



EFFECTIVENESS OF DISTRACTION TECHNIQUES WATCHING MOVIES ON MENSTRUAL PAIN LEVELS OF ADOLESCENT GIRLS

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ABSTRACT

Dysmenorrhea is not merely a common gynecological issue but a significant health concern that can lead to psychological distress, impaired daily functioning, and increased health risks. Prevalence dysmenorrhea in Pekanbaru, with rates reaching as high as 94.4% among adolescent girls. Distraction techniques involving movie-watching have demonstrated significant potential in reducing pain. The purpose of this study was to determine the effectiveness of distraction techniques watching movies on the level of menstrual pain in adolescents girl. This research is a quantitative study using a quasi-experimental approach with a one group pre and post test research design. The sample in this study amounted to 30 respondent with purposive sampling technique. The implementation. The implementation of this study was carried out by giving a pre-test first, then proceeding with the intervention of watching a movie for 120 minutes, then giving a post-test. from the results of the Paired sample T test analysis test, the P value = 0.000, where the Pvalue is smaller than the Apha value (0.05). It can be concluded that distraction techniques watching movies is effective in reducing menstrual pain in adolescent girl at Public High School 14 Pekanbaru.

Keywords: adolescent girls; distraction techniques; menstrual pain; watching; movie

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INTRODUCTION

Dysmenorrhea, characterized by painful menstrual cramps, is a prevalent condition affecting women worldwide, with its prevalence varying significantly across different regions and populations. Studies indicate that the global prevalence of dysmenorrhea ranges from approximately 16% to 94%, with many studies reporting rates above 50% (Rakhshae, 2014) in (Alamri, 2023). The variability in prevalence can be attributed to factors such as cultural differences, lifestyle, and the specific populations studied. Based on the above background, researchers are interested in developing nursing measures to reduce pain derived from a combination of pandanus and ginger leaf extracts and formed in a patch model so that it can be attached to the abdominal area to reduce menstrual pain which will be called Pahe Patch. In Asia, studies have shown that dysmenorrhea affects around 70% to 90% of adolescent girls in regions like India and Japan ((Negi et al., 2018) in (Momoeda et al., 2020). A study conducted in Ghana reported a prevalence of 68.1% among adolescents, reflecting the widespread nature of this condition (Acheampong et al., 2019). Furthermore, the prevalence of dysmenorrhea among university students is notably high, with rates reported between 50% and 90% in various studies. For example, a study among Spanish female university students found a prevalence of 74.8% (Fernández-Martínez et al., 2018). In contrast, a systematic review indicated that the overall prevalence of dysmenorrhea in included studies was around 78% (Armour et al., 2019). The impact of dysmenorrhea on quality of life is significant, as it

can lead to absenteeism from work or school and affect daily activities (Söderman et al., 2021) in (Ronny et al., 2023).

Recent studies indicate that the prevalence of dysmenorrhea in Indonesia ranges from approximately 54.89% to 72.89% for primary dysmenorrhea, with secondary dysmenorrhea reported at around 9.36% to 21.11%. This indicates that a substantial majority of women experience menstrual pain, which can vary in intensity and duration. A study conducted in 2023 highlighted that 72.89% of adolescent girls in Indonesia suffer from primary dysmenorrhea, which is primarily attributed to hormonal changes that trigger uterine contractions (Ardela, 2023). In contrast, secondary dysmenorrhea, which is associated with underlying reproductive health issues, affects about 21.11% of the population (Ardela, 2023). Another study reported that 54.89% of women experience primary dysmenorrhea, while 9.36% face secondary dysmenorrhea, emphasizing the high prevalence of menstrual pain among Indonesian women (Hidayati, 2023).

The prevalence of dysmenorrhea in Pekanbaru, Indonesia, has been a subject of recent studies, highlighting the significant impact of this condition on young women in the region. In 2023, research indicated that the prevalence of dysmenorrhea among adolescent girls in Pekanbaru was notably high, with estimates ranging from 54.89% to 94.4% (Jusuf, 2024). A study conducted in Pekanbaru found that approximately 94.4% of the respondents reported experiencing dysmenorrhea, with a substantial number indicating that the pain was severe enough to interfere with their daily activities (Evani, 2024). Distraction techniques are psychological strategies employed to divert attention away from pain or discomfort, thereby reducing the perception of pain. These techniques can be particularly effective in various medical contexts, including pain management during medical procedures, treatment of chronic pain conditions, and even in surgical settings. The underlying principle of distraction is based on the Attention Pain Theory, which posits that by redirecting cognitive resources away from pain stimuli, individuals can experience a reduction in their subjective pain experience (Atzori et al., 2018).

Distraction techniques, particularly those involving watching movies, have been extensively researched for their effectiveness in reducing pain and anxiety during various medical procedures. The underlying principle of these techniques is based on the cognitive theory of distraction, which posits that diverting attention away from painful stimuli can significantly diminish the perception of pain. Combining visual stimuli (like movies) with auditory elements (such as sound effects or music) has been shown to provide greater pain relief compared to using either modality alone (Gedam et al., 2013). Similarly, another study indicated that audiovisual distraction not only reduced pain intensity but also improved patient compliance and increased the success rate of procedures (Oliveira et al., 2016). The effectiveness of this technique is attributed to its ability to engage the viewer's cognitive resources, thereby reducing the brain's capacity to process pain signals (Erdogan & Özdemir, 2021). This research will be conducted at SMA Negeri 14 Pekanbaru, where this school has a large number of students so it will be easy to find young women who are experiencing menstrual pain later. From the initial survey, it was found that out of 5 teenage girls, 5 of them stated that they took painkillers during menstrual pain. Therefore, this study will see how the effectiveness of Pahe Patch (ginger pandanus leaf extract compress) on the level of menstrual pain in adolescent girls at SMA Negeri 14 Pekanbaru City.

METHOD

This research is a quantitative study using a quasi-experimental approach with a one group pre and post test research design. the population in this study were all adolescent girls in SMA Negeri 14 Pekanbaru. The sampling technique used was purposive sampling with the

following inclusion criteria: 1) Adolescent girls are menstruating day ½. 2) Adolescent girls who experience moderate to severe menstrual pain. 3) Adolescent girls who are not taking painkillers 4. The sample size in this study was 30 people. Research process: 1) Before the study was conducted, the researcher obtained ethical clearance from the ethics committee of PMC Hospital. 2) Explanation of research objectives, research procedures and asking for approval of willingness to be a respondent. 3) Respondents who are willing to take part in the study and in accordance with the inclusion criteria, fill out the consent sheet to become a respondent. 4) The researcher conducted a general physical examination of the patient, then reminded the patient not to take pain medication at least 6 hours before the pre-test was carried out. 5) Researchers gave pain level questionnaires to respondents. 6) Researchers taught distraction techniques with watching movies to reduce pain levels. The title of the movies is “John Q”. Film selection is done by looking for films that make the audience focus on films with the action genre but still paying attention to the age of the audience, namely teenagers. 7) Researchers explained to respondents, if there was a worsening of health conditions, please respondents immediately contact the researcher. 8) After the treatment was completed, the researcher gave a post-test questionnaire measuring the respondent's pain level. Before the research was conducted, the researcher had conducted *ethical clearance* at the PMC Hospital ethics commission, with the results of the study having passed the ethical test based on letter No. 023/RS.PMC/Kom-Etik/VIII/2024.

RESULT

Table 1.
Results of Analysis of Respondents' Characteristics

Characteristic	f	%
Age		
Early Teens (10 – 13 year)	0	0
Middle Teens (14–17 year)	30	100
Late Teens (18–24 year)	0	0

Based on table 1, it can be concluded that most of the respondents in this research is most of them were in their middle teens, namely 30 people (100%). After obtaining pain level data from the control group of 30 respondent, the data was tested for data normality, the results of the Shapiro-Wilk normality test showed that the data were different from the normal data distribution, because the value obtained was > 0.05. Therefore, the analysis test for the comparison of the average pain level uses the paired sample T test. The results of the average pain level for each group can be observed in the table below.

Table 2.
The Effect of distraction techniques watching movies on Adolescent Girls' Menstrual Pain Levels

Group	n	Mean ± SD	p-value
Pre	30	6,97 ± 0,81	0,000
Post	30	6,33 ± 0,80	

Table 2, it is known that the average menstrual pain level of adolescent girls before being distraction techniques watching movies was 6.97. After being given distraction techniques watching movies there was a decrease in menstrual pain levels is 6,33. from the results of the Paired sample T test analysis test, the P value = 0.000, where the Pvalue is smaller than the Apha value (0.05), then the distraction technique of watching movies is effective in reducing adolescent girls' menstrual pain.

DISCUSSION

Distraction techniques, particularly through audiovisual means such as watching movies, have been shown to significantly reduce pain perception in various medical contexts, including among children and adolescents. The effectiveness of these techniques is grounded in

cognitive theories of pain management, which suggest that diverting attention away from pain can diminish the subjective experience of discomfort. The systematic review by Czech et al. emphasizes that various forms of distraction, including watching movies, can effectively mitigate needle-related procedural pain, fear, and anxiety in pediatric patients (Czech et al., 2021). This aligns with findings from Nakandala et al., who noted that attention distraction methods, such as watching videos, can enhance pain tolerance by shifting focus away from painful stimuli (Nakandala et al., 2023). The underlying mechanism is supported by the Attention Pain Theory, which posits that distraction reduces the attentional resources available for processing pain signals, thus leading to a diminished pain experience (Atzori et al., 2018).

In addition to passive distraction techniques like watching movies, active forms of distraction, such as engaging with interactive content or games, have also been shown to be beneficial. For example, Kuo et al. highlighted that passive distractions, including watching television, are effective in reducing pain and anxiety during venipuncture procedures (Kuo et al., 2016). This suggests that both passive and active distraction methods can be strategically employed depending on the context and the patient's age. Furthermore, studies have shown that the emotional and psychological benefits of distraction techniques extend beyond mere pain relief. For instance, Halimah's research indicates that audiovisual distractions not only reduce pain but also improve the overall emotional state of children undergoing treatment for acute diseases (Halimah, 2022). This emotional uplift can further contribute to a lower perception of pain, creating a positive feedback loop that enhances the effectiveness of distraction techniques.

Distraction techniques have been increasingly recognized as effective methods for managing menstrual pain, particularly in adolescent girls. These techniques, which can include various forms of audiovisual engagement such as watching movies, serve to divert attention from pain and reduce its perceived intensity. The underlying mechanism is rooted in cognitive theories of pain management, which suggest that distraction can limit the brain's capacity to process pain signals, thereby diminishing the overall pain experience. Research indicates that distraction techniques can significantly alleviate dysmenorrhea, a common condition affecting many adolescent girls. For instance, Halimah's study demonstrated that audiovisual distraction techniques effectively reduced pain in children with acute illnesses, suggesting similar potential benefits for adolescents experiencing menstrual pain (Halimah, 2022). This aligns with findings from Nakandala et al., who noted that distraction methods increase pain tolerance by shifting focus away from painful stimuli, which could be particularly beneficial during menstruation (Nakandala et al., 2023).

CONCLUSION

Based on the research that has been done, it is found that of distraction techniques watching movies is effective in reducing menstrual pain in adolescent girl at Public High School 14 Pekanbaru

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