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Factors Affecting Family Size: A Study on Narail District, Bangladesh

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Abstract

Family size in a respective community relies on different socio-economic and cultural factors. This study examines the determinants of family size in the Narail district of Bangladesh. The samples of 100 respondents were selected through simple random sampling and interviewed with a semi-structured interview schedule. The bivariate analyses were performed using chi-square and correlation tests to explore the possible association between family size and selected covariates. The OLS (Ordinary Least Square) model was considered to know the marginal effects of independent variables. Results show that more than half of the households (54.2% to be exact) were small (had four or fewer members) in size. Besides, age, family income, educational status, number of living children, number of desired children, sex preferences, contraceptive use, family planning and residence were linked with the size of the family ($p < .005$) as potential socio-economic and cultural factors. In addition, the age at first marriage and religion has no impact on specifying the family size.

Keywords: family size, households, socio-economic factors, family planning, income, sex preferences, contraceptive use

1. Introduction

1.1 Problem Statement

Family size is of great significance not only for the country as a whole but also for the well-being and health of the reputed person, the family and the community (Arthur, 2005; Hyeladi & Alfred, 2014). The welfare and strength of the individual, the family, the community, and the country determine the family's size (Jones, 2005). Family extent and composition in a community, in particular, and society, in general, depends on the familial, cultural system, socio-economic situation, biological and psychological consequences of the affianced couples who intend to begin a family or the eligible partners who live in the family (Uddin, Habib, & Akter, 2012). Hence, family size is the number of family members, including children, irrespective of wherever they live (Jones, 2005). , it can be declared that the association patterns of the family: marriage, blood, and approval, which are favoured by family cultural structure and vary from one community or society to another, define the family size and harmony in a given community or society in a certain period. The inclination of family sizes and its tendency for a possible world population explosion can rush poor developing countries into further poverty and helpless grief. Traditional attitudes toward women's part in society make it challenging for them to contribute to population control (Arthur, 2009; Jones, 2005). Family size depends on numerous factors, such as age, duration of the marriage, literacy, preference for the number of children, etc. (Ojha, 1999). Another study affirmed that variables indicating family size are strong predictors of the number of children born to women (Bhargava, 2007).

The decision to have a large family size and timing is a critical issue that may involve a trade-off of the family's scarce resources against a large family size (Hyeladi & Alfred, 2014). The high and nearly stable desired family size hinders further fertility decline (Worku, Tessema, & Zeleke, 2014). Both sociologists and anthropologists claim that every couple in a society has an ideality of family size and structure calculated by the family cultural system, socio-cultural status, and biological and psychological outcomes (Uddin et al., 2012). Another study found that the education levels of women and husbands are inversely related to the ideal and desired family size in both urban and rural areas (Ali, 1989). Given the context, this study tried to determine the socio-economic determinants affecting the family size and the changes in these factors over time in the Narail district of Bangladesh.

1.2 Significance of the Study

The study's insistence will help to fete several strengths and weaknesses of the choice of family size on the socio-economic and the artistic life of people. It would contribute first-hand sapience into some of the problems faced by families of smaller sizes and those with larger family sizes to determine the suitable family sizes and approaches to make families have many economic and social standards. Factors affecting family size contribute to the productivity rate. The rapid population growth is an obstacle to harmonising demographic dividends with socio-economic development. Rapid growth is happening in countries where the decline in the total fertility rate is slow. The slow decline of the total fertility rate may be because the population has yet to reach their aspired family size. The extensive and nearly stable preferred family size obstructs further fertility decline, which determines family size in urban and rural areas. This

study specifies factors influencing family size in these areas.

1.3 Objective of the Study

The broad objective of this study is:

- To identify the factors affecting the family size in the Narail district of Bangladesh.
- To understand the nature of the family size and demographic characteristics of households in Narail District; and
- To identify the socio-economic and cultural factors that influence family size in Narail District.

1.4 Hypotheses of the Study

This study hypothesises a specific relation among the variables of family size determinant in the Narail district of Bangladesh, which provides the study with a scientific base. However, there are several hypotheses in this study. These are as follows:

H_1: The age and educational status of the respondents are associated with a significant impact on family size determinants.

H_2: There is no correlation between ages at first marriage and family size determined.

H_3: There is an association between the respondent's spouse's education and the family income of the participations, as well as their residence, with the determined impact on family size.

H_4: There is no relation between religious factors influencing the family size determined participation.

H_5: There is a correlation between the number of living children desired number of children; the decision to family planning has a significant relationship with the family size determined.

H_6: There is a strong influence on the family size determined and sex preference, awareness regarding contraception before sexual engagement, and use of contraceptives of the participants.

1.5 Conceptual Framework

Particular conceptual frameworks have also been acquired on family size-connected implications. Becker (1991), as expatiated, shows that family size is a vital determinant of whether a household or somebody is in poverty because the official poverty measure incorporates family size. Family size depends on family income, government relocations and predilection. The demand for children predicts that the number of children in a family is determined by family income and the costs of offspring (Becker, 1991). Income plays a vital role in influencing family size because families with higher incomes are more able to afford extra children. Government shifts may affect the number of children and adults in a family by altering the approximate cost of having a child and creating enticements or disincentives to marry. Finally, individual preferences will affect the family size. Family size is also distinguished for its effect on other parameters like income, occupation, and education. These

issues are also based on rationale caused by economic, social and cultural factors shown below.

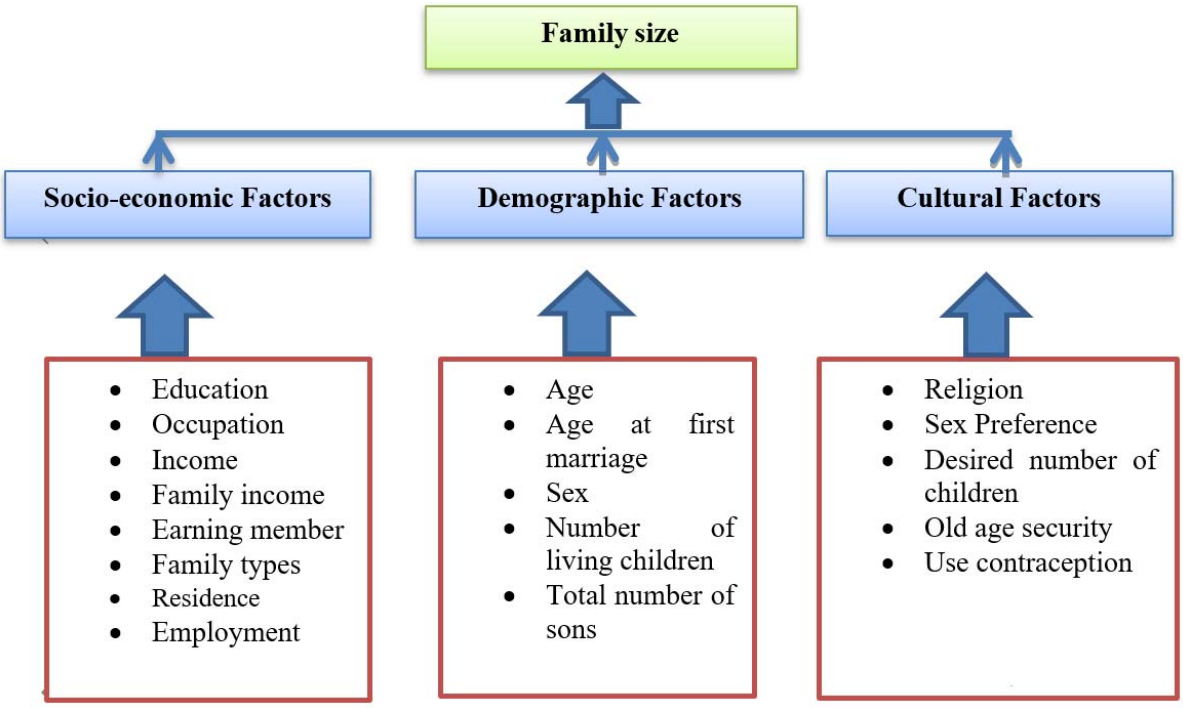

Figure 1. Conceptual framework

1.6 Literature

Family size refers to the aggregate number of children (boys and girls) a man would wish to have, presuming that he will stay with his current better half until the end of her reproduction period. Education contains schooling and learning of specific skills and something less discernible but more profound: imparting understanding and favourable judgment. It indicates the years an individual spent obtaining schooling in an educational organisation. Formal education has been used in this study to indicate the highest level a respondent has attained, even in a contemporary education system**.** There is a proclivity that educated people desire a small family size and therefore extend to contraception use. The less educated are discouraged or opposed to such use. Moreover, women who attained a secondary and higher level of education are found to be 2 and 2.6 times more likely to prefer a small family size compared to women who had no education (Dibaba & Mitike, 2016). Occupation is used to relate to the lucrative pursuits which the respondents implied to generate income. A man's occupation significantly affects family size decisions (OIOMU, 2000). Uddin, Bhuyan and Islam (2011) indicated that participants from rural areas contain a more significant number of large families than those from urban areas. Employment outside the farm has also been hypothesised to substantially influence family size (Kiriti & Tisdell, 2003). Family income is an influential determinant that significantly impacts family size. The idea of a higher family income leads to a smaller family size than a large family, which is supported by Sharif, Mubeen, and Hussian (2007). Large families are also highly impacted by the family's monthly income (Becker, 1991;

Sharif et al., 2007).

Religion, as supported, desired family size is more remarkable for Muslims than for Hindus (Mosena & Stoeckel, 2016). Religion-inclined family size determines (Sharif, Mubeen, & Hussian, 2007). OIOMU (2000) described that people tend to ignore the use of contraceptives up to they get the number of infants of the sex favoured. All over the world, the tendency is toward setting the children's sexes. Son's preference also affects the desired family size (Islam, 2011). This transfers to the perceived collaboration that the participant's infant can extend during the Old Age. Children are regarded as old age security. OIOMU (2000) mentions that the desire for extra children is recognised as old age security, affecting family size. Age at first marriage positively affects expected family size (Sharif et al., 2007; Islam, 2011; Dibaba & Mtiike, 2016). Age shows that the possibility of having extra children among older participants is lower than among younger participants (Kabir et al., 1994). The study shows that the desire for additional children among women had a particular total of living sons or with one or more living sons (Kabir et al., 1994). There is always a tendency for the desired family size by a couple affects contraceptive use and vice-versa. Where the desired number of children is high, the tendency to use contraceptives is low because the use of contraceptives limits the number of children one can get given the female's reproduction period (Campbell, 1986).

1.7 Research Gap

Several researchers have explored the relationship between family size and socio-economic and cultural determinants worldwide. Most of the study has been conducted on a definite sector of family size. However, this excavation study has been shown on a broad scale to specify the overall determinants related to family size in the Narail district of Bangladesh. The above studies have identified the problems but did not prescribe any specific solution. The study by Kabir, Amin, Ahmed, and Chowdhury, only emphasised the son preference and desired family size. The study has been conducted on a specific sector, like son preference which does not cover the fundamental determinants of family size.

Uddin, Habib, and Akhter, mainly highlighted the socio-cultural factors that influence the family size, but they skipped major economic factors like education, income and earning members. This study is also directed only at two religious communities, which gives a more limited result. Besides, most of the works were accomplished by African researchers (Caldwell, 1980; OIOMU, 2000; Dibaba & Mitike, 2016).

Some works (Ali, 1989; Sharife, 2007; Mosena & Stoeckel, 2016) are also found, but they are based in Pakistan. However, there is a lack of available research works in the Bangladesh context, and few research works were found that deal with the family size determined in Bangladesh. This study tried to examine the association between various factors that affect the preferred family size.

2. Methodology

The methodology is composed of the following subsections.

2.1 Nature and Method of the Study

The study on the factors affecting family size in the Narail district is explanatory research based on data triangulation. Descriptive studies generally attempt to specify the nature of relations between two or more variables of the situation, and descriptive statistical techniques have been used to describe the study variables. The descriptive analysis presents the specific details of a situation and an accurate background profile of the subject. By statistical analysis, the specific relations among various variables have been presented. The study reveals the factors affecting family size in the study area. Moreover, this study follows both quantitative and quantitative approaches. Data have been collected through the quantitative method to ensure greater validity and confidence in the study findings. This study has been conducted through a survey research design in simple random sampling.

2.2 Study Area

The study was executed in the Narail District of Bangladesh. It has an area of 990.23 square kilometres (382.33 sq mi) between 23°02′ and 23°19′ north latitudes and between 89°23′ and 89°48′ east longitudes. The Magura District surrounds the Narail District in the North, and Khulna District in at South, with the Faridpur and Gopalganj Districts, are on the East and Jessore to the West.

Figure 2. Map of Narail Districts

Source: Author Compilation by using data from: https://en.banglapedia.org/index.php/Narail_District

2.3 Sampling

Sampling is selecting the representative portion to obtain information about an entire

population by examining only a part (Gupta, 1994). Determination of sample size is an important task in conducting the study, which aims to make inferences about a population from a sample. For this study, simple random sampling has been used as it is compatible with this investigation. Firstly, the areas were chosen purposively, and then 100 families were selected from these areas by using a simple random sampling technique.

2.4 Data Collection and Analysis

Data is the raw material of research that equips information about the actual situation. Without data, it is impossible to conduct any research. For this study, primary data has been collected directly by interviewing the sampled household from the study area through a sample survey. In this regard face to face interaction with the respondents has been made during the interview schedules. A semi-structured interview schedule containing both closed-ended and open-ended questions has been used to collect information from the respondents. A pre-test was also executed with that schedule before the actual study to understand the actual research better. Major issues have been highlighted in the interview schedule regarding the nature and factors affecting family size. The data collected through a structured questionnaire has been coded, compiled, tabulated and analysed, keeping the study's objectives in mind. Data has been analysed by employing SPSS statistical package program.

3. Results and Findings

3.1 Presentation of Data

Table 1. Demographic information of the respondents

		Frequency	Percent	M (S.D)
Age (In years)	≤ 30	40	40.0	
	31–40	34	34.0	34.84 (9.0)
	≥ 41	26	26.0	
	Total	100	100.0	
Age at first marriage (In years)				
	≤ 18	41	41.0	
	19–23	31	31.0	20.37(4.4)
	≥ 24	28	28.0	
	Total	100	100.0	
Sex				
	Male	46	46.0	
	Female	54	54.0	
	Total	100	100.0	
Age of the spouse (In years)				
	≤ 30	35	35.0	
	31–40	41	41.0	35.42 (9.2)
	≥ 41	24	24.0	
	Total	100	100.0	
Age at First Marriage (spouse) (In years)				
	≤ 20	44	44.0	
	21–25	30	30.0	21.47 (4.7)
	≥ 26	26	26.0	
	Total	100	100.0	
Number of living children				
	≤ 2	52	52.0	
	≥ 3	48	48.0	2.62 (1.4)
	Total	100	100.0	
Desired Number of Children				
	≤ 2	56	56.0	2.40 (1.2)
	≥ 3	44	44.0	

Source: Author Compilation by Using Field Survey Data, 2022.

Table 1 illustrates the demographic attributes of the respondents. It is found that the majority (40%) of the respondents are in the age group of ≤ 30 years; the mean age is 34.84, and the standard deviation is 9.0. This study demonstrates that most of the respondents (41.0%) are

married up to 18 years, and only 28.0% of the respondents are married up to the age of 24. The mean age at marriage is 20.37 years, and most (54.0%) are female.

Data shows that most of the respondent's spouse age (35.0%) are in the age group of ≤ 30 years, where the mean age 35.42 are, and the standard deviation 9.2. The study exposes that most of the respondent's spouses (44.0%) have been married for up to 20 years. Only 26.0% of the respondent's spouses are married up to the age of 26 years. The mean age at marriage was found 21.47 years. The statistics indicate that 52.0% of respondents are living with two children. In comparison, for 48.0% of respondents, the number of living children was found more than three. This study reports that 56.0% of respondents desired up to two children, while 44.0% of respondents desired three or more.

Table 2. Socioeconomic information of the respondents

		Frequency	Percent
Educational Status	Illiterate (0)	18	18.0
	Primary (1–5)	37	37.0
	Secondary (6–10)	33	33.0
	Higher (≥ 11)	12	12.0
	Total	100	100.0
Educational status of spouse			
	Illiterate (0)	24	24.0
	Primary (1–5)	33	33.0
	Secondary (6–10)	30	30.0
	Higher (≥ 11)	13	13.0
	Total	100	100.0
Residence			
	Urban	46	46.0
	Rural	54	54.0
	Total	100	100.0
Occupation			
	Housewife	39	39.0
	Service	24	24.0
	Daily labour	21	20.0
	Business	16	16.0
	Total	100	100.0
Family Income (In Taka)			
	≤ 10000	30	30.0
	10001–20000	37	37.0
	≥ 20001	33	33.0
	Total	100	100.0
Number of Family Members			
	Small ≤ 4	54	54.0
	Large ≥ 5	44	44.0
	Total	100	100.0

Source: Author Compilation by Using Field Survey Data, 2022

Table 2 reveals the Socio-economic information of the respondents. Data shows that most of the respondents (37.0%) achieved a primary level of education. In comparison, 33.0% of respondents completed the secondary level of education, while only (11.0%) of the respondents had qualifications above higher education. 33.0% of respondents' spouses completed their education within one to five years, whereas 13.0% of the respondent's spouses have completed higher education. In this study (46.0%) of the respondents belongs to the Urban area, and 54.0 percent to the rural area. The data shows that the majority of the respondents (39.0%) are homemakers. Besides, 20.0 % of the respondents are daily labour only 16.0% are associated with the business. The income level of 37.0% of respondents' family income is 10001–20000 per month from all sources, while 33.0% of respondents' family monthly income from all sources was more than ≥ 20001 per month, and 30.0% of respondent's family monthly income is up to 10000 from all sources. The data indicate that 54.0% of respondents' family members are in the group of four and less than four, which explores that most of the respondents belong to small family sizes. In comparison, 44.0% of respondents have five and even more than five family members.

Table 3. Cultural information of the respondents

		Frequency	Percent
Religion	Muslim	72	72.0
	Non-Muslim	28	28.0
	Total	100	100.0
Sex preference			
	Yes	90	90.0
	No	10	10.0
	Total	100	100.0
Sex Preference for Child			
	Daughter	27	27.0
	Son	73	73.0
	Total	100	100.0
Use of Contraceptive			
	Yes	69	69.0
	No	31	31.0
	Total	100	100.0
Type of Contraceptive			
	Hormonal	78	78.0
	Non-hormonal	22	22.0
#	**Total**	100	100.0
Awareness regarding contraception			
	Yes	56	56
	No	44	44
	Total	100	100.0
The decision of family planning			
	Yes	57	57.0
	No	43	43.0
	Total	100	100.0
Adoption of family planning			
	Self	14	14
	Partner	32	32
	Both	54	54
	Total	100	100.0

Source: Author Compilation by Using Field Survey Data, 2022.

Table 3 reveals the Cultural information of the respondents. The data shows that a great majority of the Respondents (72.0%) were Muslim, while one-fourth (28%) of the respondents were Non-Muslim, according to their religious status. The study shows that the majority (90.0%) of the respondents have sex preferences, even as 10.0% of the respondents have no demand for sexual preferences. 73.0% of Respondents desire that their coming baby would be a son, whereas 27.0% of the respondents desire a daughter. The data found that 78.0% of the

respondents used the contraceptive, while (22.0%) of the Respondents never used any such contraceptive system. In this study, 78.0% of respondents used the Hormonal type of contraceptive method, which includes (Natural method, Condoms, and Pills), but 22.0 % of respondents used the Non-hormonal contraceptive method, including (Sterilization, Vasectomy). Besides, the majority (56.0%) of the respondents are aware of contraception before sexual engagement, while 44.0% are unaware of contraception before sexual engagement. Moreover, (57.0%) of the respondents reported that they have no decision about family planning, while 43.0% of respondents reported that they have no decision about family planning.

3.2 Association Test (Relationship among Variables)

Table 4. Information about Demographical & Socio-economic Determinants affecting the family size

Variables		Family size		The test statistic (pdf)	P value
Age (In year)		Small (≤ 4)	Large (≥5)		
	≤ 30	43.7% (24)	35.6% (16)		
	31–40	36.4% (20)	31.1% (14)	7.364 (2)	.025**
	≥41	20.0% (11)	33.3% (15)		
Age at marriage (In years)					
	≤18	40.0% (21)	41.7% (20)		
	19-25	30.8% (16)	31.3% (15)	.582(2)	.772
	≥26	28.8% (15)	27.1% (13)		
Educational Status					
	Illiterate (0)	18.8% (06)	17.7% (12)		
	Primary (1–5)	28.1% (09)	41.2% (28)	13.007(3)	.008**
	Secondary (6–10)	31.2% (10)	33.8% (23)		
	Higher (≥ 11)	21.9% (07)	7.4% (05)		
Educational status of spouse					
	Illiterate (0)	21.3% (16)	15.7% (08)		
	Primary (1–5)	22.7% (17)	31.4% (16)	12.252(3)	.007**
	Secondary (6–10)	22.7% (17)	25.5% (13)		
	Higher (≥ 11)	33.3% (25)	27.5% (14)		
Residence					
	Urban	52.72% (29)	36.9% (17)	6.669 (1)	.010**
	Rural	47.3% (26)	63.0% (29)		
Occupation					
	Housewife	37.0% (20)	41.3% (19)		
	Service	29.6% (16)	17.4% (08)	6.522(3)	.089*
	Daily labour	20.4% (11)	21.7% (10)		
	Business	12.9% (07)	19.6% (09)		
Family Income					
	≤ 10000	40.6% (13)	25.0% (17)		
	10001–20000	37.5% (12)	36.8% (25)	7.624(2)	.022**
	≥ 20001	21.9% (07)	38.2% (26)		
Number of living children					
	≤ 2	68.5% (37)	26.8% (15)	118.701(1)	P<.000***
	≥ 3	31.5% (17)	55.8% (31)		
Desired Number of Children					
	≤ 2	70.4% (38)	39.1% (18)	49.898(1)	P<.000***
	≥ 3	29.6% (16)	60.9% (28)		

Note. *Significant at Note: ***p < 0.01, **p < 0.05, *p < 0.10.

Source: Author Compilation by Using Field Survey Data, 2022.

The result in Table 4 reveals the socio-demographic features of the respondents and their family sizes. The findings of chi-square tests clarify that respondents' age, number of living infants, the desired number of infants and the spouse's age are significantly associated with their family

size determinants. The table shows a smaller number of family sizes among the participants of the 30 to 18 age groups (43.7%). Furthermore, the statistical relationship between younger4e participants and family sizes is significant ($p < 0.01$). So, H_1 is accepted. Age at first marriage, both men and women, are not associated with the family size determined. Based on these results, the alternate hypothesis H_2 is rejected. Education is a vital feature that influences the family size determinant of participants. The table also shows that participants with one to five years of schooling (41.2%) are more favourite a large number of family sizes, and the statistical relationship is significant ($p < 0.01$) between educational status and family size determinant.

The table shows the significant statistical relationship ($p < 0.01$) between the respondents' residence and family size determinants. The vicariate results also expose that the tendency for large family sizes among the participant who lived in rural areas is much higher, and the percentiles amount was (52.72%). It identified a connection between the occupational backgrounds of the participants concerning the family size determinant. It shows that people with better employment (29.6%) can trim their family sizes to a relatively small size. It shows a noteworthy ($p < 0.05$) association between family size and occupational status. There is a statistically significant ($p < 0.05$) association between family income and the number of family members. The data shows that families with higher income (40.6%) can afford additional children, which indicates that the role of family sizes is relatively large. The table shows small family sizes among the participants (68.5%) who have two or less two living children. The findings ($p < 0.01$) also revealed a statistically significant correlation between the number of living children and the family size determinant. The participants (70.4%) who have the desired number of children are low (two or less than two), and the tendency of their family sizes is relatively small size. The result indicates that this determinant also positively influences the family size determinant ($p < 0.01$).

Table 5. Information about cultural determinants affecting the family size

Variables		Family size		Test statistic (pdf)	P value
Sex preference		Small (4 >)	Large (5 <)		
	Yes	86.8% (46)	93.6% (44)	7.003 (1)	.007**
	No	13.2% (07)	6.4% (03)		
Religion					
	Muslim	72.7% (40)	71.1% (32)	.234 (1)	.625
	Non-Muslim	27.3% (15)	28.9% (13)		
Use of Contraceptive					
	Yes	74.1% (40)	63.1% (29)	4.285 (1)	.032*
	No	25.9% (14)	36.9% (17)		
The decision of family planning					
	Yes	66.7% (36)	45.7% (21)	11.159(1)	P<.000**
	No	33.3% (18)	54.4% (25)		
Awareness regarding contraception					
	Yes	62.9% (34)	47.8% (22)	17.415(1)	P<.000**
	No	37.1% (20)	52.2% (24)		

Note. *Significant at p Note: **p < 0.01, *p < 0.05.

Source: Author Compilation by Using Field Survey Data, 2022.

The results reported in Table 5 represent the significant relationships among all variables by summarising the values of Pearson's chi-square test. It is clear from the result that at a 5% level of significance, family size determinant is positively correlated with sex preferences (boy or girl) as the value of the Pearson's chi-square test is 0.000 ($p < 0.01$). Based on the percent analysis, of those who preferred sex, 93.6% held large family sizes, and 86.8% held small family sizes. The third hypothesis (H_4) draws a relationship between religious status with family size determinants. The result indicates that this factor negatively affects family size ($p < 0.05$). H_4 is rejected and reveals that there is no mentionable link between religion as well as family size determinants. Using contraceptives is a vital feature that influences the participants' family size determinant. The table also shows that the participants (74.1%) who have used any form of contraception have small family sizes; in contrast, the participants (25.9%) who have not used contraceptive is also positively linked with family size and has a statistically significant value ($p < 0.01$). The fifth hypothesis (H_5) stated that the decision to family planning significantly impacts family size.

The result reveals that participants who (66.7%) have the decision to family planning have the inclination for their family sizes to be comparatively small. Suppose there is a numerically significant ($p < 0.01$) association between the decision of family planning and family size. Thus, H_5 is accepted. Awareness of contraception before sexual engagement greatly influences family size. The data shows that the respondents who (62.9%) have awareness regarding contraception

before sexual engagement have small family sizes. So the findings ($p < 0.01$) reveal a statistically significant association between awareness regarding contraception before sexual engagement and small family sizes. So, H_6 is accepted.

3.3 Correlation Analysis

Correlation analysis is done to see the condition of the explanatory variables about the explained variable. A correlation between the number of family members and age, age at first marriage, educational status, number of living infants, the desired number of infants, family income, educational status, and monthly income of the father is taken at a 5 percent significant level. The result of this correlation is given in Table 6.

Table 6. Result from correlation analysis

Variables	NFM	Age	AM	ESR	NLC	DNC	MHI	IR	IF
NFM	1.000	-	-	-	-	-	-	-	-
Age	.252**	1.000	-	-	-	-	-	-	-
AM	-.049	.419**	1.000	-	-	-	-	-	-
ESR	-.034	-.060	.084	1.000	-	-	-	-	-
NLC	.432**	.597**	.040	-.137*	1.000	-	-	-	-
DNC	.365**	.384**	.056	-.152**	.677**	1.000	-	-	-
MHI	-.084	.189**	.106	.188**	-.040	-.225**	1.000	-	-
IR	-.174**	.338**	.554**	.120*	-.020	-.111	.398**	1.000	-
IF	-.175**	.009	.079	.138*	-.151**	-.272**	.531**	.278**	1.000

Note. **p < 0.01, *p < 0.05, significant level. **NFM** = *Number of Family Member*s, **AM**= *Age at First Marriage*, **ESR**= *Educational Status of the respondent*, **NLC**= *number of living children*, **DNC**= *Desired number of children*, **MHI**= *Monthly Family Income*, **IR**= *Monthly Income*, **ESF** = *Educational status of respondent's father*.
Source: Author Compilation by Using Field Survey Data, 2022.

From Table 6, we can see a slight positive relationship (0. 252) between age and the number of family members of the respondents, which is statistically significant. In the meantime, the correlation coefficient of a family member and respondent's age at first marriage shows a medium negative relationship (-.049) which is statistically insignificant too. Here is a statistically significant medium association between age at first marriage as well as age (.419) which shows a positive trend. Again, the educational status of the respondent has little relationship with the number of family members (-.034), age (-.060) and age at first marriage (.084). All the relationship is statistically insignificant.

From the correlation coefficient of a family member and the number of living children (.432), it is understood that there is a statistically outstanding and medium positive association between these two. Nevertheless, the coefficient of respondent's age and the quantity of living infants (.597) is a strongly positive association and statistically significant. Again, the correlation coefficient of the number of living children and age at first marriage (.040) shows a weak and

statistically insignificant relationship. Besides, the correlation coefficient of the number of living children and the educational status of the respondent (-.137) shows a weak and negative relationship which is statistically significant.

The correlation coefficient of the desired number of children and family members (0.365) is medium and statistically significant, and the relationship is positive. Moreover, the coefficient of desired children and age has medium, positive (0.384), and statistically significant. Again, the correlation coefficient of age at marriage and desired children (0.056) shows a weak, statistically insignificant, but positive relationship. The correlation coefficient of the desired number of children and educational status (-.152) is also a weak, statistically significant, but negative relationship. The correlation coefficient of desired children and the number of living children (0.677) is robust and statistically significant, and the relationship is positive.

The correlation coefficient of the desired number of children and family members (0.365) is medium and statistically significant, and the relationship is positive. Moreover, the coefficient of desired children and age has medium, positive (0.384), and statistically significant. Again, the correlation coefficient of age at marriage and desired children (0.056) indicates a weak, statistically insignificant, but positive association. The correlation coefficient of the desired number of children and educational status (-.152) is also a weak, statistically significant, but negative relationship. The correlation coefficient of desired children and the number of living children (0.677) is substantial and statistically significant, and the relationship is positive.

Again, the correlation coefficient of family income and age of the respondent (.189) shows a weak but positive relationship which is statistically significant. However, the coefficient correlation of the number of family members, age at marriage, and the number of living children are all weak and statistically insignificant. The correlation coefficient of monthly family income and family members and the correlation coefficient of monthly family income and living children is negative. But the age of marriage and monthly family income have a positive relation.

The correlation coefficient of the monthly income of respondents and monthly family income (0.398) is weak and statistically significant, and the relationship is positive. Again, the monthly income and the educational status coefficient are weak, positive (0.120), and statistically significant. Besides, the correlation coefficient of monthly income and family members (-0.174) shows a weak, statistically significant, but negative relationship. The number of living children (-.020) and the desired number of children (-.111) show a weak and statistically insignificant negative relationship. The correlation coefficient of monthly income and age (0.338) is also a statistically significant and positive relationship. Besides, monthly income and age at marriage show a strong positive significant relationship.

The correlation coefficient of the respondent's father's educational status and age at the respondent's marriage (.079) shows that there is a statistically insignificant and weak positive association between these two. However, the coefficient of monthly family income and educational status of a father (.531) is a strong positive relationship and is statistically significant. Again, the correlation coefficient of the father's educational status and the respondent's income (.278) shows a medium and statistically significant relationship. But, the

correlation coefficient of the father's educational status and the number of family members (-.175) shows a medium and negative relationship which is statistically significant. Moreover, desired children (-.271), the number of living children (-.151) is also weak, negative, and statistically insignificant.

3.4 OLS Predicting the Family Size

Table 7. OLS Regression Analysis

OLS Models of Predictors of Family Size Determinants	
Independent Variable	**Dependent Variable: Number of Family size**
	β (S.E.)
R-squared	(.298)
(Constant)	3.40**
Predictor	
Age	.103(.013)
Age at first marriage	-.008(.024)
Educational status of the respondents	.054(.019)
Number of living children	.300**(.080)
Desired number of children	.208**(.077)
Monthly Household Income	.000(.000)
Monthly income of the respondent	-.193*(.000)

Note. **p < 0.01, *p < 0.05.

Sources: Author Compilation by Using Field Survey Data, 2022.

Table 7 helps us evaluate the impact of socio-economic factors on the family size determinants of the respondents. The coefficient value of the number of living children is 0.300, which is notable at 1 percent significant level, which implies that if other things remain the same, an increase in the number of living children expands family size. A one-unit increment in the number of living children will increase the number of family members by 0.300 points. Another critical variable is the desired number of children. The coefficient value for the desired number of children is 0.208. It implies that the number of family members positively correlates to the desired number of children. A one percent increase in the Desired of children can increase a 0.208 percent increase in the number of family members.

Another critical variable is the monthly income of the respondent. The coefficient value for the monthly income of the respondent is -.193, which implies that the number of family members is negatively related to the monthly income of the respondent. A one percent increase in a monthly income can lead to a decrease of -.193 percent in the number of family members. Other variables like age and age at marriage are negatively related to the number of family members. Besides, the educational status of respondents and monthly household income have a statistically insignificant impact on determining family size determinant. Furthermore, the R^2 value of 0.298 implies that the considered explanatory variables explain almost 30 percent

variation in explained variable family size determinant.

4. Conclusion

Family, the vital component of society all over the planet, has been undergoing many fundamental changes and profound transformations. Family size determines to a greater extent, the good background of the population. The major indicators affecting changes in the family sample of Bangladesh were the expansion of educational and employment opportunities. The present study, conducted in Narail district of Khulna division, indicates that different socio-demographic and economic factors such as age, education, number of living children, the desired number of children, residence, occupation, and family income are associated with the determination of family size. Besides, some cultural factors such as sex preferences, use of contraceptives, the decision to family planning and awareness regarding contraception before sexual engagement determine family size. The study reveals that the mass families in the area have compact family sizes. Besides, respondents with higher education have small-scale family sizes, having educated their children competently. Respondents with small-scale family sizes were seen enjoying better social and economic life compared to their counterparts with fairly large family sizes. However, government policymakers and social workers are working to motivate people to have small families. It is also suggested that more educational movements regarding the use of contraceptive and reproductive health should be launched in the Bangladesh health and education sector for the adolescent boys or girls.

Family size in a particular society depends on marriage, family composition, and adoption norms, and it also depends upon socio-economic and cultural forces. Family, the basic unit of the community all over the planet, has been undergoing many basic changes and incredible transformations due to extensive socio-economic and technological development. It is notable that both in developed and developing countries like Bangladesh, the standard family size is reduced because, in many cases, young people get married at a later age (Samad, 2015). The ultimate objective of the paper is to investigate the determinants related to the family size of households in the Narail district of Bangladesh. Other objectives of the study were to find out the nature and extent of family size among the households.

Findings depict a significant association between small family size and the occupational backgrounds of services of the participants, which is consistent with the previous findings. Statistics also reveal that monthly household income is significantly associated with significant influences on family size.

Besides, the number of living children is significantly associated with a small family size among the respondents. In this study, it is seen that where the number of living children is low, then small families' size tendency must be high, which is consistent with the result of another study (Bogue, 1967; Kabir et al., 1994) ;). The study's findings show that among the participants, 70.4% prefer a fewer number of children, the tendency of their family sizes is relatively small, and it has similarities to those (Campbell, 1986; Freeman et al., 1975).

In this study, the highest of the respondents' 93.6% who prefer sex among them hold large family size that family size determinant is positively correlated with sex preferences (boy or

girl), and it is consistent with the result of a previous study (Adeokun, 1979) explained that A strong sex preference which is on getting more sons than daughters to be associated with the determining family size. Similarly, other studies (Egero& Hammarskjold, 1994; Nag, 1991) showed that son preference has a continuing influence on large family size. In this study, the religious belief of the respondents is not significantly associated with family size determinants, which is inconsistent with previous studies' findings (Goldscheider & Mosher, 1988; Rono, 1994).

The study reveals that the majority of the participants (74.1%) who have used any birth control have tiny family sizes compared with the participants (19.1%) who have not used contraceptives which is pertinent to the results of a previous study (Maleche, 1990). According to Maleche, people who desire a small family size continue to use contraception. This study depicts that participant (66.7%) who has a decision on family planning are generally inclined to have a small family. This result is consistent with another study which showed that when the decision of family planning is high, the family size is likely to be low (Siddiq, 1997). This study illustrates a significant influence on awareness regarding contraception before sexual engagement.

In fine, we find that diverse factors such as respondents' age, educational status, residence, occupation, family income, number of living children, the desired number of children, sex preferences, use of contraceptives, the decision of family planning, spouse's education and awareness regarding contraception before sexual engagement are favourably associated with the determination of family size. On the other hand, there is no notable affinity between the respondents' religion as well as age at marriage.

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