A systemic review on the Perception, behaviour, and different aspects of menstrual hygiene

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Abstract

Females have a physiological process at the reproductive age known as the menstruation cycle. Although in Indian society sometimes viewed as an unclean or dirty phenomenon. Menstruation is the most notable expression associated with puberty and having a period of significant hormonal imbalance; teenage menstrual patterns require a lot more attention than usual attention. Menstrual health is based on the family's socioeconomic, educational, and cultural statuses. School curriculum as well have played a role in menstrual hygiene. Different scientific studies reveal a significant information gap between rural and urban adolescent girls about menstrual health. Adolescent girls constitute 10% of the population, but 4.9% part of the total population of India is adolescent girls. The care of adolescents is significant over time. Reproductive child health is gaining tremendous importance all over the world. The critical thing for child health is that it is placed in much more significant emphasis on the overall enhancement of the mother's competence, economic status, health, physical conditions, education and nutrition. Keeping in mind that today's adolescent girl will become tomorrow's mother, all these things should be related to their menstrual health be kept in mind before becoming a mother, not after becoming a mother, when she is a child and a teenager. In present paper give a brief review of studies related to assessing and comparing women's knowledge, perceptions, and practices about menstrual hygiene. This review is discussed Menstruation, Problems of Menstruation, Menstrual hygiene, Social problems, Perception about the use of the sanitary pad, Health Education etc.

Keywords: Perception, Behaviour, Menstrual Hygiene

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Introduction

With this era of scientific and technological development where modifications/variations have become a way of living, the female and adolescent class is entangled in anxieties and fears, demanding emotional and physical maturity, the challenge of everyday interest. Menstruation is the most notable expression associated with puberty and having a monthly period of significant hormonal imbalance; teenage menstrual patterns require a lot more attention than usual attention. Menstruation is a common physiological process in women, marking the beginning of reproductive life. But it is often seen as an impure method in Indian culture due to cultural taboos inadequate and misinformation and causes unnecessary restrictions in the daily routine of menstruating women. As a cultural practice, the mother passes the wrong information to her daughter, about which they do not even know whether it is correct or not. Girls, like boys, seek knowledge

about Menstruation from their classmates, but they know little about it; thus, the information gap on Menstruation persists. There is a difference in information related to Menstruation in urban and rural areas, which affects the practice of Menstruation. Hygiene during Menstruation is a requirement; due to unclean, women have many problems related to reproductive health. When we talk about menstrual hygiene, even today, women use old methods during Menstruation like ashes, old clothes.

Females have a physiological process that starts the reproductive age, known as the menstruation cycle. Although in Indian society, sometimes its viewed as an unclean or dirty phenomenon. Lack of information and facts regarding Menstruation usually results in useless prohibitions in the particular menstruating girls' regular everyday routines, creating different psychological problems. Furthermore, having less awareness and knowledge likewise cause wrong personal hygienic ways in Menstruation, leading to many reproductive system area infections.

Menstrual health is based on the family's socioeconomic, educational, and cultural statuses. School curriculum as well have played a role in menstrual hygiene. Reproductive tract infections (RTI) occur mainly due to poor menstrual hygiene. And presently, many women suffer from RTI, and their progeny carries this infection. Women have a lack of knowledge related to menstrual hygiene; they are susceptible to RTI and its effects. Thus, increased the information regarding Menstruation from adolescents to reduce the problem of women suffering from RTI infection. Different scientific studies reveal a significant information gap between rural and urban adolescent girls about menstrual health [Baishakhi Paria et al. 2011].

Attempts are made here with a brief review of studies related to assessing and comparing women's knowledge, perceptions, and practices about menstrual hygiene.

This review is discussed Menstruation, Problems of Menstruation, Menstrual hygiene, Social problems, Perception about the use of the sanitary pad, Health Education etc.

MENSTRUATION

Menstruation is the monthly blood flow process that is regulated by two hormones, estrogen and progesterone. Both hormones prepare the uterus for pregnancy every month, and the level of both hormones remains high. When pregnancy does not occur, the levels of both hormones gradually decline, which leads to Menstruation. [Padubidri and Daftary, 2004].

The menstrual cycle is divided into (1) follicular or proliferative phase and (2) the luteal or secretory phase. The duration of the monthly period may differ from woman to woman, although the median is usually to have cycles every 28 days. Regular cycles that happen to be for a longer time or smaller than this, from 25 to 30 days, are regular [Treloar A.E., et al. 1967, Vollman R.F.,1977, Presser, H.B 1974]. Some problems related to the time interval of the menstrual cycle occur in women, such as more extended periods or shorter periods such as polymenorrheic and oligomenorrheic. The category of polymenorrhagic disease includes patients whose menstrual cycle is less than 21 days apart. And patients who have a longer menstrual cycle of more than 35 days are termed oligomenorrheic. Around 30ml of blood flows during the menstrual cycle (4). If more than 80ml of blood flows, it is a big problem [Hallberg L. et al.1966]. The luteal is 14 days, which remains the same in all women. The follicular phase varies, the time of which can be between 10 to 16 days [Beverly G Reed et al.2018].

Before puberty and adolescence, children should have been aware of the physical and functional differences between the sexes and should have been informed about Menstruation. Many parents do not give enough information to girls about the various changes and aspects in the body that indicate puberty. Due to some feelings about Menstruation may not be apparent to girls due to insufficient information, some again send the fact that they cannot fully control all bodily functions. Hence, the menstrual cycle can be a burden to them.

Significance of Adolescent Stage

Puberty occurs during adolescence. It's a critical time in a woman's life. From this point forward, the girl is on the verge of adulthood. It is that stage where women intermediate between childhood and womanhood, plus this is most eventful concerning emotional, mental, and psychological health care. Teenagers face many crucial problems distinctive to their age group; these kinds of development in the body brought

or by puberty together with the significance associated with teenage pregnancy.

The World Health Organization (WHO) describes adolescence between 10-19 years of age. It is a time frame in which children usually acquire actual physical development but are typically not loaded with the adult roles plus responsibilities. Likewise explains the particular period of "sexual development from the initial appearance of secondary sexual characteristics to sexual maturity, psychological development from child to adult identification, and socioeconomic development from dependence to relative independence" (WHO, 1975).

The concept of a may be applied to the psychological and behavioral states linked with growing to be adult; stage of the life before the physical development related with puberty are socially recognized, or probably the changes from childhood to adulthood, according to "A Dictionary of Sociology (Oxford)". Adolescents in the Indian population are estimated at 22. 8 % by Planning Commission, (2001).

Puberty is started later in childhood via a hormonal cascade pathway (endocrine cascade) that induces sexual development and reproductive ability. The beginning of this period cycle is considered one of the most significant changes within the girls through adolescence. The onset of puberty has long been recognized since the beginning of teenage life, together with critical social-role changes. For instance, the completion of marriage and childrearing throughout history indicated the end.

Starting the menstruation cycle, i.e. periods, signifies the most crucial phase in the teen growth of a girl. The menstruation cycle begins in between 11 and 15 years with a mean of 13 years; on the other hand, this may differ based upon nutritional status, environmental condition, geographic variation, etc. [Aliva Mohantyliva Mohanty 2021].

UNICEF report (The State of World's Children 2011) shows that around 1.2 billion adolescents aged 10-19 years in the world, making 18% of the world population and an estimated 88% of them living in developed nations around the world. In India, adolescence records for 20% of the country's population. And Haryana, adolescents comprise 21% of the overall population (Census 2011). By 2025, the population of adolescents in developing and developed countries would be about 19% and 27%, respectively [Kulkarni AP and Bride JP. 2002, Tanoja Bachloo et al. 2016].

Menstrual Hygiene related Practices and Myth

Although a natural cycle of the female body, Menstruation remains taboo in the rural area of India, having stigma not permitting conversation or perhaps information and facts trying to find [Menstrual Hygiene Management National Guidelines December 2015 Dasgupta A et al. 2008]. Females spend some part of their lives in the menstruation cycle, but the reality is that they need more to take care of hygiene in this period. But shame is attached to this natural cycle due to superstition and misconception, and menstruation hygiene is ignored. And it has an impact on menstruation hygiene, and due to which the health of women is affected [Menstrual Hygiene Management National Guidelines December 2015]. Adolescent represents a vulnerable group, mainly in India, where a female child is ignored [Dasgupta A et al. 2008]. Menstruation is a significant indicator in adolescent girls and women. A study found Adolescent girls 1/5th of the total number of women in the world [Phani K. V. Madhavi et al. 2019]. Their specific needs and the challenges they face are lack of access to adequate knowledge, a safe environment and health care service. India started its first comprehensive program by looking at Adolescent 'Rashtriya Kishor Swasthya Karyakram', during January 2014 [C. Sivagurunathan et al. 2014].

This young generation is the parents of tomorrow. Whatever decision-related to reproductive health will be taken today will profoundly impact the health and wellbeing of the coming generation and its community. Although the Government of India has taken many initiatives, a large section of adolescent girls has no awareness before the menstrual cycle. And these hygienic practices promote poor menstruation hygiene [Priya S et al.2017].

sanitary facilities

Sanitation defines as it provides a suitable environment, facilities, and services for human habitation with safe disposal of all types of human waste. With privacy, women are required to spend more of their time in the toilet; women need to be physically safe when they use public

toilets and when they go out or when they are in the school market or workplace. If the WASH (Water Sanitation and Hygiene Facilities) facilities fail in public areas such as workplaces, schools, and marketplaces, these are uncleanliness, dirty, spoiled, and not safe. It has a terrible effect on women's health, especially when adolescent girls and women go through a menstrual cycle. Suppose there is no facility to replace and dispose of sanitation material safely. If we talk about the rural and urban areas, then the issue of toilets is more severe in the urban area because there is a shortage of spaces and a lack of open space. Women who do not have toilet facilities regularly withhold water and food, Causing dehydration later, Fear of incontinence, at worst urinary tract infections (UTIs) and discomfort.

Perception on Use of Sanitary Napkins

When we look at the level of technological progress, women of the 21st century would possibly not restore or cannot be back out for the use of clothes. Sanitary napkins should be as they promote women's safety and their lifestyle apart from comfort and safety. They effectively reduce gynecological problems compared to sanitary napkins due to chemicals [Freidenfelds L. Themodernperiod 2009, Sinha, Kounteya 2013] Vostral SL. 2011].

Key points for proper Sanitary Pads selection

Sanitation: disposing of waste has become a growing problem in India because plastics used for sanitary napkins formation it's not biodegradable.

Performance: usually, women desire absorptive capacity based sanitary napkins.

Comfort: women like to relax during Menstruation Because they have to wear sanitary napkins all day.

Convenience: It is convenient to take it with you anywhere.

Cost: affordability is the big obstacle in the use of sanitary napkins. Of the 355 million menstruating women in India, only 12 % use sanitary napkins (S.N.s). More than 88% of women collect shocking options such as ash, unsanitized cloth and husk sand [Pooja Arugula et al.2017].

The cloth-piece used as menstrual pad-its disposal and reuse

There is a lot of recognition of magic and evil eyes in India. Indian women believe that the part or small piece of pad/cloth/rag used during Menstruation is also a fragile item. And it is used for casting someone's evil eye or magic because it is considered a powerful agent. It is prevalent in the study that when a woman throws a used pad on the road crossing person, whoever sets foot on it becomes a victim of magic and evil eyesight. A small piece of cloth used is also a remote part of the world of Indian women, which has been considered a parcel. A lot of effort is made to hide it; hence its disposal has a special significance in the lives of Indian women.

In this study, only 4 % of women reported its reuse by them. These women said that the cloth used in Menstruation is considered dirty and does not like to use it again. Garg et al. were. Also found in their study, only 6.5 % use it again, and other women prefer not to use it again. Although their premise was that reuse of clothes is expected in the village, the area studied in our study cannot be confirmed on this subject where women believe that reusing such dirty clothes can be used in cities [AJ Singh,2009].

BACKGROUND OF THE STUDY

Reproductive child health is gaining tremendous importance all over the world. Adolescent girls constitute 10% of the population, but 4.9% part of the Total Population of India is adolescent girls. The care of adolescents is significant over time. The critical thing for child health is that it is placed in much more substantial emphasis on enhancing the mother's competence, economic status, health, physical conditions, education and nutrition. Keeping in mind that today's adolescent girl will become tomorrow's mother, all these things should be kept in mind before becoming a mother, not after becoming a mother, when she is a child and a teenager [Ghosh, 1990].

In India, about women, 88 % are using products made from home to manage their menstrual periods, such as old clothes or rags [Dasra, Kiawah Trust 2014]. Many girls also use regionally made cotton cloth. According to the study done in the rural area of Gujarat on 164 adolescent girls, 32% said the first choice was sanitary pads, 68% said new soft cloth (falalin), not one of them favoured the use of old clothes [Garg, Suneela, and Tanu Anand 2015]. The following are the reasons for using cloth-based products: Lack of adequate knowledge about the

pad, lack of affordability or lack of access to high-quality sanitary pads, personal preference and familiarity.

In extreme cases, Women use other options like ash sand, hay, wood shavings, ash, dried leaves, newspapers, or plastic. However, there has been no intense research in India that affects the use and health outcomes [Sanitary Protection in India, Country Report June 2015].

Women's hygiene practices are of paramount importance, especially when they are going through Menstruation. If we talk about northern India, there is a lack of literature related to menstrual practices. We documented the menstrual hygiene practices of women in urban and rural areas and spoke to them about the use of their sanitary napkins in Haryana [PUNEET MISRA et al.2013]. Sanitary napkins are one of the hygienic practices used during Menstruation. Women of reproductive age must have access to comfortable and hygienic-sanitary products that will protect women's health and ensure proper sanitation. But this topic has not been given enough attention. We aimed to ascertain Perception and behaviour on sanitary pads during Menstruation among females living in a rural and urban area in Haryana.

Need and Significance

In India, about women, 88 % are using products made from home to manage their menstrual periods, such as old clothes or rags [Dasra, Kiawah Trust 2014]. Many girls also use regionally made cotton cloth. The following are the reasons for using cloth-based products: Lack of adequate knowledge about the pad, lack of affordability or lack of access to high-quality sanitary pads, personal preference and familiarity.

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Menstrual hygiene is a significant problem for women and adolescent girls who do not have the facilities for washing the rag and drying them properly. There is also a predominance in many rural places, and according to superstition, the rags should be concealed in the night and dried off from men's eyes. (UNICEF, 2003).

Some other studies have shown that hygiene is terrible in this subject. A quarter of the subjects' analysis shows that women do not bathe if there is a bleeding period. Some studies also show that high-grade girls use more pads than low-grade girls (El-Shazly et al., 1990).

Reproductive infection occurs more in women than men because women are at higher risk of disease, less likely to seek care, are more challenging to diagnose, Seriously social consequences and biological suffering (Faundes and Hardy, 1995).

None of the parents, or especially the mothers, educate their daughters about Menstruation, like about healthy practices and what is its duration. And girls are not motivated that it as a simple body procedure and take it lightly. And for this reason, inadequate knowledge in girls remains an unnecessary concern about wrong ideas or misconceptions. From the information found in this study, it is recommended that a planned educational program be introduced to encourage young adolescents to get comfortable with menarche [Mendal, 1994].

Culture of or portraying menstruating women negatively and a lot of cultures associates' Menstruation along with the body uncomfortableness, Physical and social activities are banned, and emotionality is increased. It is considered a disease that needs to be cured. Menstrual is a problem for both daughter and parents, and this problem needs to be resolved [Whisnant and Zegans, 1975; Kissling, 2002].

In the study conducted in the last few decades, it was found that there are more gynecological problems among women in rural areas of India [Bang et al., 1989; Bhatia and Cleland, 1995; Bhatia and Cleland, 1997; Koeing et al., 1998; Garg et al., 2000].

A hospital-based study in Kerala found that genital hygiene is the most important and fights against cervical cancer. And protects against cervical cancer by fighting role-playing infections [Cherian et al., 1999].

Though the female literacy rate in Kerala is high, very few mothers do not feel right to share their daughters' menstrual information, nor are they ready for it and feel ashamed to clear their doubts [Kumar, 1998]. The available data of the developing countries, based on the main points, is related to menstrual diseases and their impact on women's health, quality of life, and social integration. Propose of review and treatment of menstrual issues must be provided with a better concern major health care program. Studies have shown that despite any number of advertisements being communicated through T.V., radio, and newspapers, women still have less knowledge about menarche and related hygiene. That is why menstrual problems are more. Only 36 %of women in India use sanitary pads during Menstruation. The National Family Health Survey, 2015-2016, found that only 121 million women out of 336 million menstruating women use these locally and commercially produced sanitary napkins [National Family Health Survey 2015-2016].

Accredited social health workers (ASHAs) and assistant nurses and midwives (ANMs) of NRHM have taken essential steps to improve hygiene-related improvement in Menstruation. Sanitary napkins are distributed free of cost, mainly to adolescent girls in rural areas, But the question arises about these steps? In case the price only causes bad menstrual hygiene between women in Of India, in that case, this circumstance needs to have been solved after such actions with the government. Nevertheless, the statistics are usually not shown within the same success, which often signifies different aspects. There should be those which often obstruct the market industry growth of menstrual hygiene products in India.

On average, a woman spends 2100 days in her menstrual period. However, the availability and low cost of menstrual products are generally missing, which usually limits women's mobility and affects the development of adolescent girls in rural India. The situation worsens as many women have not seen sanitary napkins Is, nor are they aware of their use.

Many poor women keep a set of clothes to restrict Menstruation and use it during Menstruation and use it for months. An average of a package of 10 pads of sanitary napkins (Medium Quality) costs INR 30-40. In this way, if a woman is estimated in 1 month, then every woman will spend ₹ 48 to buy a sanitary napkin every month, and this is a costly amount for women with a low-income group family. Around 70% of women in India report such a problem that their family is not capable enough to buy such a product.

Even today, menstrual hygiene remains one of the biggest challenges in development issues. Not only do deep-rooted taboos, myths, and misinformation create the illusion that Menstruation is inherently embarrassing, gross and awkward. An ordinary village woman has to choose whether to buy sanitary pads for herself or milk for her child. But in some countries such as India, girls and women do not have access to sanitary napkins and their basic facilities, and although hygienic napkins are a concept crucial for menstrual hygiene management (MHM) [Vishakha Goyal,2016].

A survey: We learned that due to the price of sanitary napkins, some students do not like to use them, although they did not know precisely what kind of chemical is used in sanitary napkins while making them.

There are many problems when using sanitary napkins of poor quality:

vaginal inflammation, cervical inflammation and erosion, urinal pain, fatigue, genital herpes, and genital warts, menstrual disorders.

Chemical effects on women's health that are used to make sanitary pads:

The labia or vaginal region has a small blood vessel and is a highly vascular region. That's why they gradually continue to accumulate in the body and affect women's reproductive system compared to other parts.

Chemicals that are present in sanitary napkins are:

Chemicals like BPA and BPS are used to make sanitary napkins. And these plastic chemicals hinder embryonic development and further complicate the process, and sometimes it is also the leading cause of chemical organ damage. Phthalates play their role in providing smooth finishing, but due to these chemicals, gene expression is dysregulated.

Carcinogens

Sanitary napkins are not made of pure cotton. They also contain cellulose, one of the leading causes of cervical cancer. Rayon, this product is dioxin, and it is also a synthetic fiber used to absorb wetness is carcinogenic. Dioxin, a side product of the chlorine bleaching course of action, is cumulative and can remain within the body for about 20 years even after chemical exposure. And sometimes, it is also the leading cause of chemical organ damage and causes of cervical cancer.

Pesticides and herbicides

Cotton is used in the production of absorbent pads. In contrast, many types of pesticides and herbicides are sprayed during cotton cultivation, but when they come into contact with the reproductive system using sanitary pads and reach the blood care and very have harmful effects.

Furan is found on the top of the cotton, a hazardous chemical, and will remain at the present level. These pesticides and herbicides are associated with health problems such as thyroid malfunction, infertility, and other health problems.

Toxic shock syndrome

Prolonged use of sanitary pads in a day leads to Staphylococcus aureus growth in the vagina, which develops toxic shock syndrome. Due to the overgrowth of Staphylococcus aureus, bacteria release toxins and a rapid drop in the blood pressure (low B.P.). And because of this, there is not enough blood supply to the brain, proving very dangerous [Minor et al.1961, Des Jarlais DC et al.2004].

Women in rural north India still hold traditional beliefs regarding Menstruation. According to our research, even today, being a hygienic product, women use them during their Menstruation utilizing conventional techniques. Such as money and fabric, ash and husk sand, old rags, muds, leaves, or anything they can get their hands on to collect menstrual blood. There are many such products today; they are menstrual hygiene products like sanitary napkins, tampons, and menstrual cups are available, but Most women believe that sanitary napkins are very expensive and our family cannot afford to buy them. But these women do not know that they can have reproductive health problems in the future due to unhygienic menstrual practices. Some studies show that sanitary napkins are used more in urban areas than rural areas.

Problems of menstruation

Menstrual hygiene is a huge issue, and it is not adequately accepted or given due attention. Menstruation and menstruation practices face many problems such as cultural, social, and religious beliefs prohibitions that usually tend not to help make menstruation hygiene management easier. In some parts of the country, there are primarily rural areas where girls are not ready for Menstruation, which contributes to a lot of issues and difficulties at home and school. The ratio of adolescent girls to boys generally increases with age, educational achievement and wealth, along with a broader knowledge of sexual and reproductive health issues. When teenage females are considered social position and healthy, they form a vulnerable group in both areas. Menstruation is considered socially impure and dirty in this regard.

RTI is a severe problem for women, and it has a negative impact on women's health, including dysmenorrhea (painful periods), chronic pelvic pain, and infertility in severe cases. The uncleanliness of Menstruation causes reproductive tract infection, and it destroys the lives of women [Ndanyuzwe Aime et al. 2020].

Furthermore, adolescent girls noted menstrual pain and deficiency of efficient resources concerning safe and risk-free MHM practices since a reason behind school absenteeism [Miiro G. et al.2011, Sommer M and Sahin M.2013, Tegegne TK and Sisay MM. 2014]. Because of this, teenage girls revealed that they are regularly making use of creased/folded, bunched up, or sewed cloth, tissues, or perhaps toilet paper, scraps of old cloth, or strips of an old blanket. Due to usually outflows and leads to chafing, making school attendance difficult [Mcmahon SA et al.2011, Sommer M and Sahin M.2013, Mohammed Set al.2020].

Recently, there has been a significant increase in the study of physical and psychosocial topics in menstrual problems. Scientific studies emerge with the final result that females deal with severe complications in monthly periods, generally because of insufficient information. Menstrual

diseases, including amenorrhea, excessive uterine bleeding, dysmenorrhea and premenstrual syndrome, usually are frequent causes of going to healthcare providers by adolescent girls [Mc Evoy et al., 2004]. Disorders related to Menstruation were the highest in 58.06% [Sebanti et al., 2005] female-related disease problems. In a scientific study, girls complained of more vaginal discharge, itching of the genitals and urinary problems. And some girls complained about minor problems such as nail acne, height and weight, and skin concerns. The help-seeking habits are inadequate for these types of issues [Joshi et al., 2006]. The menstrual-related problems observed between adolescent girls are dysmenorrhea, dysfunctional uterine bleeding, irregular Menstruation, premenstrual syndrome, and social problems.

Menstrual hygiene

Discussions on menstrual hygiene are crucial concerning women to make explicit current misguided beliefs and myths about Menstruation [Nitin Lodha 2021].

Adolescent menstrual-related hygiene and appropriate self-care play an essential role in adolescent wellbeing and health care. Besides raising the risk of physical health issues, especially reproductive tract infections (RTI), inappropriate menstrual hygiene reveals psychological and social impact on women [Haque SE et al.2014, Karout N.2016, Akpenpuun JR.2014]. In many developing countries, menstruations and associated issues are viewed as a humiliating topic [Karout N.2016], described by minimal information, social and cultural misconceptions, and myths, together with a negative perspective between adolescents [Haque SE et al.2014, Karout N.2016, Michael J.2020, Coast E. et al.2019, Mohammed S. et al.2020].

Self-care and menstrual hygiene in adolescent life play a significant role in the health and wellbeing of an adolescent. Many factors influence menstrual hygiene practices, especially during Menstruation, for example, attitudes and behaviour social, cultural, economic, and religious background. To improve menstrual hygiene practices, whatever information is available about Menstruation and what is necessary to find out about menstrual hygiene.

All over the world and mainly in Saudi Arabia, few scientific studies are done on menstrual hygiene. Fill this gap; the following study was designed to evaluate information and practice regarding self-hygiene in menstrual hygiene among adolescent school girls in Buraidah City, Saudi Arabia. In addition, the research as well revealed menarche age and the association of socio-demographic characteristics with menstrual self-hygiene practices and correct menstrual information among school adolescent girls in Buridah city figured out [Al Mutairi H and Jahan S,2021]

Menstrual hygiene management (MHM) regarding girls (13 to 15 years) is still a significant public health issue in many areas around the world (1), including Cambodia (2). Due to insufficient menstrual materials and school sanitation facilities disrupting girls' daily routines and maybe the reason they struggle to attend school when menstruating, school absenteeism and poor school performance may result (3). Currently, confined research in Cambodia describes how MHM can affect girls' physical, mental and overall school performance [Socheata Phou 2021].

The biggest obstacle in menstrual management is incomplete knowledge on this subject. Girls are not even aware that ignorance of hygiene during Menstruation leads to reproductive tract infections. In rural areas, adolescents first do not have access to hygiene products and secondly because of the high cost they have to afford. Is unable to. Because of this, teenagers have to use other types and methods during menstrual. Parents, schools, and health facilities' responsibilities are to educate adolescent girls about the problems related to Menstruation and Menstruation and the transmission of this uncleanliness [[Ndanyuzwe Aime et al. 2020].

In a study taken from many low-income countries, it has been found that several girls are not correctly ready, and there are many girls whose Menstruation has started. They have no idea what is happening to them and why it is happening [UNESCO 2014, Belayneh Z and Mekuriaw B.2019, Kaur R. et al. 2018, Chandra-mouli V and Patel SV. 2017].

Furthermore, there is a complaint of taunting and abuse from guys and classmates, and she stands in class out of humiliation. She does not answer because she worries about the smell and the leakage of Menstruation [UNESCO 2014, Miiro G.

et al.2018, Hennegan J. et al.2016, Sommer M and Sahin M 2013, Tegegne TK and Sisay MM 2014]. When girls are menstruating, girls are not allowed or barred from attending social and cultural events, including religious rituals, at many places [Van Eijk AM. Et al.2016, Alam M et al. 2017]. Factors that directly affect adolescent girls' school attendance, quality and enjoyment of education are also highlighted [UNICEF WASH 2017, UNESCO 2014, Davis J. et al.2018, Miiro G et al. 2018]. Those aspects raise the vulnerability of adolescent girls to unhygienic practices in the course of Menstruation that contributes to several infections like reproductive and urinary tract infection [Das P. et al.2015, Haque SE.et al. 2014].

Adolescent girls and women have to go to the bathroom in the open because 132 million houses do not have toilets (2015), which is a disgrace for women. However, a recently accessible survey observed that only 53% had a different and usable girl's toilet out of 14,724 government schools. And therefore, the condition of the house also needs improvement. However, Menstrual Hygiene Management for Adolescent Girls and Women, or 'MHM', is an outstanding initiative to help women develop a better and stronger tomorrow and take safe and practical steps. [Menstrual Hygiene Management, National guidelines 2015]. During Menstruation, women need menstrual hygiene for more health care. Menstrual hygiene management aims at practical practices concerning dealing with during Menstruation [Barathalakshmi J. et al.2014].

Menstrual hygiene is a taboo issue, one thing that a lot of women in South Asia do not feel comfortable talking about in public places. Generally, not engaging in an open public talk on this topic will probably be discarded without much importance [Balamurugan SS. et al.2014]. In most rural and tribal communities, adolescent girls do not have access to the right kind of information, and this is due to the negative attitude and social taboos of the parents of these adolescent girls on issues related to Menstruation [Mudey AB. et al. 2010].

Studies in developing countries such as India and other third-world countries suggest that many women do not use therapeutic measures for menstrual hygiene during their menstrual period. These women use old clothes during Menstruation, mostly torn pieces of cloth from their old sarees or other garments used during the monthly period. Due to ignorance, repeated premenstrual clothing makes it more vulnerable to reproductive tract microorganisms and encourages urinary, perineal, vaginal and pelvic infections [Garg R. et al.2012]. Due to the high price of sanitary napkins, women of low socioeconomic status cannot buy them. And many times, due to lack of water, they have to be deprived of their washing. And this type of unhealthy menstrual practice increases women's risk of reproductive tract infections such as premature births, stillbirths, miscarriages, infertility problems, carcinoma of the cervix, etc., caused by unhygienic [Bathija GV. et al. 2013].

It is imperative to discuss menstrual hygiene to dispel the myths and misconceptions among adolescent girls. If menstrual hygiene is improved, it is vital to personal comfort and increased mobility. And compared to bad menstrual practices, it will also reduce the chances of infection [National Rural Health Mission 2011]. For future interventions, it is necessary to study Menstruation's current knowledge and practices among women. With such knowledge, the implications and significance of menstrual hygiene behaviours among women of reproductive age are also easily recognized. Women who have the correct information about menstrual hygiene and safe practices tend to be safer than women with poor hygiene practices. For this reason, this study was conducted among women of the reproductive age group who live in urban and rural areas to assess the awareness of menstrual hygiene and safe practices among these women [Nitin Lodha 2021].

Social problems

Ethnologists have documented several restrictions associated with MHM among girls in India, such as physical, social and religious, promoting social isolation that prevents them from actively participating in routine household activities [Patil R. et al.2011]. In addition, women who use menstrual-related adsorbent ingredients without drying them completely and discontinuing personal hygiene such as bathing and washing their hair have an adverse effect on MHM in young women [Sadiq MA and Salih AA.2020]. Due to these restrictions during Menstruation, women's health and hygiene are adversely affected. During Menstruation, if

physical activity is reduced instead of stopping altogether, it helps reduce menstrual pain. [Hightower M.1997] Conversely, this benefit is lost by restricting physical activity during Menstruation. It promotes reproductive health like female reproductive tract infections and pelvic inflammatory diseases [Nyothach E. et al.2016 Janoowalla H. et al.2020]. And this restriction also affects the academic performance of girls and working women doing business in varying degrees.

Perception about use of sanitary pad

During Menstruation, the woman has bleeding through the vagina [Sapkota D et al.2013], which occurs when endometrial wall shedding occurs. On average, Menstruation occurs once a month, lasting 3 to 5 days and in women between 13 and 52. Menstrual products are a necessity during Menstruation, and women use them regularly. However, the variety of products and their costs pose a challenge to menstrual hygiene management. Poverty worldwide ignores menstrual hygiene management. In one menstrual period, a woman may require 12 to 30 disposable pads [Moon J and Jeon E.2014, Jones LL. Et al.2009, Kaur R. et al.2018, Tehrani FR. Et al.2013]. Moreover, Nations Children's Fund study shows that has in Western Kenya, 10% of adolescent girls involved themselves in sexual activity to get money for menstrual pads [Oppenheim M.2018, Tull K.2019].

The solution to all these problems should be to change the global perceptions of menstrual products so that these products can be identified as this critical need. With the rising number of issues and interest in menstruation and related products, several rules and regulations are positively changing. Presently, the U.S. Food and Drug Administration will not control menstrual products heavily. For example, menstrual pads and tampons, for the reason that they are categorized as "medical devices," which usually tend not to need ingredient labels [Johnson ME.2019, U.S. Food & Drug Administration 2005]. Menstruation and products related to this are essential components of life, and each woman and men have to understand them [House S. et al.2013] thoroughly. For that reason, it can be important to evaluate and increase the existing information and awareness of women and men about this matter. One strategy can be education and learning (Woo MJ: Godeunghagsaeng-UI seongjisig mich taedowa Seong-gyoyug yogudo-e gwanhan yeongu [study on sexual knowledge of high school students and their demands for sex education], Unpublished).

One other analysis has revealed a tendency to provide more intense menstrual education (M.E.) for females compared to males, which causes false misinformation among males [Allen KR. Et al.2011]. In addition, this misinformation sustains more considerable misunderstandings regarding reproductive health and possibilities to correct this seldom happens as information spread is restricted at home and in school [Chang YT. et al.2012].

We're shut down essential services during the COVID-19 pandemic that affected thousands of girls and women due to poverty and lack of menstrual supplies [Jahan N.2020].

The government has distributed subsidized disposable sanitary pads, which is crucial to increasing women's access to MHM resources [Vishwakarma D. 2016, Sommer M. et al. 2015, Kaur R. et al.2018]. Though this is to promote proper MSM practices, women are uninformed of the environmental pollution as a result [Garg R. et al.2012, Woo J. et al.2019, Lin N. et al.2020].

Every year in India alone, 113,000 discarded menstrual sanitary napkin waste is generated [Bhor G and Ponkshe S.2018]. Various options are used to dispose of menstrual waste in rural areas, such as burial, burning and throwing them in toilet pits. Disposal of napkins in contact with soil kills the microflora present in the ground, leading to the decomposition process being delayed [Garikipati S. et al.2019, Kaur R. et al.2018]. Recycling is vital to responsible waste dealing out. Recycling disposable sanitary napkins is a much more complicated process because the sanitation system is not equipped to deal with menstrual waste [Bhor G and Ponkshe S.2018].

The solution to each problem is to find hygienic alternatives to MHMs and those with minimal environmental impact and are reusable, sustainable and green. Foster good MHM practices, the emphasis should be on future scaling and cost-effective alternatives that are both safe and biodegradable [Reshma G. et al. 2020]. In addition, acquiring this kind of choice is crucial during times like COVID-19 with minimized accessibility and exacerbated

vulnerabilities [Crawford BJ and Waldman EG.2020].

Women in rural areas use a reusable cloth with limited absorbency and are considered unhygienic. And talking about the reusable menstrual cup, this need for an insert has dampened its adoption [Mahajan T.2019]. More appropriate if a culturally accepted and sustainable material is reusable [Budhathoki SS. et al. 2017]. Although pads based on natural fibre meet these requirements positively, this risk is due to a lack of more profound studies in women and information [Sinha RN et al.2018]. An in-depth study is needed to assess the risk of feminine hygiene products [Bae J. et al.2018].

The Government of India took the initiative in 2011 to promote menstrual hygiene practices among adolescent girls in rural areas. Including access to high-quality napkins considered to be menstruating, raising awareness about their use and use, and Safe, environmentally friendly disposal of sanitary napkins [National Health Mission (NHM), 2011].

However, a study conducted in India in 2005 found that 90% of women used unhygienic practices such as old clothes for menstrual management while 3.9% used locally prepared sanitary napkins and only 11.2% used hygiene sanitary napkins [Anand E. et al.2015].

A study conducted in India (in Haryana) in a rural area found that 80% of adolescent girls were aware of sanitary napkins. Still, only 30% of adolescent girls used sanitary napkins, and 79% were motivated to use sanitary napkins [Bhattacharya S and Singh A.2016]. The main reasons for menstrual hygiene are limited access to water and sanitation, lack of privacy, and access to sanitary pads. Which lead to adverse effects on women's health such as reproductive tract infections [Garg R. et al.2012, Dasgupta A and Sarkar M.2010] increase in school absenteeism among adolescent girls [Shah SP. et al.2013]. RTIs cause 10-15% of fetal wastage and contribute to 30-50% of prenatal infections [Garg R. et al.2012].

Reproductive tract infections are as well related to the occurrence of cervical cancer, HIV/AIDS, infertility, ectopic pregnancy, and a variety of other signs and symptoms [Garg R. et al.2012]. Several studies have found that girls who are menstruating do not like to attend school because of the fear of leakage of blood and body odour and fear of humiliation [Van Eijk AM. et al.2016].

Gopalan (2019) in India point to three significant barriers to adopting hygiene practices during Menstruation; First One is lack of awareness about Menstruation, lack of adoption of Menstruation about the menstrual period and lack of access to good hygienic menstrual products [Gopalan, M., 2019].

A meta-analysis of 138 studies found that only a quarter of adolescent girls in India could understand the source of bleeding. Half of these girls were not aware of the onset of Menstruation [Van Eijk AM. et al.2016]. A large study in India found that 70 % of women do not use sanitary napkins because of their cost [Shah SP. et al.2013]. And among other reasons not to use sanitary napkins, there is a big problem of disposal of sanitary napkins [Bhattacharya S. et al.2016]. Aside from individual-level aspects, Menstrual hygiene is influenced by cultural taboos such as discussion of menstrual hygiene and disposal of menstrual products [Lahme AM. et al.2018]. Prior scientific studies have found that many adolescent girls use an old cloth or no protection in the course of Menstruation that is very unhygienic [Drakshayani Devi K and Venkata Ramaiah P.1994].

Due to the entire stigma related to Menstruation, adolescent girls and women usually have no discussion on this topic openly with parents, which can be the reason for inadequate information and knowledge associated with puberty and menstruation [Kabir B. et al.2010]. Thakre et al. described that in acquiring the Millennium Development target, good menstrual hygiene plays an important role [Thakre SB. et al.2011].

Health Education

A recent study showed effectiveness in educating female students on health topics at the school level, and many girls found their peers to be a common source of information on the subject. Another analysis disclosed that the great majority (98.5%) of students found that young girls needed more information about monthly periods and more for hygienic practice, and 61% reported this point recognized their mothers as ideal information sources (Mohammad and Ashtiani, 2004). In addition, students spend most of their daily time in school, which gives them

chances for education programs. As a result, educators must also attain particular knowledge whenever on-the-go education to pass on information with their young students] Dagwood, 1995; Shayani and Uenkafa, 1995; Nafstad et al., 1995; Westhoff, 2001]. National and international level, a lot of emphasis has been given to addressing this issue in different ways, such as through social media platforms and a movie called Pad man [Priyadarshani, S.2018], rolling out menstrual hygiene campaigns, testing eco-friendly or biodegradable menstrual products, putting into action detailed sex education in schools, etc. [Geertz, A. et al.2016]. Menstruation involving school-age girls remains an ignored issue within the execution front, regardless of the formalized addition of a menstrual hygiene scheme within the Reproductive and Child Health Program by the Government of India (in 2011) [Government of India 2011].

The matter continues to be the insufficient educational support from health workers, functionals guideline to put into action MHM in schools, and enough monetary resources to apply significant actions. Anxiety, humiliation, traditional social taboos, unaware helpless educators, deficiency of water, sanitation, disposal services, and privateness are a few limitations in building an enabling environment regarding protected and hygienic menstrual practices inside the school premises [Mahon, T. and Fernandes, M..2010, Sommer, M. et al.2015, Kirk, J. and Sommer, M 2006]. The challenges at the system level, collectively, have a negative impact not only on the reproductive and sexual health final results of adolescent girls, but as well on their agency (ability to make a decision and take actions for self) and self-confidence [Sommer, M. et al.2015]. Increasing enrolment of girls at schools' level of both in secondary and senior secondary schools calls for an increasingly comprehensive strategy to adapt schools to menstrual hygiene and reduce school dropouts or absenteeism [National Council of Education Research Training 2016].

Conclusion

Implications for Future Practice and Research; Finally, much remains to be done to build up the evidence base. Raising awareness of Menstruation and hygienic practices remains a largely neglected area of research, despite its growing popularity among public health organizations. We aimed to collate the available evidence and evaluate it critically, not for purely academic purposes but to highlight the strengths and weaknesses of studies related to this topic and inspire other researchers to improve future efforts.

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