(Article Type: Systematic literature review)

Women Health Problems From Contraceptive Misuse in Coastal and Flood-Prone Areas of Bangladesh: Systematic Literature Review

**Abstract**

This systematic literature review analyzed 30 peer-reviewed articles to explore the socio-cultural and environmental factors contributing to the misuse of contraceptives for menstrual suppression among unmarried women in coastal Bangladesh. The study identifies severe health complications, including hormonal imbalances and psychological stress, as consequences of this practice. Major contributing factors include societal shame, salinity of water, and limited access to menstrual health products, particularly in areas like Satkhira, Khulna, Vola, and Pirojpur. Although some government and NGO initiatives are underway, they remain inadequate in dealing with the principle causes of this issue. Key findings show that socio-cultural stigma, poor sanitation, and a lack of menstrual health education significantly drive contraceptive misuse. While existing policies have had limited impact, there is a need for more comprehensive interventions. The study emphasizes the importance of community-based education programs and policy reforms to tackle this challenge. In closing, a comprehensive approach combining health education, environmental improvements, and policy reforms is necessary for reducing the misuse of contraceptives and restrain its harmful health implications.

**Keywords:** *Contraception, Unmarried teens, Menstruation, Health, Environment*

Introduction

Menstruation is a biological process that happens in the lives of half of the world's population. Yet, having an utmost level of importance, there is still a lot of stigma and misinformation, especially in developing countries. Menstruation remains a deeply stigmatized topic in Bangladesh. Many unmarried women in Bangladesh are forced to use harmful alternatives, like abusing contraceptives, to manage their menstrual cycles, particularly in the environmentally vulnerable coastal regions (Sinha et al., 2024). According to the Bangladesh Bureau of Statistics, 70% of women in flood-prone areas lack access to basic menstrual hygiene products during disasters (BBS, 2018). Therefore, menstruation become a living hell for unmarried girls in their women years. Limitations in acquiring sanitary products, improper facilities for sanitation, and lack of privacy during times of displacement brought on by environmental disasters like floods are just some of the challenges faced by young women (Islam, 2010). This study aims to explore the sociocultural and environmental factors that contribute to this behaviour and the resulting health effects.

In many cases, the inability to deal with menstruation has made these girls look for other alternatives; one of which is resorting to contraceptive pills to stop the flow temporarily. These pills, meant for birth control and hormonal control, are often misused by unmarried women as a means to avoid the physical and social discomfort associated with menstruation. This is a very dangerous practice, as it can cause serious health complications: hormonal imbalance, problems in child delivery, and long-standing psychological disorders (Alam & Rahman, 2014). The use of contraceptive pills to bring on their menstrual cycle tremendously affects women’s reproductive healthcare.

The socio-cultural context has played a great role in developing such a scenario in Bangladesh. Menstruation is more often associated with shame; thus, household rules and pressure from society in general result in discomfort around the free discussion of menstrual hygiene (Khanam et al., 2023). Girls in their teens, without proper knowledge of menstruation, may take contraceptive pills without understanding the risks associated with them. Considering the environmental factor, for example, being displaced by flood makes dealing with menstruation even more difficult (Nahar, 2023). Contraceptive pills therefore are the only practical option where even the associated health risks may be seen as a choice in these circumstances.

This study offers a unique perspective rarely found in menstrual health literature by examining the relationship between environmental vulnerability, sociocultural stigma, and the health effects of women unmarried use of contraceptives. The study further looks into the socio-cultural pressures, environmental challenges, and health implications of this sort of behaviour. In Bangladesh, south-western districts such, as Barisal, Vola, Satkhira, Khulna and Pirojpur are prone to heavy floods and intolerable salinity of water to bear in general for women in those areas (Rahaman et al., 2024). This research considers the systematic literature review of local and international researchers to understand and find the plausible reason and sophisticated impact on unmarried women girls in those areas mentioned by other researchers.

The study is going to contribute to a wider understanding of adolescent health in Bangladesh. It will not only help develop specific interventions for the policymakers to tackle immediate consideration of health issues of unmarried adolescent girls but at the same time challenge those very cultural norms that result in stigmatization associated with menstruation.

**Aim and Objectives**

The aim of this study is to explore the underlying causes and consequences of using contraceptive pills to halt menstruation among unmarried women girls in coastal and flood-prone areas of Bangladesh. The study intends to identify the socio-cultural pressures and environmental challenges that influence these girls to misuse contraception for menstrual suppression. The objectives are:

* To understand the socio-cultural and environmental factors that lead unmarried women to use contraceptive pills to halt menstruation.
* To evaluate women’s perceptions of menstrual health and the risks of misusing contraceptive pills for menstrual suppression.
* To analyze the health consequences of contraceptive pill misuse among unmarried women in coastal areas, focusing on hormonal, reproductive, and psychological impacts.

**Materials and Method**

This is secondary research using qualitative research methodology to collect and analyze data. This research considers using a systematic review approach to assess the misuse of contraceptive pills among unmarried women in flood- and coastal-prone areas of Bangladesh. The review synthesizes overall 30 peer-reviewed articles based on socio-cultural, environmental, and health-related factors that lead to misuse of contraceptive pills. Data were retrieved from different academic literature sources in order to get a comprehensive understanding of the issue. Different online databases are searched, including but not limited to Google Scholar, PubMed, and JSTOR. The literature search has been guided by keyword terms such as "Contraceptive pills, Unmarried women, Coastal and flood-prone areas, Menstrual health." in order to ensure that findings are representative of the exact perspectives of this study.

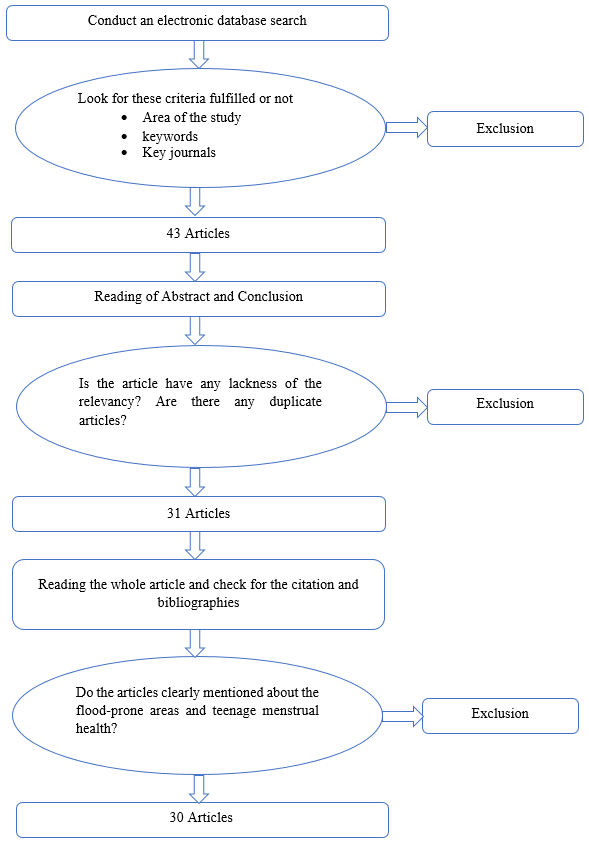
Comprehensive inclusion and exclusion criteria guided the selection of literature to ensure that the review remained relevant and provided the core understanding. It included studies on menstrual health, contraceptive use practices, and women reproductive behaviour, particularly those conducted in Bangladesh or in other similar socio-cultural settings in South Asia. Research that studied environmental vulnerabilities along the coastline was included. The review excluded studies that focused solely on married couples or city-based populations without targeting samples from coastal and flood-prone districts. Thematic analysis was conducted to categorize findings into socio-cultural, environmental, and health-related factors. Further, the identified themes were critically reviewed to get the actual scenario of the mentioned concerns.

This systematic literature review approach indicates different complexities in the misuse of contraceptive pills regarding menstrual health among unmarried women in vulnerable coastal communities. This research thus synthesizes existing literature with an aim to contribute valuable insights into these significant concerns of menstrual health management in the socio-cultural and flood-prone landscape of Bangladesh.

**Table 1 Categorizing the reviewed articles;**

|  |  |  |
| --- | --- | --- |
| Category | Number of Articles | Key Findings |
| Socio-cultural factors | 10 | Stereotyping, misinformation, and lack of education leading to contraceptive misuse. |
| Environmental determinants | 8 | Waterlogging, salinity, and improper sanitation limit menstrual hygiene access. |
| Health effects | 12 | Hormonal abnormalities, mental trauma, and fertility-related risks. |

The classification of articles was based on the study's objectives to investigate socio-cultural, environmental, and health dimensions of contraceptive misuse. Research on socio-cultural factors emphasized the role of stigma and misinformation, while those on environmental difficulties focused on how flooding and improper sanitation worsen menstrual health. Health-related studies detailed the psychological and physiological effects of contraceptive misuse, providing a detailed understanding of the interconnected factors influencing the issue.

**Focus Area**: The focus of this research is on the concept and review of the consequences of contraceptive pill misuse among unmarried women. As this is not a new horizon of research, earlier, many researchers have paved the journey to explore the whole scenario.

**Figure 1:** Literature mapping of the study.

**Theoretical framework:** This study is based on the health belief model, social constructionism, and ecological system theory. Each of these frameworks provides a different insight into the factors contributing to this behavior and underlines the complexities related to menstrual health in the targeted demographic.

**(i) Health Belief Model (HBM)**

The Health Belief Model states that a consumer's health behaviour is determined by perceptions of each health problem, susceptibility to the cause, perceived benefits, and perceived barriers to engaging in that particular situation (Tarkang & Zotor, 2015). Based on that, unmarried women may view menstruation as a huge hassle or even a health burden in coastal areas where sanitation facilities are poor or lacking. For example, they consider the pain, stigma, and social isolation accompanying menstruation as part of a big problem and try to stop the menses through contraceptive pills as a remedy strategy (Anuar et al., 2020). The model further suggests that the perceived barriers, like fear of side effects or social disapproval, when outweighed by the perceived benefits in menstrual management, **may** increase their usage. The model is highly significant in understanding how women, especially in coastal areas, perceive their susceptibility to menstrual distress and societal prejudice. The perceived benefits of avoiding humiliation and suffering often lead to increased contraceptive use, despite the health risks involved. Additionally, Limited availability of sanitary products worsens the dependence on contraceptive pills as a solution. This highlights the role of both personal views and environmental elements in shaping health behaviors. The application of the model provides an understanding of how these perceptions work in shaping unmarried women’s health behaviours in Bangladesh (Ghorbani-Dehbalaei, Loripoor & Nasirzadeh, 2021).

**(ii) Social Constructionism**

This theoretical model provides insight into how societal norms and values mould perceptions regarding menstruation and reproductive health (Olafsdottir, 2013). In most Bangladeshi communities, menstruation is steeped in taboos and cultural connotations that contribute to stigma and misinformation on menstrual health (Burr & Dick, 2017). This theoretical framework posits that knowledge is socially constructed through observed reality and interactions (White, Faithfull & Allan, 2013). This study aims to find the drivers through which these social constructions influence the choices unmarried women make regarding menstrual hygiene practices. This research utilizes the concept that allows for culturally sensitive education to be expressed. Addressing the misconceptions and myths surrounding menstrual hygiene and contraception provides girls with the ability to make correct choices concerning their health and their well-being in any given endangered area.

**(iii) Ecological Systems Theory**

This particular theory emphasizes how individual behavior such as communal or societal understanding is interdependent with the environment (Jackson, Safari & Hallam, 2022). From this perspective, flooding and displacement create environmental hazards and affect health-conscious behavior among unmarried adolescents in menstrual health decisions. Accordingly, this ecological system theory postulates that behaviours are expressed based on individual characteristics and also on interactions within several ecological systems (Lee et al., 2011). For instance, peer influences, family dynamics, and community resources influence attitudes toward menstruation and the use of contraceptives. By discussing these interactions, the theory provides a useful framework for analyzing the complex variables known to drive contraceptive pill use in coastal areas (Kim & Nho, 2022).

**Analysis and Result**

Societal norms in Bangladesh perpetuate menstruation-related stigma, leading to widespread misinformation and silence around menstrual health (Ahmad & Saqib, 2021). This socio-cultural stigma creates a psychological burden for unmarried women, who often resort to contraceptive pills as a means of avoiding public embarrassment. Studies showed that teen girls are quite vulnerable in flood-prone areas, as such natural calamities directly impact their menstrual health (Bakul & Rahman, 2023). This further leads them to use some unhealthy measures that end up growing serious health conditions for their future.

Menstrual health is a pressing concern of adolescent health and significantly influences the quality of life of young women, in general, all over the world (Alom, Sarma & Sarker, 2020). In Bangladesh, unmarried women have to go through some extra challenges because cultural norms often stigmatize menstruation. Such stigma creates a sense of shame and anxiety and press them further to apply for other means of handling their menstrual cycles (Rezwana, 2016). The following concerning trend is becoming more crucial, particularly in coastal and flood-prone communities: resorting to contraceptive pills to delay menstruation. Environmental factors, apart from the socio-economic condition, have contributed to making the issue talk of the town in these communities (Kamal et al., 2018).

Rahman et al. (2024) mentioned in their study that cultural taboos on menstruation provide a ground in which unmarried women find themselves compelled to use contraceptive pills as a practice to evade embarrassment and physical discomfort during menstruation. Because of this, most young women remain unaware of accessing proper menstrual hygiene products and often resort to contraceptive measures (Ray-Bennett et al., 2019). Moreover, the flood-prone areas have a serious scarcity of menstrual health hygiene and access to enough resources to tackle the situation of the menstrual cycle in an efficient manner (Islam, 2010). Also, water salinity makes it more difficult for those teen girls to maintain hygiene and being forced to stop their menstruation with in intervention of contraceptive pills, makes their health condition worse in either way (Kamal et al., 2018; Alom, Sarma & Sarker, 2020; Khanam et al., 2023; Bakul & Rahman, 2023; Emeral Insight, 2021).

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics | | Population in Percentage | |
| **Non-Coastal Village** | **Coastal Village** |
| **N=50** | **N=50** |
| Prevalence of Vaginal Problem (%) | | 18% | 94% |
| Experiencing Vaginal Problem | |  |  |
|  | Only Itching | 6% | 12% |
|  | Both Itching and Burning | 8% | 4% |
|  | Both Itching, Swelling and other | 2% | 30% |
|  | Both Inflammation and Burning | -- | 4% |
|  | Together Itching, Burning and Swelling | 2% | 2% |
|  | Together Itching, Burning, Inflammation and Swelling | -- | 42% |
| Frequency of Experiencing Vaginal Problem | |  |  |
|  | Continuously/Everyday | 10% | 58% |
|  | Once in a week | 2% | 2% |
|  | Once in a month | 2% | 14% |
|  | Once in three months | -- | 8% |
|  | Once in yearly | 4% | 12% |

**Figure 2**: Description of vaginal problems because of water salinity (Nahar, 2023).

In the socio-culture of Bangladesh, especially in the coastlands, adolescents' behaviours and perceived knowledge are grossly affected regarding menstruation and contraception. As Sinha et al. (2024) show, cultural belief systems are expressed in ways that girls in menstruation are isolated from routine activities, causing feelings of shame. This is further exacerbated by the environmental influence of flooding, where accessibility to menstrual hygiene products and sanitation facilities is interrupted.

The interviews conducted among the women, especially from the coastal areas, show that most of them use contraceptive pills to avoid menstruation due to societal pressures and environmental challenges. One respondent shared that during rains, she is unable to go to school because the roads flood, and scared to bleed in public." So, she takes the pill, to stop her period (Nahar, 2023)." This statement, likely to many others encapsulates the pressing need to address the intersectionality of socio-cultural and environmental factors in shaping women health choices.

This often creates a psychological burden when menstruation is strongly associated with social stigma (UNDP, 2022). When menstruation is considered, it is a matter of physical issue and highly related to their social identity. Girls stigmatize the conventional beliefs of society; therefore, they often feel extremely guilty and anxious about their natural health functions. The critical area of discussion is social pressure, which compels girls to be silent, and many times forces them to apply contraceptive pills, without knowing the consequences (Rahaman et al., 2024).

The perception of contraceptive pills among unmarried women is planted as cultural beliefs, and misinformation, which also based on their personal experiences (Islam, 2010). Some view contraceptive pills as convenient for their menstrual management, while some adolescents are really afraid to use them due to misconceptions about their safety and the impact, they will have on their future health conditions (Ray-Bennett et al., 2019). According to research by Sharmin and Islam, (2013), misbelieving contraceptive methods results in anxiety among women over potential side effects. Further, though there is very little convincing evidence for this fact, many believe that contraceptive pills lead to infertility or other fatal health issues.

According to the survey conducted by (Khanam et al., 2023), 65% of the respondents felt that they did not have enough knowledge about contraceptive methods. Inadequate awareness results in trying methods through a process of trial and error, where women self-medicate without ever approaching healthcare providers (Rezwana, 2016). It results in a pattern of behavior that causes bad health, through hormonal changes, mood swings, and vulnerabilities to infections. Poor education on contraceptive methods is a major reason for the inability towards safe and informed choices regarding their menstrual decisions (Sinha et al., 2024; Bakul & Rahman, 2023; Kamal et al., 2018).

**Figure 3:** Key Factors Contributing to Contraceptive Misuse Among Women in Coastal Bangladesh (Khanam *et al*., 2023; Ray-Bennett *et al.,* 2019).

Most importantly, societal stigma usually keeps young women from professional advice on matters related to sexual health and contraception. Several unmarried women reported feeling uneasy even with their parents or healthcare providers when discussing matters about their menstrual hygiene (Islam, 2010). This eventually produces a cycle of misinformation and harmful practices, as women turn toward peers or unreliable sources for advice (Nahar, 2023; Alom, Sarma & Sarker, 2020). Such lack of support including the knowledge gap indicates an urgent need for improvement in communication and education on menstrual hygiene and contraceptive use.

The health effects of the use of contraceptive pills to stop menstruation are quite complex and sometimes hazardous. Though it may reduce or alleviate the immediate challenges that people go through during menstruation, the long-term use of such measures has medically proven negative health consequences. For example, a study carried out by Rezwana (2016), shows that frequent use of contraceptive pills among women can create complications in mental and physical health as most of them are not medically observed.

In medical practice, specialists often show sheer concern about using excessive pills even for married women, whereas, unmarried women are more vulnerable to the side effects of contraception (Sinha et al., 2024). According to a qualitative study undertaken by Bakul and Rahman (2023), most women feel stressed and anxious over the decisions they make concerning menstrual health. Many of them revealed feeling guilty and ashamed of using contraceptives to avoid menstruation.

The potential health side effects of using contraceptives without prior professional advice emphasize the need for comprehensive reproductive health education among women in coastal land areas (Rezwana, 2016). Government and NGO initiatives are consciously trying to build the health narrative, that it is always advisable to consult with health professionals before starting any type of contraception so that this kind of safe behaviour can ensure a healthy lifestyle for such women (Azad, Hossain & Nasreen, 2013).

The environmental challenges faced by the coastal and flood-prone areas of Bangladesh contribute to a significant impact on menstrual health management (Emeral Insight, 2021). Among the natural disasters cyclones and floods create some severe interruption in the availability of basic resources, including sanitary products and healthcare services in such flood-prone areas (Moore, 2022). According to an estimated report conducted by the Bangladesh Bureau of Statistics, during and after disasters, over 70% of the respondents from the flood-affected areas reported difficulty in accessing menstrual hygiene products (BBS, 2018). As a result, young women look to other means (those are often hazardous) to handle their menstruation and most of the time they turn to birth control (contraceptive) pills as a menstruation halt method. This highlights the critical need for disaster-resilient menstrual health programs.

Furthermore, economic factors sometimes worsen the situation for unmarried and relatively poor women to cope with their situation. "Families often consider reproductive health resources when basic needs are met.". Research by the Emerald Insight (2021), suggests that the cost and availability of correct health measures in such areas remain two major barriers to unmarried adolescents, who are thus compelled to use harmful means to get rid of their problems.

This relation between environmental impact and economic instability makes the health hazards more punitive for unmarried women along the coast (Alam & Rahman, 2014). Besides, during flooding and other disasters, access to health facilities is even more limited, hence, a greater reliance on self-medication with contraceptive pills relieves them for a short time (Khanam et al., 2023). The immediate and long-term health implications of this practice on young women raise concerns as they struggle to manage their menstrual cycles.

Educational interventions thus have the potential for transformative change in the management of menstrual health among unmarried women (Ahmad & Saqib, 2021). Several studies have demonstrated that comprehensive sexual education programs related to menstrual health, reproductive rights, and contraceptive methods elicit considerable changes in perceptions and behaviours (Rahaman et al., 2024). To mention the scenario an example can be considered, the pilot program run by BRAC in several coastal communities succeeded in raising knowledge about menstrual health and contraceptive methods by 40% (BRAC, 2024).

Discussion of the socio-cultural implications of menstruation in academic study can create an open atmosphere and ensure that it’s not a taboo anymore, though the cultural perspectives of the country need to be considered to publish any of such narratives. This type of specialized education (conducted by a gender specialist teacher) can help young women make comparatively right choices for their menstrual health and thus avoid the use of contraceptive pills as a means to manage menstruation (Ray-Bennett et al., 2019). Also, the peer education models are considered to be useful in trying to fill up the knowledge gap among women (trained by some medical practitioners).

Meanwhile, it seems very difficult to run education programs correctly in rural and coastal areas due to the accessibility issues to quality education (Sinha et al., 2024). Also, there is some sort of resistance in the community concerning discussion on menstrual health and contraception. Therefore, educational interventions should be culturally sensitive and include the participation of community leaders and parents in order to enhance the chances for success in regard to female health concerns in flood-prone areas (Alam & Rahman, 2014; Moore, 2022).

Consequently, it came out that most of the young women felt disempowered in matters to do with their menstrual health. According to the study of Kamal et al. (2018), many participants reported, that they feel like they can't talk to their parents about their period or using pills. They would think they are doing something wrong.

Also, most times, the experience of menstrual health by young women is primarily a taboo between gender and socio-economic status (Sharmin & Islam, 2013). Women girls from the lower socio-economic class even have very limited access to proper healthcare services, let alone exposure to contraceptive pills, especially in coastal areas. This disparity therefore calls for the need to target interventions that are urgently required for the broader socio-economic context within which young unmarried girls seek their menstrual health (Rahaman et al., 2024).

Mismanagement of menstrual health in coastal areas by teen girls is also affecting their mental health negatively over the years. Therefore, the mental health consequences are quite severe of maintaining good hygiene while having such environmental and social vulnerabilities. In addition, the research of Alom, Sarma and Sarker, (2020) showed that the anxiety and stress linked to menstruation can seriously impact the mental health of young women. The mental pressure of adhering to an expected level of standards pertaining to menstrual hygiene fosters feelings of inadequacy and low self-esteem, especially among those who have issues with managing their menstrual flow.

The study by Ahmad & Saqib (2021), showed that most of these adolescents suffered from depression and anxiety about their menstrual cycle and unhygienic means of controlling them. Such can be aggravated by contraceptive pills, especially when women feel guilty or ashamed about their decisions. The emotional toll of navigating menstrual health is a holistic approach to adolescent health that encompasses the whole body and mind.

**Discussion**

The use of contraceptive pills to stop menstruation among unmarried adolescents in coastal and flood-prone areas of Bangladesh is a highly contentious issue, that is alleviated because of socio-cultural, economic, and environmental factors. Over the course, this study has demonstrated the major causes and their existing and potential impact on unmarried young women. Socio-cultural pressures and income constraints are the major reasons that actually intrigue the problem much more along with environmental degradation.

**Figure 4:** The social stigma of concealing reasons for women girls taking contraceptive pills (UNDP, 2022).

The cultural stigma associated with menstruation has driven many unmarried women to make decisions for contraceptive pills (Rahaman et al., 2024). Many young women are under compulsion to conceal their menstrual cycles in order to retain their status in society. Fear of ostracization at large in the community often time led to such hazardous self-medication practices, which eventually ended up with some unexpected mental and physical health complications (Ray-Bennett et al., 2019).

Moreover, environmental factors such as geographical position (exposure to coast and flood-prone areas) make the situation even worse. Due to natural disasters, sometimes it gets difficult for women to facilitate hygiene products forcing them to seek alternatives. During such crisis moments the only left choice for young women has been using contraceptives as a means of managing their menstrual time (Kamal et al., 2018). Talking to young girls in those areas reveals that they find it easy to adopt such ways.

Along with that, financial barriers often limit the options of unmarried women to take proper care of their menstrual health (Ahmad & Saqib, 2021). In most cases, family spending is apportioned to cater for the current needs, consequently limiting access to safer methods of contraception. The economic pressure often forces young women into compromising situations where they receive such pills from unreliable sources, consequently increasing their risks of health complications much more (Alam & Rahman, 2014; Sharmin & Islam, 2013).

The impact of using contraceptive pills in order to stop menstruation is not one-dimensional, rather it has a vast effect on the society and individual level. First, there are serious health consequences involving unsupervised use of contraceptives, including hormonal disruptions, potential fertility problems, and complications of side effects (Khanam et al., 2023). Studies found most unmarried women do not know about these complications which even affect the eventual government spending along with deteriorating the childbirth capability in those areas (Alam & Rahman, 2014).

Previous studies on those female’s psychological perceptions illustrated the shame and guilt attached to the overall processes of menstruation and contraception, resulting in phantasies related to anxiety and depression (Sinha et al., 2024). The emotional burden of dealing with all these issues eventually destroys one's self-esteem and diminishes one's mind as a whole.

It is worth mentioning that the government and several NGOs are sincerely working on all of these causes and impacts to significantly reduce them to zero (BRAC, 2024). The Government of Bangladesh has undertaken policy directions toward a better environment management system, social education programs and medical initiatives to ensure an effective battle against all of these challenges. The Ministry of Health and Family Welfare initiated focused awareness creation in schools about reproductive health education to break the stigma associated with menstruation and pave the way for right and informed choice by adolescents (The Ministry of Health and Family Welfare Bangladesh, 2019).

NGOs, like BRAC and the Red Crescent Society, have instituted community-based services whereby products related to menstrual hygiene are distributed and educational workshops are conducted. These initiatives raise awareness of how open discussions on menstruation and contraceptive use can lead to changes in harmful cultural norms (BRAC, 2024). Often, these organizations work with local health clinics to ensure that young women receive proper information about and access to effective contraception without stigmatization and wrong steps.

Comprehensive sexual education is one of the most feasible solutions, featuring comprehensive sexual education that should be culturally sensitive and adapted to the needs of the young women in these regions (Rahman et al., 2024). This usually not just addresses the biological aspect of menstruation and contraception but also the socio-cultural context that gives meaning to such issues. Empowerment of young women about their body knowledge significantly reduces stigma and misinformation (Sharmin & Islam, 2013).

Furthermore, community participation is an integral part of changing cultural perceptions about menstrual flow (Islam, 2010). Programs involving the leaders and influencers of the community can involve toward creating an enabling environment where free discussions on menstrual health are possible (Alam & Rahman, 2014). Workshops and dialogues lead to greater awareness and acceptance, especially in the southern part of Bangladesh, such workshops can help unmarried girls to comprehend healthier practices regarding all of these challenges.

Along with that, affordability in accessing reproductive health services and menstrual hygiene products is important to give to unmarried teen girls and even women in coastal and flood-prone areas. Government of NGO-run mobile clinics and telehealth services can reach out to the communities, which are far away and difficult to reach with necessary health resources and education (UNDP, 2022). Such subsidy policies related to menstrual hygiene products and contraceptives can possibly reduce the financial burdens families bear in acquiring these commodities (Kamal et al., 2018).

Last but not least, arrangements for free and fresh water to combat salinity is a crucial step, NGOs and the Government have to intervene in this arena to ensure freshwater availability. During natural disasters or floods, women, especially unmarried girls face an intricate challenge to combat with hygiene and freshness. Use of salty water during menstruation soar up the problem to an extent (Sinha et al., 2024). Added with that, medical supervision to control the pharmaceuticals not sell contraceptive pills without the document of the practitioner can shed some light on these pressing challenges (Kamal et al., 2018). In conclusion, it is high time that the country considers these alarming issues with high sincerity, or else a big portion of the women's community in the southern part of this region will face a severe deterioration of mental and physical health in the near future.

Summary table of misusing contraceptives to halt menstruation for unmarried women:

|  |  |  |
| --- | --- | --- |
| **Factors** | **Health Impacts** | **Policy Recommendations** |
| Water salinity | Vaginal infections | Community-based education programs |
| Social stigma | Anxiety, low self-esteem | Improved water infrastructure |
| Lack of education | Misuse of contraceptive pills | School-based awareness campaigns |

**Table 2:** Factors, Health impacts and Policy recommendations of misusing contraceptives.

**Gaps in Literature**: There is a notable gap in community-oriented initiatives addressing contraceptive pill misuse, specifically among unmarried women in coastal and flood-prone areas. Existing studies often focus on Basic health awareness, neglecting the unique socio-cultural and environmental dynamics of these communities. Moreover, long-term health impact studies on contraceptive pill misuse in these communities are insufficient.

**Overview of Findings**: Socio-cultural stereotypes is catalyst for contraceptive misuse, with women seeking menstrual distress due to fear of social rejection or humiliation. This issue is further intensified by ecological factors such as improper sanitation, limited access to menstrual health facilities, and the susceptibility of coastal regions to natural disasters, worsening both physical pain and mental stress.

**Implications and Policy Recommendation**

Healthcare providers must implement culturally inclusive education and consultation programs that cover both physical and mental aspects of menstrual health. Policymakers should focus on upgrading sanitation facilities and ensuring access to menstrual health essentials. NGOs play a significant role in enhancing community-based strategies to counter socio-cultural prejudice and environmental difficulties leading to contraceptive misuse.

The study suggests the following to address the difficulties in managing menstrual health in coastal areas:

1. Setting up mobile health clinics that offer contraceptive counselling and menstrual hygiene products.
2. In order to lessen stigma, schools should implement culturally relevant menstrual health education programs that involve parents and community leaders.
3. Putting laws into place that mandate prescriptions for birth control pills in order to stop abuse.
4. Working with NGOs and the government to guarantee access to clean water and sanitary facilities in areas vulnerable to flooding.

**Conclusion**

The results from this study have shown that socio-cultural stigma, environmental challenges, economic barriers and inadequate education drive the misuse of contraceptive pills among unmarried women in coastal Bangladesh. The study further observed that unwanted contraceptives pose serious health hazards, such as hormonal changes and psychological problems due to feelings of guilt and shame, especially when patients are not medically observed or supervised anyway. Addressing these challenges requires an integrated approach, combining policy interventions, education, and community engagement along with people awareness.

While there are government and NGO initiatives are agile in seeking remedies for certain aspects of these issues, more holistic and culturally adapted programs are needed to rule out the stigma that surrounds menstruation. In summary, the inclusion of support for mental health services and assurance of increased access to healthcare can create an enabling environment wherein young women would have the confidence to manage their menstrual health with dignity.

By addressing the root causes of this problem, as mentioned and aiming for improvements, corrective measures can be drawn in a much healthier way to build a long-term solution for women in Bangladesh. Overall, the focus on education, access, and support with a community-oriented approach can create a supportive environment in which young women can resolve their unhealthier manner of tackling menstruation. If these worrying trends are not addressed, unmarried adolescents in Bangladesh's vulnerable areas may experience long-term health and social injustices. Future research, such digital health interventions in menstrual education and community-specific approaches to reducing stigma should explore innovative ways to reduce menstrual stigma and improve access to healthcare in disaster-prone regions.

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**Disclaimer (Artificial intelligence)**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

**Appendix: Summary of Reviewed Articles**

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| No | Article Reference | Focus Area | Key Findings |
| 1 | Sinha et al., 2024 | Socio-cultural factors | Highlighted prejudice and misinformation leading to contraceptive misuse among women. |
| 2 | Alam & Rahman, 2014 | Environmental challenges | Identified wtaerlogging and salinity as critical barriers to menstrual hygiene access. |
| 3 | Khanam et al., 2023 | Health impacts | Documented hormonal imbalances and mental distress due to contraceptive misuse. |
| 4 | Bakul & Rahman, 2023 | Environmental challenges | Discussed the effects of poor sanitation in worsening menstrual health issues. |
| 5 | Rezwana, 2016 | Health impacts | Correlated contraceptive misuse to long-term reproductive health risks. |
| 6 | Rahaman et al., 2024 | Socio-cultural factors | Examined societal prejudice as a driver of health-compromising behaviours. |
| 7 | Nahar, 2023 | Environmental challenges | Discussed the prevalence of vaginal health problems in coastal areas. |
| 8 | Ray-Bennett et al., 2019 | Socio-cultural factors | Studied the cultural barriers to accessing menstrual hygiene products. |
| 9 | Kamal et al., 2018 | Health impacts | Emphasized the psychological toll of menstrual health mismanagement. |
| 10 | Alom, Sarma & Sarker, 2020 | Health impacts | Discussed the mental health implications of stigma and misinformation. |
| 11 | Sharmin & Islam, 2013 | Socio-cultural factors | Indicated the link between cultural taboos and stress over menstruation. |
| 12 | BBS, 2018 | Environmental challenges | Mentioned 70% of women in flood-prone areas lack access to health products. |
| 13 | BRAC, 2024 | Health impacts | Enhanced understanding of menstrual health through education initiatives. |
| 14 | UNDP, 2022 | Socio-cultural factors | Reported campaigns to fight period stigma in rural Bangladesh. |
| 15 | Alom et al., 2020 | Environmental challenges | Revealed water salinity’s impact on menstrual health in coastal areas. |
| 16 | Ahmad & Saqib, 2021 | Health impacts | Investigated reproductive health vulnerabilities in disaster-prone regions. |
| 17 | Azad et al., 2013 | Environmental challenges | Studied flood-induced vulnerabilities affecting women. |
| 18 | Tarkang & Zotor, 2015 | Socio-cultural factors | Implemented the Health Belief Model to health behaviour studies. |
| 19 | Moore, 2022 | Environmental challenges | Analyzed climate change’s effects on menstrual health in rural settings. |
| 20 | Olafsdottir, 2013 | Socio-cultural factors | Studied social constructionism’s role in health-related behaviour. |
| 21 | Anuar et al., 2020 | Health impacts | Examined perceived barriers to contraceptive use among adolescents. |
| 22 | Kim & Nho, 2022 | Socio-cultural factors | Revealed ecological systems influencing adolescent health choices. |
| 23 | Ghorbani-Dehbalaei et al., 2021 | Health impacts | Studied the influence of health literacy on decision-making. |
| 24 | Lee et al., 2011 | Environmental challenges | Examined environmental hazards’ impact on adolescent health behaviours. |
| 25 | Islam, 2010 | Socio-cultural factors | Emphasized the stigma and lack of menstrual education in rural areas. |
| 26 | Khan et al., 2018 | Health impacts | Examined hormonal and psychological risks of contraceptive misuse. |
| 27 | Rahman et al., 2024 | Environmental challenges | Studied multi-sectoral planning for disaster resilience. |
| 28 | White et al., 2013 | Socio-cultural factors | Evaluated the intersection of cultural norms and reproductive health. |
| 29 | Burr & Dick, 2017 | Socio-cultural factors | Focused on gendered perspectives in social constructions of health. |
| 30 | Jackson et al., 2022 | Health impacts | Examined systemic factors influencing health choices and outcomes. |