

# Assessing Knowledge, Attitudes, and Behavior of Adolescent Girls in Suburban Districts of Tehran About Dysmenorrhea and Menstrual Hygiene

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## Abstract

The aim of this study was to assess the level of knowledge, attitudes and health-taking behavior of female students ages 15-18 years old in regard to dysmenorrhea and menstrual hygiene in suburban districts of Tehran, the capital of Iran. The study applied a descriptive, cross-sectional method, in which 250 students were selected at random, using a cluster random sampling method. The data was collected by applying a 44-item questionnaire. The reliability of the questionnaire was checked by the Chronbach-Alpha method, showing a correlation of 90 percent. Seventy-seven percent of the subjects claimed that they had enough knowledge about dysmenorrhea, from which only 32% practiced the personal health taking behavior, such as taking a bath and using hygienic materials. About 33% of the students avoided any physical activity or even mild exercise during menstrual period. Over 67% of the girls reported to take palliative medicine for their menstrual pain without prescription by a doctor. Fifteen percent of them stated that dysmenorrhea has interfered with their daily life activities and caused them to be absent from school between one to seven days, similar to other relevant studies. The prevalence of dysmenorrhea in this study was 71%. The main point achieved in this study was the necessity of educating female students about the menstrual period health-taking behaviors, including: appropriate nutrition, exercise and physical activity, personal hygiene, and appropriate use of medication based on physician's prescription.

**Key Words:** Dysmenorrhea, Menstrual Period, Menstrual Hygiene, Female Students, Tehran, Iran.

## Introduction

This article begins with the assumption that women require special care, especially regarding medical and psychological attention, to perform the important tasks<sup>(1,2)</sup> that they have been engaged in for years, including work in a variety of areas such as management, medicine, industry, etc. This assumption is based on medical evidence regarding the menstrual period and its affects on women.

The menstrual period is a natural phenomenon that occurs throughout the reproductive years of every woman<sup>(1,3)</sup>. Most females experience some degree of pain and discomfort in their menstruation period (dysmenorrhea)<sup>(3,4)</sup>, which could have important impacts on their daily activities, and disturb their productivity at home or at their work place<sup>(5,6)</sup>. In these instances, they should consult a doctor to relieve their pain and other relevant symptoms of dysmenorrhea<sup>(3,5)</sup>. By this definition, dysmenorrhea is a painful period or menstruation cramps, which may be accompanied by some other symptoms and complications such as nausea, vomiting, diarrhea, headache, weakness, and/or fainting and is reported as the most common reason for females to visit a doctor in gynecology centers<sup>(2,7,8,9,10,11)</sup>. There are probably few women who can truthfully claim they have never had dysmenorrhea, and a majority of them are thought to experience some degree of menstruation cramping<sup>(1,5,12)</sup>. According to some international reports, the

prevalence of dysmenorrhea is very high, and at least 50 percent of women experience this problem throughout their reproductive years<sup>(3,13,14)</sup>. This problem not only causes fear in approximately one-fifth of the female population, but also causes many social, physical, psychological, and economic problems for women around the world<sup>(14,15)</sup>. The results of recent studies showed that nearly ten percent of females with dysmenorrhea experienced an absence rate of 1 to 3 days per month from work or were unable to do their regular/daily tasks due to their severe pain<sup>(8,15)</sup>. It has been also shown that dysmenorrhea is considered as the main cause of absence from school among young girl students<sup>(6,14)</sup>.

In Iranian culture on the other hand, the subject of menstruation and puberty hygiene is rarely discussed at home as well as at schools in most parts of country, especially in the regions the current study was conducted. This problem is observed particularly in more traditional and poorly educated families, which could be mainly due to some cultural restrictions preventing the flow of correct and sufficient information given to youngsters. The combination of Eastern traditional culture and Islamic rules has had a strong impact on the restriction of discussing sex education and related issues for youngsters via schools, mass media, and families, especially in rural areas of Iran. This has prevented the flow of accurate and sufficient information about puberty hygiene resulting in some incorrect perceptions and beliefs about dysmenorrhea and menstruation hygiene among many young girls in this country. The regions in which this study was conducted include local people as well as immigrants from small cities around the country, where such restrictions are strongly observed in many aspects of their lives, including their level of education, health status, and well being.

Although more than on third of the Iranian population consists of females under the age of 25, in which the issue of menstrual hygiene could be very important in their health, this subject has not been given enough priority for investigation resulting in only a few studies focused on this issue so far. The aim of this study was to assess the knowledge, attitudes and behavior pattern of young female students between the ages of 15 to 18 years old in suburban districts of Tehran about dysmenorrhea and menstruation hygiene.

## **Methods and Materials**

This was a cross sectional (descriptive/analytical) study. The samples of the study included 250 volunteer girl students selected at random from 20 high schools in suburban districts of the city of Tehran, using a cluster random sampling method. The study was coordinated with the district schools' top officials for data collection. All of the questionnaires were distributed and collected on the same day trying to maintain the confidentiality of the collected data. A questionnaire with 44 items was designed by the authors and was initially pilot tested on 35 students with the similar characteristics of the main study subjects for construct and content validity. To develop the main questionnaire, the concepts of Fishbien and Ajzen<sup>(16)</sup> were utilized to come up with the salient beliefs of youngsters regarding menstruation hygiene. The reliability of the questionnaire was determined by Cornbach-Alpha, showing a correlation of 90 percent.

Although this study was conducted on a small portion of the population of adolescent girls in Iran, which limits the generalization of the results to a larger population, the findings of this study could help school officials to develop appropriate curricula to educate young girls regarding this issue.

## **Results and Discussion**

In this study, dysmenorrhea was reported by 178 (71%) of students. This result is similar to other relevant studies: Recent surveys worldwide reported that between 50 to 70 percent of young girls experience dysmenorrhea each year<sup>(17,18,19,20)</sup>. Seventy-seven percent of subjects (192 students) claimed to have some information about the menstruation period, from which 75% (144 students) received this information from their relatives such as mother, sister, as well as their friends. Regardless of this finding, 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. This means that their previous information was not enough to guarantee the practice of healthy behavior. For instance, out of 250 students, only 8 of them (3.2%) believed that some diets are effective to decrease the pain of menstruation period, while 87 girls (35%) did not believe so, 110 students (44%) did not have any idea in this regard (have chosen the answer of “don’t know/ have no idea” for this question), and 45 students (17.8%) did not respond to this question. Most of the students in the youngest group (15-16 years old) were not aware of the role of nutrition in decreasing the pain of their menstruation period (figure 1). A significant difference between students in different age group was identified regarding the effectiveness of appropriate diet on menstruation pain ( $P<.05$ ). Since appropriate diet such as fruits, vegetables and corns, along with avoiding too much salt and sugar are useful in pain reduction in menstrual period<sup>(10,15,17)</sup>, the necessity of educating girls about appropriate nutrition and diet is sensible.

While most of the students in all three groups believed in the effectiveness of personal hygiene practices on reduction of menstruation pain (shown in Figure 2), only 79 girls (32%) said that they take a bath on the first days of their menstrual period. Furthermore, 162 girls (65%) reported not taking a bath at the beginning days of their period, from which, 85 girls (51.5%) reported not taking a bath even after eight days from the beginning of their menstrual period. No significant difference was found between the three age groups in this regard. These unhealthy behaviors, along with their erroneous perceptions and attitudes about the menstrual period, could increase their chances of getting certain infections, as well as discomforts of secondary dysmenorrhea, which were also shown by other recent studies<sup>(3,4,18)</sup>. These results indicate lack of sufficient information among the subjects of this study, and that health education using special methods should be developed to empower them to shift their knowledge to appropriate health-taking behaviors<sup>(19,20,21)</sup>. For instance, educating young girls about personal health related behaviors and practice, especially taking a bath with warm water in the very early days of menstrual period, would not only cause mental and social sedation, but also could be effective in reducing such problems<sup>(13,21)</sup>.

The results of this study also revealed that, on average 67% of students with dysmenorrhea self-medicated with over-the-counter preparations and only 18% consulted healthcare providers. As it is shown in figure 3, there was no significant difference among different age groups in this regard. It seems the subjects of this study did not pay any attention to the side effects of drugs. Therefore, educating young girls at schools about consulting a doctor for their menstrual period problems, will not only cause the likelihood of pain relief, but also prevent them from the possibility of side effect of drugs they may take.

Most of the subjects in this study (66%) did not believe in the effectiveness of physical activities on their pain relief, and about 33% of students even avoided any kind of physical activities during their menstrual period. The results in figure 4 indicate the similarity of the students’ attitudes in different age groups towards the effectiveness of physical activities on menstruation pain relief. Meanwhile, other studies have shown that physical activities, especially mild exercise, could cause pain relief in most cases<sup>(3,4,12)</sup>. Therefore, educating young girls about the positive consequences of physical activities, even during their menstrual periods, could be useful for the formation of their healthy lifestyle.

In this study, 38 girls (15%) said that menstrual pain caused them to be absent from school and other activities between 1 to 7 days in the past school year. In addition, out of 178 students who experienced dysmenorrhea, 49% indicated that they become reclusive, 52.5% suffered from nervousness, and 52% reported being shy during their menstrual period. These findings may be linked to the above-mentioned cultural and religious restrictions, particularly those that restrict discussion of puberty related issues, including the menstrual period. In other studies around the world, it has been reported that dysmenorrhea is the leading cause of absenteeism of women from work, school, and other activities and between 10% to 18% of young girls believed that it also causes daily life dysfunction<sup>(6,8,11,16,17,18)</sup>. These results indicate the necessity of educating female students about psychological problems associated with their menstrual period, which could be cured by visiting a health care provider in an appropriate time.

The vast majority of students (98.5%) indicated that young girls should receive appropriate and sufficient information about menstruation and associated hygienic practices, and 61% of them identified their mothers as the best source for such information. As traditionally, young girls usually propound their emotional and psychological problems with their mothers, one of the most useful educational methods for young girls could be the improvement of their mothers' knowledge base, as well as, correcting their false attitudes and beliefs in this regard. On the other hand, the results of the recent studies<sup>(4,6,7,14,21)</sup>, showed the effectiveness of educating female students about these subjects at schools, as many young girls also identified their peers as the best source for sharing, and talking about their problems. Moreover, students spend most of their daily time at schools, and they are at appropriate ages to receive correct information, and to practice health-taking behaviors. Thus, the conclusion that could be drawn from this study is the necessity of educating young girls about sufficient and correct nutrition, appropriate diet, personal hygienic observance, physical activity, exercise, and taking medication under a physician's supervision during their menstrual period. Furthermore, as it was reported by other studies<sup>(3,6,7,9,11)</sup>, to decrease the severity of menstrual pain and to reduce the rate of absence from school, as well as to prevent the possibility of getting secondary dysmenorrhea, educating young girls in schools could be considered the most effective, most efficient, and most time-saving method. Further studies may prove this prediction.

## **Conclusion**

Due to some cultural and religion restrictions, many young girls in this country lack appropriate and sufficient information regarding menstrual hygiene, causing incorrect and unhealthy behavior during their menstrual period. This burden, unfortunately, has not been taken seriously in terms of its social or hygienic aspects, leading to almost very few local articles found on this subject. This pronounced defect resulted in design and implementation of this study to investigate the knowledge, attitude and behavior of a small portion of Iranian adolescent girls about menstrual hygiene. The findings of this study indicate that having knowledge by itself does not guarantee health conscious behavior. That is, beliefs and attitudinal changes are necessary to have optimal behavior and to promote healthy lifestyles. To develop educational curricula for young girls, health education professionals should recognize the association between a person's beliefs and attitudes, and her behavior modification. Besides, they also need to consider social, environmental, and cultural factors affecting adolescents' behavior, as indicated by other studies<sup>(6,7,11,13)</sup>. By assessing these factors, health educators would be able to come up with appropriate methods and strategies to empower young girls by necessary life skills that would influence adolescents' healthy life styles.

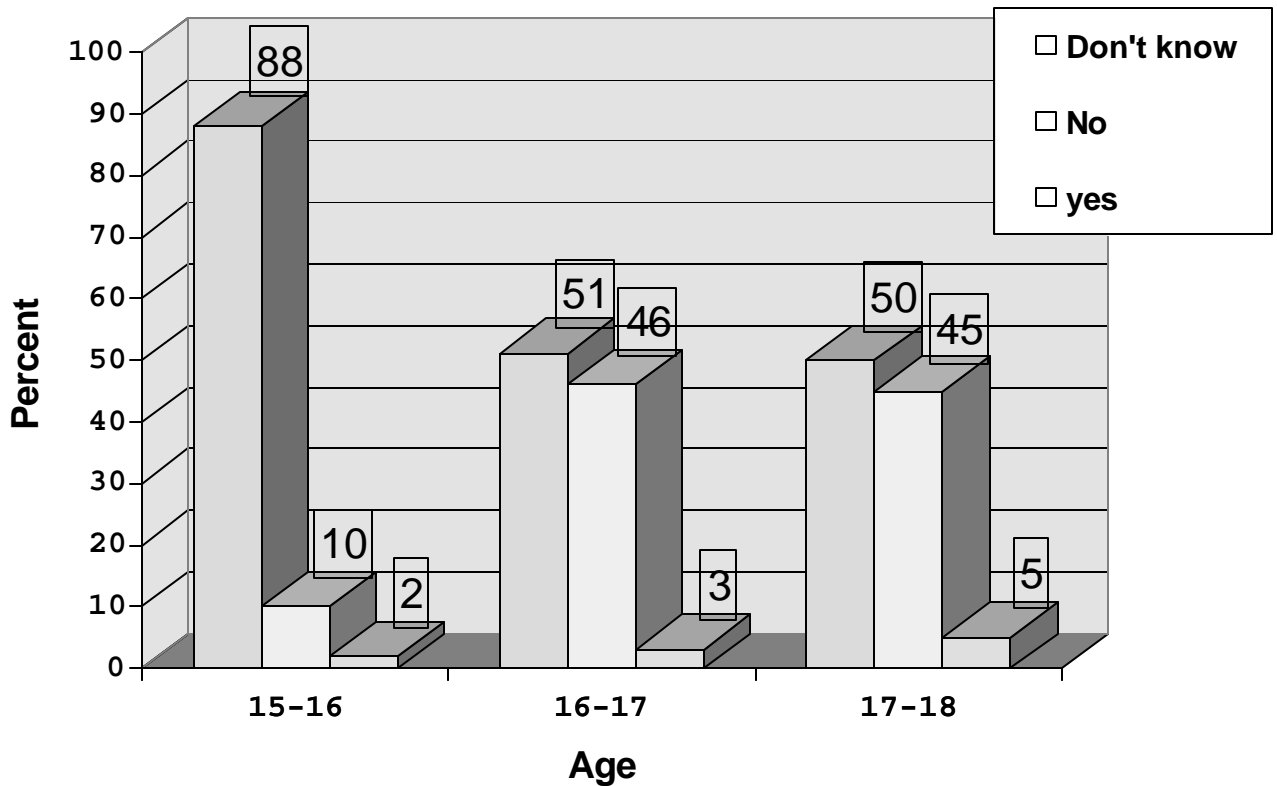
The results of this study indicate a need for development of a comprehensive school health education program with strong family planning and puberty education components. In addition, at the community level, the mothers of young girls should be educated with appropriate and sufficient puberty hygiene, and be empowered with necessary skills to communicate with and transfer the obtained information to their children. Based on the limitations of this study regarding the selected subjects, additional studies are needed with a wider geographical scope and larger samples including young girls and their mothers to come up with more sufficient, and generalized results.

## References and Notes

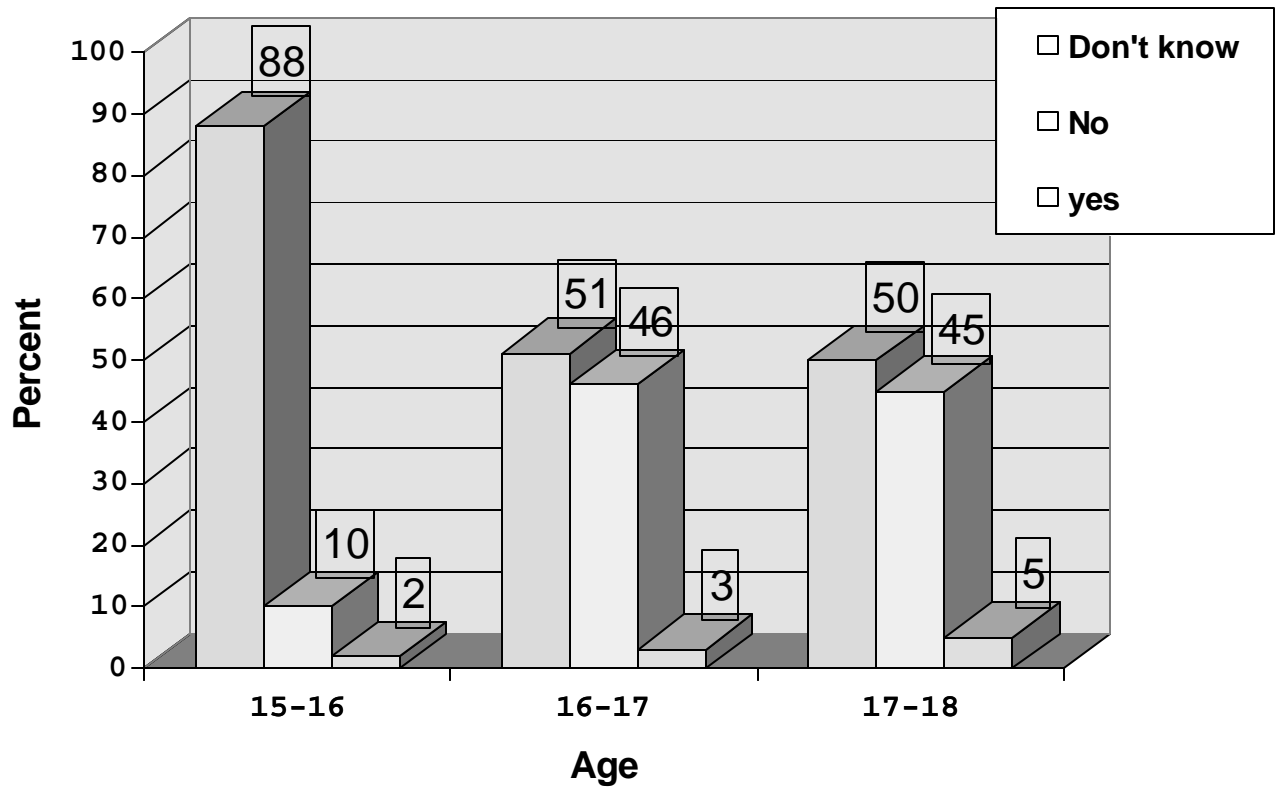
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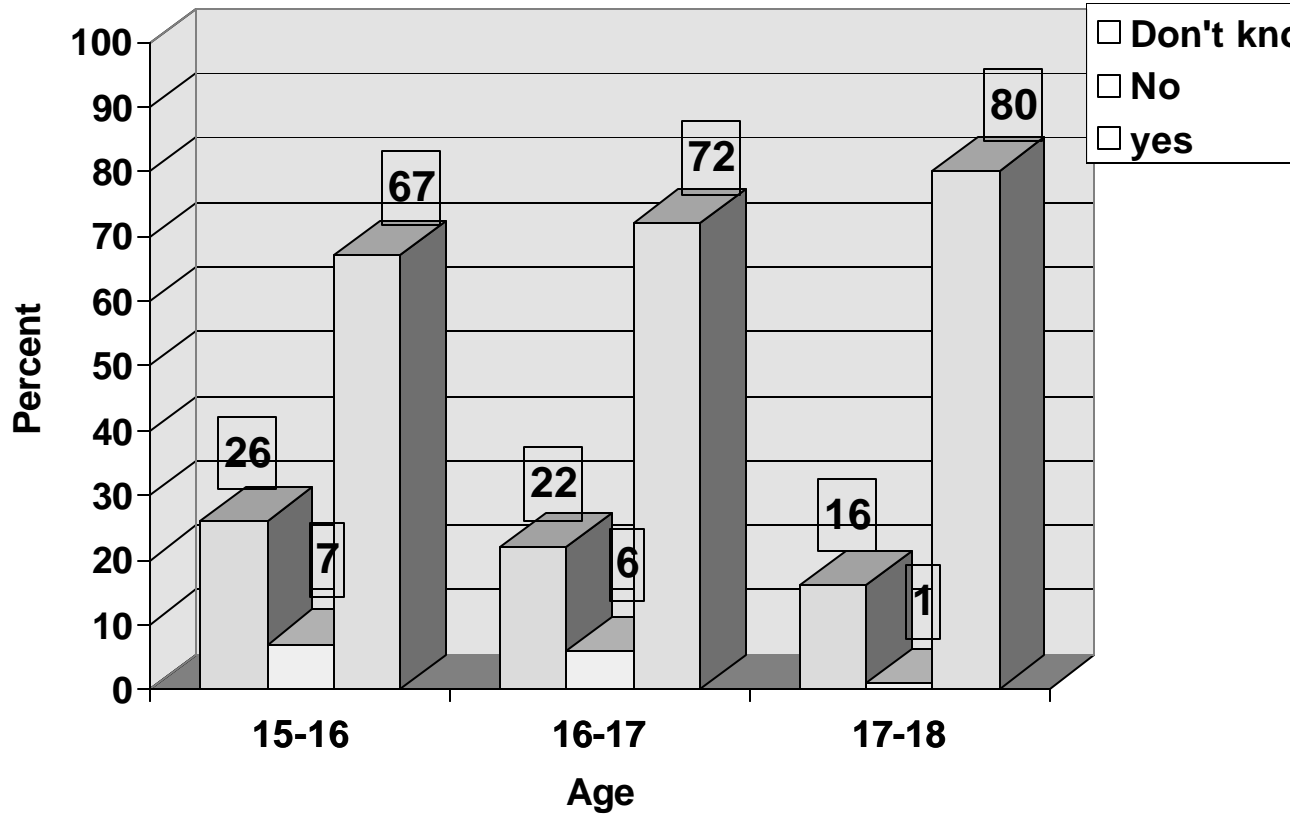
**Figure 1: Role of Nutritious Diet in Reduction of Menstruation Pain**



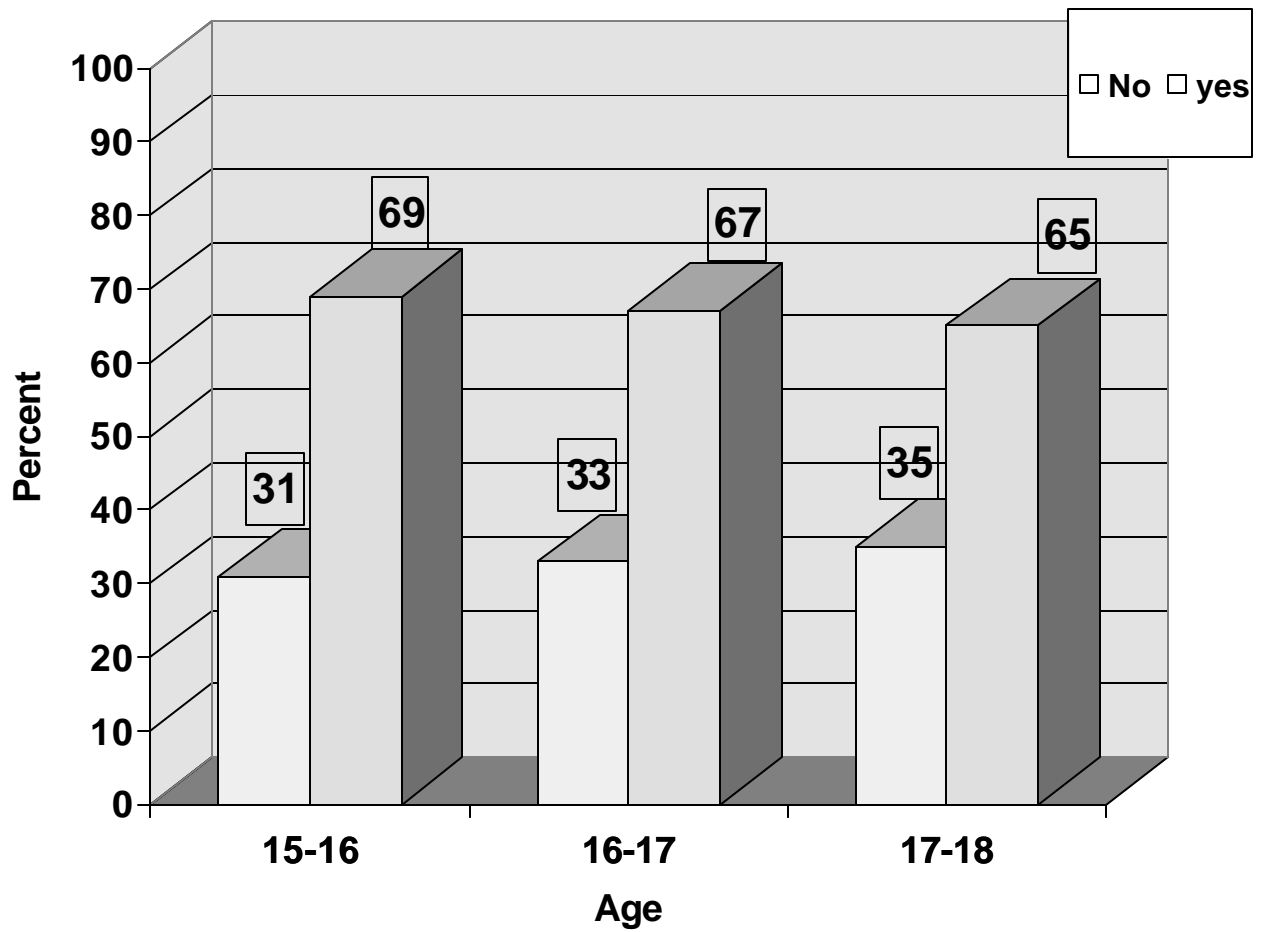
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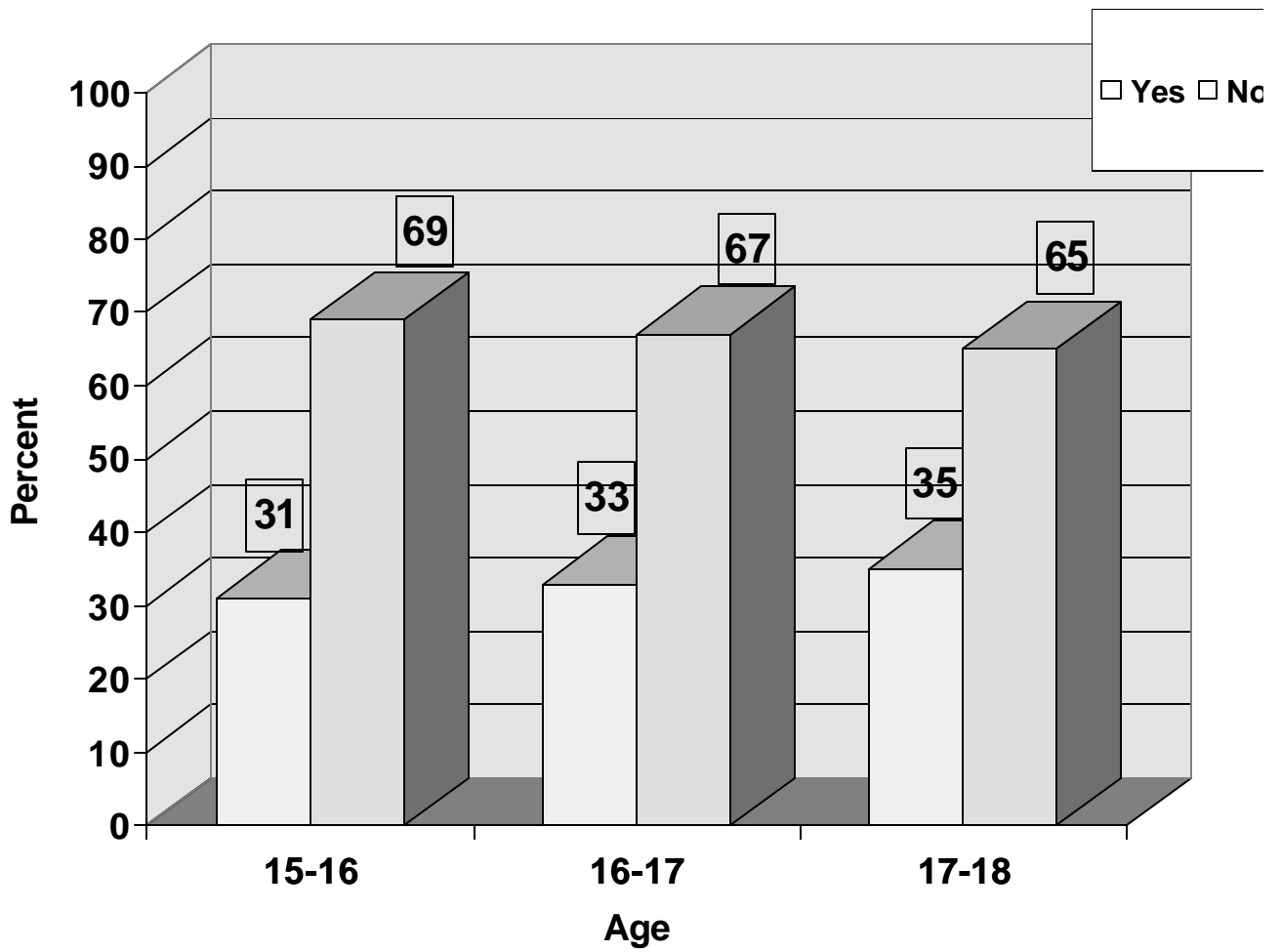
**Figure 2: Role of Personal Hygiene Practices in Reduction of Menstruation Pain**



**Figure 3: Self Taking Medication for Reduction of Menstruation Pain**



**Figure 4: Role of Physical Activity in Reduction of Menstruation Pain**



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