



A COMPREHENSIVE REVIEW ON THE MENSTRUAL HYGIENE MANAGEMENT OF ADOLESCENT TEENAGE INDIAN GIRLS

Home Science

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ABSTRACT

A lack of awareness surrounds the common occurrence of menstruation, which results in harmful behaviours. The goal of the current review was to examine and contrast teenage girls' perspectives of various elements of menstruation in India. Sixty studies in all were subjected to critical examination and commentary regarding their data collecting, demographic methodologies, and study findings. According to this review government policymakers, health programmers, and future researchers should address significant factors to improve menstrual hygiene and management in the country.

KEYWORDS

Adolescent Girls; Menstrual Hygiene; Rural-urban; Socioeconomic Characteristics.

INTRODUCTION

The menstrual cycle is a significant component of teenage girls' life, and it has a direct impact on their physical, social, emotional, and economic status [1]. In the twentieth century, it was still considered taboo in India to speak in groups. Have incorrect preconceptions, pseudoscience, and concerns regarding menstruation hygiene. India has 420 million young people. 20% of teenage females are between the ages of 10 and 15 years. Lives in 40% cities and 60% villages[2]. Because India is rural, there are extremely limited facilities in both rural and metropolitan areas[3]. The menstrual cycle in India is often misunderstood and taboos are prevalent, particularly in rural areas, due to a lack of education, knowledge, and awareness[4]. India's extreme wealth and poverty, as well as gender inequities, lead to considerable variations in health and social indices for girls and women. Poor menstrual hygiene procedures and cultural taboos hinder the attendance of 68 million teenage females in about 1.4 million schools

out of 113 million[5]. The Indian government has created policies and programs at the state level to promote menstrual hygiene and improve girls' health, wellness, and educational accomplishments [6].

Several independent studies in India have examined the frequency of social, scholastic, and health difficulties among females with poor menstrual hygiene practices.

The state of menstrual hygiene among teenage schoolgirls has been the subject of several research carried out throughout India [7]. Nevertheless, not much critically reviewed for factors like combined percentage of teenage females who practice safe menstrual hygiene. Furthermore, there was considerable variety and inconsistency in the results of these research.

India Case Study

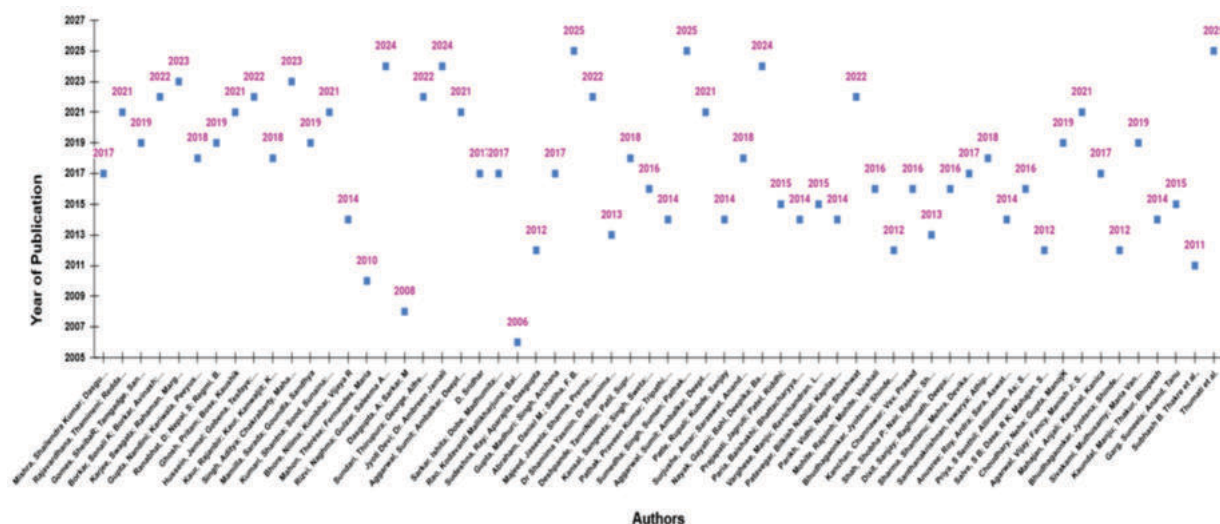


Figure: The Plot of Author Versus Year of Publication Used For This Study.

A total of 60 research articles were collected for the total India study (Can see in above Figure). Considering all states locations, This study merely focused on menstrual hygiene management, demographic selection, awareness, menstrual knowledge, knowledge source, sample size, methodology, washing habits, menstrual fluid adsorbent disposal habits, taboo, and mental effects in menstrual cycle contents study on adolescent girls of age varying from 10-25 years. We collected various research from 2006 to 2024 to capture exact trends and improvements or impact done by changing surrounding social and educational conditions. We limited our research to India, as this article aims to analyse only studies on India. We are try to cover almost all India locations with each state. Some states have more than four studies, like Maharashtra. Factors were calculated with an average mean value of all percentages reported in studies, and ranges were

chosen from low to high values for each factor. The study's conclusions will help program planners and policymakers create suitable interventions to enhance safe menstrual hygiene in the nation and comparable contexts.

Demographic Characteristics

Demographic characteristics that are often utilized include age, religion, family type, occupation of father and mother, family income, age at first menstruation, prior knowledge of menstrual hygiene, and source of information. Some authors used some additional characteristics related to basic hygiene infrastructure available in their place of residence and schools [8]. Like availability of private washrooms, water resources, common disposal and near health centers. Most of the studies have the majority religion is Hindu. After

that major one is Muslims and some authors reported special tribal communities[9], [10]. The studies have considered urban and rural populations[11]. Some studies considered half the village and half rural population[12]. Some studies used slum area population as their demographics[13], [14]. In studies the most family income is below 3 Lakhs per annum, and have father as main income backbone for the family. Among only 30% of studies reported, mothers have jobs.

Data Collection and Methodology

Data collection mostly used in schools and colleges. Few authors collected data from home to home surveys[15]. Most of the surveys conducted by cross category random sampling have sample size ranges from 50-1500. The sample size used less than 100 is about 30%, 60 % are of 100-500 sample size, while above 500 is 10%. The sample calculations were often not used to determine the sample size, which often ranged from small to very large without any basis. The statistical methods using Chi-square's most favorable method used about 95% of the authors. Other used multivariate data analysis and some studies for review analysis used meta-analysis cross sectional methods [7], [16]. For this study, data from National Health Surveys was used for analysis. By applying inferential and descriptive statistical methods to demographic characteristics, percentages and frequencies can be predicted. To calculate the knowledge score, the percentage, mean, standard deviation, median, minimum, and maximum scores are analyzed. The yes-no and ranges of score used to knowledge score. Most of studies are not reported number of inclusion, refusals and biases.

Menstrual Profile

To generate a menstrual profile from data sampling parameters used are age of menarche, duration of menstrual cycle, and duration bleeding, menstrual pattern awareness before menarche. The average age on menarche reported by nearer to 12-14 years. 12-14 years have the highest percentage of menarche. Some girls have earlier menarche at 10-11 years also as compared to older and new studies show the trend of decreasing menarche year[17], [18]. The percentage of higher age menarche is low (less than 10%) reported in study. As in urban areas have low menarche age compared to village areas. The common duration reported of mensural cycle is 21-35 days about 90%. More and less than 21 days reported a percentage about 10%. Most girls have bleeding of 2-6 days, above and less than 2-6 percent is 10%. 80-90% literature reported the regular menstrual cycles and 10-20% irregular[19]. The percentage of irregular cycles is more urban slums area compared with village area.

Awareness and Source of Information

The average awareness of the collected studies varies between 40-50%. This percentage is as low as 20% in rural and urban slum areas. Most of the urban city areas have the highest percentage of 90%[20]. The knowledge of anatomy of the reproductive system, uterus location, blood location was found very low in all studies especially in the rural and urban slum areas[21], [22]. Around 25% of girls were familiar with the fact that the uterus is the source of bleeding overall. A lot of studies recommending this is a crucial factor to work out as an improvement of basic knowledge of reproductive systems.

In most studies, mothers were the most commonly mentioned source of knowledge, with half of the girls identifying them as the primary source. Other sources are friends, sisters, grandmother, teachers various in the range of 10-30% percentage. Some authors reported teachers as the primary source of knowledge. Other sources like media, television, and newspaper are less than 10%. The source of information as a mother is sometimes less critical knowledge and filled with taboo information. But it increases the availability of digital gadgets with ease of online information. Some authors reported that studies have health center Aganwadi, teacher awareness programme increase knowledge significantly in girls[23].

Menstrual Absorbents Usage

The absorbents used are reported as commercial pads, cloths, and tampons. Commercial pads (60-90 %) and cloths (30-60%) are more common than other absorbents. Urban areas have a higher prevalence of commercial pads, while rural, tribal, and slum areas have a higher prevalence of cloths[24]. Due to awareness television ads and health programs, there is a significant increase in the use of commercial pads switching from cloth. In some urban areas eco friendly materials like banana cotton made pad are used. School studies had a lower rate of cloth use compared to community studies, regardless of the survey setting for school located in urban or rural. Very few studies reported

tampons use as absorbents[25]. Economic considerations seemed to be the main reason for using cloths instead of pads; other reasons included difficulty with disposal, unawareness of pads (especially in tribal and slum area), or personal preference. No study reported use of menstrual cups and washable panties.

Absorbent Disposable

Usage of dustbin, burning, throwing in common area, toilet flushing, and burying this common disposable method reported in studies. Usage of dustbin is more common in urban area due to availability of dustbin. The dustbin disposable percentage varies from 20-50%, burning 30-30%, flushing the toilet 8-10% and open about 10%. Burning, throwing and burying is common in rural, tribal and community areas[26]. Cloth absorbent was mainly disposed by burning and burying methods. In urban settings at some hospital and schools have their own incinerations.

Hygiene During Menstruation

Common hygiene in India is bathing and hand washing. Gentail washes are still uncommon in India, mostly using water as cleaner. The study reported bathing regularly about 70-90% with the same range of hand washing. Gentail washes reported about 30-50% with soap and 50-60% by water. Some urban studies reported the use of antiseptic liquids for bathing during the menstrual period. Bathing percentage is significantly low in slum areas due to the non-availability of water, a bathroom, and privacy. There are some taboo are related to bathing in tribal communities[27].

Restriction During Menstruation

All studies have confirmed that menstruation is still a taboo in India. Cooking food, touching religious items, and visiting worship are the most common restrictions, regardless of location. Food-related issues (30% - 46%) and touching people or special foods (36% - 64%) have been reported in studies. Other restriction like sleeping and seating separately are less than 10% in urban areas but high like 50-70% in rural and tribal area. Other less likely restrictions have been reported, such as playing, swimming, exercising, visiting relatives, and attending social functions. This percentage largely varies with urban vs rural, tribal and slum population. The restriction is more prevalent in villages and tribal areas because of strong religious beliefs and low awareness[28].

School Restrictions

School restrictions vary region to region, girl's misses school during menstruation between 19-30%. The main reasons is physical discomfort (cramps or pain in stomach). Lack of bathroom, privacy, disposal arrangements, restrictions by mothers or teachers this are other reasons reported. Other physiological reason like fear of blood, staining of cloth, odour, something bad is happening with self. The usage of pads are significantly associated with increases in school attendance. About 29% -46 % of girls reported changing pads during school time.

Significant Association

Various social, economic and mental factors were examined to significant association with menstrual hygiene. Major factor of association related toward the mother are occupation, education, religion, knowledge level. The second most avocation largely vary with studies and have conflict. Some studies reported Teaches, family background, Income and grandmother are second most associated. The association largely affecting by the local social and psychological parameters.

Nutrition in Menstrual Cycle

Despite its significant role in supporting health during the menstrual period, only a few studies have collected data on eating during nutrition surveys. The average nutrition mean value that has been reported is 60%. During their menstrual cycle, all survey respondents reported regular food intake. Addition nutrition supplements are used but their percentage is less than 5 %. Typically, in urban areas food habits has been taken care. Some tribal communities reported special food eating habits during menstruation cycles. Also, fast food cravings were reported in one study.

Overall Discussion

Based on this review, approximately half of Indian adolescent girls began menstruating without understanding the cause. The articles covered all demographic areas (Urban, rural, Tribal and slum) but need

to do more studies considering the more sample size while considering the accurate statistical sample methods with appropriate analysis. For data analysis all studies using statistical methods need to apply new Artificial Intelligence methods that could give us more useful insights while survey, training and predictions. We see in research decreases in the average menarche year and irregular period cycles. The most significant factor latest reports impacting are dietary factors and low physical activity lifestyle. While conducting surveys this factor should be considered also important to create awareness about it. As mothers are a major source of information they are also filled with less critical information and taboos, awareness should be established especially in tribal and slum areas. Around 20% of girls disposed of their used menstrual products in inappropriate locations. As cost economics matters, to buy these pads. Use of tampons and washable pad panties is more economical, safe, and has low environmental impact compared with commercial pads and cloth. It should be incorporated by proper methodology and hygienic practices. The major roles in the disposal of pads are availability, simple ease methods, and physiology in people; it is a natural process rather than taboo. A quarter of girls reported missing school during menstruation. The whole reason is the non-availability of proper facilities. Schools are mandatory to have the girls' private recreation rooms with toilets and proper disposable facilities. The menstrual hygiene factors are mostly associated with family and religious factors. One important observation in studies is that if the mother is educated and has high occupations in the family, the menstrual hygiene is strongly followed with less taboo. In recent years, the consumption of fast food has increased in both urban and rural areas. The impact of these food habits changing should be considered when conducting this survey. Should make awareness about good food habits (like eating high-protein and iron vegetables in food). Also, some special studies should be conducted focusing on nutrition habits as less study reported in the literature

CONCLUSION

Overall 60 studies reviewed and critically commented on this review paper. This review paper gives guidance for future health direction programmes conducted in local places. Also this review provided a significant factor and association parameter to more impactful awareness programmes and future researchers.

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