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PUBLISHED BY

Share-Net Bangladesh

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PHOTOGRAPHY

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ACRONYMS AND ABBREVIATIONS

UNICEF United Nations Children's Fund

BDHS Bangladesh Demographic and Health Survey

UN United Nation

COVID-19 Coronavirus Disease of 2019

UNFPA United Nations Fund for Population Activities

OCHA United Nations Office for the Coordination of

Humanitarian Affairs

SDG Sustainable Development Goal

NGO Non-Government Organization

EXECUTIVE SUMMARY

South-East Asia region is a hub of child marriage in the world. It is estimated that about 150 million girls are at risk of child marriage by 2030 in South and South-East Asia region. Bangladesh is among the top 10 countries in the world for child marriage. During 21st century climate change became global concern and Bangladesh is among the countries most vulnerable to the effect of climate change. Apart from the impact of climate change on community, UNICEF identified child marriage as a major impact of climate change on adolescents. Girls become more vulnerable to child marriage and trafficking in the context of natural disasters caused by climate change, to which Bangladesh is highly prone. Being a vulnerable region of climate change and having a higher burden of child marriage, impact of climate change on child marriage in Bangladesh is not well documented. This study aims to explore the perceptions of people on the effect of climate change on child marriage in disasterprone area.

A qualitative survey followed by social ecological model was conducted in three different upazillas at Bhola district in Bangladesh. Data were collected from four different levels (e.g., individual, familial, community, and societal) of the community. At individual level- data were collected from adolescent girls aged 18 or below (both married and unmarried). At familial level- data were collected from parents who have at least one adolescent girl. At community level-data were collected from community and religious leaders. Lastly, govt. and non-govt. officials were considered as societal level participants for data collection. Data were collected through Focused Group Discussions (FGDs) and Key Informant

Interviews (KIIs). Respondents were selected by following purposive and snowball sampling. Total 12 FGDs and 9 KIIs were conducted in this study.

Although no direct connection between climate change and child marriage have been made, a number of climate vulnerabilities induced by rapid climate change have been explored through the perceptions analysis that affects child marriage. These vulnerabilities are presented in four themes under four level of influences. Individual correlates responsible for child marriage are the age of the girl, the physical growth of the girl and extra care as burden. Natural disaster-induced poverty, homelessness, joblessness, lack of security, the number of girls in a family, and the presence of elderly people in the family increase the incentive for families to marry their daughters off at the household level. The geographical composition of the disaster-prone area, social gathering at the evacuation center, religiosity, and school closure are the identified communal variables. Lack of disaster management and lack of security in the evacuation centre are identified under the social level of influence.

For achieving SDG target by 2030, Bangladesh must have to focus on the target 5 to eliminate gender inequality and in particular target 5.3 which aims to eliminate all harmful practices, such as child, early and forced marriage. Evidence suggests that at least eight of the SDGs will not be met until child marriage is abolished. On account of this, the outcomes of this study suggest that strategies aimed at preventing child marriage should take into account environmental risk factors in disaster-prone areas. At the same time, to improve climate change resilience, policy should also address women's vulnerability to child marriage in disaster-prone communities.

ACKNOWLEDGEMENT

The authors express their gratitude and praises to the almighty Allah who enabled them to successfully complete the project. Authors would like to express sincere gratitude and profound respect to Dr Shah Ehshan Habib, Department of Sociology, University of Dhaka for his intellectual support and guidelines to complete this project.

This research project was supported by Share-Net Bangladesh as a part of their Young Researcher Grant 2021. The authors would like to give thanks Share-Net Bangladesh for their financial support. Authors are grateful to Kishore Kumer Basak and Masuma Billah from Share-Net Bangladesh for their continued support and guidelines to complete this project.

Authors are grateful to Emilia Gillies, Department of Community Health and Epidemiology, University of Saskatchewan, Canada, for her immense support to English editing of the final report. Authors also wish to acknowledge Surid Hasan, Department of Management, University of Dhaka, and Jarin Tasnia, Department of Sociology, University of Dhaka who worked as a research assistant in this project.

Last but not the least, authors wish to extend their amiable thanks to those people who gave their valuable time during data collection.

OPERATIONAL DEFINITION

Child : According to the Convention on the Rights of the Child by UN

Human Rights, a person under the age of 18 years should be

considered as a child.

Adolescent: The World Health Organization (WHO) defines adolescents as

those people between 10 and 19 years of age.

Child marriage

: According to the United Nations Children's Fund (UNICEF), child marriage is defined as a customary, formal, or informal marriage or social bond between two person who are under aged, generally 18 years in South Asia, but can vary across

jurisdictions.

Forced marriage

: Forced marriage is a marriage in which one and/or both parties have not personally expressed their full and free

consent to the union.

Climate change

: NASA's definition of climate change says it is "a broad range of global phenomena created predominantly by burning fossil fuels, which add heat-trapping gases to Earth's atmosphere. These phenomena include the increased temperature trends described by global warming, but also encompass changes such as sea-level rise; ice mass loss in Greenland, Antarctica, the Arctic and mountain glaciers worldwide; shifts in flower/plant blooming; and extreme weather events."

Climate refugees

: people who are forced to leave their home region due to sudden or long-term changes to their local environment. These changes compromise their well-being or secure livelihood, and include increased drought, desertification, sea level rise, and disruption of seasonal weather patterns.

Disaster prone area

: Area where the occurrence of natural disasters (e.g., floor,

cyclone) occurs very frequently.

Perceptions: A way of regarding, understanding, or interpreting something.

1. INTRODUCTION

1.1 Background of the study

Child marriage is considered as a critical public health challenge as well as human rights challenge particularly for lower-middle income countries like Bangladesh. Evidence shows that globally around 21% of young women were married before their 18th birthday (UNICEF, 2019b). According to the United Nations Children's Emergency Fund (UNICEF), during 2020, worldwide about 650 million women alive today were married before their legal minimum marital age. They also reported that every year about 12 million girls are getting married before age 18 (UNICEF, 2019b). Worldwide, the highest rate of child marriage has been reported from sub-Saharan Africa which is about 37%, and this rate was highest for Niger (76%) (UNICEF, 2018b). Although, South Asia made the largest progress on reducing child marriage from 49% to 30% in the last decade, the rate is still very high and challenging to continue the progress (United Nations Children's Fund (UNICEF), 2020). Plan International estimated that 150 million girls are at risk of child marriage by 2030 in South and South-East Asia region (Plan International, 2019). According to the latest Bangladesh Demographic and Health Survey (BDHS), the median age at first marriage among women aged 20-49 was 16.3 years. BDHS also reported that 59% of women aged 20-24 years were married before 18 (NIPORT & ICF International, 2020).

BDHS evident that child marriage rates significantly decreased in the Bangladesh over the past two and a half of the decades, though the decline is slow and gradual in pattern. However, the current statistics is still very high which is alarming for Bangladesh.

Plan International estimated that about 150 million adolescents from South-East Asia region are at risk of child marriage by 2030 (Plan International, 2019).

According to the 2020 Ecological Threat Register (ETR), since 1960s the world has witnessed a tenfold increase in the number of natural disasters. Data captured between 1900 and 2019 by the Institute for Economics and Peace reveal an increase from 39 incidents in 1960 to 396 in 2019 (Institute for Economics & Peace, 2020). Bangladesh has been among the five most disaster-prone countries in Asia the Pacific (Ahmad, 2021) and among the countries most vulnerable to the effects of climate change (UNICEF, 2020).

Global climate change has an impact on the severity. frequency, and distribution of hazards, rendering Bangladesh vulnerable on a local and global scale (Kabir et al., 2016). As well as many of the impacts of climate change reinforce the socio-economic, demographic, and cultural stresses (Alam & Collins, 2010; Xiaoying & Sikder, 2014). Children, for example, are the most vulnerable group after catastrophes, facing displacement, child labour, trafficking and dangerous migration, forced marriage, and sexual exploitation. Girl children become the worst sufferer because of the social structure and norms combined with difficulties during natural hazards results in violence against women, child marriage and other forms of discrimination (Alam & Rahman, 2014). Although the socio-cultural drivers of child marriage are well documented in the literature but there is a huge knowledge gap remaining in the literature related to the impact of climate change on child marriage. No connection between those have been established through scientific evidence and arguments.

1.2 Statement of the problem

Climate change became global concern and Bangladesh is among the countries most vulnerable to the effect of climate change. According to the UNICEF about 40% of the total population are children here in Bangladesh and whose risks of adverse effect of climate change are higher than adults (UNICEF, 2019a). Apart from the impact of climate change on community, UNICEF identified child marriage as a major impact of climate change on adolescents (11-18 years old) followed by child labor, sexual exploitation, rape, etc. Bangladesh has the fourth-highest rate of child marriage in the world. The practice of child marriage reflects deep-rooted norms and unequal status of girls in society as females are often seen as financial burdens. Child marriage is associated with early pregnancy, lower educational attainment, spousal violence and poverty. Girls become more vulnerable to child marriage and trafficking in the context of natural disasters caused by climate change, to which Bangladesh is highly prone. Being a vulnerable region of climate change and having a higher burden of child marriage, impact of climate change on child marriage in Bangladesh is not well documented. Thus, it is important to report evidence from different level of a community on climatic factors which may lead child marriage.

Apart from the impact of climate change on community, UNICEF identified child marriage as a major impact of climate change on adolescents (11-18 years old) followed by child labor, sexual exploitation, rape etc. (UNICEF, 2021).

1.3 Research objectives

The primary objective of the study is to explore the perceptions on the effect of climate change on child marriage in disaster-prone area. The study contains certain secondary objectives in order to achieve this main objective of the study. The study has the following Secondary objectives:

- To explore the connection between climate change and child marriage.
- To understand the factors determining child marriage in a disaster-prone area at an individual, familial, community, and societal levels.
- To understand the dimension varies at the individual, familial, community, and societal level.

1.4 Scope of the study

The study's findings explore the factors determining child marriage in climate change context by gathering information from participants of individual, familial, community, and institutional levels. This study also offers an analysis of the dimension varies at different level of influence. These explored knowledge and information are necessary to mitigate the lack of research and data in this topic. At the same this information will help to develop policies which will address women's vulnerability to child marriage in disaster-prone areas to enhance climate change resilience. This study also uncovers the socio-cultural elements and environmental risk factors that have ramifications for child marriage. The findings from this study imply that policies addressing the causes of child marriage need to recognize the environmental risk factors in vulnerable locations.

This exploration of sensitive cultural information will help the policy maker and other organizations to design their interventions by understanding the cultural construction of the community. Understanding cultural elements and design intervention accordingly can help to boost up the trust within different levels of influence. These findings would be useful to mobilize resources and revise and/or design evidence-based multi-level interventions to reduce child marriage in overall Bangladesh and will be helpful to fulfill the SDG target no 3.5 by reducing child marriage in one of the risky groups.

2. LITERATURE REVIEW

2.1 Natural disasters and climate challenges in Bangladesh

The average global temperature has risen by 0.8°Cover land and 0.5°C at sea. It is widely agreed by the scientific community that human activities are altering our climate system and that the temperature is on the rise (Ministry of Environment and Forests, 2015). United Nations Intergovernmental Panel on Climate Change (IPCC) predicts the impacts of climate change as increased flooding, increased vulnerability to cyclone and storm surges, increased droughts, decreased availability of freshwater, and the rise of sea levels (Seneviratne et al., 2012)

Bangladesh is one of the most disaster-prone countries and among the countries most vulnerable to the effects of climate change (UNICEF, 2015). It's low-lying flood plains characterized by a dense network of rivers and the Bay of Bengal in its South combined with its population density and socio-economic environment, make it highly susceptible to many natural hazards, including floods, cyclones, droughts, tidal surges, earthquakes, river erosion, waterlogging, rising seawater and soil salinity.

According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) in its 2021 Regional Focus Model (RFM) on disaster vulnerability, Bangladesh has been among the five most disaster-prone countries in Asia the Pacific(Ahmad, 2021). More than 80 percent of the population is potentially exposed to floods, earthquakes, and droughts, and more than 70 percent to cyclones (OCHA, 2018). In Bangladesh total of 20 districts are very vulnerable to the natural disaster. Nine districts are under cyclone-prone areas, five districts are under flood-prone areas, two districts are

under drought-prone areas, three districts are under flash flood-prone areas, and one district is under waterlogging prone areas. Coastal areas such as Satkhira, Khulna, Bagerhat, Perojpur, Patuakhali, Barguna, Bhola, Noakhali, and Cox's Bazar are more vulnerable to disaster (UNOCHA, 2012). On average, the country experiences severe tropical cyclones every three years, and about 25 percent of the land mass is inundated with flood waters every year.

Coastal area, mainly located in southwestern Bangladesh, is highly disaster-prone. The severity, frequency, and distribution of hazards are also affected by global climate change, making Bangladesh vulnerable both locally and globally (Kabir et al., 2016). Challenges will arise in environmental surroundings and in many of the impacts of climate change that will reinforce the socio-economic, demographic, and cultural stresses already faced by Bangladesh (Alam & Collins, 2010; Xiaoying & Sikder, 2014). For example, disasters increase households' vulnerability to poverty and adversely affect family welfare, affecting the future of the children in the family. During disasters, children are the most vulnerable group to face dislocation, child labour, trafficking and unsafe migration, forced marriage, and sexual exploitation. Girls become the worst sufferer because of the social structure and norms. combined with difficulties during natural hazards results in violence against women and other forms of discrimination (Alam & Rahman, 2014).

2.2 Present status of child marriage in Bangladesh

Despite some progress in education, women's welfare and other socioeconomic indicators, Bangladesh has the highest prevalence rate of child marriage in South Asia (Bajracharya et al., 2019). This country is now home of 38 million child brides

who were married before reaching 18 and ranks among 10 countries in the world with the highest prevalence (UNICEF, 2020a).

The COVID-19 pandemic situation has brought about a sharp and steady rise in child marriage. A recent report by UNICEF said more than 10 million girls are defenseless against child marriage because of the pandemic. (UNICEF, 2021)

According to a UN report, now the rate of child marriage in Bangladesh has decreased at 51%, which was 90% in 1970. Although the prevalence of child marriage has been dropped nearly 40% within 50 years, it remains very high (UNICEF, 2021a). The COVID-19 pandemic situation has brought about a sharp and steady rise in child marriage. A recent report by UNICEF said more than 10 million girls are defenseless against child marriage because of the pandemic. An evaluation report on March 2021 conducted by the Manusher Jonno Foundation (MJF) in collaboration with the UN Population Fund, UNICEF, and Plan International Bangladesh said at least 13,886 girls in 21 districts were victims of child marriages between April and October of 2020 (Sakib, 2021). Experts say that school closures, economic stress, service disruptions, pregnancy, and parental deaths due to the pandemic are putting the most vulnerable girls at increased risk of child marriage (UNICEF, 2021b).

2.3 The causes and consequences of child marriage in Bangladesh

The determinants of child marriage are poverty, the custom of dowry, education of women and their husbands, women's

occupation, place of residence, religion, fear of shame and stigma, and deeply embedded social norms in patriarchal societies (Kamal et al., 2015; Nahid, 2014).

One of the most frequently cited factors behind child marriage in rural Bangladesh is poverty (Asadullah et al., 2021). Young girls are often considered an economic burden to their families. So, the parents want to get married their girl child off at a very early age to reduce the family's financial burden (Nahid, 2014). Since in many parts of Bangladesh the dowry increases with the girls' age, parents cope with the situation by marrying their daughters off at a young age (F. D. Chowdhury, 2010). As marriage is seen as an act that can ensure both financial security and protection from sexual abuse or illicit sexual contact, rather than making the daughters educated, marriage became a solution and most parents focus on whether the groom's family is well off or not (Nahid, 2014). Patriarchal norms and cultural forces shape women's status at home and in the community. The qualitative data of the study by Asadullah et al 2020 found that there are specific terms to describe the marriage-readiness of adolescent girls for example Dangor (grown up), Siyana (mentally mature) and Upozukto (qualified). When a girl is physically mature for marriage, it is thought by their parents that she can bring defame or dishonour to the family by engaging any illicit relation- which is one of the justifications for child marriage (Asadullah et al., 2021; Sakib, 2021). However, early marriage has serious physical, intellectual, psychological, and emotional impacts. Child marriage restricts personal freedom and educational opportunity to develop a complete sense of human being (Nahid, 2014). It results in unwanted and early pregnancy, which is linked to high rates of pregnancy-related complications or risk to the newborn and mother's life. Pregnancy-related deaths are the leading cause of mortality for 15–19-year-old girls. Child marriage extends a woman's

reproductive span, leading to higher fertility due to lack of contraceptive usage, thereby contributing to larger family sizes (Leftwich & Alves, 2017; Nahid, 2014).

2.4 Existing knowledge on the association between climate change and child marriage

The UN's Sustainable Development Goal (SDG 5.3) has aimed at ending child marriage by 2030 (Nayema, 2022). Eliminating child marriage has been recognized as an important agenda in Sustainable Development Goals. Very limited studies and discussions have attempted to focus on child marriage in the fragile context of natural disasters (Kumala Dewi & Dartanto, 2019). However, literature have established the fact that climate change and child marriage are connected. Dewi & Dartanto (2018) conducted a study to examine the association between natural disasters and child marriages in Indonesia quantitatively. This study confirms that a point increase of natural disaster frequency at the village increases the probability of girls entering the child marriage by 0.1% (Kumala Dewi & Dartanto, 2019).

Financial shock after a disaster is cited as the primary reason responsible for child marriage in a disaster-prone area (Asadullah et al., 2021).

Pasten et al. 2020 explored the relationship between climate change and child marriage using a sample of 180 countries, and the findings suggest that climate change and child marriage are highly associated with each other (Hotchkiss et al., 2016). Dolderer and frid (2018) found a relationship between rainfall and adolescent marriage in Nepal and Uganda

(Dolderer & Frid, 2018). Droughts have also been found to reduce annual crop yields by 10 to 15%, which creates income shocks among the families, triggering child marriage in Sub-Saharan Africa and India (Corno et al., 2020).

Human Rights Watch (2015) identified that the geographical location of Bangladesh makes it highly and sometimes extremely disaster-prone, hit by cyclones, floods, riverbank erosion, and earthquakes. Among the contributing factors behind child marriage, natural disasters are also identified as a significant predictor (Human Rights Watch, 2015b). A recent study conducted by Asadullah MN and his colleagues reported a significant positive association of shocks related to climate events with the incidence of child marriage. They also found that child marriage is a coping strategy adopted by households in response to their increased vulnerability due to natural disasters. One study noted that when schooling is affected during the flood season, adolescent girls are more vulnerable to early marriage in Bangladesh (Asadullah et al., 2021). Alston et al. (2014) found that 45% of female respondents in coastal areas in Bangladesh experienced forced marriage due to climate-related shocks and poverty (Alston et al., 2014b). Similar patterns were documented after cyclone Sidr in 2007 and cyclone Aila in 2009 (Human Rights Watch, 2015b).

Financial shock after a disaster is cited as the primary reason responsible for child marriage in a disaster-prone area (Corno & Voena, 2016; Kumala Dewi & Dartanto, 2019; Tsaneva, 2020). During a natural disaster, household experiences small or large welfare losses and find strategies to cope with these financial shocks are other sources of income or reduce the households' existing burden (Kumala Dewi & Dartanto, 2019). One of the common coping mechanisms followed by the parents is marrying off their children to reduce the burden (Hotchkiss et al., 2016). Usually, a family required a long time to settle down and find a husband after a disaster,

and meanwhile, the girl is getting older and dowry is going up, which also trigger child marriage (Alston et al., 2014b). Human Rights Watch found that families' anticipation of losing their land and homes to river erosion contributed directly to decisions by some families to marry their girls at young ages. Not only river erosion, but many families also struggled with frequent flooding, which destroyed their crops, sometimes several times a year, creating a constant battle for survival for many low-income families. As for survival, family usually makes decisions about schooling and marriages for their children (Human Rights Watch, 2015b).

Aside from economic factors, the girls' well-being and security during/after a disaster is also a factor that drives family decisions on child marriage (Stark et al., 2012). Natural disasters such as floods, droughts, and earthquakes destroy settlements which imply evacuation of people. Poor condition, overcrowding, poor hygiene in the evacuation camps cause the spread of infectious diseases. Lack of security for adolescent girls in evacuation camps and these uncertain and dangerous diseases means parents will always try to protect their children's well-being by marrying off their daughters (Kumala Dewi & Dartanto, 2019). Evidence from other countries, including Uganda (Schlecht et al., 2013), Kenya and Afghanistan (van der Gaag et al., 2010), show that the insecurity of camp life, hunger and extreme poverty drives parents to marry off their daughters at a young age in the hope of protecting them from harm.

According to plan international (2013), United Nations Population Fund (UNFPA) pinpoint three sub-groups of adolescents who are at high risk during disasters and the first group is young adolescent girls (10-14 years). Because of their dependence, lack of power, and lack of participation in decision-making processes, young girls are at risk of sexual exploitation and abuse during disasters. More than a quarter

of girls experience sexual abuse and violence during disasters. Against constant threats of sexual harassment and insecurity during natural disasters, parents seek refuge in early marriage to preserve their adolescent daughters' purity. Sexual abuse and exploitation are a matter of shame for a girl as most society blames the victim rather than the perpetrator (van der Gaag et al., 2010). Action aid (2007), in one of their study shows that after a tsunami occurred in Tamil Nadu, India, many young women became subject to sexual violence and didn't dare to report it because of the shame and stigma related to it (Lanka, n.d.). Even if a girl shares such an incident with her family, the family doesn't report it to the police because of the fear of losing the family's reputation and instead of marrying off their girl as soon as possible (McLeod et al., 2019).

2.5 An analysis of Government legal provisions in Bangladesh regarding child marriage

2.5.1 Minimum legal age of marriage:

Child marriage refers to any formal marriage or informal union between a child and an adult or another child. According to the Law of Bangladesh, the minimum legal age of marriage for girl is 18 and for boy is 21.

2.5.2 The Child Marriage Restraint Act, Penalties and compensation:

To reduce child marriage, the Bangladesh government had adopted The Child Marriage Restraint Act in 1929. Punishment was whoever performs, conducts or direct any child marriage will be punished with only one month of imprisonment or 1 thousand Taka fine or both (Legislative and Parliamentary Affairs Division, 2019). Later this act was reviewed and reformed in 2017 by Bangladesh parliament,

and new amendment set new punishment. This act says if any child marriage occurs, parents or other concerned authority who promotes and permits this act to be solemnized will be punished with a maximum of two years and minimum of six months of imprisonment or 50 thousand Taka fine or both, and imprisonment will be extended up to three months if anybody is unable to pay the fine. As a punishment of marriage registration, appointed punishment was similar. For marriage, concerning authority must have to prove the age of the bride and groom by providing legal documents such as the birth certificate, national identity card, educational certificates (for example, JSC, SSC, HSC etc.) or passport (Care Bangladesh, 2015; Legislative and Parliamentary Affairs Division, 2019).

2.5.3 Legal provisions regarding exceptions to the Minimum legal age of marriage and its criticism:

Although the new amendment passed in March 2017 stiffer punishments and welcome better law enforcement, the addition of an exception in section 19, which permits younger girls to marry in vaguely-defined "special" circumstances with parental consent and permission from the courts weakens the existing law and would make girls more vulnerable to child marriage (Girls Not Brides, 2017). This statement is contradictory with the national and international legal instrument, for example, Domestic Violence (prevention and protection) Act 2010, Penal Code 1860, Prevention of Oppression Against Women and Children Act-2003, CEDAW, Universal Declaration of Human Rights, International Covenant on Civil and Political Rights Convention on The Rights of The Child This new law also doesn't define clearly that what it means by "special circumstances" and mention the minimum age for marriage in such special cases(Care Bangladesh, 2015).

Domestic and international rights organizations such as

UNICEF, Human Rights Watch, Care Bangladesh, Child not Bribes criticize that this law is a devastating step backward for the fight against child marriage in Bangladesh and recommend reforming the law. A study has revealed that poor people will mostly take such opportunities in the name of poverty (Arnab & Siraj, 2020). Human Rights Watch found that government officials were actively facilitating child marriages by accepting bribes to produce false birth certificates criticizing the government's lack of law enforcement (Care Bangladesh, 2015; McLeod et al., 2019).

2.5.4 Government's ongoing activities with regard to reducing child marriage:

Together with UNICEF Bangladesh, the Ministry of Women and Children Affairs has administrated the launch of the National Plan of Action (2018-2030) to eliminate child Marriage through existing institutional initiatives, programs, and combined efforts of all. The objective is to end the marriage of girls aged below 15 years, reduce by one-third the marriage rate for girls aged 18 years in 2021, and eliminate child marriage by 2041. The government commenced a digital birth registration process to avoid birth date manipulating and availing fake age certificates and marrying girls too early (Sakib, 2021).

2.5.5 Child Marriage in Climate Change Policies:

The potential link between climate change and child marriage never addressed by Bangladesh's climate change policies. Ministry of Environment and Forest developed National adaptation programmes of action (NAPAs) in 2005 after extensive consultations with communities across the country, professional groups and other members of civil society. It provides a process to identify priority activities that need immediate response to adapt to climate change (Ministry

of Environment and Forest, 2005). In 2008, Government adopted Bangladesh's Climate Change Strategy and Action Plan (BCCSAP) based on NAPA which was later revised in 2009. This revised document discusses the obligation of the government to ensure the protection of the poorest and most vulnerable in society, including women and children from climate change and that all programmes focus on the needs of this group for food security, safe housing, employment and access to basic services, including health. The government also commits to increasing the resilience of vulnerable groups, including women and children, through community-level adaptation, livelihood diversification, better access to basic services and social protection (MoEF, 2009).

In 2013, Bangladesh published a Climate Change and Gender Action Plan (CCGAP). The CCGAP's overall objective was to mainstream gender concerns into climate change-related policies, strategies and interventions. However, the plan also does not address any link between the impacts of climate change and child marriage or include any discussion of reducing child marriage or mitigating risk that climate change impacts could drive child marriage. About child marriage this document mentions "the negative impact of early marriages" and it cites the CMRA and Dowry Prohibition Act as examples of legislative reform responding to issues raised by the Committee on the Elimination of Discrimination against Women (MoEF, 2013).

2.6 Organization and actors address child marriage in climate change context

Besides governmental initiatives, Non-Governmental Organisations (NGOs) are trying to help reducing child marriage. In 2016, UNICEF and UNFPA launched "Global

Programme to End Child Marriage" in 12 countries with high prevalence in child marriage, including Bangladesh (UNICEF, 2018c). UNICEF also recognized that in the context of natural disasters caused by climate change, girls become more vulnerable to child marriage and trafficking (United Nations Children's Fund, 2020). Human Rights Watch investigates and reports on abuses that happen all over the world including abuses against children. The article by HRW "Marry before your house swept away, child marriage in Bangladesh" acknowledges natural disaster as one reason behind child marriage and criticises the CMRA for encouraging child marriage through special consideration. This article also criticises Bangladesh's climate change policies for addressing the link between natural disasters and child marriage and targeting any interventions. Action Aid is an NGO that began working in Bangladesh in 1983, and they 'support vulnerable communities to adapt to climate change and protect themselves against future disasters. They also 'build floodproof villages, provide salt-resistant seeds, teach children how to survive in a disaster and build child-friendly spaces where they can continue their studies when the route to school is flooded', which means that they are also helping to continue to provide education to the children when natural disasters strike, and therefore also helping towards providing an education for all (action aid, 2021). In Bangladesh Oxfam works to 'empower communities to raise their voices for fair adaptation policies, compensation and responses'. Friendship is an NGO helping to provide free education for all in Bangladesh by 'building schools in poor, remote communities where previously there were no governmental schools' (FRIENDSHIP, 2021). It also uses donations to help fund a child's education to prevent them from dropping out as their parents cannot afford the fees and thus could help to prevent parents from removing their children from school and subjecting them to child marriage as they no longer have to fund their child's education.

3. MATERIALS AND METHOD

3.1 Research design

To explore the study objectives and satisfy the research question a community based qualitative study was carried out in the study area. Qualitative research is more effective in identifying intangible factors, such as- culturally specific information about the values, opinion, behaviors, and social contexts of a particular issue (Jackson et al., 2007). As this study was trying to explore human perceptions on the effect of climate change on child marriage, qualitative data of different domain were gathered and explained.

3.2 Theoretical framework

This study used the social-ecological model (Figure 2) as a conceptual framework for this study. Many researchers have adopted this theory-based framework in explaining various social problems, public health issues including sexual and reproductive health. American psychologist Urie Bronfenbrenner first introduced this model in the 1970s. Arguing that human development must be understood under the entire ecological system in which the growth of a person takes place, he offers a model and refers to it as "The ecology of human development" (Bronfenbrenner 1977). It describes the sphere of influence in multiple layers, typically represented as an individual, relationship (familial), community, and societal factors.

From a social-ecological standpoint, child marriage is one of the most concerning social problems that are intertwined with various issues concerning the situations of the girls and the family, community, and societal backgrounds. Without family support, girls cannot continue their education and fall within the trap of early marriage. It is also essential to recognize that different types of families are at different levels of risk. For example, girls from displaced families because of natural calamity or single-headed families are at much higher risk of dropping out of school and marrying early. Community is a broader term that includes a neighborhood or various types of peer groups. This level also consists of patriarchal beliefs, negative attitudes toward girls, harmful cultural and gender norms that create inequalities against women, and child marriage. At a societal level, several institutions within the immediate environment of girls, including schools or educational institutions, media, workplaces, health institutions, etc. that need to be identified and targeted with messages on child marriage and reforms that would help increase the value of girls. Even sound policies and existing laws need reformation, close monitoring, coordination, and resource support to implement and achieve intended outcomes.

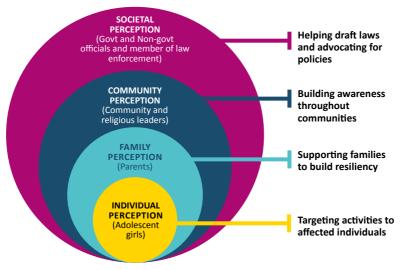


Figure 3: Conceptual framework of this study.

3.3 Study area

This study was carried out in the Bhola district located in the Barisal division which is about 190 km far from the capital city Dhaka. Bhola is considered as the largest riverine delta island of the world with an area of 3403.48 sq. km. It lies between 21°54′ and 22°52′ north latitudes and between 90°34′ and 91°01′ east longitudes (Banglapedia, 2021). It is bounded by Barisal district on the north, Lakshmipur and Noakhali district on the east, Bay of Bengal on the south and on the west by Barisal and Patuakhali district. Meghna is in east and north side of the district and Tetulia is in the west side and they both flow into the Bay of Bengal situated in the south. The altitude of the island is not much above 12 feet from the sea level. The district now consists of 7 Sub-Districts, 5 municipalities, 68 unions, 314 mauzas, 438 villages, 45 wards and 68 mahallas. The upazilas are Bhola Sadar, Daulatkhan, Burhanuddin, Tazumuddin, Manpura, Lalmohan and Char Fasson. Among the 7 upazilas of the district Char Fasson is the largest (1440.04 sq. km) and Burhanuddin is the smallest (284.67 sq. km) in size (Banglapedia, 2021). Three Upazilas were selected randomly for data collection. Data were collected from Bhola Sadar. Daulatkhan, and Lalmohan Upazillas. A study area map is provided in the Annex section.

Bhola was chosen as the study area for its geographical location. It is a remote district made of coastal plain land surrounded by rivers and rivulets on all Sides which made Bhola and adjacent area more susceptible to disaster. River erosion, cyclones & tidal surge is the burning issue in Bhola coastline and this is why the islands in the Bay of Bengal are called the Climate Ground Zero. Besides, Bhola has the highest prevalence of child marriage. According to UNICEF, the rate of child marriage in Bhola is 60.3% while the national rate is 51.4%. Around 19% of the girls of this district got married before their 15 birthday and 41% got married after 15 but before 18 years old (Dhaka Tribune, 2021; UNICEF, 2020a).

3.4 Study population and inclusion criteria

As this study followed social-ecological model, data were collected from four different levels (e.g., individual, familial, community, and societal) of the community, meaning that there were four types of study population involved in this study. At individual level- data were collected from adolescent girls aged 18 or below (both married and unmarried). At familial level- data were collected from parents who have at least one adolescent girl. At community level- data were collected from community and religious leaders. Lastly, govt. and non-govt. officials were considered as societal level participants for data collection. Participants, residing in the studied area for at least past five years (except- societal level participants), met the level criteria and willing to participate were only included for data collection. There were no age restrictions (except- adolescent girls) for study participants.

3.5 Data collection tools and techniques

For collecting qualitative data, this study followed two different techniques of data collection called Focused Group Discussion (FGD) and Key Informant Interview (KII). FGDs were conducted with minimum 6 and maximum 8 participants and KIIs were one-to-one interview session. The time duration of per FGD was 1- 1.30 hours and per KII was 25-30 minutes. There were 12 FGDs and 09 KIIs were conducted in this study. Details of the study profile are presented in Figure 3. Semi-structured, pre-tested interview checklists were used for data collection. Checklist were prepared based on the domain in which the interviews are taking place. KII checklists were prepared only for collecting data from respondents of societal domain. Before commencing final data collection, a pilot study was conducted

outside the studied area to validate the study tool, and edited/revised accordingly.

3.6 Sample size and sampling procedure

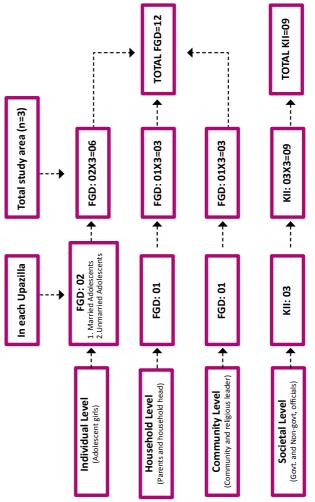
This study followed a purposive sampling method which is the most commonly used sampling method to recruit participants for data collection. In purposive sampling, the sample is chosen on the basis of the convenience of the investigator(Acharya et al., 2013). COVID-19 pandemic, lack of access in Char area were barrier in the way to follow probability sampling. But for making the data more representative, data were taken from different sub districts by choosing respondents from different age, occupation and different level of influence.

3.7 Data collection procedure

Two trained research assistants (RAs) having previous qualitative data collection experience were recruited for filed data collection. As the research conducted in 3 selected Upazillas, in each upazilla 4 FGD was conducted on 3 domains of influence including individual (two FGDs), household and community. Total 12 FGDs were conducted in 3 Upazillas of Bhola. KIIs were taken only from the respondents of societal level who work in Govt. or Non-Govt. organizations. In each Upazilla 3 KIIs were conducted and total 9 KIIs were conducted.

3.8 Data analysis

Data were analyzed by using the Neuman (2000) three-phase coding system. For the first phase, taped and transcribed data were scanned by each data collector (RA), which led to a certain degree of familiarization with the factors considered and to locate the themes. Each data collector looked at the range, content, and diversity of the raw data. Secondly,



igure 4: Data collection procedure at different population level.

prior codes, inductive codes, and subcodes were generated, identified, and defined in a broader group. Definitions were included code abbreviations, color coding, full description, when to use, when not to use, and examples from transcripts. At the end, each data collector reread the sorted data and

finalize the final theme. Another data collector checked the transcripts to increase the validity of the data.

3.9 Ethical consideration

Institutional ethical clearance was obtained from the Institutional Ethical Committee (IEC) of Patuakhali Science and Technology University (reference no. PSTU/IEC/2021/30). Informed written consent (written in Bangla) was obtained from each of the participants, those who were aged below 18 written consents were also obtained from the respective parents/legal guardians of the participants. The consent form contained contact information of the investigator for possible communication. The purpose, the process, and the riskbenefits from participating in the study were also described. Participants were informed that there will be no financial or other financial or non-financial incentives for participating in the study, and that their participation is voluntary. They were also informed that they may withdraw the participation in the study at any time after initial participation, without any prejudice or penalty.

3.10 Limitations of this study

Authors acknowledge several limitations of this study, first, the study design is cross-sectional in nature, which fails to establish a temporal relationship, we advise caution while interpreting the result. Secondly, this study was conducted in a pocket area of Bangladesh and the sample is not representative of whole Bangladesh. Apart from the limitations, this study provided insights on the effect of climate change on child marriage in Bangladesh, which is unique in nature and main strength of this study.

4. FINDINGS

Child marriage is a common practice in all parts of Bangladesh. The results of this study indicate that girls who live in disasterprone areas are more vulnerable than girls from other parts of the country. In such areas, disasters such as riverbank erosion and extreme flooding exacerbated by climate change have a significant role in driving child marriage. Individual level factors responsible for child marriage are the age of the girl, the physical growth of the girl and extra care as burden. Natural disaster-induced poverty, homelessness, joblessness, lack of security, the number of girls in a family and the presence of elderly people in the family increase the incentive for families to marry their daughters off at the household level. The geographical composition of the disasterprone area also exacerbates a few factors responsible for child marriage, such as being isolated from the rest of the country, poor communication systems, receiving less education, and becoming less developed. These reasons are identified under the communal level of influence: the other three reasons mentioned are social gathering at the evacuation center, religiosity, and school closure. Lack of disaster management and lack of security in the evacuation center are identified under the social level

Themes and Subthemes		
1.	Individual correlates of child marriage	
	Age of the girls	
	Physical growth/ sexual maturity of the girls	
	Extra care as burden	

Themes and Subthemes	
2.	Household correlates of child marriage
	Number of girls
	Financial crisis
	Homelessness
	Insecurity and the concept of girls "honor"
	Presence of elderly
3.	Communal correlates of child marriage
	Geographical composition
	Religiosity
	Social gathering at the evacuation centre
	School closure
4.	Institutional correlates of child marriage
	Lack of disaster management
	Lack of security in the evacuation centre

4.1 Individual correlates of child marriage induced by extreme natural disaster

4.1.1 Age of the girls:

The respondents in the FGD and KII correlate girls' age with the duration of the disaster. Younger girls are always prioritized in the marriage market. As girls are meant to be married and rearing up children, parents will spend money at the time of marriage rather than spending fragmentally during their upbringing. After a disaster, it takes time to adapt to a new situation. Parents think that their girls will become too old during this adaptation period, so, before facing such incidents and losing any time, they decide to marry off their girls.

My elder sister got married at 15 years old when I was around 12. Our house was repaired, painted, new tins were installed and the border of the house was paved. My parents were very worried that if we fall into the flood, all will go away. Sometimes cyclone blows away the shed of the house. Again, doing all of the things will take time and money as well. In the meantime, my sister's age will be more. As that time the house was prepared, my parents decided to marry her off. On the day of marriage, I was very sad because I was very close to my sister. (An unmarried girl during FGD)

Girls' ages in rural areas are also connected to the dowry amount. As younger girls are preferable for marriage, girls aged 17 to 18 are considered too old. In order to marry them, parents must give extra money. People living in char areas, areas near the riverbank, mainly depend on fishing for living; they frequently face financial crises. They do not want to take this extra burden of increased dowry.

Parents think that a girl has to marry one day or another. Age increases the complexity related to marriage and parents want to reduce it. If a family faces river erosion, it requires time for the family to resettle. They have to go to another place, built a new house, get a new job. With all of this process,

the age of the girls also increases. Girl's age in the rural site is related to the amount of dowry. The more the age is, the more the amount of dowry is. People in char areas usually face financial crises. Extra pressure is beyond their imagination. Parents feel a responsibility within that my girl is aged and mature and we should marry off her. (A school teacher during FGD session with community leader)

4.1.2 Physical growth/ sexual maturity of the girls

The physical growth of the girls is a matter of concern for the parents. According to the respondents, the growth of the girl in char areas is faster than in other areas. The reason is identified as they are brought up in an open place and engage in various physical activities, such as collecting water, washing clothes, and cleaning the house. As most people depend on fishing for livelihood, consuming protein almost every day is very common nature, physical activity, and food habits are mentioned as factors behind physical growth.

Our Bhola district is a river-prone area.
70% of the people depend on the river for earning their livelihood. We have villages for fishermen (jele polli) here. In such areas the girl children who are in class 8 or 9 or same level education at the madrasah, you can't judge their age by their physical appearance.

They look mature and their growth is quite good that it is difficult to understand the fact that their age is below 18. (A journalist, during FGD with community leader)

Respondents made a connection between physical growth and sexual maturity. The girl's sexual maturity is measured by their physical growth and appearance. Some incidents with girls aged 13-15 years engaging in illegal sexual acts with boys were mentioned. Parents fear these incidents and decide to marry the girls quickly before the girl can act out inappropriately.

Another very important thing is that the food habit of this area is related to child marriage in my view. When people eat fish regularly, they experience greater growth sexually. The sexual urge of the people is very high as they continuously consume protein. So, you will hear a lot of incidents that girls are marrying without their parents' permission. Such incidents are regarded as shameful and parents try to be safe from them. (A journalist, during FGD with community leader)

Climate change is responsible for the extreme heat and prolonged summer; this weather is responsible for weight gain. Because of this extreme weather, it is thought that the weight of girls is increasing. In rural areas, a girl's physical growth and age are measured by her weight and appearance.

Due to the rapid climate change, now the summer season stays longer than before.

Girls' physical growth becomes faster because of extreme heat. Then there rises a social conspiracy to marry her off. But she is not aged. The neighbor and society influence the parents to do that. Even if they have consciousness, due to the unconsciousness of the neighborhood they get influenced. They also think about social respect and this is another reason. As an NGO worker, I noticed that in rural areas both educated and uneducated people prioritize child marriage. People who will eradicate it from society are encouraging it directly or indirectly. One child marriage incident encourages other incidents to happen. (An NGO worker during FGD)

4.1.3 Extra care as burden:

Female children need extra care during disasters, as they face extraordinary challenges during these situations. Unlike boys, they are concerned and ashamed about being exposed to the 'public eyes of men' while carrying out their daily activities such as bathing, going to the toilet and sleeping. Another challenge mentioned is that they face menstruation every month. During this time, they need extra care, food, and materials to manage their period. Poor families cannot provide these necessities, so they hand over their girls as quickly as they can.

During disaster, there is a lack of toilets and bathrooms as all of the places are submerged

in water. This damaged sanitation system is a big concern for girls and their parents. A man can easily take birth anywhere but a girl can't. Even where the girl will sleep? If anybody attacks her? Adolescent girls face problems during their menstruation as well. How they will manage their period in such a situation? Considering all of this situation, parents become compel to marry off their daughters. (A headmaster during FGD)

While talking about the most affected group during the disaster, an unmarried girl said-

We face floods almost every year. In my view, adolescent girls face many kinds of problems such as lack of separate place for changing dress, lack of proper sanitation, and hygiene. When the water rises, our house is submerged and we can't move easily. I, my sister and other 2 cousins were almost the same age. We faced trouble during bath or washroom. Our parents don't allow us to go anyplace alone. (An unmarried girl during FGD)

4.2 Household correlates of child marriage

4.2.1 The number of girls in a family:

Bhola consists of several char areas. In these areas, families consist of at least 7-8 members. One of the very significant correlates mentioned in some key informant interviews is the number of girls in a family. If there are 4 girls in a family, parents aim to marry them off because of financial difficulties. Parents in that situation don't think about age; they think only of how many girls they have to marry and rush to find them a groom. These incidents are most noticeable in unstable and socially unaware families.

In other parts of Bangladesh, people try to maintain family planning, but, in this area, every family has 3-4 children. If the children are girls, parents think that if they can marry their girls, it is the fulfillment of their duty. They think that they are fulfilling their duty by marrying off their girl but actually, they are avoiding their greater responsibility for example- education, health, food, by marrying off them. (A member of law enforcement agency)

In the village, parents have seen girls not as an asset, but as a burden. When there are many girl children, they are considered a burden. They always think of how soon they can marry their daughters to well-off families. If they see that a girl has achieved minimum physical fitness, they begin to take marriage preparations. These marriages later cause poor

maternal health, poor child health, and unrest in the family.

If the number of the girls are 3-4, parents have more tension of fulfilling their duties rather than 1-2 girls in a family. In most cases, they become married at a very early age around 14-16. In the law's house, they become the victim of domestic violence. As their age is less, the member of the family thinks that they will not raise their voice against oppression. They become pregnant at a very young age. Malnutrition, anemia and other diseases attack them. Then the husbands divorced them and the girls become helpless. (Chairman, During KII)

4.2.2 Financial difficulties:

Financial condition of the victim's family is mentioned as the primary reason for child marriage. In most cases, the parents are very poor and economically unstable. Natural disasters aggravate the existing economic and social vulnerabilities that stimulate forced child marriage. A father might lose his livelihood and accumulated wealth, including land, house, cattle, fish, trees, and others. In such crises, girls are considered as a burden and parents do not consider their age.

Their daily income is 300-500 taka, so maintaining the whole family is a problem. When any cyclone or tidal surge occurs, people lose their homes, land. The crops of

the land got damaged, fishes are flooded away from the firm. People become financially unstable. Then they become vulnerable and perplexed. If any girl child is in that family, the family does not think about her age, but to marry her cause they are unable to bear the cost. For reducing burden parents marry off their girls with a relatively financially stable groom. (An NGO worker during FGD)

The livelihood of 70% of people living in char area depends on the water; this profession is not very profitable. During a disaster, pressure on families is increased due to loss of income sources. The groups that suffer most are mentioned as fishermen, farmers, and traders by profession.

Most of the people are poverty-driven and they are fishermen. They usually think if they give away their girl to lessen their burden.

During disaster the financial situation becomes beyond description. As Bhola is a disaster-prone area, every year people living here expect a natural disaster especially a flood. So, these poverty-affected people used to think that I should marry my daughter before the flood while I have money in my hand. (A ward counselor during FGD)

Floods, river erosion, cyclones, and other natural calamities have destroyed crops, animals, and homes, putting thousands of farmers out of work. Many of these families opt to move

away from the river and resettle in relatively high places. Sometimes they go to the capital Dhaka in search of work and end up living an inhuman life in the congested slums.

River erosion is acute in my village. Not only river erosion is responsible for child marriage, it is also acute because of the rainy season. *In the rainy season, the water increases. As* a result, crops become flooded away and the price of daily necessary things go up. Natural disaster makes the parents helpless in terms of finance. They think if they can marry off their daughter, they will be free from their foroj [A religious term in Islam, which considered as an obligatory task to complete] responsibility as well as one child less means one less mouth to feed for them. They will be unencumbered. That's why they are interested in child marriage. (A journalist from Bhola Sadar)

Child marriage is identified as a coping mechanism or response for families who face great economic hardship induced by natural disasters and climate shocks. Where floods, droughts, and resulting crop destruction devastate food security and economic production, families may see marrying their daughters as a method to relieve some of these burdens. When a disaster pushed them from barely surviving to the brink of death, one coping method was minimizing their family size by arranging marriages for young daughters.

If the number of children is high, it is difficult for parents to look after them for a long time. During disaster, people lose their livelihood and shelter. Being helpless, they try to reduce the burden of the family by marrying off their daughter. It works as an adapting mechanism for the families. (Chairman during FGD)

Dowry was a common practice in the rural area. The data from the present study says that this practice occurs less often now, but it does still happen. The amount of dowry depends on a few factors; one factor is that safeguarding and trying to keep their daughter may result in increased dowry that the bride's family is expected to pay to the groom's parents. Some poor families believe that making a one-time payment is more practical than paying for their daughter's upkeep on a long-term basis, especially if they are facing economic hardship. Dowry payments also will often rise with the girl's age, presumably because her chances of participating in sexual activity before marriage.

Although in our village, the dowry incident is very low, in char area people give money, necessary belongings for example bed, almira, bike etc as dowry. For poor parents, it becomes difficult to give these expensive things. If the girl is very beautiful, sometimes an affluent family wants to take her without any dowry. In such cases, parents become happy rather than thinking about the age. If a girl is dark and aged, nobody wants to marry

her and demand a lot of money. Parents somehow pay the money but after marriage, the girl faces violence by her husband and in law's. (A married woman during FGD)

Now, COVID-19 is the biggest disaster according to some respondents. During this pandemic, many people lost their jobs, which threw people into a state of uncertainty. Before anything bad happens to them, they want to fulfill their responsibility of marrying their girls into a well-off family.

My child is now reading at SSC. She wants to admit to HSC. Her father is no more and we are not even financially stable. The situation of the country is not good. We face disaster every year but now covid 19 is the biggest disaster. Maybe I can die today or tomorrow. If I got a suitable match for her, before anything happens, I want to see her married. Her husband's family will continue her education. (A mother of an adolescent girl during FGD)

4.2.3 Homelessness:

Child marriage rates are found to be higher acute in areas affected by river erosion. Due to river erosion, many people become homeless and have an adult daughter with them. When families are forced out of their homes, it costs a good amount of money to resettle. If an adult girl is with them, they are in increased danger. Marrying a girl into a relatively well-off family from such a destitute situation becomes impossible for them. Thinking about such situation parents oblige to marry of their daughter before this disaster ever happens to them.

I think that child marriage happens more in river erosion-affected areas. In my village the prevalence of natural disasters is low and the homeless people come and take shelter. Making a new home needs money but most of them lose everything in disaster even their cattle. In such family girls are seen as a burden and get married for reducing the financial burden. Mainly homelessness or the need to be resettled trigger the financial crisis which is the main motor of child marriage. (A journalist during KII)

Observing other people lose their homes and properties motivates other people who are in danger of losing everything in the future to marry off their girls. Before becoming destitute, they want to hand over their daughter to a well-off family.

In river erosion-affected areas, families observe that the homes of their neighbors closer to the river are being washed away and those families permanently relocated as a result of river erosion. Experience of such incident creates fear among them that they are going to lose their home within two three years. One of the ways they dealt with the fact that try to find a marriage for their daughter before becoming homeless would assure her

safety while also reducing their family size. (An NGO worker during FGD)

4.2.4 According to one of the FGD respondents

I've got a classmate. There was no coronavirus when I was in class seven, but their house was on the riverbank. Her parents wondered what would happen after their house was submerged due to river erosion and the girl seem like a burden to them. They married her off after finding a suitable groom. (An unmarried girl aged 13 during FGD)

Safety issues of girl children arise in new environments. Many homeless families take shelter with relatives or neighbors. Even when taking shelter with relatives, community leaders have stated that they are not safe. as the possibility of abuse by close friends and family is very common. Respondents also mentioned that if a new girl comes into a village, the village boys sometimes tease her. Boys from affluent families propose to her; rejection of their proposals sometimes leads to abuse.

People lose their land, home and other properties in river erosion. When they don't have any place to live, their primary concern is where they will keep their young daughter. Sometimes they took shelter in their relative's house but young girls are not safe from their close ones too. Parents want to secure their

social reputation and avoid family defame. If they get a good proposal of marriage and see that the groom's side wants to take the girl without demanding much, they gladly give the girl away without thinking about her age or health. When survival is important, people can't think about extra safety or extra mouth to feed on. (Headmistress during FGD)

4.2.5 Safety issue: The concept of "Honor"

After financial instability, another serious reason for child marriage is the lack of social security. Female children face many difficulties when they go to school, such as disturbance and eve-teasing by local people. Parents think that one day or another, the girl will have to get married. By marrying girls off early, parents can prevent defamation of the family reputation.

My daughter is mature physically for marriage. The people who say about stopping child marriage, would they provide me financial help for rearing up my daughter? Or would they ensure the security of my girl? If the parents want to carry out their responsibility, it is a crime. If they want help from the authority, they don't get it. What actually parents should do? (A mother during FGD)

Child marriage is motivated by the sense of "honor." Having friendships with guys is considered to be sexually promiscuous behavior. Therefore, some families regard marriage as a way to safeguard their daughters from sexual harassment. Because they are accompanied by a guy, married girls are less likely to be harassed. Preventing harassment is a general reason for child marriage in every part of Bangladesh. The link between natural disasters and fear of losing "honor" is explored in this study. In the times of disaster, adolescent girls are at high risk of sexual violence that could damage their sexual purity. Information from both FGD and KII states that girls are not safe in their own homes, in neighbors' or relatives' homes, or in the cyclone center.

Girls face extraordinary challenges in times of disaster. They often become harassed by their close ones in times of seeking shelter during disaster. Most of the time such incidents remain secret. If the incident is quite open, parents try to marry their daughter off with the person who abused her. The history of being abused is considered as a fault of the girl's character. It is very problematic to marry the girl off who is a victim of any sexual harassment. (A lawyer during KII)

An unmarried girl from a FGD stated that-

Guardians are more concerned about our social safety and so they married off us. In urban areas, no one is concerned about anyone else. But in the village, any incident spreads very quickly among the whole area. If any girl has any love relation, she is

disrepute in that area and no one wants her as a bride. To stop them to involve in any love relation, the guardian arranges marriage. (An unmarried girl during FGD)

According to respondents, the structure of the Bangladeshi society is adverse for the upbringing of girls. After reaching 12 or 13, it is found that girls are teased by young boys on the way to school or when collecting water; when parents notice this, they quickly act to stop it. The fear of defamation or loss of family names due to illegal actions has accelerated child marriage.

The lack of social security is acute for girls in the whole of Bangladesh, not just in Bhola. Girls are not secure here. The situation is a little bit deep in the disaster-prone area because after disaster, the whole administrative system got damaged and it takes time to fix all of the problems and get back to the previous stage. Another thing is the mentality of the people. As the rate of education in char or riverside area is low, people are very conservative in girl's matter. Fear of eve-teasing, abusive behavior, molestation etc. among parents makes a girl's child education difficult. (A ward counselor during FGD)

There are evacuation centers available, but adolescent girls are not safe there. People from every class, gender, age, and

ethnicity may live in one evacuation center. Although men and women do not stay together, respondents have mentioned that there are no security facilities. Incidents of eve-teasing are prominent in these facilities. Rape is also prevalent in these environments. There are laws for getting justice, but less than 20% of people seek out assistance. Police administration is a hassle, and it also requires money.

I have heard about cyclone centers but never visit. What I know is that the animals and humans stay together under the same roof. There are no separate facilities for anyone. Very few people visit in cyclone center because of the lack of security both inside and outside of the center. Inside the center, their young girls are not safe from the evil eye of men. Outside of the center, people think that they have to leave their property, home, wealth everything when they go to the evacuation center. Everything will be looted if they come to the center. There is no security. They don't go to the center unless they are under a lot of govt. pressure. (A married girl, FGD)

Primary schools are often used as cyclone centers, as they are available in every union and they are built in higher places. In the evacuation center, women and girls stay together; there is no separate facility for girls. If girls have to stay in the center for a long time, they face many problems.

I think if the authority considers the issue of a separate system, it will be much better. In our childhood, we saw such system. Now there are a lot of NGOs working with them. They are trying but I don't think there is any separate system. Evacuation centers are mainly schools where there are prayer rooms. I think if these rooms are used for breastfeeding or adolescent girls, it will be effective. I saw it that these rooms are allocated for mother or girls. There is sanitation for girls separately. (An NGO worker, FGD)

4.2.6 Fulfilling the wish of grandparents:

Natural disasters are a threat to the elder people. Disasters increase the chance of death. Seeing the marriage of their grandchildren is a wish for the grandparents. In the village, people respect the elder person and try to obey their commands.

There are older people in the family, they also provoke such incidents. They think that they will not live for a long time, so they should see their grandson-in-law as soon as possible. Different disasters heighten the risk of death. They emotionally blackmail the girls. It gives them a relief and a sense that they fulfilled their responsibility. (A lawyer from FGD with community leaders)

Disasters also increase the chance of being affected by many water-borne diseases. It also takes a long time to resettle after a disaster. Within this time, the possibility of staying alive is very low for the older members of society. The elder person of the family often wishes to see their grandson-in-law.

When I was married off, I even did not know about that. My mother awake me from sleeping and offering me sweets and informed me that I had been married off. I even don't know about marital life and the conception of a child. I cried a lot and disagreed with my parents. But my grandmother requested me. It was before the flood of 2009 or 10. My grandmother said to me she may not survive this flood and she wanted to see grandson-in-law. I couldn't say one word after. (A married women victim of child marriage, FGD)

4.3 Communal correlates of child marriage

4.3.1 Geographical composition

The geographical composition of the district indirectly triggers child marriage. Respondents have stated that Bhola is undeveloped in terms of education and transportation because of its geographical location. It is a disaster-prone area surrounded by a river, and only reachable from the rest of Bangladesh by road. In other places, the communication systems are so fast and developed, which has led to those places receiving improved education and other technological developments more quickly.

Actually, we are located at the closest position of the Bay of Bengal. Bhola is the biggest delta and isolated area in Bangladesh. Our transportation is dependent on the river and it is very poor. We are most affected by natural disasters like storms, cyclones, and river erosion and during such disaster, the communication system got disrupted. Fixing the system again requires time. One of the reasons for our underdevelopment is our poor transportation and communication system. (A married adolescent, FGD)

Respondents link the communication system of Bhola with other districts and within itself with educational backwardness. Because of a lack of education, there is also a lack of social awareness of issues such as child marriage. NGOs are trying to work in isolated areas, but lack of transportation has made these places unreachable.

We have 3 alluvial areas in Daulatkhan and these places are isolated (Hazipur, Madanpur, Meduya). The child marriage rate is very high there due to illiteracy. In the urban area, there is no child marriage because of improved education and social awareness. But People from river dilution areas have a fragile education system, lack of public consciousness, administrative negligence, and

parents' unconsciousness. Although different NGOs are trying to work on these areas, the poor transportation system is making things difficult for them. Even during disaster like flood, storm, the school remains close which disrupt the educational fluency. (A journalist, FGD)

Due to disasters such as tidal surges, floods, or cyclones, the people living in char areas face aberrant challenges with communication. Boats are often the only medium of transportation available in these areas during a flood. Areas near the Tetulia River, including char Kukri Mukri, Patila, Hain char, Bonger char, are submerged into water even if they receive little rain. All the respondents agree that disasters disrupt communication and make it more difficult for children to attend school regularly.

4.3.2 Religiosity:

One of the journalists and teachers mention the religiosity of the people living in the char area as a reason for child marriage. According to them, frequent natural disaster makes the life of people beside the rivers more uncertain and vulnerable. Both predictable and unpredictable disasters take a lot of lives every year. Fear of losing life makes them more religious and more likely to maintain a religious life. Most people are Muslim; in Islamic law there is no fixed age or age limit for the marriage of girls. Islam encourages marrying girls off as soon as they reach puberty.

The people of the char area are very scared of death. Disasters take a lot of lives every year. The number is increasing as the weather

becoming unpredictable day by day. They very tend to follow a religious life. Islam says marrying off the girls after reaching puberty and is one of the core responsibilities of the parents. They try to follow the religious order. (A journalist, FGD)

Although respondents didn't connect sexual promiscuity, religiosity, and disaster, their narratives indicate a relationship between leading a life promiscuous life and a decline of social values among the young generation and the spread of Covid 19. Some of the respondents believe COVID-19 is a result of degrading social values and also a punishment from Allah.

Coronavirus is a disaster sent by Allah to make people realize that we are not permanent in this world. People especially girls nowadays live obscene life and wear very obscene clothes. Nobody abides by the rules of religion. Corona is a punishment for the people. We should realize that we should abide by the values and norms. (A father during FGD)

4.3.3 Social gathering at the evacuation center

One of the most unique connections between child marriage and natural disaster is made through the concept of "social gathering or togetherness." According to the respondent, during disaster, the families from every corner of the village gather in the cyclone center. This social gathering brings a dreadful end for a girl's childhood; many families with boys will propose marriage to families with young girls.

In evacuation centers, many families stay together. In that time if there is a mature beautiful girl with good physical growth, other families talk about her or propose her parents to marry off their daughter with their boy or choose her for their close one. Except that if the growth of a girl is great, then people whispered about her, look at her negatively and tease her. Sometimes girl's parents discuss looking for a suitable groom for their girl in such gathering. Then if find some good combination, they marry their girl off. (A teacher, FGD)

This social gathering is a place for expressing people's unnecessary thoughts. As most of the people lose their livelihood due to disaster, people are left with no work to do. When people are free, many thoughts come to their minds. According to the married girls' group, child marriage is a result of such thoughts.

People have nothing to do during disaster.
They spend a lot of free time and think
about what we can do. Parents think about
their adolescent girls and if they got a good
proposal. In this free time, they want to
reduce their future workload by searching
for grooms for their daughters. (A married
adolescent, FGD)

4.3.4 School Closure

According to the unmarried FGD group, the most affected group in the wake of disaster is adolescent girls. One of the reasons is the inability to attend school due to school closures during disasters. During flood and rainy season, the whole village is submerged with water. Generally, the school remains closed during floods, but in the rainy season, girls face extra challenges when going to school. They may become wet even if they have an umbrella, which can be very embarrassing. Due to this reason, parents do not want to allow them in school on rainy days.

It is difficult to attend school on rainy days.
The roads become muddy and slippery.
Although many of us have an umbrella, we
get wet. Now the rain is also unpredictable.
Watery conditions create an embracing
situation for us. I don't like the rainy season.
(An unmarried girl, FGD)

Absence of electricity during disasters hampers the education of the children. During storms, it is expected that the electricity will be disrupted for at least 3-4 hours. In some cases, trees fall onto the electricity line, which can cause the electricity to be cut off for 2-3 days until someone fixes the problem. This uncertainty related to education makes parents think that "no necessary for education in such hassle for girls".

Education is seen as a difficult task as the facilities are quite low in char area. Disasters make the situation worse for the girls.

Uncertainty, fear, safety, poor performance

in the class force parents to think about marriage. And these girls also don't have any awareness or eagerness -because they don't receive enough inspiration or motivation from anyone. (A teacher, FGD)

4.4 Social correlates of child marriage

4.4.1 Lack of disaster management, broken social and administrative structure – Increase of criminal activity

Lack of preparedness for disasters and lack of control after a disaster are identified as reasons for child marriage. After natural disaster, social and administrative structures weaken. People may lose their land, their cattle, their properties, or even their lives. Managing the after-effects of disaster takes a long time; within this time, parents think about marrying their daughter off in order to decrease the number of mouths they have to feed.

I think that natural disaster and early marriage are connected indirectly especially when we failed to control or manage disaster or after disaster effects. Many families lost their homes and face financial difficulties. When we fail to help them and they have a young girl at their home, they could not but marry off their girls. In such incident girls' age or the age bindings of marriage don't matter,

what matters is a suitable groom. Suitable groom means have work, can take the responsibility of bringing up. (An NGO worker, FGD)

When everyone begins to focus on fixing broken homes and rearranging the village, the incidence of criminal activity increase. The evidence says that this disorganized situation increases the incidence of eve-teasing, molestation, and rape. As the social structure is broken, the security system also weakens; a lack of security leaves girl at risk of child marriage.

Every year we face floods in our district. In 2018, we learned about an incident that a girl of 16 years became raped by her neighbor while taking shelter in his home as the girl's houses were flooded away. That was a helpless situation and everybody was so busy fixing the situation that, they didn't notice the safety of the girl. In these crucial times, some people want to take advantage as the security system gets broken. Sometimes such incident occurs by someone powerful that, there is nothing to do. (A journalist, KII)

4.4.2 Lack of security in the evacuation center

A cyclone center, also referred to as an evacuation center, exists in every union. The schools in the union are used as cyclone centers. According to the given data, unless people face unbearable difficulties, they do not want to go to the

cyclone center due to the lack of safety and security provided at these centers. This lack of security is described in two ways. Firstly, when they leave their own property and go to the evacuation center in order to protect their lives, there is no way to arrangement for the security of their property left at their homes. Fear of losing existing properties forces many to risk their lives and stay at home during disasters. Another thing mentioned by an advocate is that the security inside the evacuation center is also in question. There are separate sleeping and washroom facilities for men and women, but no special security arrangement exists in these centers.

There is cyclone center in every union. People tend not to go there ignoring the rules and regulations of government. There occur unwanted incidents sometimes. Red Crescent only works there voluntarily. Besides that, we cannot see that much prompt action from the local representative and administration. They only do mike throughout the area. There is a scarcity of toilets and people are sometimes harassed there as there remains no security guard. Sometimes teachers periodically monitor there. They lack proper security, pure water and exist negligence of the local government. (A ward counselor, FGD)

5. DISCUSSION

In times of disasters, women and adolescent girls are affected disproportionately compared to men (Atkinson & Bruce, 2015; Durston, 2020). Experiences of adolescent girls are strongly tied to societal attitudes about them, as well as the political, economic, social, and cultural background (Asadullah et al., 2021). It is also influenced by her age, physical growth, financial crises in the family, and a variety of other elements related to the geographical region she lives and the social groupings to which she belongs. Socio-ecological model used in this study enables this study to explore the correlates in individual, household, communal and institutional context that trigger one such social crime named "Child marriage" in climate change context and gathers information on the perceptions of people from individual to institutional level of influence.

Although no direct connection between climate change and child marriage have been made, a number of climate vulnerabilities induced by rapid climate change have been explored that affects child marriage. The duration of the disaster and the time need to resettle after the disaster are responsible for increasing the age of the girls and creates tension among parents (Center for Disaster Philanthropy, 2021; Pfefferbaum & North, 2008) because keeping girls unmarried, particularly when they are aged and physically mature is not only associated with shame and social stigma (Sakib, 2021; Schuler et al., 2006) as well as increase the cost of dowry (Alston et al., 2014a). Besides, evidence says that parents want to hand over the daughters before the sweptwing away of the house by river erosion because owning a house get more importance than living in a rent and give the girls' families more status and bargaining power in arranging a marriage (Human Rights Watch, 2015b).

Experience of greater physical and sexual growth due to the geographical composition and rapid climate change especially increasing heat is identified behind happening child marriage. Although studies have not confirmed the finding, but evidences say younger bribes are demandable because they are perceived to have greater sexuality, a longer period of fertility, be more obedient and easier to control (Asadullah et al., 2021; Chowdhury, 2004; Schuler et al., 2006; Singh & Vennam, 2016). In rural areas greater physical growth of a girl matters most rather than her age (Chowdhury, 2004) and create fear among parents as a girls with greater growth frequently victim of evil eye of the men (Akter et al., 2022) and neighbors and relatives create pressure for marrying her (Human Rights Watch, 2015a). Therefore, premarital sex, whether it occurs through sexual assault or by choice, can damage a girl's marriageability. Parents want to transfer the responsibility of a girl before any defame happens (McLeod et al., 2019; Singh & Vennam, 2016). The presence of elderly and their wish to see grandson in law before death is identified and supported by research as one of the reasons behind the death end of a girl's childhood (Singh & Vennam, 2016). The decision of marriage is taken by the elder persons and most of the time, girls even don't know whom they are going to be married or when.

During disaster girls need extra care as they are identified as more vulnerable than male children. Girls face extraordinary problems because of lack of toilets, bathing place and material to manage their periods (Bhattacharjee, 2019; Rashid & Michaud, 2000). Strong social taboos surrounding menstruation, as well as the filthy water that surrounded them, made it difficult for the girls to wash or replace their period cloths on a regular basis. These extra cares are considered as burden in times of disaster when survival is the only priority for a family (Rashid & Michaud, 2000). Studies

have highlighted those disasters are gendered events and women and girls experience them differently than men, suffering longer term and more intangible consequences such as an increase in violence or greater instability in employment (Bhattacharjee, 2019). The rate of death is also high among the women. In 2010, a study in Pakistan found that 85 per cent of those displaced by floods were women and children (Malik & Rasul, 2011) and during the Asian tsunami in 2004, up to 45,000 more women than men died (Telford et al., 2006).

Economic crises largely induced by climate change caused an increase in child marriages (Alston et al., 2014a). Child marriage is identified as an adaptation strategy to respond to economic and livelihood insecurity (Archambault, 2011). Many parents compelled to marry their daughter off to minimize their family size and protect their daughter's future. Floods, cyclones, tidal surge and river erosion are examples of natural catastrophes and extreme weather phenomena that can suddenly ruin a whole neighborhood or river bank area (Human Rights Watch, 2015). Property damage, homelessness and displacement may occur if a family's house is damaged or destroyed. Discriminatory gender roles, norms and gender discrimination in a social structure cause girls to be disproportionately affected by poverty or displacement, which can be prompted or exacerbated by the impacts of climate change. In Bangladesh, social norms place expectations on a daughter to get married and give birth soon after marriage, while the sons remain at home and bring income to the family (Raj, 2010). When parents can't afford to feed or educate all of their children, girls' futures are frequently the first to be sacrificed as they are viewed as burden due to both the dowry and inability to bring income (Human Rights Watch, 2015b; Paprocki, 2018; Raj, 2010).

After a disaster, there are often spikes in violence against women and girls, especially sexual violence, and families may

regard marriage as a method to shield girls from these threats (Girls Not Brides, 2021b). In Haiti, it is reported that adolescent girls faced physical, psychological, or sexual abuse both preand post-earthquake but the risk of sexually abused increases after earthquake(Sloand et al., 2017). As USAID stated, "all of the major drivers of child marriage are heightened by the anxiety, uncertainty, and lack of control that exist in conflict and natural-disaster scenarios" (UNICEF, 2018a). It is widely noted that women and girls become victim of violence in their own home or relatives and neighbor's home by close family member, in the locality and evacuation center by other men in times of disaster (Kumala Dewi & Dartanto, 2019; Scott, 2019). The anxiety around maintains sexual purity and marriageability of a girls compel parents to secure their girls through marriage (Singh & Vennam, 2016). Another finding suggests that the people living in the disaster-prone area tend to be religious and study confirmed that prior to cyclones, religious activities increase (Alam & Collins, 2010). As marriage is seen as parental responsibility and a religious regulation, parents try to fulfill their religious and social duty as soon as possible. The number of girls in a family influence the decisions of the parents.

Social gathering in the evacuation center, idleness, long term confinement and lack of entertainment are elements of social level provoke people to marry off their daughters. Girls are vulnerable to sexual and mental harassment in the cyclone center as they are exposed to unfamiliar environment and unable to maintain their 'space' and privacy from male strangers (Rashid & Michaud, 2000). A heightened incidence of child marriage in disaster affected area is associated with poor transportation system, living in rural areas and receiving less education (Girls Not Brides, 2021b). School closure for a long time due to disaster or after disaster resettlement is a roadblock to female education and lack of education encourage the continuation of child marriage throughout

the generation (Roy & Chouhan, 2021). Isolated area are difficult to reach by transport which is an impediment in the way of receiving quality education, better technology and awareness initiatives by NGOs (Girls Not Brides, 2021a). At the institutional level, Governments in the country and the local government most affected by climate change do not necessarily have robust systems for monitoring, documenting, and responding to environmental changes, and affected locations are sometimes in remote and marginalized areas of the country(IPCC, 2012). Lack of disaster management and lack of guidelines to provide protection during and after disaster make marriage as a fate for adolescent girls (Asadullah et al., 2021).

6. CONCLUSION AND RECOMMENDATIONS

6.4.1 Conclusion

In sum, the qualitative evidence presented on the support of the study identified child marriage as an adaptation mechanism adopted by households in the face of shared vulnerability to climate change. The decision of marrying a girl off before or after disaster is not a result of any single factors but a multiple factors work together. Through social- ecological framework, this study explored how climate change by creating a number of climate vulnerabilities affect the decision of child marriage in a family. The findings are presented under four themes and several subthemes. Qualitative data in support of each theme and subthemes are presented and later described. These findings explore the underlying vulnerabilities in individual, familial, communal and institutional domain and suggests work on each level variable to reduce the risk of being victimization of child marriage.

The Sustainable development Goals (SDGs), which include the goals of gender equality, good health and wellbeing and climate action by 2030, have been signed by a number of countries. However, gender equality is not possible while 12 million girls are still married as children every year and don't get equal facilities to flourish their potentials. At least eight of the SDGs will not be met until child marriage is abolished (Girls Not Brides, 2021a). This means that cross-sector collaboration is necessary for progress.

Recommendations:

- Introduce policies addressing the environmental risk factors of child marriage in vulnerable regions.
- Policies should address women's vulnerability to child marriage in disaster-prone areas to enhance climate change resilience.
- Youth groups can be formed in disaster prone areas to create awareness among the adolescents.
- Adolescent friendly cyclone shelters should be established in the disaster-prone areas.
- Awareness increasing interventions should be run by government and non-government organizations.
- Child marriage response should be included in the emergency response protocol in climate vulnerable areas
- Using the toll free helpline 109 need to be pushed in the community level
- Further longitudinal mixed method study is recommended to establish causality.

7. REFERENCE

- Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: why and how of it? Indian Journal of Medical Specialities, 4(2). https://doi.org/10.7713/ijms.2013.0032
- action aid. (2021). Bangladesh statistics: at a glance. https://www.actionaid.org.uk/about-us/where-we-work/bangladesh
- Ahmad, R. (2021). Bangladesh among top 5 disaster-prone countries in Asia-Pacific | Dhaka Tribune. Dhaka Tribune. https://www.dhakatribune.com/bangladesh/environment/2021/03/08/bangladesh-among-top-5-disaster-prone-countries-in-asia-pacific
- Akter, S., Williams, C., Talukder, A., Islam, M. N., Escallon, J. V., Sultana, T., Kapil, N., & Sarker, M. (2022). Harmful practices prevail despite legal knowledge: a mixed-method study on the paradox of child marriage in Bangladesh. Sexual and Reproductive Health Matters, 29(2), 1885790. https://doi.org/10.1080/26410397.2021.1885790
- Alam, E., & Collins, A. E. (2010). Cyclone disaster vulnerability and response experiences in coastal Bangladesh. Disasters, 34(4), 931–954. https://doi.org/10.1111/j.1467-7717.2010.01176.x
- Alam, K., & Rahman, M. H. (2014). Women in natural disasters: A case study from southern coastal region of Bangladesh.

 International Journal of Disaster Risk Reduction, 8, 68–82. https://doi.org/10.1016/j.ijdrr.2014.01.003
- Alston, M., Whittenbury, K., Haynes, A., & Godden, N. (2014a).

 Are climate challenges reinforcing child and forced marriage and dowry as adaptation strategies in the context of Bangladesh? Women's Studies International Forum, 47(PA), 137–144. https://doi.org/10.1016/j. wsif.2014.08.005

- Alston, M., Whittenbury, K., Haynes, A., & Godden, N. (2014b). Are climate challenges reinforcing child and forced marriage and dowry as adaptation strategies in the context of Bangladesh? Women's Studies International Forum, 47, 137–144. https://doi.org/10.1016/j.wsif.2014.08.005
- Archambault, C. S. (2011). Ethnographic Empathy and the Social Context of Rights: "Rescuing" Maasai Girls from Early Marriage. American Anthropologist, 113(4), 632–643. https://doi.org/10.1111/j.1548-1433.2011.01375.x
- Arnab, A. T., & Siraj, M. S. (2020). Child Marriage in Bangladesh: Policy and Ethics. Bangladesh Journal of Bioethics, 11(1), 24–34. https://doi.org/10.3329/bioethics.v11i1.49193
- Asadullah, M. N., Islam, K. M. M., & Wahhaj, Z. (2021). Child marriage, climate vulnerability and natural disasters in coastal Bangladesh. Journal of Biosocial Science, 53(6), 948–967. https://doi.org/10.1017/S0021932020000644
- Atkinson, H. G., & Bruce, J. (2015). Adolescent Girls, Human Rights and the Expanding Climate Emergency. Annals of Global Health, 81(3), 323. https://doi.org/10.1016/j.aogh.2015.08.003
- Bajracharya, A., Psaki, S. R., & Sadiq, M. (2019). Child marriage, adolescent pregnancy and school dropout in South Asia. Unicef, 1–68. https://www.unicef.org/rosa/media/3051/file
- Banglapedia. (2021). Bhola District. https://en.banglapedia.org/index. php?title=Bhola_District
- Bhattacharjee, M. (2019). Menstrual Hygiene Management During
 Emergencies: A Study of Challenges Faced by Women and
 Adolescent Girls Living in Flood-prone Districts in Assam.
 Indian Journal of Gender Studies, 26(1–2), 96–107.
 https://doi.org/10.1177/0971521518811172
- Care Bangladesh. (2015). A Policy Brief on the Child Marriage Restraint Act, 2017.

- Center for Disaster Philanthropy. (2021). Women and Girls in
 Disasters. https://disasterphilanthropy.org/issue-insight/
 women-and-girls-in-disasters/
- Chowdhury, F. D. (2010). Dowry, Women, and Law in Bangladesh.
 International Journal of Law, Policy and the Family, 24(2),
 198–221. https://doi.org/10.1093/lawfam/ebq003
- Chowdhury, Farah Deeba. (2004). The socio-cultural context of child marriage in a Bangladeshi village. International Journal of Social Welfare, 13(3), 244–253. https://doi.org/10.1111/i.1369-6866.2004.00318.x
- Corno, L., Hildebrandt, N., & Voena, A. (2020). Age of Marriage,
 Weather Shocks, and the Direction of Marriage
 Payments. Econometrica, 88(3), 879–915. https://doi.
 org/10.3982/ecta15505
- Corno, L., & Voena, A. (2016). Selling daughters: age of marriage, income shocks and the bride price tradition. Institute for Fiscal Studies Working Paper, 1–67.
- Dhaka Tribune. (2021). Report: Child marriage rate 60.3% in Bhola. https://www.dhakatribune.com/bangladesh/nation/2021/03/27/report-4-in-5-children-are-victims-of-early-marriage-in-bhola
- Dolderer, E., & Frid, L. (2018). Adolescent Marriage and Rainfall:

 The effect of Climate Change in Nepal & Uganda.

 https://gupea.ub.gu.se/bitstream/2077/56879/1/
 gupea 2077 56879 1.pdf
- Durston, Z. (2020). Childhood and Well-Being in Bangladesh: A Focus on Gender Inequalities, Child Marriage and Climate Change Issues Childhood and Well-Being in Bangladesh: A Focus on Gender Inequalities, Child Marriage and Climate Change Issues. The Plymouth Institute of Education Online Journal, 1(1). https://pearl.plymouth.ac.uk/handle/10026.1/16086
- FRIENDSHIP. (2021). WHAT WE WANT TO ACHIEVE. https://friendship. ngo/what-we-do/

- Girls Not Brides. (2017). Bangladesh and the Child Marriage Restraint Act 2016: a recap. Girlsnotbrides.Org. https://www.girlsnotbrides.org/articles/bangladesh-child-marriage-restraint-act-2016-recap/
- Girls Not Brides. (2021a). 8 things to read on child marriage and climate change for World Environment Day 2021. https://www.girlsnotbrides.org/articles/8-things-read-child-marriage-and-climate-change-world-environment-day-2021/
- Girls Not Brides. (2021b). Child marriage in humanitarian settings.

 UNFPA-UNICEF Global Programme to End Child Marriage.

 https://www.girlsnotbrides.org/learning-resources/
 child-marriage-and-covid-19/events-and-webinars/child-marriage-in-humanitarian-settings/
- Hotchkiss, D. R., Godha, D., Gage, A. J., & Cappa, C. (2016). Risk factors associated with the practice of child marriage among Roma girls in Serbia. BMC International Health and Human Rights, 16(1), 6. https://doi.org/10.1186/s12914-016-0081-3
- Human Rights Watch. (2015a). Marry Before Your House is Swept
 Away: Child Marriage in Bangladesh. In Human Rights
 Watch. https://www.hrw.org/report/2015/06/09/marry-your-house-swept-away/child-marriage-bangladesh
- Human Rights Watch. (2015b). Marry Before Your House is Swept Away. https://www.hrw.org/report/2015/06/09/marryyour-house-swept-away/child-marriage-bangladesh
- Institute for Economics & Peace. (2020). Ecological Threat Register 2020. In Institute for Economics & Peace. http://visionofhumanity.org/reports
- IPCC. (2012). Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. In Managing the Risks of Extreme Events and Disasters to Advance Climate Change

- Adaptation: Special Report of the Intergovernmental Panel on Climate Change. https://doi.org/10.1017/ CBO9781139177245.009
- Jackson, R. L., Drummond, D. K., & Camara, S. (2007). What is qualitative research? Qualitative Research Reports in Communication, 8(1), 21–28. https://doi.org/10.1080/17459430701617879
- Kabir, R., Khan, H. T. A., Ball, E., & Caldwell, K. (2016). Climate
 Change Impact: The Experience of the Coastal Areas of
 Bangladesh Affected by Cyclones Sidr and Aila. Journal of
 Environmental and Public Health, 2016, 1–9. https://doi.
 org/10.1155/2016/9654753
- Kamal, S. M. M., Hassan, C. H., Alam, G. M., & Ying, Y. (2015).

 CHILD MARRIAGE IN BANGLADESH: TRENDS AND

 DETERMINANTS. Journal of Biosocial Science, 47(1),

 120–139. https://doi.org/10.1017/S0021932013000746
- Kumala Dewi, L. P. R., & Dartanto, T. (2019). Natural disasters and girls vulnerability: is child marriage a coping strategy of economic shocks in Indonesia? Vulnerable Children and Youth Studies, 14(1), 24–35. https://doi.org/10.1080/174 50128.2018.1546025
- Lanka, S. (n.d.). Violence Against Women in the post-tsunami context.

 Violence Against Women.
- Leftwich, H. K., & Alves, M. V. O. (2017). Adolescent Pregnancy. In Pediatric Clinics of North America (Vol. 64, Issue 2). https://doi.org/10.1016/j.pcl.2016.11.007
- Legislative and Parliamentary Affairs Division. (2019). The Child Marriage Restraint Act, 1929 (ACT NO. XIX OF 1929).

 Ministry of Law, Justice and Parliamentary Affairs. http://bdlaws.minlaw.gov.bd/act-149/section-4953.html
- Malik, J. A., & Rasul, T. (2011). REBUILDING LIVES Post 2010 Floods. https://actionaid.org/sites/default/files/rebuilding_lives_publication.pdf

- McLeod, C., Barr, H., & Rall, K. (2019). Does Climate Change Increase the Risk of Child Marriage? a Look At What We Knowand What We Don'T-With Lessons From Bangladesh and Mozambique. Columbia Journal of Gender and the Law, 38(1), 96–145. https://search.proquest.com/docview/2313889651?accountid=14648
- Ministry of Environment and Forest. (2005). National Adaptation Programme of Action (NAPA). Final Report November 2005. November, 1–46. https://unfccc.int/resource/docs/napa/ban01.pdf
- Ministry of Environment and Forests. (2015). Climate Change and Disaster Management in Bangladesh. http://cmsdata.iucn.org/downloads/disaster 1.pdf
- MoEF. (2009). Bangladesh Climate Change And Action Plan 2009.

 Ministry of Environment and ForestsMinistry of
 Environment and Forests, Government of the People's
 Republic of Bangladesh, Dhaka, Bangladesh., 76. https://www.iucn.org/downloads/bangladesh_climate_change_strategy_and_action_plan_2009.pdf
- MoEF. (2013). Bangladesh Climate Change and Gender Action Plan.
- Nahid, F. (2014). Child marriage in Bangladesh: Socio-legal analysis. International Journal of Sociology and Anthropology, 6(1), 1-7. https://doi.org/10.5897/IJSA11.024
- National Institute of Population Research and Training (NIPORT), & ICF International. (2020). Bangladesh demographic and health survey 2017-18.
- Nayema, N. (2022). Child Marriages Unlikely to End by UN's 2030

 Deadline | Inter Press Service. Inter Press Service. http://

 www.ipsnews.net/2020/01/child-marriages-unlikely-enduns-2030-deadline/
- OCHA. (2018). Bangladesh Disaster Risk and Climate Resilience Program- Bangladesh | ReliefWeb. Relief Web. https:// reliefweb.int/report/bangladesh/bangladesh-disasterrisk-and-climate-resilience-program

- Paprocki, K. (2018). Threatening dystopias: Development and adaptation regimes in Bangladesh. Annals of the American Association of Geographers, 108(4), 955–973. https://doi.org/10.1080/24694452.2017.1406330
- Pfefferbaum, B., & North, C. S. (2008). Children and Families in the Context of Disasters: Implications for Preparedness and Response. The Family Psychologist: Bulletin of the Division of Family Psychology (43), 24(2), 6–10. https://doi.org/10.1901/jaba.2008.24-6
- Plan International. (2019). 150 million girls are at risk of child marriage by 2030: The time to act is now. https://plan-international.org/news/2019-01-10-150-million-girls-are-risk-child-marriage-2030-time-act-now. Accessed on 17/06/2020
- Raj, A. (2010). When the mother is a child: the impact of child marriage on the health and human rights of girls.

 Archives of Disease in Childhood, 95(11), 931–935. https://doi.org/10.1136/adc.2009.178707
- Rashid, S. F., & Michaud, S. (2000). Female Adolescents and Their Sexuality: Notions of Honour, Shame, Purity and Pollution during the Floods. Disasters, 24(1), 54–70. https://doi.org/10.1111/1467-7717.00131
- Roy, A., & Chouhan, P. (2021). Girl child marriage in Malda district of West Bengal: analysis of prevalence and socio-economic factors. Vulnerable Children and Youth Studies, 1–14. https://doi.org/10.1080/17450128.2021.1923878
- Sakib, S. N. (2021). Bangladesh: Child marriage rises manifold in pandemic. Anadolu Agency. https://www.aa.com.tr/en/asia-pacific/bangladesh-child-marriage-rises-manifold-in-pandemic/2184001
- Schlecht, J., Rowley, E., & Babirye, J. (2013). Early relationships and marriage in conflict and post-conflict settings: vulnerability of youth in Uganda. Reproductive Health Matters, 21(41), 234–242. https://doi.org/10.1016/S0968-8080(13)41710-X

- Schuler, S. R., Bates, L. M., Islam, F., & Islam, M. K. (2006). The timing of marriage and childbearing among rural families in Bangladesh: Choosing between competing risks. Social Science & Medicine, 62(11), 2826–2837. https://doi.org/10.1016/j.socscimed.2005.11.004
- Scott, M. (2019). Accountability for state failures to prevent sexual assault in evacuation centres and temporary shelters: A human rights-based approach. In Climate Hazards, Disasters, and Gender Ramifications (pp. 249–273). https://www.taylorfrancis.com/chapters/edit/10.4324/9780429424861-13/accountability-state-failures-prevent-sexual-assault-evacuation-centres-temporary-shelters-matthew-scott
- Seneviratne, S. I., Nicholls, N., Easterling, D., Goodess, C. M., Kanae, S., Kossin, J., Luo, Y., Marengo, J., Mc Innes, K., Rahimi, M., Reichstein, M., Sorteberg, A., Vera, C., Zhang, X., Rusticucci, M., Semenov, V., Alexander, L. V., Allen, S., Benito, G., ... Zwiers, F. W. (2012). Changes in climate extremes and their impacts on the natural physical environment. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: Special Report of the Intergovernmental Panel on Climate Change, 9781107025, 109–230. https://doi.org/10.1017/CB09781139177245.006
- Singh, R., & Vennam, U. (2016). Factors Shaping Trajectories to
 Early marriage: Evidence from Young Lives, India. In
 Young Lives Working Paper 149 (Issue May). https://
 ora.ox.ac.uk/objects/uuid:14005c76-8e23-4817-b74f64578861af18/download_file?file_format=pdf&safe_
 filename=YL-WP149-Trajectories%2Bto%2Bearly%2BMar
 riage.pdf&type_of_work=General+item
- Sloand, E., Killion, C., Yarandi, H., Sharps, P., Lewis-O'Connor, A.,
 Hassan, M., Gary, F., Cesar, N. M., & Campbell, D. (2017).
 Experiences of violence and abuse among internally
 displaced adolescent girls following a natural disaster.
 Journal of Advanced Nursing, 73(12), 3200–3208. https://doi.org/10.1111/jan.13316

- Stark, L., Bancroft, C., Cholid, S., Sustikarini, A., & Meliala, A. (2012).

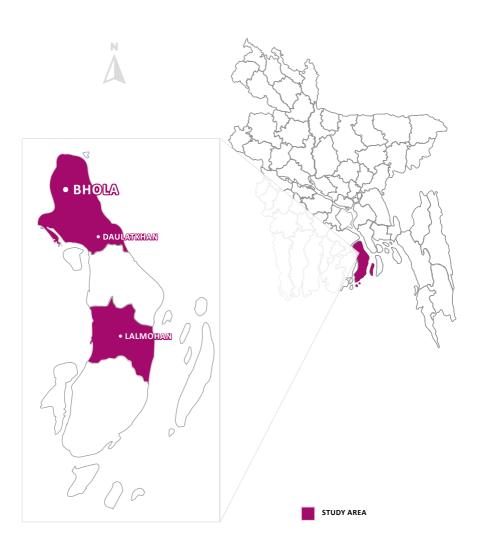
 A qualitative study of community-based child protection mechanisms in Aceh, Indonesia. Vulnerable Children and Youth Studies, 7(3), 228–236. https://doi.org/10.1080/17450128.2012.663947
- Telford, J., Cosgrave, J., & Houghton, R. (2006). Joint Evaluation of the international response to the Indian Ocean tsunami: Synthesis Report. http://www.tsunami-evaluation.org/NR/rdonlyres/2E8A3262-0320-4656-BC81-EE0B46B54CAA/0/SynthRep.pdf
- Tsaneva, M. (2020). The Effect of Weather Variability on Child Marriage in Bangladesh. Journal of International Development, 32(8), 1346–1359. https://doi.org/10.1002/jid.3507
- UNICEF. (2015). The Changing Climate. https://www.unicef.org/bangladesh/en/changing-climate
- UNICEF. (2018a). Key drivers of the changing prevalence of child marriage in three countries in South Asia. 1–88. https://www.unicef.org/rosa/sites/unicef.org.rosa/files/2018-08/KEY DRIVERS changing prevalance of child marriage.pdf
- UNICEF. (2018b). Latest trends and future prospects. In Unicef. https://data.unicef.org/resources/child-marriage-latest-trends-and-future-prospects/
- UNICEF. (2018c). UNFPA-UNICEF Global Programme to End Child Marriage. https://www.unicef.org/protection/unfpa-unicef-global-programme-end-child-marriage
- UNICEF. (2019a). Children in Bangladesh. UNICEF Bangladesh. https://www.unicef.org/bangladesh/en/children-bangladesh
- UNICEF. (2019b). Fast Facts: 10 facts illustrating why we must #EndChildMarriage. Unicef. https://www.unicef.org/eca/press-releases/fast-facts-10-facts-illustrating-why-we-must-endchildmarriage

- UNICEF. (2020a). Ending child marriage: A profile of progress in Bangladesh: Vol. October 20. https://data.unicef.org/ resources/ending-child-marriage-a-profile-of-progress-inbangladesh/
- UNICEF. (2020b). The changing climate As disaster risks evolve,

 UNICEF helps build resilience of communities. https://

 www.unicef.org/bangladesh/en/changing-climate
- UNICEF. (2021a). Accelerated action needed to end child marriage in Bangladesh by 2030. October 2020, 1–7. https://www.unicef.org/bangladesh/en/press-releases/accelerated-action-needed-end-child-marriage-bangladesh-2030
- UNICEF. (2021b). COVID-19: a threat to progress against child marriage. In New York: UNICEF. https://www.unicef. org/press-releases/10-million-additional-girls-risk-child-marriage-due-covid-19
- United Nations Children's Fund. (2020). Ending Child Marriage-Towards evolution of social behaviour. Unicef. https:// www.unicef.org/bangladesh/en/ending-child-marriage
- United Nations Children's Fund (UNICEF). (2020). Child marriage around the world | UNICEF. https://www.unicef.org/stories/child-marriage-around-world
- UNOCHA. (2012). MOST DISASTER PRONE DISTRICTS IN BANGLADESH.
- van der Gaag, N., Henriks, S., & Rodway, F. (2010). Because I am a Girl:
 In the Shadow of War. Girlhood Studies, 3(1). https://doi.
 org/10.3167/ghs.2010.030107
- Xiaoying, J., & Sikder, R. (2014). Climate Change Impact and Agriculture of Bangladesh. Journal of Environment and Earth Science, 4(1), 35–40.

ANNEX 1: STUDY AREA



ANNEX 2: ETHICAL APPROVAL LETTER



INSTITUTIONAL ETHICAL COMMITTEE

Patuakhali Science and Technology University

Dumki, Patuakhali-8602, Bangladesh Phone: 04427-56003, Fax: 04427-56009 Email: jec.pstu@pstu.ac.bd

Ref. No. PSTU/IEC/2021/, 30

Date: 12 September 2021

To,
Md. Sabbir Ahmed
MS Student (CHH JJ 002/2019)
Department of Community Health and Hygiene
PSTI

RE:

Approval for ethical clearance for a study title: "Perceptions on the effect of climate change on child marriage in Bhola district: A qualitative exploration based on social ecological model"

Reference is made to the above heading.

I am pleased to inform you that, the IEC is convinced with proposed steps of addressing the ethical issues and there is no objection to hold this project/research work. On behalf of the committee, the chairman has approved ethical clearance of the above mentioned study based on the recommendation of Institutional Ethical Committee meeting.

(Prof. Dr. Md. Golam Rabbani Akanda)

Chairman

Institutional Ethical Committee (IEC)

Patuakhali Science and Technology University

Email: rabbanipstu@yahoo.com

Cell: +8801716950727

ANNEX 3: INFORMED CONSENT FORM (BANGLA)

অবগতির জন্য সম্মতিপত্র

আজ আমার সাথে কথা বলতে রাজি হওয়ার জন্য আপনাকে/ আপনার সন্তানকে ধন্যবাদ। আমরা ভোলা জেলায় বাল্যবিবাহের উপর জলবায়ু পরিবর্তনের প্রভাব সম্পর্কে সমাজের বিভিন্ন স্তরের মানুষের ধারণা নির্নয় সম্পর্কিত একটি গবেষণা কাজে তথ্য সংগ্রহ করছি। এই গবেষণাটি ঢাকা বিশ্ববিদ্যালয় এবং পটুয়াখালী বিজ্ঞান ও প্রযুক্তি বিশ্ববিদ্যালয় এর দুজন স্নাতকোত্তর শিক্ষার্থীদের দ্বারা এবং শেয়ার-নেট বাংলাদেশ এর অর্থায়নে পরিচালিত হচ্ছে।

এই গবেষণায় অংশগ্রহন সম্পূর্ন স্বেচ্ছাকৃত। এই গবেষণায় অংশগ্রহণের জন্য আপনাকে/ আপনার সন্তানকে কোন আর্থিক অথবা অ-আর্থিক ক্ষতিপূরণ অথবা কোন প্রকার সুবিধা দেয়া হবে না। এখানে যদিও সরাসরি আপনার/ আপনার সন্তানের কোন সুবিধা নেই, তবে আশা করা যাচ্ছে, এই গবেষণা ফলাফল বাংলাদেশে বাল্যবিয়ে রোধকল্পে গুরুত্বপূর্ণ সিদ্ধান্ত গ্রহনে সাহায্য করবে। এই গবেষণার সকল রেকর্ড গোপন রাখা হবে। শুধুমাত্র গবেষণা সংশ্লিষ্ট ব্যাক্তিরা গবেষণার রেকর্ড দেখতে পারবেন। কাগজের তথ্য ও রেকর্ডগুলি সুরক্ষিত ভাবে সংরক্ষণ করা হবে। নির্দিষ্ট সময় অতিবাহিত হবার পর তথ্য কাগজের রেকর্ডগুলি পুরোপুরিভাবে নষ্ট করা হবে (কম্পিউটার রেকর্ডও মুছে ফেলা হবে)। উক্ত গবেষণা সম্পর্কিত যদি আপনার আরও কোনও প্রশ্ন থাকে তবে দয়া করে গবেষণা দলের একজন সদস্যকে জিজ্ঞাসা করুন অথবা আপনি মোঃ সান্থির আহমেদ, পটুয়াখালী বিজ্ঞান ও প্রযুক্তি বিশ্ববিদ্যালয়, এর সাথে যোগাযোগ করতে পারেন।

মোবাইল নং- +৮৮০১৭২৭৯৩০০৮৩

বোঝার বিষয়টি নিশ্চিত করুন:

- ১। আমি নিশ্চিত করছি যে এই গবেষণা সম্পর্কিত তথ্যপত্রটি আমার কাছে পড়ে শোনানো হয়েছে এবং উক্ত গবেষণায় আমার সন্তানের/ আমার কি প্রয়োজন তা আমি বুঝতে পেরেছি।
- ২। আমাকে তথ্য বিবেচনা করা, প্রশ্ন জিজ্ঞাসা করার সুযোগ দেওয়া হয়েছে এবং আমার সন্তষ্টি অনুযায়ী সকল উত্তর প্রদান করা হয়েছে।

AESEARCH ON PERCEPTIONS ON THE EFFECT OF CLIMATE CHANGE ON CHILD MARRIAGE IN BHOLA DISTRICT: A QUALITATIVE EXPLORATION BASED ON SOCIAL ECOLOGICAL MODEL

- ৩। আমি বুঝতে পেরেছি যে আমার সন্তানের/ আমার অংশগ্রহন স্বেচ্ছাকৃত এবং আমি কোনও কারণ ছাড়াই যে কোনও সময় তা প্রত্যাহার করতে পারি।
- 8। আমি বুঝতে পেরেছি যে আমার সন্তানের/ আমার দ্বারা প্রদত্ত যে কোনও তথ্য ভবিষ্যতে প্রতিবেদন, নিবন্ধ বা গবেষণা দলের উপস্থাপনায় ব্যাবহার করা যেতে পারে।
- ৫। আমি বুঝতে পেরেছি যে আমার সন্তানের/ আমার নাম কোনও প্রতিবেদন, নিবন্ধ বা উপস্থাপনায় প্রদর্শিত হবে না।

প্রাপ্তবয়স্কদের অংশগ্রহনের জন্য সম্মতি

৬। আমি উপরোক্ত গবেষণা এবং ছবি তোলায় অংশ নিতে সম্মতি দিচ্ছি/ আমি আমার সন্তানকে উপরের গবেষণায় অংশ নিতে সম্মতি দিচ্ছি।

নাম	তারিখ	স্বাক্ষর
অপ্রাপ্তবয়স্কদের বাবা-মা/ অভিভাববে গ্যানসংগাস তাৎসাগতগুকারীর সাথে সম্বাদ	চর সম্মতি ট দেওয়া ব্যাক্তির সম্পর্কঃ	
	5 (100) (1)11(34) 31 71(6)	
নাম	তারিখ	স্বাক্ষর
তথ্য সংগ্রহকারীর পরিচয়		
নাম	তারিখ	স্থাক্ষর
יווי	SIINA	איאיוס

আপনার নথির জন্য এই তথ্য পত্রটির একটি কপি/অনুলিপি আপনাকে দেওয়া হবে

ANNEX 4: FOCUS GROUP DISCUSSION CHECKLIST (BANGLA)

উৎসসন্ধানী দলবদ্ধ আলোচনা (FGD) সঞ্চালনার প্রশ্নপত্র

গবেষণা শিরোনামঃ "বাল্যবিবাহের উপর জলবায়ু পরিবর্তনের প্রভাব সম্পর্কে ধারনাঃ সামাজিক বাস্তসংস্থানীয় মডেলের উপর ভিত্তি করে একটি গুণগত অন্বেষণ"

পরিচিতিমূলক প্রশ্নসমূহঃ (১০ মিনিট)

আসুন নিজেরা পরিচিত হয়ে নিই। প্রত্যেককে একে একে পরিচয় দিতে দিন। প্রত্যেককে একের পর এক কথা বলতে দিন। পরিচিতি পর্বে নিচের তথ্য গুলো সংগ্রহ করুন এবং তাদের কাজ বা প্রধান ক্রিয়াকলাপগুলির নোট নিন।

- নাম, বয়স, শিক্ষাগত যোগ্যতা (বিবাহিত কিশোরীদের ক্ষেত্রে কত বছরে বিয়ে হয়েছে ও বিয়ের বয়স জিজ্ঞেস করুন)
- কিশোরী (বিবাহিত/অবিবাহিত) কি হতে চায়/চেয়েছিল, স্বপ্ন পূরণ হবে কিনা, যদি মনে করে হবে না তবে কেন হবে না, প্রতিবন্ধকতা গুলো কি কি ইত্যাদি।
- কিশোরী (বিবাহিত/অবিবাহিত) বাদে অন্যান্য পেশা, ছেলে মেয়ে ও তাদের ভবিষ্যৎ সম্পর্কে তারা কি
 ভাবে, সমাজ নিয়ে ভাবনা ইত্যাদি।

বাল্যবিবাহ সম্পর্কিত ধারনা যাচাইঃ (১৫ মিনিট)

- ১। আপনি/আপনারা কি জানেন বাল্য বিবাহ কি? (সবার কাছে জীজ্ঞাসা করুন তারা কী জানে এবং বিয়ের উপযুক্ত বয়স সম্পর্কে তাদের ধরনা)
- ২। আপনাব এলাকায় কি বাল্যবিবাহ প্রচলিত?
- ৩। আপনার এলাকায় বাল্যবিবাহের কারণ কি বলে আপনি মনে করেন?

- ৪। কোভিড-১৯ এর পূর্বে আপনার এলাকায় বাল্যবিবাহের অবস্থা কেমন ছিল?
- ৫। বর্তমানে আপনার এলাকায় বাল্যবিবাহের অবস্থা কেমন?
- ৬। যদি উন্নতি/ অবনতি হয়ে থাকে তাহলে কোভিড-১৯ ব্যাতিত আর কি কি কারন আছে বলে আপনি মনে করেন?
- ৭। মেয়েদের শারীরিক ও মানসিক বিষয়ের ওপর বাল্যবিবাহের কি কি প্রভাব আছে/ থাকতে পারে বলে আপনি মনে করেন?
- ৮। আপনার এলাকায় কি এমন কোন বিশেষ সময়/ পরিস্থিতি/ ঘটনার প্রচলন আছে যখন বাল্যবিবাহের ঘটনা তুলনামূলক বেশী হয়? উত্তর হাাঁ হলে, দয়া করে ব্যাখ্যা করুণ।

জলবায়ু পরিবর্তন ও প্রাকৃতিক দুর্যোগ সম্পর্কে ধারণা যাচাইঃ (১৫ মিনিট)

- ১। জলবায়ু পরিবর্তন বলতে আপনি/ আপনারা কি বোঝেন দয়া করে বলুন?
- ২। প্রাকৃতিক দুর্যোগ বলতে আপনি/ আপনারা কি বোঝেন দয়া করে বলুন?
- ৩। আপনার এলাকায় সাধারণত কি কি প্রাকৃতিক দুর্যোগ হয়ে থাকে?
- ৪। আপনার এলাকায় সর্বশেষ কি দুর্যোগ ঘটেছে? এতে কি কি ক্ষয় ক্ষতি হয়েছে?
- ৫। সর্বশেষ এই দুর্যোগে কারা বেশি ক্ষতিগ্রস্থ হয়েছে বলে আপনি/ আপনারা মনে করেন?
- ৬। আপনি/ আপনারা কি মনে করেন দূর্যোগে কিশোরী মেয়েরা বেশী ঝুকিতে থাকে? উত্তর যদি হাঁা হয়, তাহলে কেন এবং কিভাবে, দয়া করে ব্যাখ্যা করুন?
- ৭। দূর্যোগ কালীন ও পরবর্তী সময়ে কিশোরী মেয়েরা কি কি সমস্যার সম্মুখীন হয় বলে আপনি/ আপনারা
 মনে করেন?
- ৮। আপনার/ আপনাদের এলাকায় কি দূর্যোগকালীন বিশেষ আশ্রয়কেন্দ্র আছে? যদি থাকে, সেখানে কি কিশোরী মেয়েদের জন্য বিশেষ কোন ব্যাবস্থা থাকে?
- ৯। কিশোরী মেয়েদের দূর্যোগকালীন ও দূর্যোগপরবর্তী ঝুকি থেকে বাঁচাতে আপনার এলাকায় কি বিশেষ কোন পদক্ষেপ গ্রহণ করা হয়? দয়া করে ব্যাখ্যা করুন।

বাল্যবিবাহের ঘটনা পর্যালোচনাঃ (১০ মিনিট)

স্বতন্ত্র স্তরঃ কিশোরী (বিবাহিত/ অবিবাহিত) দের জন্য প্রযোজ্য - অংশগ্রহণকারীদের দেখা বাল্যবিবাহ সম্পর্কিত ঘটনার ব্যাখ্যা জানতে চান (কখন ঘটেছে, কারন কি ছিল, তাদের অনুভূতি কি বিষয়টি নিয়ে, দুর্যোগের সাথে সম্পর্কযুক্ত ছিল কিনা)

পারিবারিক স্তরঃ বাবা-মা দের জন্য প্রযোজ্য - অংশগ্রহণকারীদের দেখা বাল্যবিবাহ সম্পর্কিত ঘটনার ব্যাখ্যা জানতে চান (কখন ঘটেছে, কারন কি ছিল, তাদের অনুভূতি কি বিষয়টি নিয়ে, দুর্যোগের সাথে সম্পর্কযুক্ত ছিল কিনা)

সাম্প্রদায়িক স্তরঃ অংশগ্রহণকারীদের দেখা তাদের সম্প্রদায়ে বাল্যবিবাহ সম্পর্কিত একটি ঘটনার ব্যাখ্যা জানতে চান (কখন ঘটেছে, কারন কি ছিল, তাদের অনুভূতি কি বিষয়টি নিয়ে, দুর্যোগের সাথে সম্পর্কযুক্ত ছিল কিনা, তারা কোন পদক্ষেপ নিয়েছিলো কিনা, পদক্ষেপ নেয়া বা না নেয়ার পিছনের কারন জানতে চান।

জলবায়ু পরিবর্তনের সাথে বাল্যবিয়ের সম্পর্ক বিষয়ক ধারণা যাচাইঃ (২০ মিনিট)

- ১। আপনি/ আপনারা কি মনে করেন প্রাকৃতিক দূর্যোগ (যেমনঃ বন্যা, ঝড়, নদী ভাঙন) এর সাথে বাল্যবিয়ের সম্পর্ক আছে? যদি থাকে, দয়া করে ব্যাখ্যা করুন।
- ২। আপনি/ আপনারা কি কখনো লক্ষ্য করেছেন, আপনার এলাকায় কোন দূর্যোগ পূর্ব/ পরবর্তী সময়ে ১৮ বছরের কমবয়সী কিশোরীদের বিয়ে হয়ে যাচ্ছে? হাঁ্য হলে, দয়া করে বিস্তারিত বলুন।
- ৩। আপনার/ আপনাদের কি মনে হয়, দূর্যোগ পূর্ব/ পরবর্তী সময়ে ১৮ বছরের কমবয়সী কিশোরীদের বাবামা কেন তাদের বিয়ে দেন? দয়া করে বিস্তারিত বলুন।
- 8। দূর্যোগ পূর্ব/ পরবর্তী সময়ে বাল্যবিয়ে রোধকল্পে আপনি/ আপনারা সমাজের পক্ষ থেকে কি বিশেষ কোন পদক্ষেপ গ্রহণ করেন/ আপনাদের কোন পরিকল্পনা আছে? দয়া করে বিস্তারিত বলুন।

কভিড-১৯ এর সাথে বাল্যবিয়ের সম্পর্ক বিষয়ক ধারনা যাচাইঃ (১০ মিনিট)

- ১। কভিড-১৯ চলাকালীন সময়ে আপনার এলাকায় কি বাল্যবিবাহের হার বেড়ে গেছে বলে আপনি মনে করছেন?
- ২। আপনি/ আপনারা কি মনে করেন কভিড-১৯ এর কারনে কিশোরী মেয়েরা বাল্যবিয়ের ঝুকিতে আছে?(কিশোরী মেয়েদের জিজ্ঞেস করুন তারা মনে করে কিনা তারা ঝুকিতে আছে?) যদি থাকে, দয়া করে ঝুকির কারনগুলো ব্যাখ্যা করুন।
- ৩। কভিডের কোন কোন দিকগুলো বাল্যবিবাহের কারন বলে আপনি মনে করছেন?
- ৪। কভিডের সময় বাল্যবিয়ে রোধকল্পে আপনি/ আপনারা/আপনাদের সমাজের পক্ষ থেকে কি বিশেষ কোন পদক্ষেপ গ্রহণ করা হয়েছে/ আপনাদের কোন পরিকল্পনা আছে? দয়া করে বিস্তারিত বলুন।

আপনাদের সহযোগিতার জন্য ধন্যবাদ।

ANNEX 5: KEY INFORMANT INTERVIEW CHECKLIST (BANGLA)

মূল তথ্যদাতার সাক্ষাৎকার (KII) সঞ্চালনার প্রশ্নপত্র

গবেষণা শিরোনামঃ "বাল্যবিবাহের উপর জলবায়ু পরিবর্তনের প্রভাব সম্পর্কে ধারনাঃ সামাজিক বাস্তুসংস্থানীয় মডেলের উপর ভিত্তি করে একটি গুণগত অন্বেষণ"

পরিচিতিমূলক প্রশ্নসমূহঃ

- নাম, বয়স, পেশা, প্রতিষ্ঠানের নাম, পদবী, কত সময় ধরে এই কাজে জরিত।
- আপনাব প্রতিষ্ঠানে আপনাব কাজ কি?
- আপনার প্রতিষ্ঠান বাল্যবিবাহ বা দুর্যোগ ব্যাবস্থাপনার কোন দিক নিয়ে কাজ করছে কি? করলে কি
 ধরনের কাজ করছে।
- পেশার বাইরে কোন কাজের সাথে যুক্ত আছেন কিনা?

বাল্যবিবাহ, জলবায়ু পরিবর্তন ও প্রাকৃতিক দুর্যোগ এবং জলবায়ু পরিবর্তনের সাথে বাল্যবিয়ের সম্পর্ক বিষয়ক ধারণা যাচাইঃ

- ১। আপনার এলাকায় কি বাল্যবিবাহ প্রচলিত? বাল্যবিবাহের কারণ কি বলে আপনি মনে করেন?
- ২। আপনার এলাকায় কি এমন কোন বিশেষ সময়/ পরিস্থিতি/ ঘটনার প্রচলন আছে যখন বাল্যবিবাহের ঘটনা তুলনামূলক বেশী হয়? উত্তর হাাঁ হলে, দয়া করে ব্যাখ্যা করুণ।
- ৩। আপনি কি মনে করেন দূর্যোগে কিশোরী মেয়েরা বেশী ঝুকিতে থাকে? উত্তর যদি হাঁা হয়, তাহলে কেন এবং কিভাবে, দয়া করে ব্যাখ্যা করুন?
- 8। দূর্যোগ কালীন ও পরবর্তী সময়ে কিশোরী মেয়েরা কি কি সমস্যার সম্মুখীন হয় বলে আপনি/ আপনারা মনে করেন?

- ৫। আপনার/ আপনাদের এলাকায় কি দূর্যোগকালীন বিশেষ আশ্রয়কেন্দ্র আছে? যদি থাকে, সেখানে কি কিশোরী মেয়েদের জন্য বিশেষ কোন ব্যাবস্থা থাকে?
- ৬। কিশোরী মেয়েদের দূর্যোগকালীন ও দূর্যোগপরবর্তী ঝুকি থেকে বাঁচাতে আপনার এলাকায় কি বিশেষ কোন পদক্ষেপ গ্রহণ করা হয়? দয়া করে ব্যাখ্যা করুন।
- ৭। আপনি কি মনে করেন প্রাকৃতিক দূর্যোগ (যেমনঃ বন্যা, ঝড়, নদী ভাঙন) এর সাথে বাল্যবিয়ের সম্পর্ক আছে? যদি থাকে, দয়া করে ব্যাখ্যা করুন।
- ৮। আপনি কি কখনো লক্ষ্য করেছেন, আপনার এলাকায় কোন দূর্যোগ পূর্ব/ পরবর্তী সময়ে ১৮ বছরের কমবয়সী কিশোরীদের বিয়ে হয়ে যাচ্ছে? হাাঁ হলে, দয়া করে বিস্তারিত বলুন।
- ৯। আপনার কি মনে হয়, দূর্যোগ পূর্ব/ পরবর্তী সময়ে ১৮ বছরের কমবয়সী কিশোরীদের বাবা-মা কেন তাদের বিয়ে দেন? দয়া করে বিস্তারিত বলুন।
- ১০। ভোলার মত দুর্যোগপ্রবণ এলাকায়, দুর্যোগের কোন কোন দিকগুলো বাল্যবিবাহ জন্য দায়ী থাকতে পারে বলে আপনি মনে করেন?
- ১১। দূর্যোগ পূর্ব/ পরবর্তী সময়ে বাল্যবিয়ে রোধকল্পে আপনার প্রতিষ্ঠানের পক্ষ থেকে কি বিশেষ কোন পদক্ষেপ গ্রহণ করেন/ আপনাদের কোন পরিকল্পনা আছে? দয়া করে বিস্তারিত বলুন।
- ১২। আপনার জানামতে দূর্যোগ পূর্ব/ পরবর্তী সময়ে বাল্যবিয়ে রোধকল্পে কোন সংস্থা কাজ করছে কি? তারা কি ধরনের কাজ করছে?

কভিড-১৯ এর সাথে বাল্যবিয়ের সম্পর্ক বিষয়ক ধারনা যাচাইঃ (১০ মিনিট)

- ১৩। কভিড-১৯ চলাকালীন সময়ে আপনার এলাকায় কি বাল্যবিবাহের হার বেড়ে গেছে বলে আপনি মনে করছেন?
- ১৪। আপনি কি মনে করেন কভিড-১৯ এর সাথে বাল্যবিয়ের সম্পর্ক আছে? যদি থাকে, দয়া করে ব্যাখ্যা করুন। কভিডের কোন কোন দিকগুলো বাল্যবিবাহের কারন বলে আপনি মনে করছেন?
- ১৫। কভিডের সময় বাল্যবিয়ে রোধকল্পে আপনি/ আপনার প্রতিষ্ঠানের পক্ষ থেকে কি বিশেষ কোন পদক্ষেপ গ্রহণ করা হয়েছে/ আপনাদের কোন পরিকল্পনা আছে?
- ১৬। কি ধরনের পদক্ষেপ গ্রহন করলে এই অবস্থা থেকে উত্তোলন সম্ভব বলে আপনি মনে করেন?

আপনার সহযোগিতার জন্য ধন্যবাদ।

RESEARCH ON PERCEPTIONS ON THE EFFECT OF CLIMATE CHANGE ON CHILD MARRIAGE IN BHOLA DISTRICT: A QUALITATIVE EXPLORATION BASED ON SOCIAL ECOLOGICAL MODEL

ANNEX 6: PHOTO GALLERY



Photo: Focus group discussion with adolescents



Photo: Focus group discussion with women married before 18



Photo: Focus group discussion with community and religious leader



Photo: Focus group discussion with married adolescent girls

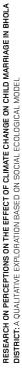




Photo: Key informant interview with word councilor



Photo: Key informant interview with journalist

