MENSTRUAL SYNDROME: SEVERITY, FREQUENCY AND SYMPTOMATOLOGY IN ADOLESCENT GIRLS OF QUETTA, PAKISTAN

Faiza Hameed Jan¹, Zil E Huma¹, Nabeela Tariq¹ and Naheed Sajjad^{2,*}

¹Department of Zoology, Sardar Bahadur Khan Women's University, Quetta, Pakistan.

²Department of Biotechnology, Sardar Bahadur Khan Women's University, Quetta, Pakistan.

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KEYWORDS

Dysmenorrhea

Menstruation

Menarche

Nausea

Quetta

ABSTRACT

The purpose of the study was to investigate the prevalence of menstrual characteristics, its frequency, age of menarche, symptomatology and factors associated with menstrual cycle. A total of 450 respondents were studied in 5 different government girls' schools of Quetta, Pakistan. Data was collected by close-ended questionnaire. Analysis of data was carried out by statistical software SPSS version 20 and significant association between different variables was analyzed by chi-square test. Significant association was reported between food and nausea, amount of blood flow and weakness and vice versa. The study revealed that the mean duration of blood flow was 5-7 days. It has been analyzed that there is a statistically significant relationship between type of pain and amount of flow ($p < 0.05$). Among the studied group respondents, about 88.89% respondents reported dysmenorrhea. The study concludes that dysmenorrhea was prevalent and no significant association was found between dysmenorrhea and regularity of menstruation. Majority of the girls avoid physical activities like sports and exercise.

* Corresponding author

E-mail: naheedsaj@yahoo.com (Naheed Sajjad)

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1 Introduction

The transition period from childhood to adulthood is called adolescence which is characterized by marked differentiation in endocrinal, emotional and mental growth. The adolescent period is a preparatory period for girls in which they get prepared physically and psychologically for safe motherhood. Being the “direct reproducers” of future generation, the healthy adolescent girl is not only responsible for her own health but for the health of the future population too (Agarwal & Agarwal, 2010).

The distinctive feature of female puberty that signals the reproductive maturity is called menarche (El-Gilanya et al., 2005). Menstruation shows a remarkable range of variation, most of the women experience it at the age of 10-16 years. The age of menarche varies from population to population depending upon nutritional, geographical and environmental factors (Kaplowitz, 2006). Adolescent females suffer from various common problems such as premenstrual syndrome, amenorrhea and dysmenorrhea (Diaz et al., 2006). The social and educational life of 5-10% of the girls is interrupted by severe dysmenorrhea in their teens (Dawn, 1990).

According to the study conducted by Shersha et al. (1991) among 1600 women in Karachi, the prevalence of premenstrual syndrome (PMS) was 33%. Within first 2 years of the menarche; the girls face comparatively more problems than those who have crossed this duration (Ziv et al., 1999). Reproductive tract infection (RTI) is also associated with menstrual hygiene. The unclean and improperly stored napkins used during menstruation can cause problems (El-Gilanya et

al., 2005). The infection can be caused due to the use of unclean or dirty cloth napkins that result in the harboring of microorganisms in vagina. Improperly dried pads also provide favorable condition to the microbes in vaginal tract to cause infection (Paul, 2007). In India and Pakistan 98.5% girls of both urban and rural areas used old cloth material for pads (Moaweds, 2001). Different prohibitions regarding menstruation has been observed such as, entry in the holy places, taking bath, changing cloths, combing hairs and restriction on particular food such as, potato, rice, onion, sugarcane, curd, milk and lassi etc. (Kaplowitz, 2006). Due to the importance of this syndrome, a study was designed to investigate the frequency, severity, symptomology about menstrual syndrome in adolescent school girls in Quetta, Pakistan.

2 Materials and Methods

A cross-sectional study was designed to explore information from 450 randomly selected adolescent girls. The respondents ranging from 12 to 16 years age, from 5 different government schools of Quetta, Baluchistan, Pakistan were briefed about close-ended questionnaires after taking their consent. Prior to data collection, pilot study was also conducted in order to evaluate feasibility. The questionnaires comprised information regarding the menarche, dysmenorrhea, food preferences, mood fluctuations, type of napkins used, menstrual hygiene, effect of physical activities, bathing etc symptoms which were commonly faced by girls during menstruation period. The collected data was analyzed by statistical software SPSS version 20. Associations of variable factors were calculated by chi-square test.

Figure 1 Source of menstrual guidance.

Figure 2 Variety of aids used as absorbents for menstrual bleeding.

Table 1 Association between different variables analyzed by chi-square test.

Association between two variables	p-value
Type of pain and amount of blood flow	0.000 ($p < 0.05$)
Amount of blood flow and weakness	0.000 ($p < 0.05$)
Regularity of menstruation and dysmenorrhea	0.463 ($p > 0.05$)
Food and nausea	0.003 ($p < 0.05$)

3 Results and Discussion

Among the studied 450 respondents, the mean age of menarche was 12.5 years. Results of present study are in agreement with the study conducted by Dasgupta & Sarkar (2008) and reported the age of menarche was 12.8 years. Similar types of results were also reported by Khanna et al. (2005). Results of present study revealed the effect of guidance on appropriate knowledge about personal hygiene for menarche and menstruation (Figure 1), mothers were found to be the main source of guidance (55.11% cases), sisters (30.22%), and friends (12.22%) while only 2.44% get informed by relatives. The results were similar to Dasgupta & Sarkar (2008) who reported mothers to be the first informants followed by friends and relatives. Similar findings were reported by Khanna et al. (2005) in Rajasthan, India and El-Gilanya et al. (2005) in Egypt.

The results of this study suggested equal use of cloth (48%) and branded sanitary pads (48%) while the remaining 4% preferred the cotton as absorbent (Figure 2). The observations of Zegeye et al. (2009) were similar to the findings of present study where as the findings of Moaweds (2001) were contradictory to the findings of this study, these researchers reported that 98.5% of the Pakistan and Indian girls were used to wear old cloth materials as sanitary napkin for blood absorption.

Further, it was reported that severe abdomen pain was experienced by 44% girls who were having heavy menstrual flow, mild pain was experienced by 12% girls having comparatively light flow and the remaining (44%) individuals had a moderate pain and moderate blood flow. Association between type of pain and amount of flow was found significant ($p < 0.05$) (Table 1).

Current study revealed that the mean duration of blood flow in 48% cases was 5-7 days. The studies conducted by Zegeye et al. (2009) and Ali et al. (2011) found the mean duration of menstrual blood flow was 4 ± 1.2 days. Current results showed that weakness was also associated with amount of flow ($p < 0.05$) (Table 1). The study of Roberts et al. (2003) also reported heavy bleeding as cause of weakness among girls.

The outcomes of the present analysis indicate that, dysmenorrhea was prevalent in most cases (88.89%) (Figure 3). Similar results was obtained by Zegeye et al. (2009), they reported the prevalence of dysmenorrhea in 72% cases. Result suggested that 73% girls showed premenstrual symptoms. No association was found between dysmenorrhea and regularity ($p > 0.005$) (Table 1). Al-Kindi & Al-Bulushi (2011) also reported that there is no significant association between dysmenorrhea and regularity of cycle.

Figure 3 Prevalence of dysmenorrhea

Figure 4 Physical and psychological changes during menstruation.

Figure 5 Psychological effects of menstruation.

Variable physical and psychological changes were also experienced during menstruation, 76.22% of the subjects suffered physical changes such as enlargement of hips, weight gain, swelling in legs etc. and 23.78% of them underwent psychological changes like depression and anxiety (Figure 4). Similar findings were also reported by Parsons & Sammers (1978), Jarrett et al. (1995), George & Bhaduri (2002), Lee et al. (2006). These researchers suggested that physical and psychological changes during menstruation were associated with dysmenorrhea. The findings of the present study regarding psychological behavior indicated that 46.89% subjects complained depression, 8.89% anxiety and the rest of 44.22% remained normal during menstruation (Figure 5). A statistically significant association between nausea and food was observed ($p < 0.05$) (Table 1). Similarly, Wentz (1988) noted that, during menstruation dysmenorrhea was also the cause of sickness, headache, nausea, diarrhea and vomiting. Regarding the food habit during period, present survey concludes that 74% respondents prefer variety of food, vegetables and meat. Only 11% preferred to drink milk. Dasgupta & Sarkar (2008) reported that 50% girls avoid certain foods during menstruation; in this manner their study is contradictory to the findings of present study.

Although, the condition of majority of participants remained normal but due to taboos, the majority (61.11%) was hesitant to perform any physical activity, only 38.89% girls took part in activities like sports and exercise (Figure 6). Lee et al. (2006) reported that physical activity has no relationship with menstrual disorders. Similar results have been shown by Parsons & Sammers (1978).

Conclusion

It is concluded from the study that dysmenorrhea was strongly prevalent. The majority of girls avoid physical activities like sports and exercise. Significant association ($p < 0.05$) was also

Figure 6 Participation of respondents in physical activities (during menstruation).

reported between food and nausea, amount of flow and weakness, type of pain and amount of flow. The mean duration of blood flow was 5-7 days. Depression and anxiety were also found among the girls who remained psychologically disturbed during this period.

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Conflict of Interest

Authors would hereby like to declare that there is no conflict of interests that could possibly arise.

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