

Menstrual Disorders and Hygienic Self Care Practices among Adolescent Girls in Preparatory year at Al-Jouf University

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Abstract: Adolescence is the transitional phase of physical and mental development between childhood and adulthood and is characterized by immense hormonal changes. 75% of girls experience some problems associated with menstruation. Self care practices as well as menstrual hygiene are basic requirements for promoting a satisfied life and personal esteem in a woman. Therefore the aim was to investigate the menstrual disorders and the self care practice of menstrual hygiene among 400 adolescent girl a sample was selected to participate in the study based on stratified random sampling method from AL-Jouf university girls section, preparatory level, Saudi Arabia. An interview questionnaire sheet consisted of three sections was administered to the students after explain the aim of the study and their consent was obtained.

Results was revealed that dysmenorrheal was reported in 368 (92%) of the respondents, and premenstrual symptoms reported by 354 (88.5%) were the most frequent disorders encountered. followed by passage of clots in 226 (56.5%), irregular cycles (41.5%), and abnormal duration of flow occurred in only in 100 (25.5%) respectively. A total of two hundred twenty four (n = 224) adolescents girls were involved in the study change their pads 3 to 4 times per day, with a mean of 4.11 ± 0.899 during menstruation. The majority (92.0%) of girls changed their sanitary pads at night, whereas, only 38 (8.0%) were not changed their sanitary pads at night during menstruation. However, 260 (56.0%) were Change sanitary pads at university. while, 140 (35.0%) do not Changed sanitary pads at university, during menstruation.

Conclusion, It was concluded that, high prevalence of menstrual disorder among adolescent girls in Al Jouf University, preparatory level, Saudi Arabia. The findings indicate an average level of practice of hygienic self care among adolescent during menstruation. Factors such as young age, lack of self care knowledge to have an effect hygiene among respondents.

Recommendations, Menstrual hygiene and self care practice guidance program should be taught by the teaching staff and by their mothers, and sisters to the adolescent girls needs to avoid poor health outcome due to poor self care practices. Reproductive health care of adolescent girls should be included in the curriculum of secondary schools .

Keywords: Adolescent girl, menstrual disorders, self care practice of menstrual hygiene.

I. Introduction

Adolescence is the transitional phase of physical and mental development between childhood and adulthood and is characterized by immense hormonal changes. Adolescent has been defined by the World Health Organization (WHO) as the period between 10 to 19 years of age, in their second decade of life [1]. Adolescent girlhood is a critical time of identity formation and a period of transition from childhood to woman hood [2], and of great challenge to the parents, as well as the child and those concerned for the upbringing of the adolescent. It is characterized by physical, psychological, mental and social changes that are critical to wellbeing [3]. The most striking change in adolescent girls is the onset of menstruation. Menstruation is due to cyclical hormonal changes in the female, under the control of hypothalamic-pituitary ovarian axis [4]. The onset of menstruation in adolescent is an important developmental milestone and an evidence of fully developed reproductive ability. the age of onset of menstruation or menarche is generally between 11-15 years. in Saudi Arabia , there is a decrease in the age of menarche among Saudi women due to better socioeconomic status and improvements in health. Slight variations in the age of menarche may occur according to the nutritional status, hereditary pattern, and climate difference [5].

After menarche, common menstrual abnormalities that the female adolescent may encounter include premenstrual syndrome, dysmenorrhea, prolonged menstrual bleeding, and emotional disturbances, 75% of girls experience some problems associated with menstruation [6]. In a study by Klein and Litt in Philadelphia, 56% of 2699 adolescent girls surveyed had dysmenorrhea [7]. Campbell and McGrath reported that, a higher prevalence of 93% [8]. In Nigeria, two studies by Thomas et al., [9] and Odujinrin and Ekunwe [10] in the western region equally reported high prevalence of dysmenorrhea among adolescent girls. Jacks et al., [11] and Sule et al., [12]. The prevalence and proportion of various types of menstrual disorders differ in different adolescent population, suggesting sociocultural and regional variation. Menstrual problems in some

adolescents may lead to disruptions in personal relationships and school activities, and reduction in academic performance [13]. Studies in the U.S. in which 374 reproductive age women were surveyed showed that premenstrual syndrome in women is associated with considerable use of health care resources, time loss from work, and decreased productivity [14,15]. Studies across the globe in adolescents suggest that menstrual disorders are a common reason for seeking medical care and for school absenteeism [16,17,18]. Adolescent menstrual hygiene and self care is a critical issue that determines the health status of the adolescent and the eventual practices that are inculcated into adult life [19]. Poor hygiene and inadequate self-care practices are major determinants of morbidity and other complications among this age group [20]. However, some girls have developed their own strategy to cope. Globally, different forms of beliefs and perception of menstruation have been found which either negates or promotes the adolescent females health. Studies have shown that superstitions, illogical beliefs and misinterpretation are more common than accurate understanding of the process of menstruation, menstrual hygiene and self care practices [21].

In view of this, it becomes important for parents, teachers and health care practitioners especially nurses to be adequately involved in the promotion of adolescent menstrual hygiene and self care practices to reduce disease burden and poor health outcome associated with poor menstrual hygiene and self care among these group [22]. Unlike in previous generations where adolescent is seen as a period of cleanliness and spotlessness, this observation rarely applies to adolescents of these days. The increasing rise in female genital tract infections among women in recent times really speaks of poor hygiene and self care practices [23]. This trends and observations may be similar to what is obtainable in. Therefore, there is the need to investigate adolescent menstrual hygiene and self care practices among this group. The main objectives for this study are to find the prevalence, pattern of menstrual disorders among preparatory girls in Al- Jouf university, to determine the menstrual hygiene among adolescents in Saudi Arabia community, as well as, to explore what factors influence their self care practice during menstruation.

II. Subjects And Method

This descriptive survey study, was carried out from September 2014 to the end of November 2014, 400 adolescent girls were chosen to participated in the study based on stratified random sampling method from AL-Jouf university girls section, preparatory level, Saudi Arabia . Students were explained about the purpose of the study and given information on the questionnaire. All students who were willing to participate in the study were included in the study. They were invited to answer the questionnaire, The inclusion criteria were that they have attained menarche and are taking care of themselves during menses. Students who did not attain menarche, who are suffering from any chronic health condition and are using any medicines for long duration (more than a month) were excluded from the study.

The study tool was a carefully designed, tested, self-structured questionnaire develop and written in Arabic language by the researchers to elicit information aimed at meeting the criteria of the purpose for the study. It is made up of three (3) sections: A, B and C. Section A obtains information on socio-demographic variable of respondents, while section B obtains information about menstrual hygiene , and details on menstrual history included age of menarche, average length of menstrual cycle, duration of menstrual flow, any passage of clots during periods, occurrence of dysmenorrhea and if present, is it severe enough to skip classes, as well as any related university absenteeism, or any need to take medications like analgesics or antispasmodics and any perception of premenstrual symptoms were studied and analyzed. on the other hand, section C obtains information related to self care practices and usual personal hygiene during menstruation including; number of pads used per day, changed sanitary pads at night or at university, taking shower (bathed) during menstruation, use of deodorant, shaving the pubic hair,...etc.

The social score of Fahmy and El-Sherbini [24]. was used to determine the family social class. The validity of the instrument was ascertained from the information gathered from the literatures that met the study criteria, and also involving an expert in research for the questionnaire suitability and its applicability for the study gave credibility of the instrument. The reliability of instrument was determined through a test-retest method involving carrying out a pilot study using 20 questionnaires, while discarding ambiguous items of the initially constructed questionnaire. Data obtained from the field work were analyzed by means of the statistical package for social sciences (SPSS) version 17.

III. Result And Data Presentation

Socio-demographic data

Table 1 shows the socio-demographic data of respondents. A total of four hundred (n = 400) adolescents were involved in the study whose age range was 16 to 20 years, and a mean age of 17.86 years. 268 (67.0%) of the adolescents were moderate social class, 338 (84.0%) were attained menarche at the age of 10 to 13 years , 300 (75.0%) have menstrual flow between 2 to 6 days, while , 336 (84.0%) have menstrual cycle of less than 21 days.

Prevalence of menstrual disorders:

Table 2/fig.1 shows the menstrual disorders experienced by the study population. dysmenorrhea was reported in 368 (92%) of the respondents, and premenstrual symptoms reported by 354 (88.5%) were the most frequent disorders encountered. followed by passage of clots in 226 (56.5%), irregular cycles (41.5%), and abnormal duration of flow occurred in only in 100 (25.5%) respectively.

Association of Menstrual disorders to absenteeism

[Table 3/fig.2] shows the association between the menstrual disorders led to girls absenteeism from classes. 308 (77.0%) did not attend University throughout the period of menses, dysmenorrheal and premenstrual symptoms were the responsible for the highest rate of university absenteeism in 121(36.3%) and in 73 (24.0%) respondents.

Table (1): Sociodemographic Data of The Sample

Variable	Number (N=400)	Percent (%)
Age (years):		
16-18	304	76.0%
19-20	96	24.0%
Social class:		
Low	0	0.0%
Moderate	268	67.0%
High	132	33.0%
Menarche age (years):		
10-13	338	84.0%
> 13	62	15.0%
Duration of menstrual flow (days):		
2-6		
7 days and above	300	75.0%
	100	25.0%
Duration of the menstrual cycle (days):		
<21	336	84.0%
21-45	64	16.0%

Table (2): prevalence of menstrual disorders

Menstrual disorders	Frequency (N=400)	Frequency (%)
Dysmenorrhea:	368	92%
Pre-menstrual symptoms:	354	88.5%
Passage of clots:	226	56.5%
Ir-regular cycles:	166	41.5%
Abnormal duration of flow:	100	25.0%

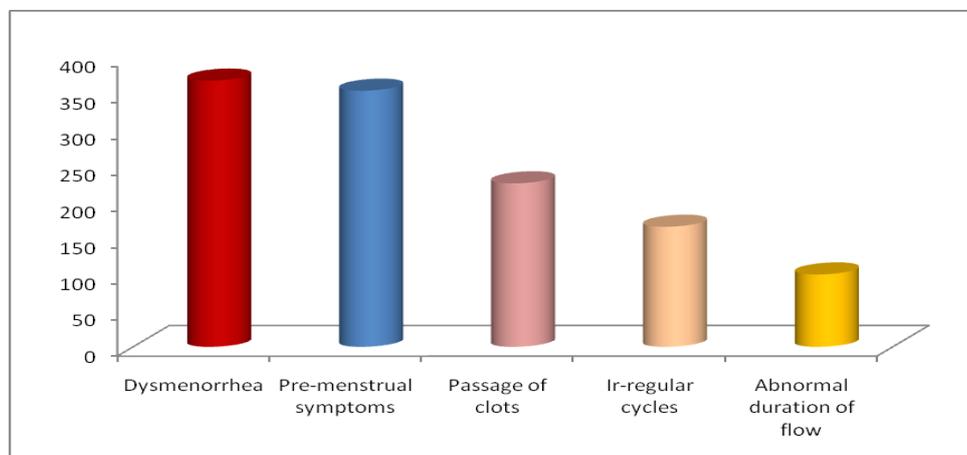


Fig. (1): prevalence of menstrual disorders

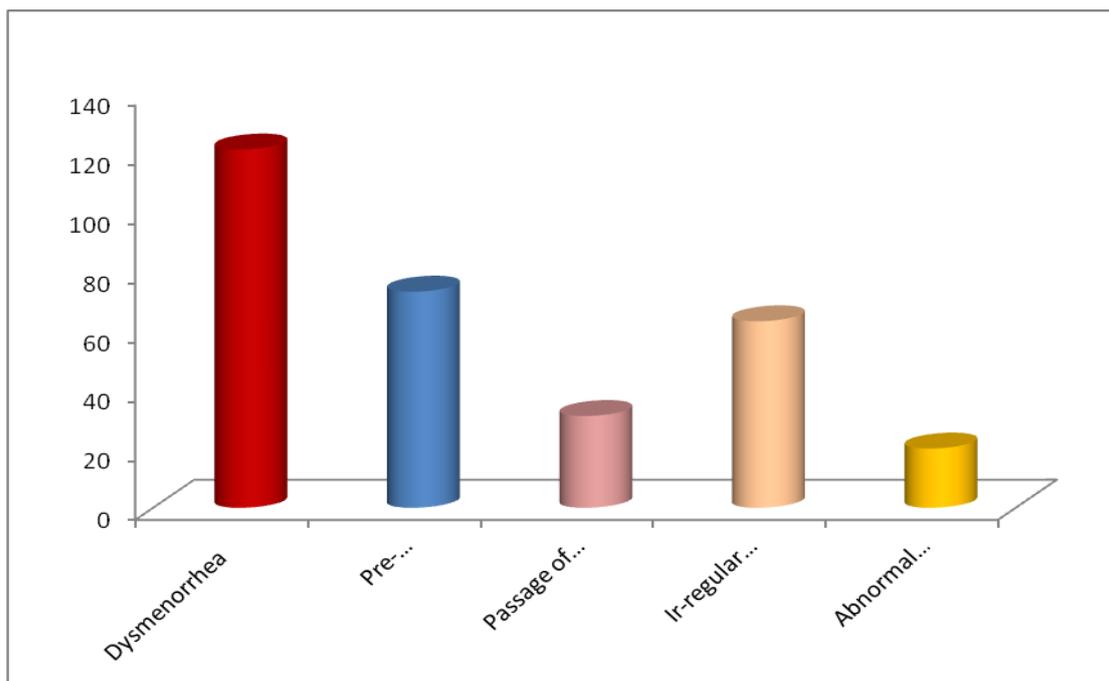


Fig. (2): Shows association of menstrual disorders to absenteeism

Table (3): Association of Menstrual disorders to absenteeism

Menstrual abnormalities	Absenteeism (n= 308)	
	Number	(%)
Dysmenorrhea	121	36.3%
Pre-menstrual symptoms	73	24.0%
Passage of clots	31	10.0%
Prolonged menstrual bleeding	63	20.0%
Scanty menstruation	20	6.5%

Table (4): Self care practice during menstruation among adolescent related to menstruation (n=400).

Self-care Practices during menstruation	Frequency	Percent
Showered (bathed) during menstruation		
Yes	274	68.0%
No	126	31.5%
Stay indoors at home		
Yes	308	77.0%
No	92	23.0%
changing of sanitary pads at night		
Yes	372	93.0%
No	28	7.0%
Use of deodorant		
Yes	280	70.0%
No	120	30.0%
Shaving the pubic hair		
Yes	358	89.5%
No	41	10.5%
Changing under wear		
Yes	396	99.0%
No	4	1.0%

Self care practice during menstruation

Table 4 shows the self care practice during menstruation: 274 (68.0%) engage in regular bathing during menstruation, while the remaining 126 (31.5%) doesn't bath. 308 (77.0%) stay indoors during menstruation while 92 (23.0%) do not stay indoors during menstruation. 372 (23.0%) changing of sanitary pads at night during menstruation whereas, 28 (7.0%) do not changing of sanitary pads at night, 208 (70.0%) uses deodorant. while, 120 (30.0%) do not use deodorants, 358 (89.5%) said yes they shave their genital area during menstruation, while 41 (10.5%) do not shave their genital areas. However, 396 (99.0%) wash their underwear while only 4 (1.0%) do not wash their under wears, during menstruation.

personal hygiene during menstruation

Table 5 shows the Usual personal hygiene during menstruation: A total of two hundred twenty four (n = 224) adolescents girls were involved in the study change their pads 3 to 4 times per day, with a mean of 4.11±0.899 during menstruation. The majority (92.0%) of girls changed their sanitary pads at night, whereas, only 38 (8.0%) do not changed their sanitary pads at night during menstruation. However, 260 (56.0%) Changed sanitary pads at university. while, 140 (35.0%) do not Changed sanitary pads at university, during menstruation.

Factors that Influence self care practices

Table 6 shows the various factors that influence adolescent self care practice; the majority of the adolescent 174 (43.5%) were be influenced by underage. while, 82 (20.5%) were be influenced by Fatigue because of menstruation. however, the remaining 156 (39.0%) said that, they have lack of knowledge about self care practices during menstruation.

Table (5): Usual personal hygiene during menstruation among adolescent related to menstruation (n=400).

Practices during menstruation	Number	Percent
Pads used per day		
1-2	12	3%
3-4	224	56%
5+	164	41%
Mean ± SD 4.11±0.899		
Changed sanitary pads at night		
Yes	368	92.0%
No	38	8.0%
Changed sanitary pads at university		
Yes	260	65.0%
No	140	35%

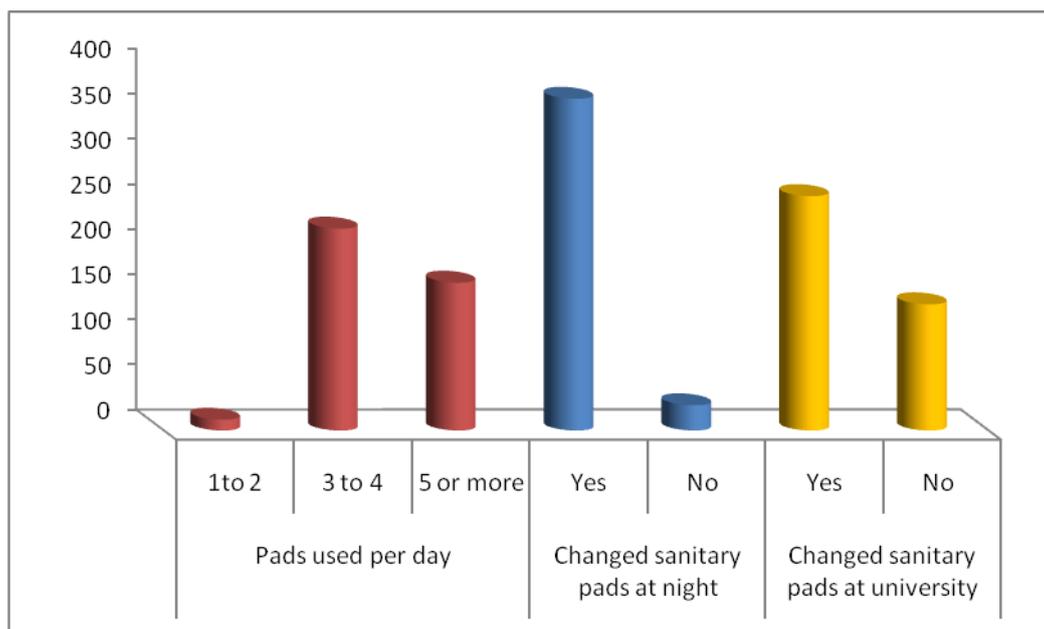


Fig. (3): Showing usual personal hygiene during menstruation among adolescent related to menstruation

Table (6): Factors that Influence self care practices.

Practices during menstruation	Number	Percent
Young age	174	43.5%
Fatigue because of menstruation	82	20.5%
Lack of self care knowledge	156	39%

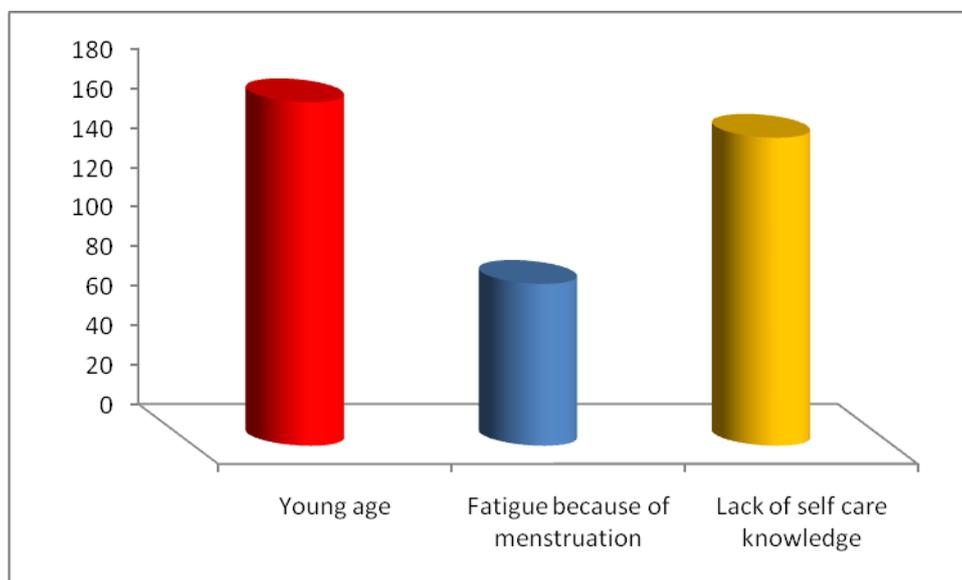


Fig. (4): Factors that Influence self care practices.

IV. Discussion:

The result from this study was drawn from adolescent females resident in Saudi Arabia, Al-Jouf university, preparatory level. It was an attempt to find the prevalence, pattern of menstrual disorders, determine the menstrual hygiene, and explore factors influence their self care practice during menstruation. The discussions of findings are:

Prevalence and menstrual disorders

Menstrual disorders of varying prevalence and severity have been reported in young post-menarche adolescent girls [18,24]. Dysmenorrhea was the commonest reported menstrual disorder in this study and this was corroborated with studies in western Nigeria and in other countries [25,26,27]. There were, however, marked differences in the percentages reported. ninety-two percent of the respondents in this study reported dysmenorrhea as the predominant menstrual disorder. This was In accordance with, Cakir et al., reported a prevalence of 85% among university students[27], while in America a prevalence range of 59 to 93% has been reported by various researchers [28,29]. Thomas et al., [9]. and Odujinrin et al., [10]. found higher prevalence of 72.3% and 71.8% among adolescents in western Nigeria. on the other hand, 36.4% reported by Sule et al., [12] in northern Nigeria and 33% by Sharma et al., in India [15].

Premenstrual symptoms was reported as the predominant menstrual disorder in the range of 67 to 85% by some studies in Ethiopia, America, Malaysia, and India [10,28,30]. Vichnin et al., found prevalence of 31% in adolescents in New York [31]. In Nigeria the reported prevalence of premenstrual disorder varied from 23% to 50%.7,26 This study found a prevalence of 88.5% in our adolescents' study. Abnormal cycle lengths that occurred in 16.0% of our respondents were slightly higher than the rate of 13.2% reported in a similar study in America but less than the range of 23% to 37.2% noted in studies in the northern Nigeria, Turkey, Malaysia, and Singapore [12,32,33,34].

School absenteeism have been attributed to menstrual disorders in post-menarche females [35,18]. In studies by Houston et al., [28] and Klein and Litt [36] in America, 21% and 23.6% of African American adolescents reported missing school as result of menstrual disorders, compared to12.3% in white students. Twenty-four percent of adolescent girls studied in Singapore by Agarwal et al., [16] and one in eight of young Hong Kong Chinese school girls by Chan et al., also reported having been absent from school due to menstrual disorders [37,38]. Cakir et al., reported a much lower rate of 4.4% among university students [27]. In this study 77.0% reported school absenteeism as result of menstrual disorders. Dysmenorrhea (36.3%) was the

commonest cause of school absenteeism when compared to other menstrual disorders. This was slightly higher than the rate of 21-24% reported among African American adolescents.

Self care practice of menstrual hygiene

The practice of healthier behavior like menstrual hygiene and self care practices during normal menstruation, menorrhoea (heavy bleeding) and dysmenorrhoea (painful bleeding) are important indicators of health and determinant of health especially during the reproductive age of a woman [20], as adoption of high quality menstrual hygiene will play an important role in prevention of reproductive tract infections (RTI) and cancer of cervix among the women population. Therefore, promoting positive attitudes towards management of menstruation and related problems among the adolescent girls is the need of the hour [21], which concurs with the results of this study. Table (4) reveals that self care practice during menstruation includes: regular bath (68.0%), stay indoors (77.0%), changing of sanitary pads at night (23.0%), use of deodorant (70.0%), shaving the genital area (89.0%), regular washing of under wears (99.0%). but however, this indicate a sub-optimal level of care during menstruation.

A similar finding was observed by Singh and Maya [20], in their study on knowledge assessment regarding puberty and menstruation among adolescent school girls in Varanasi district, India. Again, Adika et al., [39] observed a poor perception and behavior towards the changing of sanitary pads during menstruation among adolescent school going girls which is similar to the result of this study. Regardless of this findings, many of the studied females did not have appropriate knowledge about the menstrual period hygiene, and did not practice health-oriented behavior in this regard [21], This also supports our study finding.

Factors influencing practical care of menstrual hygiene:

Factors such as under age (43.5%),and (39.0%) said that, they have lack of knowledge about self care practices during menstruation while, 82 (20.5%) were be influenced by fatigue because of menstruation. These findings are in concordance with the study by Adika et al., [39] in their study on use of sanitary pad among adolescent girls in Amassoma community, Bayelsa state, Nigeria. The findings are also supported by the study of McCaleb and Cull [40] on socio-cultural influence and self care practices of middle aged adolescents. However, Ravindran [19] found that, there was a significant association between menstrual hygiene maintenance and knowledge prior to menarche, and, menstrual disorders.

Nursing implication

Nurses play a key role central to public education on health hygiene and personal development, including the maintenance of optimal menstrual hygiene and self care practices among female adolescents. They always come in contact with this vulnerable group and therefore it is necessary for them to have adequate knowledge as well as becoming role models to this delinquent group of the society. It thus becomes as a role to ensure proper education and encouragement of personal hygiene and optimal self care practices among female adolescents in our society.

In summary, our results suggest that despite, the majority use of sanitary pads, there are no adequate self care practices and menstrual hygiene among the adolescent girls. Factors such as their socioeconomic status, young age, fatigue because of menstruation and lack of self care knowledge were indicated to influence self care practice and menstrual hygiene. Our results further suggest that to promote health and avoid infections were reasons for self care practice and menstrual hygiene. Self care habits and practices have the potential to hamper the adolescent girls' reproductive development, thus highly important for their reproductive health and wellbeing. Self care practices in menstrual hygiene may help us not only to better understand self care practices, but to also find the most effective intervention among these vulnerable groups of adolescent girls and reduce their burden on menstrual hygiene.

V. Conclusion

It was concluded that, high prevalence of menstrual disorder among adolescent girls in Al Jouf University, preparatory level, Saudi Arabia. The findings indicate an average level of practice of self care among adolescent during menstruation. Factors such as young age, lack of self care knowledge known to have an effect among respondents of this study. Improvement of menstrual health will not only help in improving the academic performance of the students and their self esteem, but also prevents future problems like Polycystic Ovarian Disease, hyperlipidemia, obesity and infertility.

VI. Recommendations

1. The findings from this study made the researchers to make the following recommendations:
2. Menstrual hygiene and self care practice guide should be taught by teachers and by their mothers , and sisters to the adolescents girls needs to avoid poor health outcome due to poor self care practices.

3. Menstrual hygiene and self care practices should be included in the curriculum of secondary school training.
4. Seminars to improve adolescent menstrual hygiene and self care should be organized by teachers, should include skills to be able to pass on accurate information about menstruation, education about the selection of sanitary menstrual pads and their proper disposal, how to look after their menstrual needs when at university or away from home, and the lack of negative effects of bathing or showering, changing underwear and encouraged to ask for help and to discuss their personal care needs with their mothers, teachers and appropriate health care personnel.

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