

IMPACT OF KIN ON WOMEN'S FERTILITY IN BANGLADESH

Sumaiya Habib¹

Abstract

The society of Bangladesh is kin oriented. The patriarchal relations along with the bondage with matrilineal kith and kin influences its overall socio-economic life of the people of Bangladesh. Specially, the rural societies of the country exhibit it is psychological and emotional attachment with the patrilineal families. However, women of rural Bangladesh combine their membership with a dual identity and make a wise use of it. Thus, families and kin relations have impact on the life and living of the individuals. In the context of Bangladesh, the reproductive behaviour of the woman has been shaped according to her social positioning, post marital residence, decision making status and wealth. This research contributed to understand the reasoning of the reproductive behaviour of the rural women and discussed on the influence of kin in determining age of fertility, gap between children and survival of the child. The research argues that the influence of close kins in women's fertility and childcare is inevitable in Bangladesh. Thus, women's maternal health security is much shaped through her relationships, which are often placed secretly. In depth interviews among 45 the married women of rural society have been conducted to explore their experiences with kin relations regarding reproductive decisions and persuasion.

Keywords: Kin, decision, fertility, care, natal, family

Introduction

Kinship and family systems all over the world organize human reproduction, economic support of family members, childcare, socialization, and social placement by defining rights and obligations for parents, children, and extended kin (Davis, 1949; Murdock, 1949). Accordingly, people from a kin-based society like Bangladesh corresponds with relatives, kins and kiths to regulate their social life. The importance of kin relations in the social structure, economy and culture

¹ **Sumaiya Habib, PhD** is Assistant Professor, Department of Anthropology, University of Dhaka, Bangladesh.

Email: disha_habib@yahoo.com

of Bangladesh has let social scientists to considered kinship as an inevitable component to the study of its socio-economic life. However, contemporary works on kinship indicates mostly on the ceremonial functions of kin networks. Therefore, the essence and impact of kin relations on life, living and culture has been neglected in many studies (Blanchet, 1984; Aziz, 1979; White, 1992). Here, the study has been rigorously chased the importance of certain kins in generating and nurturing reproductive health and behaviour. As Bangladesh is widely recognized as kin-oriented society, many researchers (Aziz, 1979; Choudhury, 1995; Mashreque, 1998) have studied the functioning role of kin network in socio-economic and political aspects of the country, structure of kinship system with particular interest of kinship systems of different ethnic communities; but the influence of kin in women's fertile life was not in priority. Whereas our policy makers and health service givers immensely engage themselves in understanding women's decision-making position on reproduction, maternal health, and infant mortality. The study argues that women of Bangladesh depend upon close kins in decision making on fertility, maternal health and infant's survival could be influenced by the associated kin of them.

Kins as ancestral unit confirms the responsibility of togetherness and convey the sense of identity and shared belonging through not only kinship connections within household but also to their diffused members. As Sapolsky (2017) stated from the perspective of evolutionary biology, kin recognition, protection, and support are mechanisms for selection and survival. This helps to explain why kinship evokes a powerful sense of belonging and diffuse emotional connection that enhances social solidarity among relatives. However, these bonds, unity and solidarity is relatively less important in modern society than the traditional ones (Frustenberg, 2020).

Kins influence on fertility behaviour and childcare has been explored in various research. The effect of kins in maternal health, fertility and reproductive behaviour and childbearing is noticeable as a significant phenomenon in different studies. Specially, the importance of grandparents in the lives of children at the time of birth till caring and looking was significantly brought out in several early studies (Wilson, 1986; Pope et al., 1993; Euler & Weitzel, 1996; Spence, Black, Adams, & Crowther, 2001; Pollet, Nettle, & Nelissen, 2006; Pollet, Nettle, & Nelissen, 2007). Sear and Mace (2008) has elaborately viewed how the kins evidently encourage female reproductive health security and help the child

mortality more significantly. Their study shows that presence of at least one category of kin can improve child survival rate. They stated that most evolutionary anthropologists agree that this is too much of an energetic burden for mothers to manage alone and that they must enlist help from other relatives to share the costs of raising children. Which kin help is the subject of much debate. Sear and Mace (2008) reviewed the evidence for whether the presence of kin affects child survival rates, to infer whether mothers do receive help in raising offspring and who provides this help. In their study they conclude with the fact that maternal grandmothers and women's siblings tend to improve child survival, whereas paternal grand-mothers response in a different way and their effects on child survival are varied to the care receivers. They also stated that the fathers have surprisingly little effect on child survival. On the same hand, the slackening of kin ties could cause fertility decline by resulting in changes in social norms surrounding reproductive behaviour, several studies have investigated that the direct connection and involvement of kins in female fertility (Nath, Leonetti, & Steele, 2000; Sear, Mace, & McGregor, 2003; Tymicki, 2004). However, kin's attachment and fertility are not universally positively associated, some studies showed that there is no association between kin and fertility or evidence of kin relations that influences on fertility, moreover there could be negative association in some case (Sear & Coal, 2011).

The purpose of the study was to explore kin's overall influence on women's reproductive life especially in the time of reproductive decision making, pregnancy, reproductive completions, and mothering of a new-born. The study also tried to identify the meaning and understanding of 'kin' (*aponjon*) to the respondents of the study.

Methodology

The study areas are in the district of Jessore, the southwestern part of Bangladesh. The respondents of this study live in neighbouring villages in Jessore. These villages are close from the town and none of them are more than 15 kilometres away. The study consulted the local health service provider, widely known as *sasthokormi* to the community, who was a female and resident of the study area. Thus, she became the key informant of the study in collecting information. The study was of qualitative nature with 45 women respondents. Methodologically, this research followed focus group discussion and in-depth

case studies and brought out the experiences from the respondents. The fieldwork consisted of four focus group discussions (FGD) where 10-12 women from different age groups and classes participated. Moreover, seven in-depth cases were conducted to cross check and clarify the data collected. The FGDs helped the study to explain individual experiences where the participants spontaneously compared their struggle and unique relationship with kinsmen.

The research goals were to find out the married new mother only to understand their subjective experiences. Thus, purposive sampling helped the research to find the suitable respondents. The study has used only the pseudo name of the respondents to protect identity and meeting the research ethics.

Here in this study, the term 'kin' is used to indicate relations that the respondents felt affiliated with in mind, emotion, sympathy and need. Thus, methodologically, the study will generate a reflexive model to focus on their relationship in decision making and practically experiencing pregnancy and early motherhood.

The respondents and their understanding of 'kin':

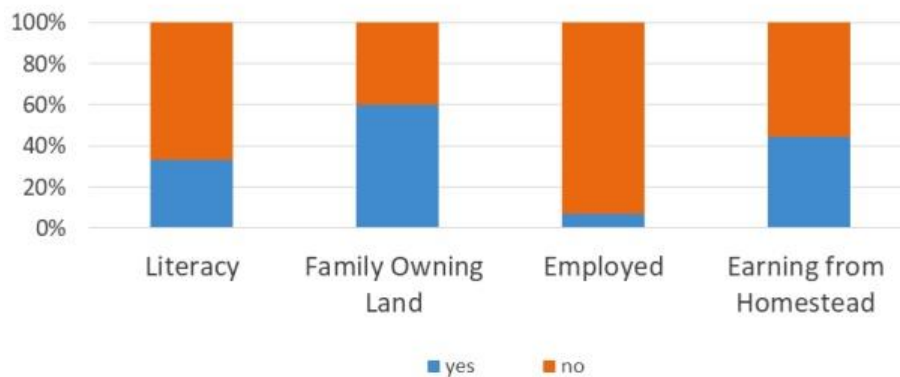
In the study area, most of the women were from peasant families and mostly do not earn in a regular basis, only a few earn from factory, seasonal business, fishing, labour etc. Among the 45 respondents only 3 (6.7%) were employed in a nearby factory, 27 (60%) families have agricultural land, and 20 (44%) women earn from either poultry or kitchen garden. Only 15 respondents (33.3%) could write their name and can moderately read *Bangla*, their mother tongue. Figure 1 explains the socio-economic position of the respondents of the study.

Source: Fieldwork, 2019

The respondents here belong to the age group from 18 to 38, most of them got married at their early puberty (at the age 15/16). Though they verbally admit that child marriage is not a good practice, but still it is not widely practiced in these villages. Among the respondents many became mother at the age of 16. Some of them had healthy pregnancy with a successful birth at home. But their journey to pregnancy and birthing were unique and deliver us vivid information on their close kins and their vital role during the journey.

The people of Bangladesh are strongly related to their patrilineal kin network. Here, people are patriarchal in nature and nurture. Most of its people are Muslims and traditionally passes family title, ancestral land, and chunk of property to sons. Though, according to law daughters are also hire of little amount of property, it is not practiced widely. Most of the respondents admitted that they do not hold any authority over their natal property. Few of them shouted for their share once or twice, which did not bring any positive feedback from her parents or brothers. As a matter of fact, the patrilocal residence pattern has separated women from their natal family and neighbourhood and further poverty and economic

Figure 1: Repondent's socioeconomic position



deprivation provoke most of them less interested about the share of land and so on. Still, these women are the members of patrilineage in their blood and feel strong affiliation with maternal consanguinity.

While asking them who their kins are, their first impression was not enough clear to understand. The matrimonial departure has blunted their emotions and the society penetrated the idea of belongingness to husband's lineage often. But urge to have mother beside a woman during any painful situation is embedded from her childhood. Therefore, they consider themselves as potential and essential member in their affinity with a permanent and selfless connectivity with consanguinity.

Many of the respondents admits that their mother or aunt or elder sister was the first person to them as a primary educator of reproductive health. At their early adolescent period, they were warned with several norms, such as covering body,

not to meet outsider often (especially men), avoid the male members of the family and escape from religious task during menstruation time etc. The trauma of physical changes during adolescent period usually addressed by either their close patrilineal kins or mother. Though these learning are performed in a more secret and indirect way, but the openness and king support during that phase keep a deep influence upon the women's mind till a successful pregnancy. Thus, they share both of their physical and mental relatedness, pain, trauma, pleasure and excitement of marriage and pregnancy. The bond among these closely related kins cannot be seen, but understandable while any of them found themselves in a situation to share and discuss. Hence, the construction of close kin in rural setting is practiced as an agency when required and its contribution in women's sexuality, fertility, pregnancy, and motherhood journey should not be less prioritized while studying them in Bangladesh.

Responsibility and Decision making:

These married women in Bangladesh rarely could participate about their pregnancy. They were taught to be submissive to husbands and in laws. Moreover, fertility is not a choice for them, rather they are imposed or provoked to have children at an early age. Most of their mothers and in-laws considered that having children before 20s will be better. So, in most cases women got pregnant by the age of 16 or 17. However, many of them planned about their second pregnancy and decided mutually. Taking a gap is usual for second pregnancy, most cases husbands encourage wives to use childbirth precautions. It was noticed that women's experience of first pregnancy initiate their willingness and mental strength to second pregnancy. Moreover, each of their experiences are allied with the care, support, and presence of their mothers. Any complication and loss of their first pregnancy let them to discuss with their mother or close kin, so that they could overcome next time. Thus, the mothers of these women and close kins influence in the decision-making process at their pregnancy.

Though in many cases women cannot decide their place of staying during pregnancy and delivery location, but this decision initiate their successful delivery they perceive. It is because that the location of staying during pregnancy and delivery place comes with various experiences they observe. According to the table 1, the younger new mothers (aged 17-20) experienced more success

with first pregnancy staying at their natal place. Thus, they observe that their mothers and own kins have played important role in decision making during their pregnancy. Among the 45 respondents 26 delivered successfully staying at their natal place, 9 at in-law's place and the rest 10 could not complete a successful pregnancy (Table 1).

Table 1: Respondent's age of first pregnancy and delivery location

Age of first pregnancy	Number	Successful at natal home	Successful at in-law's place	Home Birth	Clinical Birth
17-20	33	20	7	19	8
21-23	9	3	2	1	4
24-27	3	3	0	0	3
Total	45	26	9	20	15

Source: Fieldwork 2019

Several women (92% of the informants) acknowledged that after marriage the first-time meeting with mother and close kins served them lump of advice on their normative behaviour, sexual life and encouraged them to agree with husbands to have children as early as possible. Thus, these women always believed that having children, preferably a son, is necessary to confirm the position in in-law's household. The days with hope came true for many young women, but all did not experience pregnancy equally.

The case of Anwara and Hashi, cousin from agrarian household, can be taken first. Anwara got married when she was 21 years old, whereas Hashi got married at the age of 17. Anawar's husband's village was far from her natal village, and they had a poor communication system when she got married. Like many others of her age, she did not delay getting pregnant with no complication at all. But, at the time of her childbirth she became weak and failed to gain energy to deliver naturally, thus were taken to local health complex, where she went through surgery and delivered an under-weight son, who could not to survive. She was 22 years when she went through this trauma. Anwara reported that while she was carrying, she barely could eat, she felt tired for not having enough food. She

admitted that her mother in-law was cooperative in nature, but was sick and bed ridden, thus Anawara was supposed to take care of her like other daughter in-laws of that household. Anawara was not taken to the doctors during pregnancy. According to her, she assumed that getting sick during pregnancy is natural. Later doctors told her that she had deficiencies and weakness, thus failed to deliver a healthy son. On the contrary, when Hashi her cousin sister got pregnant, she got complete support from her mother and younger sister during pregnancy that let 17 years old Hashi to deliver a child at home without complication. Hashi's husband was a van puller in the neighbouring village, and he wanted Hashi to live with her mother during first pregnancy. Hashi's mother always wanted to take care of her daughter at this phase of life. They called the local *dai* several times and checked her health properly as required. Hashi's mother took all the responsibilities of good and evil. Both Anawara and Hashi think that it is only the care and mental support from mother that let young Hashi to deliver child without trouble. Anawara was cautious about her second pregnancy after 2 years. This time she travelled to her natal place during her last month of pregnancy. She still had complications, thus got surgery again and gifted with a under weighted daughter. This time doctors fought, Anawara's mother and aunt fasted and gave proper attention to the new-born, and the child survived. Anawara always consider that if she could live with her mother, she would be able to eat more healthy food and could be taken care in good hand. Still, Anawara's daughter is at her natal place, where she is growing in love and care. In her words:

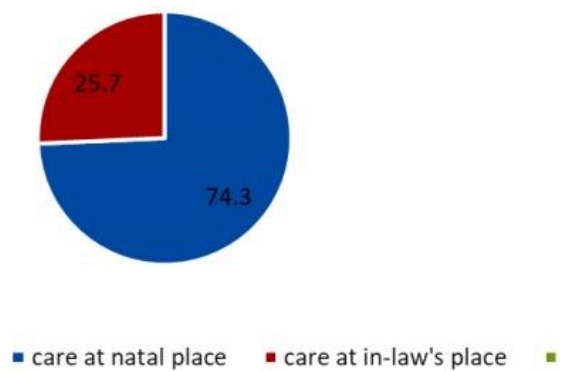
I can rely on my own mother the most. She can save me from any trouble....any! I always pray to *Allah* for her long life, so that I can lead a better living. When I lost my first born, she was in pain like me, and her prayers and sleepless nights let me have my daughter. My daughter and I will serve my mother till the end of life (Anawara, Jessore. Fieldwork 2019).

Hence, many women think that only their close kin or mothers can take responsibility and help with kind attention during childbirth. Though some predicted that Anawara was older than Hashi thus gone through troubles, but now they are relating her successful delivery with the social atmosphere she enjoyed during pregnancy and post-delivery tenure. They observe a relation between the longevity of the child depends upon the caring responsibility of maternal grandmother. So, children's health and maternal complications can be solved well with the ties of kinship, ties between a new mother and her natal close relations.

Similarly, many studies on child mortality and maternal and childcare investigated that the presence of paternal grandmothers is either less beneficial to their grandchildren than that of maternal grandmothers (Volland & Beise, 2002), which also engages conflict between women and their mothers-in-law and in many cases this conflict results in higher mortality rates of young children and may increase the risk the life of the new mother (Skinner, 1997). Affection, solidarity, and cooperation bonded this close kin tie so well that a mother's care, young sister's smile, mother, and aunt's fasting can give a young pregnant women mental strength to fight physical weakness during hard days.

Apart from these, age, education, employment, and socio-economic position of the pregnant women exhibits direct action to their decision making and choices to share with others. Usually, the socio-economic condition of women's parents and education of husbands have much to do as they stated. The location and surroundings of the last six weeks of pregnancy and delivery time are crucial for all the women. All of them wanted to be with their mothers and close kins. But it was not surprising to observe the daughters of poor family and the pregnant women who lost their mother avoid visiting natal place. However, they emotionally feel low and helpless on certain condition. Thus, the socio-economic condition of the parents holds the psychological strength of these new mothers to have more secured pregnancy and delivery.

Figure 2: Percentage of successful first pregnancy



Source: Fieldwork 2019

According to the data it is seen (Figure 2) that among successful first pregnancies, the most cases that is, 74.3% were surrounded by the natal kins, whereas 25.7% were with in laws. The respondents ensures that the indulgence and relatedness with their natal home stead serve a comfort zone for them to have a better care during the last days of pregnancies and delivery period. Moreover, the words and kind attitudes of their mothers and close kins help them to overcome the wobbly moments even after an unsuccessful delivery. But, among the 74.3%, most consider their mothers as the new-borns' life giver. The case of a young new mother shows how she and her new-born survived with the help of grandmother. Rani, 18 years old pregnant girl was sent to her mother before delivery as her in law were unable to take care of her. Rani was confused and traumatized because, her in-laws wanted her back with a healthy son only. It was her mother and sister-in-law who constantly cheer her during last days of pregnancy with a hope, saying that all marks of a son inside the womb were predominantly exposing on Rani's face and body. Rani expressed her fear of last January, when she delivered a son at home with the help a local *dai* and her mother. All her relatives including the *dai* were pessimistic about the survival of the son. Rani's infant was weak to breath and turning blue. The whole night her father was praying and declared to sacrifice a goat if the infant survives. However, only her mother never lose hope. Still now, Rani considers that her mother must did some magic to bring life to a dead body with all her care and local knowledge. For her, the indigenous healer or doctor cannot take care of her son that time. Only her trust and warmth of love helped the infant survive. So, the study observe that the pregnant women seek not only emotional and physical support from family but also require close kin to take responsibility and decision while she feels fragile during pregnancy.

The Gap between Pregnancies

As mentioned in the previous section that the second pregnancy usually takes places after 2 to 4 years with the consent of married couples. However, this research disclosed a secret communication between mother-daughter on second pregnancy. The mothers or close kins of the respondents have guided their daughters when to get pregnant second time. They had discussed and planned the benefits of a perfect timing which could enable them to help and support during and after pregnancy. All the respondents admits that their first experience encourage them to follow their clos kin's advice. In most cases new mothers

visits either natal home frequently or stays for longer time, which enables them to get engage with their sister in-law and mother to get tricks of household politics and grab the control of homestead, including the ways to take care of the infant. These close relations are also helpful indulging the infant and let the new mother to have rest from exhausting motherly tasks. However, observing the psychological and physical strength of these new mothers they are advised what should be the perfect time to have another kid. In most cases, the new grandmothers provoke their daughters to have kid as early as possible if the first delivery is a girl. Like the people of many south Asian countries, the people of Bangladesh also consider that having son would enhance the power and prestige of a woman (Maloney & Aziz, 1985; Islam, 1985). Moreover, they are also advised to consider the age of their parents (Maloney & Aziz, 1985). Mostly, the older grandparents want to see their successors with a family with a few kids, at least a son and a daughter. The table 2 has explained the influential person's in woman's life of research area to guide her gap between pregnancies, where it can be seen that most of them follow their mother's guidance. According to the table 2, it is seen that all the respondents had experienced a second pregnancy, whereas 26 among 45 had third pregnancy. The case below would elaborate the facts behind the second and third pregnancies among the women of the study.

Table 2: The influential persons to decide the second and third pregnancy

	Mother's guidance	Female Neighbour's advice	In-laws' demand	Almighty's wish	Total
2nd pregnancy	29	7	5	4	45
3rd pregnancy	11	4	9	2	26

Source: Fieldwork 2019.

The case of Afia, 23 years old respondent who has three kids did not wait to have a second issue as soon as her menstrual cycle turned regular. Because her mother always wanted her to have a son before her father in-law expires, who was about hundred years old; and her first issue was a daughter. Afia's mother thought that the old paternal grandfather would be happy to see a grandson from Afia and will

be able to pray for them. Here, both age of the parents and the gender of the first issue penetrated the second pregnancy. However, the physical strength of new mothers is also in consideration of their close relatives. Many respondents said that their mothers discouraged them to take second issue before three years. Usually, these women always try to follow their mother's or close kin's instructions. Many listen to their female neighbour's advice, usually when their own mothers are not accessible or capable to escort them. Still, some of the respondents had to miscarry their mother's advice to fulfil the desires of husbands and some had unplanned pregnancy, about which some approaches as if it were 'desire of the Almighty' and others told it was a forced pregnancy. Women are shy to discuss about husband's will or demand in this regard. However, it is clearly visible that, rural women of Bangladesh show less control over her own body. Though, in Gambia the presence of a mother- or father-in-law speeds up a woman's fertility rate, while her own relatives have no impact on her reproductive rate (Sear & Mace, 2009). However, in this study it is seen that in rural Bangladesh women's parents in-law and husbands are more interested to have kids from the married women than any other relatives, but now a days women try to consult with their mothers and close kin before planning a pregnancy. Traditionally, rural women of Bangladesh were restricted by their husbands and parent in-law to communicate with their parents and natal relations (Islam, 1985). Women's education and empowerment affected their role in the decision-making process in all aspect. Afsana and Rashid (2000) explained that the poor and illiterate woman is completely under control of her in-laws, whereas the financially secured, literate woman enjoys more power and autonomy. However, the advancement of the tele- communication system in the country has enhanced the opportunity to share each sole feelings with women's close kins every day. Similarly, this study observes that the women with education and well financial position who can afford easy communication with their mothers usually depend on their kin's understanding prior second or third pregnancy.

The Strength of Secret Talk

There are several examples, where it is observed that women secretly dissolve their own personal health difficulties and console each other in a distinct way. In most cases these women lack agency in the wider social boundary. They remain in periphery and try to cope with what they have. Many female health troubles like menstruation pain or irregularities, fertility strains, abortion, menopausal

trauma etc. are discussed within their comfort zone and they try to overcome with the advice of experienced senior women they have (Koster, 2003; Fuchs & Moch, 1995; Inhorn & Balen, 2002). In a society like Bangladesh, where once women got married, they are considered as a part of in-law's family and usually discouraged to visit natal home frequently, the women feel vulnerable and emotionally shallow in terms of pregnancy and mothering a new-born. The patriarchal system forced the pregnancy and motherhood duty as a complementary task of womanhood. Whereas many rural women consider motherhood as a strength to establish little control in homestead. So, local rural women constantly circulate their experiences of pregnancy with other younger women, including their daughters and daughter in-laws. The lack of education on reproductive health has not a big problem to these new mothers when they got the chance of talking with their close intimate kins on several health issues. The availability and wide use of mobile phone let the rural women to communicate with relatives every day. So, they do not feel excluded from their natal close relations like their mothers.

Though women of rural Bangladesh combine a dual membership with her natal lineage and in-law's lineage, she never excludes her maternal kins from where she enjoys supreme comfort and indulgences. Many women agreed that despite the poverty of their maternal relations, they were always in good care whenever met. Thus, their bondage is wide with a strong network of kinship. These women never miss a chance to gossip with wide ranges of kins and secretly discuss on various issues of life including private matters; they fight, quarrel, make fun and enjoys a free life within an unseen boundary. However, these wide networks sometime give them an agency to disclose problems of life and find a solution to it. Many reproductive illness and troubles were minimized through these networks as the respondents addressed. According to Sadia, she had problem with her menstruation, thus her fertility hampered. She could not talk with her personal problems with in-laws; thus, she continued her communication with cousin sisters who eventually took her to various local healers and paid the charges when she could manage money for healing. Sadia said that her husband and in-laws will never allow her to visit those places, moreover, will call her bad name for not being able to give birth of a child soon. Her cousin sisters helped her out of this and managed to conduct each meeting with the local healer secretly, which cured her. As a result, she gave birth of a son after three years of marriage. Sadia was guided by that healer and behaved accordingly. Thus, her

conjugal life was somehow conserved by the influence of the healer, where her husband was kept in a smoke screen to understand the overall story of healing of the failures to conceive. Like Sadia, many respondents also admitted that their secret bonding is helpful not only for reproductive issues but also for other womanly health issues they face. From puberty to menopause the women's secret gossiping are like oral influencers to mental health to support the psychological strains, to adjust, heal and cope with a new womanhood.

Conclusion

Although Bangladesh is a patriarchal society and patrilocality is still the most favourable choice, rural women are much associated with their natal relatives. Moreover, the positive influence of women's mothers and sisters could be considered as life saving for a new mother and new-born. Like Sear and Mace (2008) the study has find out how the maternal grandparents constantly support to from the very beginning of pregnancy till nurturing the child. The psychological strength and endless affection are the bondage between a mother and daughter. Specially, when the daughter is facing the similar physical challenges that her mother went through years ago, then her experience can calm the new carrying mother and ensures a positive outcome. The women of rural Bangladesh depend and comfortably agree on their mother's or close kins decisions about pregnancy, family planning or child delivery. With the development of female education and little economic security from home stead earning, they are now capable to talk, meet and feel affiliated with natal relatives. Besides, the wide uses of mobile phones allowed them to be more associated now a days. Thus, the research observes the positive influence of mothers in their daughter's fertility and reproductive health is dominating, despite her own control on her body does not exist at all. Moreover, the age, education, socio-economic condition of women and her relatives from both sides, natal or affinal play vital role in responsibility and decision-making during pregnancy and on ward in child rearing. The research also sharply indicate that the technological and financial knowhow has allowed the women to communicate with their natal home, which also let them to access more power in the decision-making process in the family. Thus, the research predicts a new shift to be observed in few decades, where the women's education, self-confidence and empowerment will initiate her control over body and decision making in rural Bangladesh.

References

- Afsana, K., & Rashid, S. F. (2000). *Discoursing Birthing Care: Experiences from Bangladesh*. The University Press Limited: Dhaka.
- Aziz, K. M. A. (1979). *Kinship in Bangladesh*. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, Monograph Series, No. 1.
- Blanchet, T. (1984). *Meaning and Rituals of Birth in Rural Bangladesh: Women, Pollution and Marginality*. The University Press Limited: Dhaka.
- Davis, K. (1949). *Human Society*. London, England: Macmillan.
- Ellur, H. A. & Weitzel, B. (1996). Discriminative grandparental solicitude as reproductive strategy. *Human Nature*, 7(1), 39-60.
- Fuchs, R. G., & Moch, L. P. (1995). Invisible Cultures: Poor Women's Networks and Reproductive Strategies in Nineteenth century Paris. In S. Greenhalgh (Ed.), *Situating Fertility: Anthropology and demographic inquiry* (pp. 86-107). Cambridge: Cambridge University Press.
- Inhorn, M. C. & Balen, F. V. (2002). *Infertility around the Globe: New Thinking on Childlessness, Gender and Reproductive Technologies*. Berkeley: California Press.
- Islam, M. (1985). *Women, Health and Culture*. Women for Women: Dhaka.
- Koster, W. (2003). *Secret strategies: Women and abortion in Yoruba society, Nigeria*. Amsterdam: Aksant.
- Maloney, C., & Aziz K. M. A. (1985). Life Stages, Gender and Fertility in Bangladesh. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, Monograph Series, No. 3.
- Mashreque, S. M. (1998). Politics of Kinship in a Traditional Peasant Community of Bangladesh. *Humanomics*, 14(3), 45-75.
- Nath, D. C., Leonetti, D. L., & Steele, M. S. (2000). Analysis of birth intervals in a non-contracepting Indian population. *Journal of Biosocial Science*, 32(3), 343-354.
- Pollet, T. V., Nettle, D., & Nelissen, M. (2006). Contact frequencies between grandparents and grandchildren in a modern society: Estimates of the impact of paternity uncertainty. *Journal of Cultural and Evolutionary Psychology*, 4(3), 203-213.
- Pollet, T. V., Nettle, D., & Nelissen, M. (2007). Maternal grandmothers do go the extra mile: factoring distance and lineage into differential contact with grandchildren. *Evolutionary Psychology* 5(4), 832-843.
- Pope, S. K., Whiteside, L., Brooks-Gunn, J, Kheller, K. J., Rickert, V. I., Bradley, R. H. and Casey, P. H. (1993). Low-birth-weight infants born to adolescent mothers: Effects of coresidency with grandmother on child development. *Journal of the American Medical Association*. 269(11), 1396-1400.
- Sapolsky, R. M. (2017). *Behave: The biology of human at our best and worst*. New York: Penguin Press.
- Sear, R. & Mace, R. (2008). Who keeps children alive? A review of the effects of kin on child survival. *Evolution and Human Behaviour*, 29(1), 1-18.
- Sear, R., & Coall, D. A. (2011). How Much Does Family Matter? Cooperative Breeding and the Demographic Transition. *Population and Development Review*, 37, 81-112.
- Sear, R., Mace, R., & McGregor, I. A. (2003). The effects of Kin on Female Fertility in Rural Gambia. *Evolution and Behaviour*, 24(1), 25-42.

- Sear, R., & Mace, R. (2009) Family matters: kin, demography and child health in a rural Gambian population. In G. R. Bentley & R. Mace (Eds.), *Substitute Parents: Biological and Social Perspectives on alloparenting in human societies* (pp. 50-76). Oxford: Bergahn.
- Spence, S.A., Black, S.R., Adams, J. P. & Crowther, M.R. (2001). Grandparents and grandparenting in a rural Southern state : a study of demographic characteristics, roles and relationships. *Journal of Family Issues*, 22(4), 523-534.
- Tymicki, K. (2004). The kin influence on female reproductive behaviour: the evidence from the reconstitution for Bejsce parish registers, 18th-20th centuries, Poland. *American Journal of Human Biology*, 16(5), 508-522.
- Voland, E. & Beise, J. (2002). Opposite effects of maternal and paternal grandmothers on infant survival in historical Krummhorn. *Behavioral Ecology and Sociobiology*, 52, 435-443.
- Wilson, M. N. (1986). The black extended family: An analytical consideration. *Developmental Psychology*, 22(2), 246-258.