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Externalizing Behaviors of Children as Predicted by Maternal Psychological Well-being

Research Article

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ABSTRACT

Most of the behaviors of children depend on their parents' psychological well-being. This study investigated the relationship of maternal psychological well-being with externalizing behaviors of children. A Personal Information Form (PIF), an adapted self-reported Bangla version of the Strengths and Difficulties Questionnaire (SDQ), and an adapted General Health Questionnaire (GHQ-28) were administered on 800 (400 children, 400 mothers) participants to collect data. The children were selected from ten Bangla medium high schools in Dhaka city and their age ranges from 11 to 13 years. The schools and the children were selected using a multistage random sampling technique. The Correlation co-efficient indicated that externalizing behavior in children and mother psychological well-being were significantly positively correlated. Results also showed that somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression of mothers were significantly correlated with externalizing behavior of children. Multiple regression analysis results showed that mothers' anxiety and insomnia alone accounted for 46.9% of the variation and was the most powerful predictor of externalizing behavior. The other significant predictors were severe depression, somatic symptoms, and social dysfunction. All the predictors explained jointly 56.1% of variance in externalizing behavior of children. The implications of the findings have been discussed in the light of theory and scientific evidence from the previous studies.

Keywords: *Externalizing behavior, children, mother, psychological well-being*

1. Introduction

Parenting is a very difficult and stressful job and though fathers make significant contributions in parenting, mothers have the key responsibilities in caring for their children. Mothers' role is not only caregiver, but also a teacher, educator and personality builder. An encouraging and cooperative mother is a source of support and can

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help foster the healthy development of her child. But if a child is not provided with the consistent, loving care he or she may suffer from different behavioral problems. Therefore, mothers take a primary role in taking care and guiding the children, if they have any problem, it might have a negative impact on their children's behavior. It has been proven that a mother's poorer mental health has a negative impact on her children's behavior (Downey & Coyne, 1990; Friedlander et al., 1986). Externalizing behavior difficulties in children are frequently linked to poor psychological well-being of their mothers (Leve et al., 2005). Childhood behavioral disorders, like externalizing behavior, are of great concern since they tend to remain throughout childhood and adolescence (Ashford et al., 2008).

Externalizing behavior is defined as acting out hostile and rule-breaking behaviors toward others, such as physical aggressiveness, cheating, stealing, disregarding regulations, and property destruction (Achenbach & Edelbrock, 1978). Keil and Price (2006) defined externalizing behavior as overt behaviors that are violent, harmful, aggressive and disobedient in nature. These kinds of behavior issues usually have negative or harmful outcomes and go against societal norms. Longitudinal research, for example, reveals that teenage externalizing traits are a potential cause for a variety of negative effects, including juvenile delinquency, upcoming violence and crime (Liu, 2004), and lower academic and vocational achievement in later life (Tanner et al., 1999). In Bangladesh, Mallik and Radwan (2020) conducted research on 14 to17 year school going children and found 6.30% externalizing behavior in them.

Psychological well-being is the straightforward idea of an individual's contentment, enjoyment, rights, interests, and standard of living (Burris et al., 2009). People with good PWB shows positive feeling, well-supported, accomplished, gratified with their lives, and so on. Psychological well-being, which is typically defined as the absence of anxiety and sadness, may be seen to encompass individual mood in a wide sense (Krol et al., 1993). Parental psychological well-being has immediate and broad consequences on the quality of family relations, as well as the well-being of other members of the family, particularly children (Newland, 2015; Mikolajczak et al., 2019; Williams, 2018). Choi and Becher (2019) revealed that maternal PWB was connected to an increased likelihood of behavioral problems of their children through mothers' harsher parenting practice. Welner et al. (1977) explored a connection between parents' depression and their children's externalizing problematic symptoms. It was conducted with one fourth of 29 parents who were hospitalized due to depression and their children had incidents of depression (8 out of a sum of 75 children) where children with forty-one families had well parents having depression (152 children) and these differences were significant. Tsotsi et al. (2019) conducted a study on 391 children and their mothers and found that maternal anxiety is a strong risk factor for externalizing behavior in children in their early years. Foster et al. (2008) tried to investigate the associations between mothers' depression and their children's externalizing problematic behaviors and found that undeniable degrees of maternal negativity and poor degrees of positivity during critical thinking related tasks were associated with their children's externalizing problematic behaviors.

A supportive and cooperative mother is a source of strength and can aid in her child's healthy development. But if a child is not provided with consistent loving care, he or she may suffer from various behavioral problems. However, a considerable number of studies have been conducted on the relationship between mother's psychological well-being and children's behavioral problems outside of our country (Choi & Becher,

2019; Piko, 2006) and only a few studies conducted on children's conduct problems and other related variables in Bangladesh (Dey et al., 2020; Roy et al., 2016). But research in Bangladesh has revealed some remarkable gaps, particularly with regard to maternal psychological well-being and children's externalizing behaviors. Furthermore, the majority of those earlier research examined the relationship between several aspects of mothers' psychological well-being and behavioral issues in their offspring, but didn't find the best affecting factors among the variables. For these reasons, the current researchers decide to conduct the research from Bangladesh's point of view. The findings of this study should help researchers, counselors, legislators, psychotherapists, and other stakeholders take the appropriate action to improve mothers' mental health and reduce children's behavioral problems. Furthermore, these findings highlight the need of doing a clinical evaluation of the entire family ecology, including the relationship between maternal mental health and children's behavioral problems. As a result, the present study has practical implications. Additionally, it will enhance the body of knowledge to the existing literature.

Objectives of the Study

The main objective of the present study was to investigate the relations of mothers' psychological well-being with externalizing behaviors of their children.

Specific objectives of the study were to investigate-

1) the relationship between maternal psychological well-being and children externalizing behavior.
2) the relationship of mothers' somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression with children's externalizing behavior.
3) the relative importance of maternal predictors in explaining externalizing behavior of the children.

2. Materials and Methods

2.1 Sample and Sampling Technique

A total of 800 participants (400 children, 400 mothers) were employed as sample for the current study. There were 200 boys and 200 girls among the 400 children. The children were selected from ten secondary schools of Dhaka City and their age ranges from 11 to 13 years (M = 12.43, SD = .64) and mothers were from 30 to 50 years (M = 37.65, SD = 4.14). The optimal number of samples for multiple regression studies with four predictors was calculated using the G*Power software. Our goal was to reach 80% statistical power with a moderate effect size (f^2 = .15) at a significance level of .05 (Faul et al., 2009). We found that our sample size is adequate to achieve a 80% statistical power. The schools and the children were selected following multistage random sampling (also known as multistage cluster sampling) technique. Using a simple random sampling method, the first ten secondary Bangla-medium high schools were selected from Dhaka City. Then, lists of 6^{th} and 7^{th} Grade (class) students were collected from each school and 20 students (10 male and 10 female) from each class had been selected through systematic random sampling. The participants were of lower (25.3%), middle (56.3%) and upper (18.5%) family income backgrounds.

2.2 Measuring Instruments

The following instruments were used to collect data in the study:

1. Psychological Well-Being Questionnaire

The General Health Questionnaire (GHQ-28), originally developed by Goldberg and Hiller (1979) and adapted into Bangla by Roy and Muhammad (2021), was used to assess the psychological well-being through four subscales: somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. The scale consists of 28 items. It is a 4-point Likert scale that ranges from "less than usual" to "much more than usual" ranging from "0" to "3". The GHQ-28 has a maximum individual

total score of 84, whereas each subscale has a maximum score of 21. Higher score indicates poorer psychological well-being of the respondents. Internal consistency reliability (alpha coefficient) of the GHQ-28 scale was .97 and reliability α coefficient for each subscale of GHQ-28 was found to be very high, such as, .95 for anxiety and insomnia, .92 for somatic symptoms, .93 for social dysfunction and .94 for severe depression subscale. For GHQ-28, the test-retest reliability coefficient at a 15-day interval was .87. GHQ-28 was shown to have face, content and convergent validity. To determine convergent validity of the GHQ-28 Pearson product moment correlations were computed between difficulties score of the GHQ-28 and GHQ-12 (Ilyas & Aeysha, 2001) and found significant positive correlation (r = .890, p < .01).

2. Strengths and Difficulties Questionnaire

For measuring externalizing behavior of the children an adapted self-reported Bangla version of the Strengths and Difficulties Questionnaire (SDQ) was used in the current study. The SDQ was originally developed by Goodman et al. (1998) and adapted by Roy and Muhammad (2022) was used to measure externalizing problems of children, where high scores indicate grater problems. The questionnaire is designed for youngsters between the ages of 11 and 16 to self-complete in the self-report format. There are five subscales out of 25 items in the questionnaire. The researchers used the difficulties part of the self-reported SDQ in accordance with our current study's requirements. The SDQ's difficulty sections show strong test-retest reliability (α =.91), internal consistency (α =.93), and face, content, convergent, and structural validity. The various self-report scale's Cronbach's alpha coefficient was .85 for conduct problems, .86 for hyperactivity, 87 for emotional symptoms, and .83 for peer problems. Second-order externalizing and internalizing factors were generally confirmed by confirmatory factor analysis, and the broader externalizing and internalizing subscales demonstrated good discriminant and convergent validity. “Not true,” “somewhat true,” and “certainly true” are evaluated as 0, 1, and 2, respectively, for the item. The scores for each of the four subscales range from 0 to 10. The externalizing score is the total of the conduct and hyperactivity scales, and it runs from 0 to 20. The internalizing score is the total of the emotional and peer problems scales scores, and it has a range of 0 to 20.

3. Personal Information Form (PIF)

In order to collect personal and demographic data, such as age, gender, family income, and educational qualifications of their mothers, a specially designed questionnaire was employed.

2.3 Study Design

In this study, a cross-sectional survey research design was used.

2.4 Procedure

For the purpose of data collection, a date was set after obtaining approval from each school's authority. The researchers went to a particular school on a pre-fixed date. After selecting the students through a randomization procedure, the researchers collected their residential addresses to collect data from their mothers about psychological well-being. Before administration of the questionnaire written and verbal instructions of how to fill up the questionnaires and any clarification of any items were given to them. The participants were also promised that any information they provided would be kept private and utilized specifically for the purpose of study. The researchers collected data from the participants and assured them that they could withdraw from the study anytime, if they want to. For measuring externalizing behaviors of children, the self-report of SDQ questionnaire was administrated. The GHQ-28 was also given to the mothers of the response students in order to measure their

psychological well-being. After the participants finished the task as instructed, the questionnaire was collected from them. Finally, the participants received gratitude for their involvement in the research.

2.5 Ethical Considerations

In this study, in case of ethical issues, researchers were fully aware. This study was carried out in accordance with the Declaration of Helsinki guidelines and approved by the ethical committee of the Department of Psychology, Jagannath University, Bangladesh. In the study, the participating parents and their children faced no potential risks (e.g., either physical, psychological, social or legal) and confidentiality of the received information from the participants was strictly ensured. In addition, before administering the questionnaires for collecting main data, consent is also taken from the participants by providing necessary debriefing (i.e., pattern and goals of the study, about right to refusal or withdrawal from participation etc.) to the participants. We also informed the participants that they wouldn't get economic benefit for participation but small appreciation gifts and thanks were given.

3. Results

The purpose of the present study was to investigate the relations of maternal psychological well-being with externalizing behaviors of children. In order to test the research objectives, the data obtained from the returned survey were analyzed applying descriptive and inferential statistics. As descriptive and inferential statistics different methods of analysis were carried out using the statistical program of SPSS version 23.0. In order to examine the first to second objectives Pearson product moment correlation was computed. The findings are presented in the following tables:

Table 1. Correlation between Maternal Psychological Well-being and Children's Externalizing Behavior

Variables	1	2
1. Psychological Well-being	—	
2. Externalizing Behavior	.750**	—

Note. ** $p < .01$.

Results reported in Table 1 indicate significant positive correlations between maternal psychological well-being and children's externalizing behavior ($r = .750$, $p < .01$).

Table 2. Correlation Matrix among Somatic Symptoms, Anxiety and Insomnia, Social Dysfunction, Severe Depression of Mothers and Externalizing Behavior of Children

	1	2	3	4	5
1. Somatic Symptoms	—	—	—	—	—
2. Anxiety and Insomnia	.713**	—	—	—	—
3. Social Dysfunction	.615**	.626**	—	—	—
4. Severe Depression	.649**	.717**	.654**	—	—
5. Externalizing Behavior	.644**	.685**	.598**	.654**	—

Note. ** $p < .01$.

The correlation coefficients presented in Table 2 revealed that somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression of mothers were positively correlated with externalizing behavior of children. Results indicated that somatic symptoms were significantly positively correlated with externalizing behavior ($r = .644$, $p < .01$). Again, anxiety and insomnia were significantly positively correlated with externalizing behavior ($r = .685$, $p < .01$). Further,

social dysfunction was significantly positively correlated with externalizing behavior (r = .598, p < .01). Finally, severe depression was significantly positively correlated with externalizing behavior (r = .654, p < .01).

In the following sections, few assumptions tests were applied before applying inferential statistics.

In terms of the mathematical output of the assumption test of children's externalizing behaviors, the normality test analysis reveals that the data are approximately normally distributed. Under the generally accepted limits of ±2, the values of skewness (.804) and kurtosis (.037) indicated that the data are approximately normally distributed (Field, 2009).

Visual Graphs of Normality Test of the Externalizing Behaviors of Children for Applying Inferential Statistics

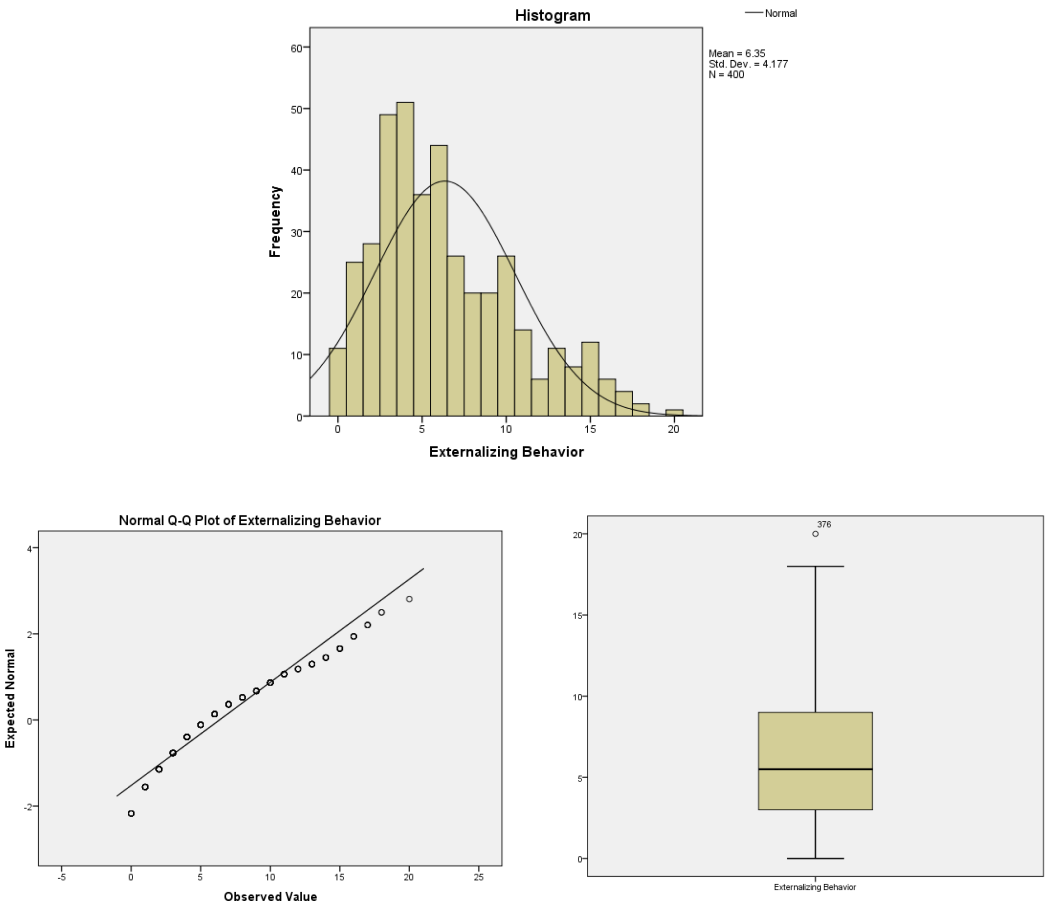

Figure 1. Visual Graphs of Externalizing Behaviors of Children Scores as Assumption Test.

Based on the visual output (Figure 1) of the assumption test of externalizing behaviors of children it can be assumed that the data are approximately normally distributed. The visual inspection of the histograms, normal Q-Q plots, and box plots permitted that the data were approximately normally distributed.

To consider, in third objectives, the effects of each independent variable on externalizing behaviors of children, a forward stepwise regression analysis was performed.

Table 3. Forward Stepwise Multiple Regression of Externalizing Behavior of Children on Somatic Symptoms, Anxiety and Insomnia, Social Dysfunction, and Severe Depression of Mothers.

Predictors	***Un-Standard Beta***	***β***	***t***	***p***	***R^2***	***R^2 Change***	***F Change***	***ANOVA for Model Fit***
Constant	1.124		3.196	.005				
1. Anxiety and Insomnia	.249	.292	5.326	.001	.469	.469	351.809***	351.809***
2. Severe Depression	.246	.213	4.052	.001	.524	.054	45.298***	218.132***
3. Somatic Symptoms	.205	.204	4.017	.001	.550	.026	23.164***	161.261***
4. Social Dysfunction	.199	.150	3.163	.005	.561	.011	10.004**	126.197***

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

Dependent Variable: *Externalizing Behavior.*

Predictors: *1.* Anxiety and Insomnia; 2. Anxiety and Insomnia, Severe Depression; 3. Anxiety and Insomnia, Severe Depression, Somatic Symptoms; 4. Anxiety and Insomnia, Severe Depression, Somatic Symptoms, Social Dysfunction.

Standardized beta (β) presented in Table 3 showed that there were four significant predictors [*i. e.*, anxiety and insomnia ($\beta = .292$, $p < .001$), severe depression ($\beta = .213$, $p < .001$), somatic symptoms ($\beta = .204$, $p < .001$), and social dysfunction ($\beta = .150$, $p < .005$)] which jointly explained 56.1% of variance in externalizing behavior of children. Regression analysis further indicated that the most powerful predictor of externalizing behavior was mothers' 'anxiety and insomnia' which alone explained 46.9% of the variance. Unstandardized beta (.249) of anxiety and insomnia suggested that as mothers' 'anxiety and insomnia' increased by one unit externalizing behavior of children increased by .249 units. Standardized beta ($\beta = .292$) indicated that as mothers' anxiety and insomnia increased by one standard deviation externalizing behavior of children increased by .292 standard deviation. Results also indicated that severe depression was the second important predictor which alone explained 5.4% of variance in externalizing behavior. Standardized beta ($\beta = .213$) indicated that as mothers' severe depression increased by one standard deviation externalizing behavior of children increased by .213 standard deviation. *R*-square change furthermore indicated that 2.6% of variance in externalizing behavior was accounted for the somatic symptoms and 1.1% of variance in externalizing behavior of children was accounted for social dysfunction of mothers. This interpretation is true only if the influence of other predictors is held constant. Also, the significant *F*-test [F (4, 395) = 126.197, $p < .001$] of Table 4 indicated that the variation in externalizing behavior of children was accounted for joint linear influences of mothers' anxiety and insomnia, severe depression, somatic symptoms, and social dysfunction. Finally, the value of ANOVA indicated that all the predictors good and fit the models significantly.

4. Discussion

In the current study, the first objective was to investigate whether there is any relationship between maternal psychological well-being and

children's externalizing behavior. Results presented in Table 1 indicated that there were significant positive correlations between maternal psychological well-being and children's externalizing behavior. The results indicated that mothers whose psychological well-being is good their children tend to have lower externalizing behavior. The findings are consistent with previous researches (Cummings & Davies, 1994; Yoon et al., 2017; Pfiffner et al., 1999; Foster et al., 2008). The mothers whose psychological well-being is higher are able to understand the emotions and problems of their children and can guide them in a better way. Besides this, they realize their own abilities, are able to cope with normal stresses, to work regularly and productively, and are also able to make a contribution to the family and society. If mothers stay in critical or stressful situations because of illness, excessive engagement in household activities, family conflict, daily hassles, job stress, then it impacts on their children behavior. Poor level of psychological well-being of mothers tends to spill over and negatively affect the quality of interactions with their children. The results can also be explained from theoretical perspectives. This result is congruent with interdependence theory. In accordance with the interdependence theory, in a family framework, when a family member is unhappy in his or her relationship with another family members, their emotions might be linked to both their own and the other family member's psychological well-being (Rusbult & Van Lange, 2003). As children in their childhood mostly depend on their mothers so their lifestyles or behavior patterns are assumed to be affected by their mother's psychological well-being. Children mostly expect positive responses from their mothers but due to poor psychological well-being mothers would not be able to satisfy their children's requirements which are assumed to ultimately influence their children's behavior patterns.

The second objective was to explore the relationship of somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression with externalizing behavior of children. Results presented in Table 2 revealed that mothers' somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression, were significantly and positively correlated to externalizing behavior of children. The results indicate that externalizing behavior of children is increased if the mothers' somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression are increased. These findings are supported by various studies conducted earlier (Beardslee et al. 1983; Field et al., 1996). In explaining the findings some investigators mentioned that depressed mothers tend to less cohesive, less organized, provide less structure, guidance, and rule enforcement, all of which subsequently influence on children development (Avenevoli & Merikangas, 2006; Goodman & Brumley, 1990). This result is also related to interpersonal acceptance and rejection theory. According to this theory if a child's requirement in parental acceptance is not satisfied by parents, the children tend to develop various dysfunctional personality traits like aggression, weak self-sufficiency, emotional instability etc. (Rohner, 1986). The mothers with somatic complains, anxiety and insomnia, social dysfunction, and severe depression are less likely to set limits on their children, less effective in their discipline practice, provide poor home environment, face difficulty in understand children's state and these misunderstandings lead to their reduced sensitivity towards child behavior. Apart from this, they cannot properly accept and guide them in a better way. For this reason, their children show more externalizing behavior in their daily activities.

The third objective was to investigate the relative importance of predictors in externalizing behavior of the children. Table 3 showed that the most powerful predictor of externalizing behavior was mothers' anxiety and insomnia. The other significant predictors were severe depression,

somatic symptoms, and social dysfunction respectively. All the predictors explained jointly 56.1% of variance in externalizing behavior of children. These findings are also supported by the earlier researches (Ashman et al., 2008; Foster et al., 2008; Riahi et al., 2012). Anxiety of the mother is a well-known risk factor for behavior problems in children. If the mother feels anxious regularly, she cannot concentrate in her daily life activities, provide poor home environment, cannot properly guide her children. As a result, their children exhibit more externalizing behavior in their daily activities. Tsotsi et al. (2019) found that maternal anxiety is a strong risk factor for externalizing behavior in children. If a mother feels anxious or depressed, they cannot set limits for their children, and if they did, they were less likely to stick to them. For externalizing problematic behaviors, family problems were the main significant indicator for offspring of mothers with depression/anxiety disorders (Hser et al., 2015). Foster et al. (2008) tried to explore the relationships between mothers' depression and their children's externalizing problematic behaviors. Mothers' current depressive symptoms and effect of ongoing or severe depressive disorders showed more negative behaviors in their children. They also found that undeniable degrees of maternal negativity and poor degrees of positivity during critical thinking related tasks were associated with their children's externalizing problematic behaviors. Burstein et al. (2010) explored that child whose mothers had psychological problems expressed higher amount of externalizing problematic behaviors.

Though the study has some significance it had some limitations also. One drawback is the dependence on a relatively small size sample which were gathered from only the six and seventh grade Bangla medium high school students in Dhaka City. For more reliable results, a larger and more comprehensive sample would be collected from other representative parts of the country who represent a wide range of age groups. Moreover, there are numerous other factors that affect externalizing behaviors of children but were not included in the current study. Therefore, future studies should include factors, such as parental acceptance rejection, parental conflict, genetic influences and family income to get a comprehensive understanding of externalizing behaviors of Bangladeshi children.

5. Conclusion and Implications

This study investigated the relations of maternal psychological well-being with externalizing behaviors of children. The findings demonstrated that children of mothers with good mental health or psychological well-being typically exhibit less externalizing behavior. Children's externalizing behavior is strongly predicted by mothers' mental health, including anxiety and insomnia, somatic symptoms, social dysfunction, and severe depression; however, mothers' anxiety and insomnia are the most significant predictors. Therefore, it can be concluded that anxiety and insomnia, out of all the variables affecting a mother's psychological well-being, have the greatest influence on how their children develop externalizing behaviors.

The current study's findings may be important in a variety of ways. It significantly advances many different scientific disciplines. It adds new information to the body of literature in the behavioral sciences, including psychology, developmental psychology, educational psychology, and sociology.

This study contributes to our understanding of how children's behavior is influenced by their mothers' psychological wellbeing. The study will add some new facts in psychology, which will enrich the research knowledge about the mothers' mental health and their children's behavioral pattern. The outcomes will also assist us in developing new psychological theories and models regarding mother-child relationships. The results of this study can help parents and other family members,

researchers, and mental health professionals understand how mothers' psychological health can affect the behavioral outcomes of their children. This understanding will help them to take the required actions to deal with mental health issues effectively. However, the findings of this study have significant implications on theory, research, policy, and training about the mental health of mothers and externalizing behaviors of their children.

On the basis of the findings of present study, the following recommendations may be considered. i) For the proper behavioral and emotional development of children, it is crucially needed to maintain good maternal psychological well-being. ii) Maternal counseling or training program can help mothers to overcome psychological difficulties like anxiety and insomnia and to learn healthy coping strategies with their children. iii) Finally, we also recommended that the Bangladesh Government and different Non-Government Organizations (NGOs) should take more effective initiatives to help mothers who have mental health problems with children having externalizing behaviors. Studies on mother child interaction are now a global issue, thus it is important to verify and investigate those issues scientifically for better understanding in the perspective of socio-cultural context for policymaking purpose.

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