

Research Article

Menstruation, Onset, Management and Manipulation

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Abstract

Introduction: One of the major physiological changes that take place in a woman's life is onset of menstruation, menarche, most significant milestone of reproductive life. Many sociocultural, individual factors affect attitude towards menstruation with substantial implications of all these factors in coping with menstruation. Variations in age of menarche, menstruation may be due to various disorders also and they also impact menstrual management and future life. Menstruation manipulations being done by women have sequelae too.

Objectives: Collect, share information in context of menstruation, its onset, management, menstrual manipulations.

Material and Methodology: Literature search was done with available research engines, like google, google scholar, sci.hub, yahoo etc for collecting information as per the objectives. Studies reviews were looked into, irrespective of the type.

Results: Onset of menstruation, menarche, and management of menstruation are affected by many social, cultural, religious factors including everyday life. Mean age of menarche varies in populations globally. Geography, environment, socioeconomic, nutritional status of family, all affect menarche. Awareness of good hygiene practice during menstruation also varies. Many adolescent girls attain menarche, unprepared to manage menstruation hygienically. Pads used for menstrual flow vary globally and their disposals too vary. Menstrual manipulations are done for various reasons.

Conclusion: Menstruation, onset and its management need preparedness Menstrual manipulations need better understanding. Creating awareness about menstruation, its management premenarche amongst young girls, information of possible manipulations, their effects are all essential for promoting adolescents overall health, specially reproductive health.

Keywords

- Menstruation
- Onset
- Menarche
- Factors
- Menstruation management
- Manipulations

INTRODUCTION

One of the major physiological changes that take place in a woman's life is the onset of menstruation, menarche, the most significant milestone of reproductive life. It is the hallmark of transition from childhood to womanhood. The preparations for menarche start with puberty, which spreads over three to five years in a normal girl, beginning with Adrenarche, visible pubic or auxiliary hair and Thelarche, breast development. Many sociocultural and individual related factors affect attitude towards menstruation and have substantial implications in coping with the difficulties that come with menstruation.

RESULTS

Onset of menstruation and its management are affected by many social, cultural, and religious factors including everyday life of the girl and the family. The mean age of menarche varies in populations globally, and is known to be a sensitive indicator of various population characteristics, geographical locations, environmental conditions, and socioeconomic and nutritional status of the family. Awareness and practice of good hygiene

during menstruation is essential. Still many adolescent girls attain menarche, unprepared to manage the menstruation hygienically. Singh [1], did a study in *North India* about perceptions and experiences of rural women regarding menstruation. The reported mean age of menarche was 15 years and main source of information about menarche/menstruation was friends/relatives (72%). Very few girls (0.4%), used sanitary napkins during menstruation. Majority of the girls had strong beliefs about effects of diet on menstruation and most of them considered menstruation a dirty act and indulged in negative behavior. In majority of the girls initial reaction at onset of menstruation was of fear and apprehension. The researchers concluded that the girls had traditional beliefs regarding menstruation. Shanbhag et al. [2], also did a cross sectional study in India with interviews of rural school girls and reported mean age of menarche 14 years. Almost all the girls had heard of menstruation, but 40% after attaining menarche, 74% knew that menstruation was a normal physiological activity but only 29% had awareness regarding menstruation. Only 44% used sanitary pads during menstruation and 48% did not know that menstruation and pregnancy had any linkage. Among those who

used cloth, only around 31% used soap and water to wash cloth used for menstrual flow, 59% used soap and water to clean the genital organs and 11% girls did not take regular bath during menstruation. Finlay et al. [3], did a study in Sub-Saharan Africa and reported that 37% girls did not have knowledge of menstruation. In rural regions, girls have much less access to information. They have problems of availability of sanitary products and resources. So, mostly girls rely on old cloth for menstrual flow and wash just with water to reuse because getting soap is also a problem and sometimes getting clean water too. Also women manage menstruation differently when they are at home or outside. They use whatever they have and dispose with domestic waste even use public toilets to flush pads without thinking about the consequences. So, there is a need to educate and make girls/women aware of the environmental pollution and health hazards associated with improper disposal. It is also well known that poor menstrual hygiene can lead to reproductive tract infection with long term morbidities. Um et al. [4], looked into the knowledge about menstrual practices and hygiene amongst school girls in Nigeria and reported that majority had some knowledge of menstruation. Most of them had used sanitary pads in their last menstruation and changed pads 1-5 times. Three quarter girls increased the frequency of bathing. They suggested the need of education in schools for dissemination of sensitive reproductive health messages targeted towards adolescents as well as the parents and improving access of the adolescents to youth friendly services. Samarth et al. [5], did a study in Central India in a rural area and reported that only a small number of adolescents were aware of menstruation and only half of the adolescents were seen to follow menstrual hygiene. Michael et al. [6], did a study at a public health institute in Pakistan and reported that only 44% girls knew that menstruation was a physiological phenomenon and 60% knew that menstrual blood came through vagina. Nearly 40% of study respondents missed their schools because of menstruation. The use of absorbent material was frequent (90%), and 69% used commercial sanitary pads. Only around 42% of the respondents were taking bath during menstruation and 20% did not clean their genitalia with water during menstruation. They had misconceptions regarding menstruation because of the poor access to health-related information. Yaliwal et al. [7], did a cross sectional prospective study in schools of India about cultural practices during menstruation, and water supply, sanitation, and hygiene practices (WASH) and reported 70% girls attained menarche by 12 to 15 years around 70% of the girls were using commercial sanitary napkins, 57% girls were washing their genitals more than twice a day. 94% were taking bath during menses and 87% used soap 94% with water. 38% girls disposed pads by burning them, 51% put them in dust bin, and 5% buried them. Around 18% said that they remained absent from school for a day, some for more days. 53% said that they had difficulty in concentrating at school during menstruation. Only 22.3% said that there were facilities to change pads at school, 43% girls said they avoided cultural functions during menstruation. The girls from rural areas had poorer hygienic habits, in comparison to the urban girls. Cultural restrictions were more in the rural girls. Mukherjee et al. [8], did a study among urban Nepalese women and reported that menstruation, was still associated with restrictions and superstitious in Nepal though factual data on women's perspectives on menstrual practices was not available.

Many women did not pray during menstruation and were encouraged by their mothers to practice a range of menstrual restrictions. Purifying the kitchen, bed or other household things on the fourth day of menstruation was reported and quite a few saw menstruation as a bother or curse with differences among social classes. Coast, et al. [9], reviewed evidence relating to knowledge and experiences of puberty and menstruation among girls of 10–14 years in low- and middle-income countries. Forty of 44 studies used school-based samples which revealed that girls had little knowledge about menstruation and menstrual hygiene. Most girls obtained information from their mothers, although mothers were not necessarily their preferred source of information. Yiadom [10], also reported that although awareness of menstruation was universal in Ghana and many girls had adequate awareness of menstrual hygiene, only a tenth of the adolescent girls had positive attitude towards hygiene during menstruation and only, a third practiced good menstrual hygiene. Older age and living with both parents were the main predictors of knowledge of menstrual hygiene and staying with mother only, access to finances and having adequate knowledge of menstruation were the main determinants of good menstrual practices among adolescent girls in basic schools. More than half of the respondents had adequate awareness but this did not translate into positive attitude towards good menstrual practices due to negative socio-cultural norms and practices with other factors that tended to stigmatize menstruation. Yeung et al. [11], reported that psychosocial and cultural factors influenced expectations of menarche among Chinese premenarcheal teenage girls and participants' expectations of menarche were largely negative and heavily influenced by cultural beliefs about menstruation. Findings revealed that positive emotional expectations of menarche were best predicted by the perceptions of menstruation as a natural event, positive self-concept, and rejection of indigenous negative menstrual attitudes. Negative emotional expectations of menarche were best predicted by perceptions of menstruation as a negative event, inadequate preparations for menarche, endorsement of indigenous negative menstrual attitudes, and older age. Yiadom et al. [12], reported that in Ghana most girls entered adolescence when they were in basic schools, which made menstrual hygiene among girls in junior high schools very important. Although awareness of menstruation was universal, the Likert score (score based on questionnaire) revealed that 67% girls had adequate knowledge of menstrual management. About a tenth had positive attitude towards menstrual hygiene and a third practiced good menstrual hygiene. Malefyt et al. [13], reported that ethnographic research identified beliefs and values among women who discussed menstruation as a natural process of change in body. Premenstrual dysphoric disorder (PMDD), a set of subjectively unpleasant mental and somatic symptoms, which appear in luteal phase of menstrual cycle in some women, remit and disappear up to one week from its termination. Zukov et al. [14], suggested to put PMDD with other depressive disorders. PMDD should be separate strictly defined psychiatric diagnosis. They opined that PMDD and accordingly premenstrual syndrome (PMS), were multidisciplinary problems and must be treated like that. No abnormality has been found till date, though many have been suggested. At best PMS can be characterized as a group of psychological and somatic symptoms that are limited in the week preceding menstruation and are relieved by the onset of

menstruation. Zukov et al. [15], did a review which revealed that mood disorders in women were explicitly related to estrogen production. Bertone-Johnson et al. [16], reported chronic inflammation implicated in the etiology of depression and other disorders that shared common features with PMS, but whether inflammation contributed to menstrual symptoms severity and PMS was not known. Serum levels of inflammatory markers, including interleukins and interferon were positively associated with menstrual symptoms severity and/or PMS in young women. Ussher et al. [17], reported that self policing practices were associated with the experience and construction of premenstrual change as it aimed to allow women to develop more empowering strategies for reducing or preventing premenstrual distress. Chandraratne [18], did a study to know about PMS experience of adolescents in Sri Lanka and reported that individual premenstrual symptoms were experienced by around 66% of the study subjects. The most common somatic symptom was fatigue in 30% and affective symptom feeling sad and hopeless in 30%. Prevalence of PMS was around 9%, and it significantly disturbed the school activities, relationships and daily routine indicating a high negative influence on adolescents' daily life. Only around 10% girls sought help from practitioners of western medicine for their premenstrual symptoms and a majority did not perceive it as a condition to report. Over all PMS is a common condition among schoolgirls with a high negative influence on their daily life. Derman et al [19], have reported that there was an association between dysmenorrhea and PMS in 57% and 37% had mild, 37% moderate and 14% had severe PMS. The most common symptom of PMS was negative effect particularly in the form of stress 88% and nervousness 88%. There was a statistically significant negative relationship between milk consumption and the feeling of abdominal bloating, cramps, craving for some foods and increased appetite. PMS and dysmenorrhea were frequently overlapping. Sveinsdóttir et al. [20], did a study about menstrual cycle symptom variations in women using and not using oral contraceptives. Due to the varied symptoms, severity changed over multiple menstrual cycles. So prospective daily ratings were thought to be necessary to know about menstrual related symptoms and cyclicity in the general population and to know the occurrence of menstrual cycle symptoms cyclicity and PMDD in a random sample of women using and not using oral contraceptives (OC). Researchers reported that cyclicity was most often demonstrated by participants. There was not much difference in cyclicity between non OC users and OC users. Kumar et al. [21], reported that therapy, sometimes even hormonal was requested by the girls and their families to alleviate abnormal bleeding, cyclic mood changes, painful menstruation, or a combination and also to assist with menstrual hygiene in Andhra Pradesh, India Young girls frequently experienced a variety of menstrual-related complaints, like dysmenorrhea, menorrhagia, irregular menstruation, and menstrual-related mood changes. These problems deserve careful evaluation because they might reflect normal ovulatory menstrual symptoms or be suggestive of pathology that can have a major impact on future reproductive and general health. Critchley et al. [22], reported that the contribution of menstruation and heavy menstrual bleeding to iron deficiency anemia needed wide recognition by the girls, their families, employers, and society also. Sanctis et al. [23], reported independent evidence of influence of age at menarche on menstrual abnormalities. The findings revealed the necessity of

follow-up of such adolescent girls' with abnormalities in menstruation to monitor the endocrine development. Rigon et al. [24], did a study in Italy about menstrual pattern and menstrual disorders among adolescent girls and reported that adolescents having persistent menstrual disorders in first two years from menarche, had a higher risk for developing persistent menstrual irregularities with longer bleeding periods (>6 days) with susceptibility to iron deficiency anemia. So clinicians needed to identify menstrual abnormalities as early as possible in order to minimize consequences. Quint et al. [25], reported that reproductive health issues such as puberty, sexuality, and menstruation can be more complicated for teenagers with disabilities and their families as a result of concerns surrounding menstrual practices, risk of abuse, vulnerability, change in seizure pattern, and altered mood. Yaliwal et al. [26], also opined that the burden of menstruation and cultural practices which the adolescent girls had to face had been less quantified. Menstrual manipulation which refers to the practice of using hormones to stop or reduce menstrual bleeding or regulation of cycles, or reduction in menstrual flow of complete suppression enabled girls/women to cope up with the problems and allowed them normal activities. Surgical options for this purpose, such as hysterectomy or endometrial ablation are also there but not used. Hormonal methods to manipulate menstruation are reversible. There are a number of medical conditions for which fewer menstrual periods and less blood loss may be beneficial. In addition, suppression of hormonal cyclicity may benefit menstrual-related mood disorders or other conditions which increase in frequency with menstruation. Menstrual suppression is also being used by individuals with a variety of personal reasons like honeymoon, vacations, travel, or other specific reasons. Hillard et al. [27], did review of studies about menstruation suppression and reported that menstrual suppression to provide relief of menstrual-related symptoms or to manage medical conditions associated with menstruation has been used clinically since the development of steroid hormonal therapies. These therapies can benefit women's quality of life, and by stabilizing the hormonal milieu, potentially improve the course of underlying medical conditions. However the risks and side effects of manipulations on the reproductive health and life need more research. Deitch et al. [28], reported that the menstrual cycle was a vital sign whose normalcy suggested an overall good health and whose abnormality required evaluation. Eating disorders and the female athlete triad increased the risk of osteoporosis. Polycystic ovary syndrome, which is not uncommon in women with menstrual abnormalities, is associated with future cardiovascular risks also. Diagnosis and management of these problems will not only improve a young woman's current health, sense of well-being overall quality of life but may also lower her risk for future disease and ill-health. Fahs et al. [29], reported that little research has been done about the relationship between menstruation and sexuality. Their study used inductive thematic analysis of qualitative interviews with 40 women across a range of age, race and sexual orientation backgrounds to examine women's experiences with sex during menstruation and reported that while 25 women described negative reactions and two described neutral reactions, 13 women described positive reactions. Negative responses cohered around discomfort and physical labour to clean partner discomfort, negative self-perception and emotional labor to manage partner's disgust.

Positive responses cohered around two themes: physical and emotional pleasure from sex while menstruating, and rebellion against anti-menstrual attitudes. Charlesworth et al. [30], reported that some believed that women's bodies were innately inferior to men's bodies and thus it was in women's best interest to keep menstruation secret, so that society did not have to be reminded of women's deficiencies. With this logic, women came to understand that by keeping menstruation out of the public sphere, they might be able to keep some of the cultural stigma assigned. Yet, by keeping menstruation out of the public sphere, the stigma associated with menstrual continued to grow. Kulkarni [31], did a study to understand menstruation related issues faced by women in jails, and queer people across three Indian cities and reported that most queer people found menstruation unpleasant as they did identify themselves as women. Unlike queer people, Female Sex Workers (FSW), accepted menstruation normally but spent a lot on pain killers and alcohol to keep working as painful periods affected their work too. Pip [32], did a study in New Zealand's Backcountry and reported that menstrual waste disposal methods were limited and consequently little was understood about women's management of menstruation in the Backcountry revealed hygiene and discretion as major factors of concern for women in dealing with menstruation, and lack of information about appropriate menstrual disposal practices in the outdoors were reported. As such menstruation has a restraining effect on levels of enjoyment and comfort experienced during outdoor activities. So carrying home used products is believed to be the best method of menstrual waste disposal. Kressbach [33], reported that menstrual tracking and fertility apps have gained popularity in recent years, often sold as tools for self-empowerment through self-knowledge. Pascoe [34], reported products for blood flow changed from bulky, re-usable rags to invisible, disposable pads and tampons. Disposal facilities changed from the waste bin to incinerators, and eventually to specialized, antibacterial 'sanitary disposal units. The greatest impact of these shifts was felt in public places where women deal with private bodily functions in semi-public or community environments. Promotional materials for menstrual products and disposal facilities promised that use of new technologies would obviate age-old menstrual taboos, emancipating women from the anxiety and mortification long associated with menstruation.

DISCUSSION

Thomas et al. [35], reported that Trump's discourse reminded that, even in American culture, where the ideology and discourse of the second wave of women's liberation movement appeared culturally acceptable and integrated into society, the menstruation taboo persisted. Even American society treated menstruation as a fearful, threatening, and repulsive bodily act that was banished to be private and needed to in domestic spheres. This visibility of the menstrual taboo allowed it to perform in public culture by producing negative consequences that affected women. Researchers also reported that Trump's discourse was significant because it highlighted the persistent social myth that menstruating woman was dangerous and evil. Researchers also reported that in an American advertisement the message told women that leaking blood was not without consequence, often dangerous and deadly wild animals could be attracted with the belief that wild animals were attracted to menstrual blood,

proven myth, a particular modern truth remained implicit in the advertisement; leaks could cause so much embarrassment and shame that women felt like dying rather than engage in the social public sphere. Pascoe et al. [36], reported that women could discuss menstruation, but they did not often discuss it. Perhaps the secrecy and silence surrounding menstruation has largely dissipated, but a subtle discomfort still remained. Even women are manipulated, regulated and policed which permits the continuation of patriarchal thinking. Numerous studies revealed that society believed negative effects of menstruation occurred frequently, despite scientific studies proving otherwise. Education can be provided at healthcare facilities, in the residential areas as well as religious centers in addition to schools. As visual images undermined and not supported the fear that this was biological function and reflected the resisting of dominant and cultural taboos, individuals can likewise shift their attitude towards embracing bodily acts and reinforce positive feelings towards menstruation. The commodification of menstruation and proliferation of products parallel with their focus on educating women to reclaim their menstruation and the meanings attached body esteem and control of anxiety were important for positive attitude towards menstruation. Caretakers have to keep reminding intellectually disabled women to change and dispose pads. Women in jail get supply of pads from Govt. or Non government organizations (NGO) and need based approach are essential. Reduced apprehension, high self-respect and understanding of appearance of normal physiology are recommended for accepting menstruation as a normal body function. Good menstrual hygiene and knowledge regarding reproductive health help a girl/woman in reducing physical as well as psychological symptoms. Kaur et al. [37], reported that, awareness should be created to emphasize the use of reusable sanitary products or the natural sanitary products made from Banana fibre, Bamboo fibre, Sea sponges, Water hyacinth, etc. Educating young girls/women about menstruation menstrual manipulation, does allow women to have their period less often or to avoid bleeding at inconvenient time. However needs more researchers Myths and misperceptions about menstrual manipulations persist. Some physicians believe it is somehow inadvisable. Adolescents reproductive health awareness may be provided a family life education with the school curriculum. They may also be told that irregular and infrequent cycles are often present for a few years after menarche and don't need any interventions, except awareness of girls, families and service providers too. Menstrual taboos continue to have effects on the women who seek leadership positions because women are hormones negatively impacted their self-control. Accurate information to adolescents about the services needed to manage menstruation in a hygienic way, with dignity is essential.

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