore the complex interplay between financial status and mental health outcomes, highlighting the potential impact of income on psychological well-being in this occupational group.

Discussion

The banking sector in Bangladesh, characterized by its rapid growth and dynamic environment, represents a significant cornerstone of the nation's economy. Within this fast-paced industry, bankers navigate a multitude of challenges ranging from financial complexities to regulatory pressures. Amidst such demanding circumstances, the psychological well-being of bankers emerges as a critical aspect deserving attention. Understanding the psychological dynamics among bankers in Bangladesh, particularly regarding self-esteem, cognitive distortion, and depression, is essential for fostering a supportive work environment and promoting mental health resilience.

The correlation analysis (Table 2) highlights significant relationships among self-esteem, depression, and cognitive distortion. The negative correlation between self-esteem and depression aligns with previous research, indicating that higher self-esteem serves as a protective factor against depression.[11] This underscores the importance of fostering self-esteem in mitigating depressive symptoms among bankers, who may experience high levels of occupational stress.

The positive correlation between depression and cognitive distortion supports the cognitive theory of depression, which posits that negative thinking patterns exacerbate depressive symptoms.[23] This finding suggests that interventions aimed at reducing cognitive distortions could be beneficial in alleviating depression among this population. Additionally, the negative correlation between

self-esteem and cognitive distortion reinforces the idea that higher self-esteem is associated with fewer maladaptive cognitive patterns, a finding consistent with previous studies.[11,28]

The significant gender differences in self-esteem, depression, and cognitive distortion (Table 3) warrant attention. Males exhibited higher self-esteem compared to females, a finding consistent with previous studies indicating gender disparities in self-esteem.[9,10,16] This difference may be attributed to socio-cultural factors and gender roles that influence self-perception.

The slightly higher depression scores among females, though not markedly different, reflect broader trends in mental health research, which consistently show that women are more prone to depression.[29-31] This may be due to a combination of biological, psychological, and social factors that differentially impact men and women.

The higher cognitive distortion scores among females are particularly noteworthy. This suggests that women in the banking sector may be more susceptible to negative thinking patterns (32), which could be exacerbated by occupational stress and societal expectations. These findings align with research suggesting that women are more likely to engage in ruminative thinking, which can increase cognitive distortions.[20,23,32]

The results indicated significant associations between income levels and both depression and cognitive distortion, while no significant relationship was observed for self-esteem. These findings align with existing literature suggesting that higher income is generally linked to better mental health outcomes, including lower levels of depression.[33,34] The significant differences observed in depression across income groups underscore the potential protective effect of higher income against depressive symptoms. This relationship may be attributed to increased access to resources, reduced financial stress, and improved social status associated with higher income levels.[35,36] Conversely, the varying levels of cognitive distortion across income groups highlight the nuanced impact of socioeconomic factors on cognitive processes and perceptions of reality.[37,38]

While the research presents valuable insights, it is important to acknowledge its limitations. Primarily, the reliance on self-report measures introduces the possibility of response bias and inaccuracies stemming from participants' subjective perceptions and willingness to disclose sensitive information. Future research utilizing longitudinal designs and a broader range of assessment methods could provide a more comprehensive understanding of these relationships and their implications for intervention and prevention strategies.

Despite these limitations, the research demonstrates notable strengths. The inclusion of robust sample size and the utilization of well-established measures provide a solid foundation for understanding these psychological factors. These findings also suggest that interventions aimed at improving mental health among bankers and similar occupational groups should consider socioeconomic factors such as income. Strategies focusing on enhancing financial security and reducing economic disparities could potentially mitigate the negative psychological effects observed in lower-income brackets. Further research exploring longitudinal data and intervention outcomes could provide deeper insights into these relationships and inform targeted mental health policies in workplace settings.

Conclusion

Several international banks have initiated mental health awareness programs and training. The mental well-being of Bangladeshi bankers significantly impacts their daily functioning, emphasizing the importance of understanding mental health issues. It is imperative for the government to address the obstacles causing mental health issues among bankers, potentially through online programs or seminars providing tips to alleviate stress, anxiety, and depression. Furthermore, policymakers should utilize the findings of this study to ensure adequate financial and physical support for banking professionals. There is a promising opportunity for researchers to initiate further investigations into job-related stress across various employment sectors in Bangladesh, aiming to benefit both human resources and organizations.

Ethics approval and consent to participate

Approval was obtained from the ethics committee of the University of Rajshahi. The procedures used in this study adhere to the tenets of the Declaration of Helsinki. Informed consent was obtained from all individual participants included in the study.

Author Contributions

In this study, all authors made equal contributions. Both authors were involved in the conception and design of the study, as well as actively participating in the data collection process. Additionally, both authors independently conducted the analysis and played a key role in preparing the manuscript. Throughout the entire process, both authors diligently read, revised, and ultimately approved the final manuscript.

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