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Original article

ASSOCIATE FACTORS OF FAMILY RELATIONSHIPS AMONG ADULTS: A HOUSEHOLD BASED CROSS-SECTIONAL STUDY IN BANGLADESH

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ABSTRACT

The functioning of a family, the basic unit of society, depends on the relationships among the family members. The family relationship (FR) is a complex matter that is affected by various physical, mental, socioeconomic, and cultural factors. This vital issue is rarely studied in Bangladesh. We designed this study to focus on family relationships among adults in the Rajshahi district of Bangladesh. We conducted this household-based cross-sectional study with 696 subjects selected by a multi-stage random sampling technique and collected data using a semi-structured questionnaire from February 1 to March 31, 2023. We used the Brief Family Relationship Scale for screening FR. We applied frequency distribution, the chi-square test, and the binary logistic regression model for data analysis. The prevalence of poor FR among adults living in Rajshahi district, Bangladesh was found to be 18.1%. The predictors of poor FR were: (i) female gender (AOR = 2.502, 95% CI: 1.455-4.303; $p<0.001$), (ii) age≤40 years (AOR = 4.379, 95% CI: 2.361-8.121; $p<0.001$), Non-Muslims (AOR = 4.721, 95% CI: 2.087-10.679; $p<0.001$), uneducated (AOR = 2.292, 95% CI: 1.194-4.397; $p<0.05$), ≥3 family members (AOR = 4.094, 95% CI: 2.030-8.254; $p<0.001$), low family income (AOR = 2.556, 95% CI: 1.100-5.939; $p<0.05$), having chronic medical disease (AOR = 2.480, 95% CI: 1.390-4.426, $p<0.01$), having mental disorder (AOR = 23.004, 95% CI: 10.951-48.326; $p<0.001$), pains of loss of relatives/service/wealth (AOR = 4.539, 95% CI: 2.465-8.360; $p<0.001$) and substance abuse (AOR = 2.679, 95% CI: 1.553-4.623; $p<0.001$). Poor FR is high among the study subjects. This might adversely affect the functioning of individual family members and society as a whole. The concerned government and non-government authorities should provide appropriate counseling services regarding gender, familial, social, cultural, and religious issues to the families. A special focus should be given to vulnerable groups.

KEY WORDS: Family relationship, Adults, Associate factors, Logistic regression model

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INTRODUCTION

A family is a basic unit of society that functions for economic endeavors, landholding, and social identity (Heitzman and Worden, 1989).It consists of members like father, mother, son, daughter, brother, sister, grand-father, grand-mother, grandson, granddaughter, uncle, aunt, cousin, nephew, niece, and so on. Marriage and birth are the two main ways that form families by creating emotional bonding and similar values among the family members. According to size, families are usually categorized as nuclear (a couple and their children) and joint (a couple, their children, grandchildren, and others). Parents, spouses, siblings, and children are considered immediate family, and others, like grandparents, grandchildren, uncles, aunts, cousins, nephews, nieces, and so on are extended families (Kalpana, 2023). The family is made strong not only by the number of heads, but, in the true sense, by the rituals and traditions the members create for themselves, the memories they share, the commitment, care, and love they show to one another, and their individual and collective hopes and ambitions for the future (Kennedy and King, 2023).

The family relationship (FR) means inter-personal communication and cooperation among the members of the family (Rözer et al., 2016), who not only live under one roof but also bear a sense of belonging, take care of others' well-being, deal with challenges unitedly, and carry forward family traditions (Heitzman and Worden, 1989). Good relationships among family members are vital because overall well-being, mental growth, peace, security, social dignity, and economic stability depend on the functioning of the family. A strong family helps one become confident in life. Good communication, the feeling of togetherness, spending quality time with each other, showing care and affection to every member, supporting and honoring each other, following elders, resolving crises unitedly, focusing on every member's well-being, and showing resilience are some of the characteristics of a strong family relationship (Kalpana, 2023). FR is a complex matter affected by various physical, mental, socioeconomic, and cultural factors. It crucially affects the mental and social well-being of family members (Alanko and Lund, 2020; Johnson and Galambos, 2014; Braithwaite et al., 2010). A good family relationship ensures social support (Rözer et al., 2016) that helps the individual or the whole family cope with the challenges they meet (Tull et al., 2020. On the contrary, poor FR affects both physical and mental health during childhood and adult life (Lewinsohn et al., 1999; Fergusson and Woodward, 2002; Bohman et al., 2010;Alaie et al., 2019), and its comorbidities include parental alcohol abuse and mental illness (Wadood et al., 2021).

This type of research is essential for different populations, but to the best of our knowledge, there was hardly any study on this topic in Bangladesh. Only one study is available on bipolar disorder and self-perceived interpersonal relationships; the authors considered only married adults in urban settings and did not use an appropriate scale for determining family relationships (Wadood et al., 2021).

OBJECTIVES

Therefore, we decided to determine the prevalence of family relationships among adults in Rajshahi district of Bangladesh and examine the factors affecting them. We wanted to study FR more broadly by expanding the study area, taking married and unmarried adults from urban and ruralsettings, and using a scale for determining family relationships.

MATERIALS AND METHODS

Study design, area, and population: This current study was a part of our project titled "bipolar disorder, suicidality, and family relationship among adults in Rajshahi District of Bangladesh." This was a household-based cross-sectional study conducted among adults residing in Rajshahi District, Bangladesh. The district consists of one urban (Rajshahi City Corporation) and nine rural (Upazilas) administrative units. The district is situated on the bank of the mighty river Padma and is bounded by Natore district to the east, Naogaon district to the north, Chapai Nawabganj district to the west, and the river Padma and a part of Kushtia district to the south. The Padma has separated it from the historic Murshidabad district of the West Bengal province of India. The area of the district is 2,407 square kilometers (Banglapedia, 2023). A total of 29,15,013 people live in the district in its 7,75,260 households (BBS, 2022).

Inclusion/exclusion criteria: Adults of at least 18 years having no significant illness were included as samples for this study, and subjects less than 18 years and seriously sick were excluded.

Size of samples and sampling technique: We used the following mathematical formula to calculate the sample size for this study: $n=\frac{z^2 p(1-p)}{d^2}$, where n is the desired sample size, p is the proportion of prevalence of poor family relationships=0.199; the prevalence of poor family relationships (19.9%) was taken from a previous publication (Wadood et al., 2021); z = 1.96 at the 95% confidence interval; and d is the margin of error; we considered d = 0.05. The formula showed that the sample size should be 245. However, we selected 400 households to avoid a non-participation crisis. All adults living in the households were considered our samples. For selecting samples, we applied a multi-stage random sampling technique. As there was only one urban unit in the district, we chose Rajshahi City Corporation (RCC), and for rural areas, we randomly selected three out of 9 Upazilas. In the second stage, we randomly selected two out of 30 Wards from RCC, and three unions from each of the chosen Upazilas. Then we selected one Muhalla from each of the two RCC Wards and two villages from each of the three chosen unions. Thus, we selected a total of eight neighborhood units (Muhallas and villages) from the whole district. In the fourth stage, we selected 50 households from each of the chosen neighborhoods.

Questionnaire: We used a semi-structured questionnaire to collect necessary anthropometric, demographic, familial, socioeconomic, and health-related information from the participants. The questionnaire also included 16 statements from the Brief Family Relationship Scale (BFRS, 2016). The first author prepared the draft questionnaire in English. The other authors reviewed, edited, and finalized it. The questionnaire was then translated into Bangla separately by one professor of English and one psychiatrist. The translated Bangla versions of the questionnaire were then re-translated to English separately by another professor of English and one Associate Professor of Clinical Psychology. The authors, using the suggestions and recommendations of the translators and re-translators, compared and reviewed the original, translated, and re-translated versions and finalized a Bangla version of the questionnaire (BVQ). We conducted a pilot study using this questionnaire among 100 subjects and

found that the BVQ was sufficiently understandable to the participants. So, we used this questionnaire in our study.

Ethical approval and consent to participate: This study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of Institute of Biological Sciences, University of Rajshahi, Bangladesh (Memo No: 110(16)/320/IAMEBBC/IBSc, dated June 5, 2022). Participants were explained about the study protocol, and informed consent was documented. For the illiterate participant, informed consent was obtained in the presence of an independent literate witness.

Data collection: We formed four teams of data collectors, each consisting of one male and one female student from the Department of Statistics at Rajshahi University. We motivated and trained them to collect data professionally and ethically. They reached the selected households and approached all adults present in the households during the survey. They briefed them about the objectives and methodology of the study and got their written consent for the face-to-face interview. The authors closely supervised the whole data collection procedure. Thus, we collected information from 696 subjects from February 1 to March 31, 2023. We entered all the collected information about the subjects on the computer and coded and re-coded the data.

Outcome variable: Family relationship was the outcome variable for this study. It was determined by using the BFRS (BFRS, 2016), a highly sensitive and specific tool for screening family relationship status (Foket al., 2014). This scale was used earlier in different populations of various socio-cultural backgrounds, including the married adults of West Bengal (Kolkata) in India (Gupta and Ganguly, 2020). BFRS includes seven statements under the cohesion subscale, three statements under the expressiveness subscale, and six statements under the conflict subscale. Each statement on the scale has four options for response: strongly agree: 0, agree: 1, disagree: 2, strongly disagree: 3 (BFRS, 2016). The scoring of the statements under the conflict subscale would be reversed. Under the cohesion subscale, scores were categorized as 0–7 points = 1– most cohesive; 8–14 = 2– moderate; and 15–21= least cohesive. Scores on the expressiveness subscale were grouped as follows: 0–3 = 1- most expressive; 4–6= 2– moderate; 7–9= 3- least expressive. Conflict scores were categorized as: 0–6 = 1- most conflict; 7–12 = 2– moderate; 13–21 = 3– least conflict. BFRS explains family relationships through these three subscales, assessing cooperation and support, expression of thoughts and discussions, and the limit of anger and conflict within the family. For the convenience of analysis and explanation, we recoded and added cohesion, expressiveness, and conflict categories; the sum scores ranged from 3 to 9. Considering the mean value of the scores as the cut-off point, we grouped the family relationship as (i) good (3–5 points) and (ii) poor (6–9 points) (BFRS, 2016)

Independent variable: We considered some anthropometric, demographic, familial, socioeconomic, and health-related factors as independent variables for this study on the basis of some relevant previous studies and the objectives of our study (Table 1).

Table 1: Association of the household, demographic, socioeconomic and health-related factors with the family relationship among adults

Variables n (%)		Family Relationship		χ^2-value	p-value
		Good n (%)	Poor n (%)		
Age	≤40 years, 465 (66.8)	359 (77.2)	106 (22.8)	20.806	0.001
	>40 years, 231 (33.2)	211 (91.3)	20 (8.7)		
Religion	Muslim, 667 (95.8)	555 (83.2)	112 (16.8)	18.581	0.001
	NonMuslim, 29 (4.2)	15 (51.7)	14 (48.3)		
Gender	Male, 369 (53.1)	318 (86.2)	51 (13.8)	9.714	0.002
	Female, 327 (46.9)	252 (77.1)	75 (22.9)		
Education	Illiterate, 109 (15.7)	75 (68.8)	34(31.2)	16.110	0.001
	Primary or Secondary educated, 193 (27.7)	158(81.9)	35(18.1)		
	High educated, 394(56.6)	337(85.5)	57(14.5)		
Occupation	Earning, 245 (35.2)	219 (89.4)	26 (10.6)	14.311	0.001
	Non-earning, 441 (64.8)	351 (77.8)	100 (22.2)		
Family Monthly Income (BDT)	Low income (≤20,000), 432 (62.1)	336(77.8)	96 (22.2)	13.279	0.001
	Middle (20001-40000), 205 (29. 4)	183 (89.3)	22 (10.7)		
	High income (≥40001), 59 (8.5)	51 (86.4)	8 (13.6)		
No of family members	1-2 members, 54 (7.7)	34 (63.0)	20 (37.0)	14.155	0.001
	≥3 members, 642 (92.3)	536 (83.5)	106 (16.5)		
Marital status	Married, 495 (71.1)	418 (84.4)	77 (15.6)	7.505	0.007
	Unmarried and others, 201 (28.9)	152 (75.6)	49 (24.4)		
Chronic medical disease	Yes,109 (15.6)	70 (64.2)	39 (35.8)	27.237	0.001
	No, 587 (84.4)	500 (85.2)	87 (14.8)		
Respondent's mental disorder	Yes, 60 (8.6)	11 (18.3)	49 (81.7)	178.932	0.001
	No, 636(91.4)	559 (87.9)	77 (12.1)		
Pains of loss	Yes, 86 (12.4)	46 (53.5)	40 (46.5)	53.412	0.001
	No, 610 (87.6)	524 (85.9)	86 (14.1)		
Substance abuse	Yes, 147 (21.1)	96 (65.3)	51 (34.7)	34.597	0.001
	No, 549 (78.9)	474 (86.3)	75 (13.7)		

Data analysis: We used Statistical Package for the Social Sciences (SPSS) Version 22 for data analysis. First, we applied descriptive analysis to the frequency distribution of the independent variables and the prevalence of the family relationship (the outcome variable). Then, we used the Chi-square test to examine the association of the independent variables with the outcome variable. Lastly, we put the statistically significant associated factors as independent variables in the

logistic regression model to see their effect on the outcome variable. We checked for multi-collinearity problems among the independent variables in the multiple logistic regression model using the magnitude of the standard error (SE), and no multicollinearity problem existed in this case as the magnitude of SE was between 0.001 and 0.5 (Chan, 2004).

RESULTS

We interviewed 696 subjects, 53% male and 47% female, for our study. Of them, 84.5% came from rural areas, and 91.2% were from nuclear families. The age of the participants ranged from 20 to 85 years, and the mean age was 36.9±14.1 years. The frequency distributions of the independent variables are presented in Table 1. The frequency distributions of the three subscales of the BFRS revealed that 7.2% of the respondents had conflict, 2.6% were less expressive, and 2.4% had less cohesion, which is suggestive of poor family relationships (Fig. 1). Our study found that 18.1% of the adults had poor family relationships.

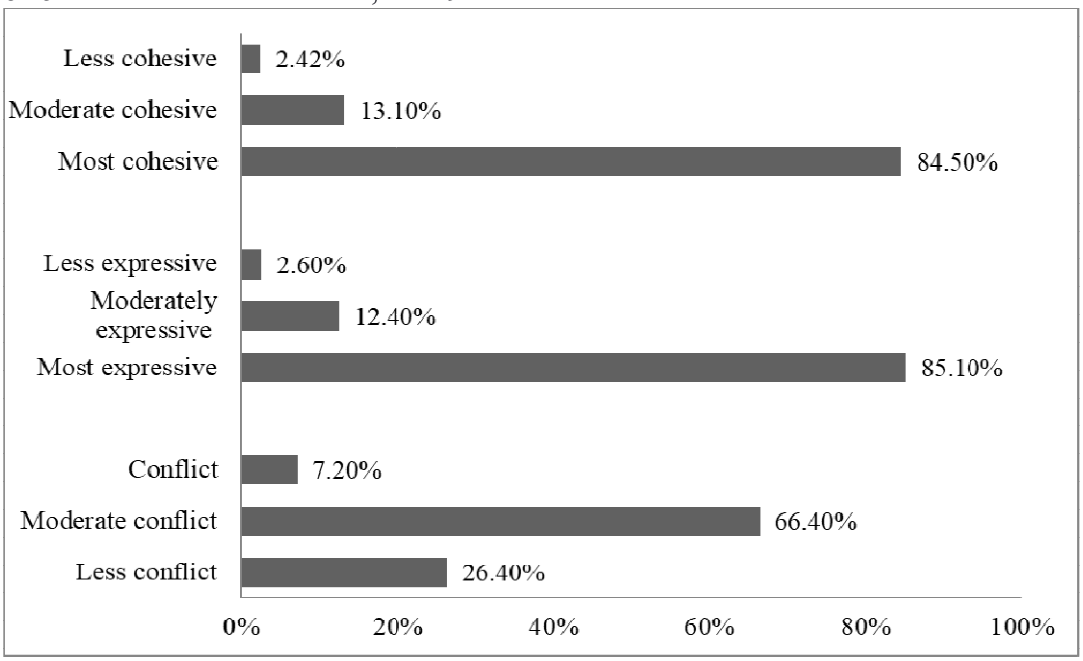

Fig. 1: Prevalence of categories of the BFRS subscales

It was found that young adults (≤40 years) had a higher rate of poor FR (22.8%) than the older age group (>40 years) (8.7%), with non-Muslims recording a higher rate of poor FR (48.3%) compared to Muslims (16.8%); Females had a higher rate (22.9%) of poor FR than males (13.8%). The prevalence of poor FR decreased with the increase in education level; non-earning respondents showed a higher rate of poor FR (22.2%) than earning respondents (10.6%). Low-income people had the highest rate of poor FR (22.2%) rather than middle-income (10.7%) and high-income (13.6%) people. The number of family members was correlated to the poor FR (1–2 members, 37.0%; 3 members, 16.5%). Married subjects

recorded a comparatively lower rate of poor FR (15.6%) than the group of unmarried and others (24.4%). Respondents with chronic medical disease had a higher rate of poor FR (35.8%) compared to their counterparts (14.8%), and respondents with mental disorders were found to have a higher rate of poor FR than their counterparts (yes, 81.7%; no, 12.1%). Subjects having pains of loss of relative/wealth/service had a higher prevalence of poor FR (46.5%) than their counterparts (14.1%). Substance abuse was found to have a strong correlation to poor FR (yes, 34.7%; no, 13.7%). Variables significantly associated with FR are presented in Table 1.

Table 2: Effect ofthe socio-demographic and health related factors on the family relationship among adults

Variable	**B**	**p-value**	**†AOR**	**95% CI of AOR**	
				Lower	**Upper**
Gender: Female Vs Male [R]	0.917	p<0.001	2.502	1.455	4.303
Religion: Others Vs Muslim [R]	1.552	p<0.001	4.721	2.087	5.679
Age: ≤40 years Vs >40 years[R]	1.477	p<0.001	4.379	2.361	8.121
Education: Illiterate Vs High educated [R]	0.829	0.013	2.292	1.194	4.397
Education: Primary or SecondaryVs High educated [R]	0.174	0.557	1.190	0.666	2.126
Respondent's occupation: Earning Vs Non-earning[R]	-0.116	0.716	0.890	0.476	1.664
Marital status: Married Vs Unmarried[R]	-0.142	0.593	0.868	0.515	1.461
Number family members: ≥3 members Vs ≥ 1-2 member[R]	1.409	p<0.001	4.094	2.030	8.254
Family's monthly income: Low Vs High income [R]	0.938	0.029	2.556	1.100	5.939
Family's monthly income: Middle Vs High income [R]	0.302	0.550	1.352	.503	3.639
Chronic medical disease: Yes Vs No[R]	0.908	0.002	2.480	1.390	4.426
Respondent's mental disorder: Yes Vs No [R]	3.136	p<0.001	23.004	10.951	48.326
Pain of loss: Yes Vs No [R]	1.513	p<0.001	4.539	2.465	8.360
Substance abuse: Yes Vs No [R]	0.986	p<0.001	2.679	1.553	4.623

N.B.: B- Coefficient; AOR- Adjusted Odds Ratio; CI- Confidence Interval; R- Reference

We considered all variables in Table 1 as independent variables in a multiple logistic regression model to see their effects on poor FR. The female gender showed a higher likelihood of poor FR than males (AOR = 2.502, 95% CI: 1.455-4.303; p<0.001).The age groups of ≤40 years (AOR = 4.379, 95% CI: 2.361-8.121; p<0.001) was found to be more prone to having poor FR as compared to the older age group of >40 years. Non-Muslims are more likely to have poor FR (AOR = 4.721, 95% CI: 2.087-10.679; p<0.001) than Muslims. Uneducated adults had a 2.292-fold higher chance of having poor FR (AOR = 2.292, 95% CI: 1.194-4.397; p<0.05) as compared to educated adults. Adults having ≥3 family members were more likely to have poor FR (AOR = 4.094, 95% CI: 2.030-8.254; p<0.001) than adults having 1-2 family members. People living in low-income families were found to be more prone to having poor FR (AOR = 2.556, 95% CI: 1.100-5.939; p<0.05) than people living in high income families.Adults having chronic medical disease (AOR = 2.480, 95% CI: 1.390-4.426, p<0.01) and mental disorder (AOR = 23.004, 95% CI: 10.951-48.326; p<0.001) were more likely to have poor FR as compared to their counterparts. People having pains of loss of relatives/service/wealth (AOR = 4.539, 95% CI: 2.465-8.360; p<0.001) showed a higher likelihood of poor FR than their counterparts. Subjects who abused substances had a higher chance of having poor FR (AOR = 2.679, 95% CI: 1.553-4.623; p<0.001) as compared with those who did not abuse substances (Table 2).

DISCUSSION

We conducted the present study aiming to determine the prevalence of family relationships and its associated factors among adults in Rajshahi district, Bangladesh. We applied appropriate statistical tools/ models according to our objectives.

Prevalence of poor family relationship: The prevalence of poor family relationships found in our study population (18.1%) is significantly high. In a previous study, Wadood et al. (2021) found 19.9% poor FR among married adults in Rajshahi City, Bangladesh. That study used four non-validated questions instead of any scale to determine the FR status of the respondents. Besides, the study area was comparatively smaller, and the subjects were only couples. A Chinese study that used a different scale for screening family relationship status found 6.8% of older women had poor family relationships (Zeng et al., 2022). Another study conducted among Swedish urban adolescents reported a 9.1% poor FR (Almet al., 2019). The Bangladesh Bureau of Statistics (BBS) reported in 2016 that 55.4%, 49.6%, 28.7%, 27.3%, and 11.4% of ever-married women in Bangladesh suffered from controlling behavior and physical, emotional, sexual, and economic violence. The rate of divorce was estimated to be 0.42%, and it has increased by 34% in the last seven years (BBS, 2022). These findings reflect some important aspects of FR in Bangladesh and indicate that the prevalence of poor FR found in the current study might be an underestimate. This can be explained by the fact that Bangladeshi people are not liberal enough about disclosing their personal and family secrets. Most women (72%) experiencing partner violence never disclosed their sufferings to others as they did not consider it necessary to report (39.3%); the other reasons for not reporting were concern about honor of the family (15.6%), for fear (12.0%), and concern about shame/embarrassment (7.7%) (BBS, 2015). The same thing might also happen in the case of our participants.

Associated factors for family relationships: In a patriarchal society like Bangladesh, females are always suppressed and oppressed, and it might be expected that they would perceive a higher level of poor FR compared to males. An estimated 46% of married Bangladeshi women had experienced physical and psychological abuse, and 54% had experienced verbal abuse by their husbands (Mannan, 2002). Another study found that 50% of women in Bangladesh experienced domestic violence at least once in their lifetime. About 49% of household deaths among women in Bangladesh were due to severe beatings by their husbands (Paltiel, 1987). In another study, 69%, 59%, 39%, and 7% of gender-based violence were perpetrated by husbands, fathers, mothers, and brothers, respectively (Bangladesh Centre for Advanced Studies, 2020). All these findings prove that the higher rate of poor family relationships perceived by females in the current study was not unjustified.

In our study, non-Muslims were found to have a higher likelihood of poor FR than Muslims. Islam is a religion that places a lot of emphasis on integrated family life and orders its followers to respect and care every family member. These religious issues might contribute to the comparatively higher rate of good family relationships among Muslims.

In our study, contrary to popular perception, younger adults aged ≤40 years perceived higher rates of poor FR. Usually, people in this age range have high expectations of their family members. A little deprivation causes comparatively more pain for them. On the other hand, older people are experienced enough with the reality that helps them tolerate even bigger pains.

Our study showed that uneducated participantswere more likely to have poor family relationships than educated ones. This finding was supported by a Chinese study (Zhang, 2012). The educational status of the family members is a vital factor in the socioeconomic development of a family. Education helpsto understand the process of family formation and functioning well, and educated people are more capable of earning livelihoods for the family, which gives them dominance in the family. On the other hand, illiterate people earn low wages, and they lose dignity in the family. These issues might contribute to creating disputes and quarrels in the family that ultimately can cause poor FR.

Low-income families struggle for their minimum livelihood, and unfair competition is created among the family members based on their individual hardships and shares, which ultimately make their interpersonal relationships difficult. A Slovakian study showed that low income distorts family communication among its members and affects family functioning (Banovcinova and Levicka, 2015). Low income also corresponds with a lack of education, and their effects mediate through each other to make family relationships poor.

In our study, the family size of ≥3 members showed a higher likelihood of poor FR than the smaller family of two members. Usually, the larger number of people, the greater the chance of disputes and conflicts. A larger family size also creates an economic burden. More members in a family make just care and sharing harder, which might create discrimination, emotional distress, and a sense of negligence among the family members. All these issues and situations

can distort interpersonal relationships in the family.

Pains of losing a relative/wealth/service often create psychological distress among family members. They might be engaged in conflicts about the causes/consequences of the loss, and blame one another for the role they play. This loss might also cause financial crises in the family. Thus, the family relationship might be affected.

Chronic medical disease might create emotional, financial, and humanitarian crises in the family that have an impact on family relationship status. The adverse impact of chronic medical disease on the family relationship found in our study is supported by some previous studies, one of which reported that 69% of people thought their family relationships were adversely affected by chronic physical diseases (Golicset al., 2013).

Any mental disorder in any family member disrupts the overall family functioning in various ways, and its effects on the family members are far-reaching (Gubmanand Tessler, 1987). A review study showed a high level of multidimensional impact of severe mental disorders on family members (Fekaduet al., 2019). An Australian study reported that mental disorders affected not only the individual but also family members and relatives, causing family relationship difficulties (Robinsonet al., 2008). The impact of schizophrenia on family members is substantially negative, even in families with stronger networks (Shibreet al., 2003). Depression and anxiety disorders have many adverse impacts on relationships in families (Whisman, 2007). Bipolar disorder has a high correlation with family conflicts and poor family relationships (Wadood et al., 2021; Miklowitz, 2007; Fok et al., 2014). A lot of research also shows that depressive disorders also have negative impacts on family functioning (Luet al., 2017; Senaratneet al., 2010).

Substance abuse creates problems not only for the individual addict but also for all other family members in many ways and adversely affects the family system, ultimately causing family relationship problems (Wadood et al., 2021; Shamsaeiet al., 2019; Jesuraj, 2012). In Bangladesh, 13% of gender-based violence was reported to be contributed by individuals with alcohol use (Bangladesh Centre for Advanced Studies, 2020), which was a cause/consequence of poor FR.

Strengths and limitations of the Study: The household nature of the study enabled us to collect more realistic information from the respondents. The statistical models we used for data analysis were well-fitted, and we got statistically significant results. The samples were selected randomly, covering all walks of life. However, this study had some limitations too. Firstly, the cause-and-effect relationship could not be established because of the cross-sectional nature of the study. Secondly, the BFRS was not validated for our study population. Thirdly, the self-reported information of the subjects might be biased. Finally, though the study covered almost all socioeconomic and cultural sectors of the target population, it cannot be called nationally representative as it was limited to only one out of 64 districts in Bangladesh. It needs different research strategies and tools to get more accurate and nationally representative findings.

CONCLUSION

This was a household-based cross-sectional study. The objective of the study was to determine the family relationship status among the adult population of Rajshahi district in Bangladesh. A total of 696 subjects took part in the study. The prevalence of poor family relationships was significantly high (18.1%). Female gender, non-Muslims, younger adults of ≤40, uneducated, low-income household, larger family size (≥3 members), pains of loss of relative/wealth/service, chronic medical disease, mental disorders, and substance abuse were the risk factors for poor family relationships. The concerned government, non-government, social, cultural, and religious authorities should provide appropriate counseling services regarding gender, familial, social, cultural, and religious issues to the families.

Abbreviations: AOR- Adjusted odds ratio; BFRS: Brief Family Relationship Scale; BVQ: Bangla version of the questionnaire; CI: Confidence interval; FR: Family relationship; IAMEBB: Institutional Animal, Medical Ethics, Biosafety and Biosecurity Committee; IBM*:* International business machines corporation;RCC: Rajshahi City Corporation; SE: standard error; SPSS: Statistical Package for the Social Sciences.

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