Investigating the Efficacy of Home Remedies for Alleviating Dysmenorrhea among Adolescent Girls in Selected Secondary Schools of Kolhapur, Banke, Nepal

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Abstract

Adolescence is a time of transition between childhood and maturity that is marked by fast changes in the body, mind, emotions, and endocrine system as well as a change from total reliance to some degree of autonomy. For women in particular, this time is crucial since it includes the mental and physical preparation required for a healthy pregnancy and childbirth. Throughout a woman's reproductive years, menstruation is a normal, periodic process that causes pain and discomfort to varied degrees in many people. Approximately 50% of women have dysmenorrhea, a name originating from the Greek words "DYS" (difficulty/painful/abnormal), "MENO" (month), and "RRHEA" (flow). Over 50% of teenagers experience this disorder, and 10% experience severe symptoms. The purpose of this cross-sectional study was to evaluate teenage girls' awareness of at-home treatments for dysmenorrhea. The research was conducted at Trivhuvan Secondary High School in Kohalpur, Banke, among 79 secondary level students (Class 10). A non-probability sampling method was employed to select the participants. The researcher developed a semi-structured, self-administered questionnaire based on relevant literature and books. The findings revealed that more than half of the respondents (53 or 67.1%) possessed moderate knowledge, 25 respondents (31.6%) had an adequate level of knowledge, and a minority (1 or 1.3%) exhibited inadequate knowledge regarding home remedies for relieving dysmenorrhea.

Keywords: Adolescent's girls, dysmenorrhea, home remedies, knowledge.

Introduction

The hallmark of dysmenorrhea is excruciating lower abdominal cramps that usually occur right before or during menstruation. Other symptoms that are frequently present include dizziness, exhaustion, perspiration, headache, backache, nausea, vomiting, and diarrhea. There are two forms of dysmenorrhea: primary and secondary. Menstrual discomfort in people with normal pelvic anatomy, known as primary dysmenorrhea, usually starts in adolescence. It only occurs during ovulatory cycles and frequently manifests itself six to twelve months following menarche in the absence of underlying disease. Conversely, years after menarche, secondary dysmenorrhea can appear and is linked to menstrual discomfort as a result of underlying pathological disorders (Gebeyehu et al., 2017).

Home remedies may be classified into two categories: widely available non-food home goods and food products. Home remedies are substances used to cure common symptoms and diseases. Whether they are food-based or not, these treatments are frequently used for purposes other than those of health. Home treatments that don't include food have been around for decades

and involve a range of goods and agents that are readily available to the public (Quandt et al., 2015).

Some factors that increase the likelihood of dysmenorrhea are age, stress, menarche age, obesity, a positive family history, irregular or protracted menstrual cycles, and excessive menstrual flow. Lifestyle decisions including drinking alcohol, smoking, skipping breakfast, and consuming snacks may also have an impact on a person's risk of developing dysmenorrhea (Abubakar et al., 2020).

Dysmenorrhea causes a great deal of disruption to teenage girls' daily routines; this includes extended bed rest, missing school activities, sleep disturbances, decreased appetite, inability to attend classes, and absence from job (Gupta & Chauhan, 2021). Research suggests that prostaglandins are important in the pathophysiology of primary dysmenorrhea, even if the exact mechanism behind the condition is yet unknown. The uterine lining sheds and contractions occur as a result of the unfertilized ovum lowering progesterone levels. More prostaglandin is produced as a result of this drop in progesterone levels. According to Abubakar et al. (2020), the overproduction of prostaglandins results in myometrial contractions and vasoconstriction, which lower uterine blood flow and discomfort.

Adolescent females with primary dysmenorrhea frequently experience menstruation problems that have a substantial influence on their everyday and academic lives (Gupta & Chauhan, 2021). About 60–90% of teenage females are affected by it, and it can cause a variety of symptoms, such as dull, aching discomfort or severe, intermittent pain that is usually restricted to the lower abdomen or pelvis. In addition, headache, nausea, vomiting, diarrhea, constipation, fainting, and premenstrual symptoms including sensitive breasts and an enlarged belly that may last the whole menstrual cycle are linked to dysmenorrhea. The majority of women have discomfort that starts just before or during their menstrual cycle, peaks after 24 hours, and passes after two to three days (Gupta & Chauhan, 2021).

Objectives of the Study

- To determine how well-versed teenage females are in using natural therapies to treat dysmenorrhea.
- To ascertain how knowledgeable Tribhuvan Higher Secondary School 10th graders are about at-home treatments for dysmenorrhea.
- To investigate the relationship between the participants' demographics and their familiarity with DIY dysmenorrhea therapies.

Research Questions

- How much do the teenage females at Tribhuvan Higher Secondary School know about at-home treatments for dysmenorrhea?
- What percentage of students know enough, too little, and not enough about using natural therapies to treat dysmenorrhea?
- Is there a noteworthy correlation between the students' demographic attributes and their understanding of do-it-yourself therapies for dysmenorrhea?

Materials and Methods

This descriptive cross-sectional study was carried out at Tribhuvan Higher Secondary School in Kohalpur, Banke, over a three-month period from January 2024 to April 2024. The study aimed to evaluate the knowledge of home remedies for dysmenorrhea relief among adolescent girls in the 10th standard. The entire population of 10th standard students, comprising 79 individuals, was included in the study using a total enumerative sampling method.

The study tool was a semi-structured, self-administered questionnaire with two sections: the first section collected academic and demographic data, and the second section investigated the relationship between the students' knowledge of dysmenorrhea home remedies and different demographic factors.

Approval for data collection was obtained from the principal of Tribhuvan Higher Secondary School. Data collection was conducted from January 2nd to January 15th, 2024. The collected data were analyzed using SPSS Version 29. To assess the association between the knowledge of home remedies for dysmenorrhea and selected demographic variables, the chi-square test was employed.

Limitations of the Study

1. The study is limited to a single school, which may not represent the broader population of adolescent girls.
2. The sample size is relatively small, comprising only 79 students, which may affect the generalizability of the findings.
3. The study relies on self-reported data, which may be subject to response bias.
4. The cross-sectional design of the study does not allow for the determination of causality.

Ethical Considerations

The principal of Tribhuvan Higher Secondary School granted written consent. All participants also gave their informed permission, guaranteeing that they understood the goal of the study and that they may leave at any moment without facing any repercussions. Participants' confidentiality and identities were scrupulously preserved. No personal information was gathered, and data was safely kept to avoid unwanted access. Entire voluntary participation was required for the study. At any point throughout the research, students might choose not to participate or to leave.

Results and Discussion

Table 1

Frequency and Percentage Distribution of Respondents in Terms of Selected Socio-Demographic Variables

n=79

Variables=79	Frequency
Age	
10 to 12	9(11.4%)
13 to 15	43(54.4%)
15 to17	27(34.2%)
Age of 1st Mensturation	
10 to 12	5(6.32%)
13 to 15	38(48.1%)
15 to17	36(45.56%)
Menstrual flow	
Normal	63(79.7%)
Absence of bleeding	0
Mild bleeding	10(7.6%)
Severe bleeding	5(12.7%)
Duration of menstruation	
<3 days	23(29.1%)
3-5 days	43(54.4%)
> 5 days	13(16.5%)
Pattern of menstruation	
Regular	63(79.7%)
Irregular	16(20.3%)
Family history of dysmenorrhea	
Yes	36(45.6%)
No	13(54.4%)

Table 1 shows that socio demographic characteristics of the respondents in which least of the respondents   9 (11.4%) belongs to age 17. Most of the respondent 43(54.4%) belongs to age 18. Above half of the respondent 41(51.9%) belongs to age of 1St mensturation (10-13) years. 38(48.1%) belongs to age of 1st mensturation (14-16) years. Most of the respondents have normal menstrual flow 63(79.7%) and non of the respondents have absence of bleeding. Above half of the respondents have 3-5 days' duration of menstruation 43(54.4%) and least of the respondents have >5 days' duration of menstruation 13(16.5%). Majority of respondents have regular pattern of menstruation 63(79.7%) and least of the respondents have irregular pattern of menstruation 16(20.3%). t Majority of the respondents 69(87.3%) belongs to < 1 months and least of the respondents 1 (1.3%) belongs to > 3 months' interval between menstrual cycle. A respondent

43(54.4%) have not family history of dysmenorrhea and the respondents 36(45.6%) have family history of dysmenorrhea.

Table 2

Frequency and Percentage Distribution of Level of Knowledge Regarding Home Remedies to Relieve Dysmenorrhea among Adolescent's Girls.

n=79

Level of knowledge	Range of score	Frequency (%)	mean score
Inadequate knowledge	0-5(1-34%)	1 (1.3%)	10.1373 ±1.80320
Moderately adequate knowledge	5-11(34-68%)	53(67.1%)	
Adequate knowledge	11-17(68-100%)	25(31.6%)	

Table 2 shows that level of knowledge regarding home remedies to relieve dysmenorrhea among adolescents at tribhuvan Secondary School kohalpur, Banke. Among total 79 respondents most of the respondents 53(67.1%) had moderately adequate level of knowledge and respondents 25(31.6%) had adequate level of knowledge and least of the respondents 1(1.3%) had inadequate level of knowlede.

Table 3

Knowledge Association with their Selected Demographic Variables.   n=79

S.N.	Personal variables	Level of knowledge			Chi square(X^2)	p value
1	**Age**	Inadequate	Adequate	Moderate	1.398	0.845
a.	17	0	3	6		
b.	18	1	12	30		
c.	19	0	10	17		
2	**Age of 1st menstruation**					
a.	10 to 13	0	17	24	4.604	0.1
b.	14 to 16	1	18	29		
3	**Menstrual flow**					
a.	Normal	0	16	47	19.573	0.001
b.	Absence of bleeding	0	0	0		
c.	Mild bleeding	1	4	1		
d.	Severe bleeding	0	5	5		
4	**Duration of menstruation**				2.724	0.605

a.	< 3 days	1	14	8		
b.	3-5 days	0	30	13		
c.	> 5 days	0	9	4		
5	**Pattern of menstruation**	0	46	17	7.702	0.021
a.	Regular					
a.	<1 months	0	48	21	9.504	0.05
b.	2-3 months	1	4	4		
c.	> 3 months	0	1	0		
7	**Family history dysmenorrhea**				0.898	0.638
a.	Yes	1	29	13		
b.	No	0	24	12		

Significant at p value ≤ 0.05, NS= Non Significant, S= Significant.

Table 3 demonstrates how the chi square test is used to examine the relationship between knowledge and sociodemographic factors. While no other variables show a significant relationship between level of knowledge and demographic variables like age, age of first menstruation, duration of menstruation, and family history of dysmenorrhea, there was a significant association between level of knowledge and menstrual flow, pattern of mensuration, and interval between menstrual cycles.

Discussion

This study set out to evaluate the teenage girls at Tribhuvan Secondary School in Kohalpur, Banke, on their awareness of at-home treatments for alleviating dysmenorrhea. There were 79 participants in the study, and the results are compared with previous research from related studies to examine the implications.

The study revealed that a minority of respondents, 9 (11.4%), were 17 years old, while the majority, 43 (54.4%), were 18 years old. Regarding the age of first menstruation, 41 (51.9%) of the respondents experienced menarche between the ages of 10-13, and 38 (48.1%) experienced menarche between the ages of 14-16. The majority of the participants reported having a normal menstrual flow, 63 (79.7%), with no cases of amenorrhea. More than half of the respondents, 43 (54.4%), had a menstrual duration of 3-5 days, whereas a smaller proportion, 13 (16.5%), reported menstrual durations exceeding 5 days. Most participants, 63 (79.7%), reported having regular menstrual cycles, while a minority, 16 (20.3%), experienced irregular cycles.

Additionally, a significant majority, 69 (87.3%), reported menstrual cycle intervals of less than one month, with only one respondent (1.3%) reporting intervals of more than three months. Furthermore, 43 (54.4%) of the respondents indicated no family history of dysmenorrhea, whereas 36 (45.6%) reported a family history of the condition.

These findings align with a descriptive study conducted among 52 adolescent girls at SRM College of Nursing, which assessed knowledge regarding home remedies for dysmenorrhea. In that study, 20 (38.4%) of the respondents reported experiencing menarche between the ages of 11-14 years. A small proportion, 5 (9.6%), had menstrual durations exceeding 5 days, while almost half, 24 (46.2%), had menstrual durations of less than 3 days. Furthermore, 18 (34.6%) of the respondents reported menstrual cycle intervals of less than one month, while a smaller group, 14 (26.9%), reported intervals exceeding two months (Abirami et al., 2019). The consistency between these studies underscores the commonality of dysmenorrhea among adolescent girls and highlights the importance of understanding home remedies to manage this condition effectively.

The current study demonstrates that, because p values are less than 0.05, the chi-square test is used to evaluate the relationship between knowledge and sociodemographic factors. While no other variables show a significant relationship between level of knowledge and demographic variables like age, age of first menstruation, duration of menstruation, and family history of dysmenorrhea, there was a significant association between level of knowledge and menstrual flow, pattern of mensuration, and interval between menstrual cycles.In a similar vein, 60 teenage girls participated in a descriptive research to determine the knowledge of teenage girls in certain Ludhiana, Punjab, schools on at-home remedies for dysmenorrhea (David, 2014). According to the study, factors including age, class, place of residence, menarche age, length of menstrual cycle, and length of menstruation period were found to be non-significant, while factors like religion, parents' educational attainment, menstrual flow, and information source were found to be significant.

Conclusion

The study's conclusions show that 53 respondents, or 67.1%, had an average to above average degree of knowledge about using natural therapies to treat dysmenorrhea. Of the respondents, 25 (31.6%) showed a sufficient level of knowledge, while just 1 (1.3%) showed an inadequate level of knowledge. This is a significant minority. The degree of knowledge and certain sociodemographic factors, including menstrual flow, menstrual pattern, and the time between menstrual cycles, were significantly correlated. The degree of knowledge and other demographic factors, such as age, the age at first menstruation, the length of the menstrual cycle, and a family history of dysmenorrhea, did not, however, appear to be significantly correlated. These results indicate that a sizable percentage of respondents had a moderate grasp of using at-home treatments to relieve dysmenorrhea. This emphasizes the necessity of focused educational initiatives to increase awareness and strengthen the treatment of teenage girls' dysmenorrhea.

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