IAMSPH 6 (1) (2025) Pages: 1-8

Journal homepage: https://pcijournal.org/index.php/iamsph

International Archives of Medical Sciences and Public Health

Published: Pena Cendekia Insani

The Relationship of Knowledge and Attitude with Giving Vitamin A Capsules to Postpartum Mothers in The Tanjung Marulak Health Center Work Area

Mestika Riza Helti[1], Faradita Wahyuni[2]

[1]Universitas Haji Sumatera Utara, Medan, Indonesia

[2]Institut Kesehatan Medistra Lubuk Pakam, Indonesia

Article Info

Article history:

Received : 20 Nopember 2024
Revised : 18 December 2024
Accepted : 19 January 2025

Keywords:

Carrot Juice, Dysmenorrhea, Health Centre

ABSTRACT

Menstruation is a significant occurrence in the life of a young woman. Certain adolescents may encounter disruptions during menstruation, specifically experiencing discomfort during menstruation (dysmenorrhea). The management of menstrual pain is categorized into two distinct approaches: pharmacological and non-pharmacological. Carrot juice is a non-pharmacological treatment option. The objective of this study is to assess the impact of administering carrot juice (daucus carota) on alleviating dysmenorrhea pain among female students at SMP Negeri 10 Tebing Tinggi City in 2022. The research method employed in this study is a quasi-experiment utilizing a one-group pretest-posttest design. The study encompassed the entire population of 93 class IX students at SMP Negeri 10 Tebing Tinggi City. The sampling technique employed the Lemeshow formula with a sample size of 15 individuals. The sampling method employed is purposive sampling. The data utilized consists of primary and secondary data, which were gathered through observation sheets. Subsequently, the data was processed and analyzed employing the paired t-test method. The findings indicated that the pretest group predominantly experienced moderate dysmenorrhea pain, with a total of 11 individuals (73.3%). Following the administration of carrot juice, dysmenorrheal pain decreased to mild pain in 12 individuals (80.0%). The statistical test yielded a p-value of 0.000. Conclusion: Carrot juice (daucus carota) has been found to have a positive impact on reducing dysmenorrhoea pain. Therefore, young women can utilize carrots as a non-pharmacological and easily accessible method to alleviate menstrual pain.

Corresponding Author:

Mestika Rija Helti,
Universitas Haji Sumatera Utara, Medan, Indonesia
Email: mestikarizahelti@unhaj.ac.id

1. INTRODUCTION

Menstruation is a significant occurrence in the life of a young girl during adolescence. Menstrual health is a vital component of a woman's reproductive health, encompassing not only physical well-being but also mental, spiritual, and social well-being. Inadequate management of menstruation can result in the discontinuation of education, frequent absences from school, and various sexual and reproductive health issues, which can have enduring health and socio-economic ramifications for adolescent girls (Ernawati et al., 2017).

Certain adolescents may encounter menstrual disorders, specifically experiencing discomfort during menstruation (dysmenorrhea). Dysmenorrhea refers to the occurrence of pain during menstruation, typically characterized by cramping and localized in the lower abdomen. The severity of pain complaints can range from mild to intense. Dysmenorrhea is the most prevalent secondary menstrual disorder, characterized by pain occurring prior to, during, or following menstruation. The pain is caused by the prostaglandin hormone, which induces contractions in the uterine muscles (Judha et al., 2019).

Some individuals regard menstrual pain as a customary occurrence. However, in certain instances, a significant number of women endure extended periods of menstrual discomfort. They persistently endure pain and are unable to engage in any activities during menstruation due to the excruciating nature of the pain (Anugoro & Wulandari, 2017).

The prevalence of dysmenorrhea worldwide is substantial. Statistically, the prevalence of dysmenorrhea among women is consistently high across different countries. For instance, in America, approximately 60% of women experience dysmenorrhea. In Sweden, the percentage rises to around 72%. Furthermore, a study conducted in the UK revealed that 10% of advanced school adolescents are absent for 1-3 days each month due to dysmenorrhea (Ariyanti et al., 2020).

In 2018, the World Health Organization (WHO) reported in the Journal of Midwifery that the prevalence of dysmenorrhea is significant worldwide. The prevalence of dysmenorrhea in young women typically ranges from 16.8% to 81%. The prevalence of dysmenorrhea in European countries ranges from 45% to 97% among women. Bulgaria has the lowest prevalence rate at 8.8%, while Finland has the highest rate at 94%. The highest incidence of dysmenorrhea is typically observed in adolescent females, with an estimated prevalence ranging from 20% to 90%. Approximately 15% of teenagers reported experiencing intense dysmenorrhea, as indicated by Silviani et al. in 2019.

The incidence of dysmenorrhea varies from country to country. In the United States, the prevalence of dysmenorrhea is estimated to be 45-90%. Dysmenorrhea is also responsible for absenteeism from work and school, with 13-51% of women having been absent at least once and 5-14% repeatedly absent. Of the 1,266 female students at Firat University in Turkey, 45.3% had pain with every period, 42.5% had pain sometimes and 12.2% had no pain. An epidemiologic study of an adolescent population in the United States reported a dysmenorrhea prevalence of 59.7%. Of those who complained of pain,

12% were severe, 37% were moderate and 49% were mild. Dysmenorrhea causes 14% of adolescent girls to miss school frequently (Anugoro & Wulandari, 2017).

Based on a study conducted by Assyifa in 2018, administering carrot juice has been found to decrease the pain scale by -3.82 units. Specifically, the pain scale decreased from 5.64 (prior to administering carrot juice) to 1.82 (after administering carrot juice). In the control group, the average pain scale decreased from 4.45 before to 3.35 after, resulting in a pain scale reduction of -0.9. The statistical test results indicate that the obtained ρ value of 0.000 (ρ value <0.05) demonstrates a significant effect of administering carrot juice in reducing primary dysmenorrhea pain.

SMP Negeri 10 is a junior high school located in Tebing Tinggi City. Based on a preliminary survey using information provided by the homeroom teacher, it was determined that four female students suffered from primary dysmenorrhea. Each of the four students restricts their daily activities and requires medication to alleviate the pain associated with menstruation. Indeed, none of them are able to fully engage in classroom learning, thus, when menstruation occurs, they consistently abstain from attending school and opt to recuperate at home.

They consistently seek permission to leave when they experience menstruation due to their inability to tolerate the menstrual pain they endure. To alleviate dysmenorrhea pain, analgesic and anti-inflammatory medications are administered. Non-pharmacological treatments are interventions administered without the use of chemical substances, aimed at alleviating symptoms experienced during menstruation. Carrot juice can be administered as a non-pharmacological treatment.

Based on the above background, the researcher is interested in examining "The Effect of Giving Carrot Juice (Daucus Carota) on Reducing Dysmenorrhea Pain in Junior High School Students of State 10 Kota Tebing Tinggi in 2022".

2. RESEARCH METHOD

This research is a form of quantitative research known as a Quasi experiment. Quasi experiments are a type of experimental research where researchers do not use randomization to determine the research group. However, the results obtained are still meaningful in terms of both internal and external validity (Yusuf, 2017). The research design employed in this study was a quasi-experimental design, specifically a one-group pretest-posttest design. This design incorporates a pretest phase that precedes the administration of the treatment. Consequently, the treatment outcomes can be assessed with greater precision by comparing them to the pre-treatment condition (Yusuf, 2017). This research was conducted at SMP Negeri 10 Kota Tebing Tinggi. The location was chosen due to the presence of four female students who had primary dysmenorrhea. Each of the four female students, when they undergo menstruation, restricts their daily activities and necessitates medication to alleviate the pain. The sampling methodology employed in this study involved the utilization of sampling techniques, specifically the Lemeshow formula, to calculate the sample size. As a result, a total of 15 individuals were selected using the purposive sampling technique.

3. RESULT AND ANALYSIS

The results of research on the Effect of Giving Carrot Juice (Daucus Carota) on Decreasing Dysmenorrhea Pain in Junior High School Students of State 10 Kota Tebing Tinggi in 2023 are as follows:

Table 1 Frequency Distribution of Dysmenorrhea Pain Categories Before Giving Carrot Juice to Students of SMP Negeri 10 Kota Tebing Tinggi in 2023

No	Kategori Nyeri	Frekuensi	%
1	Ringan	0	0,0
2	Sedang	11	73,3
3	Berat	4	26,7
	Total	**15**	**100,0**

Based on table 1 above, seen from the pain category, the majority of respondents experienced moderate pain as many as 11 people (73.3%) and the minority experienced severe pain as many as 4 people (26.7%).

Table 2. Frequency Distribution of Dysmenorrhea Pain Categories after Giving Carrot Juice to Students of SMP Negeri 10 Kota Tebing Tinggi in 2023

No	Kategori Nyeri	Frekuensi	%
1	Ringan	12	80,0
2	Sedang	3	20,0
3	Berat	0	0,0
	Total	**15**	**100,0**

Based on table 2 above, seen from the pain category, the majority of respondents experienced mild pain as many as 12 people (80.0%) and the minority experienced moderate pain as many as 3 people (20.0%).

Table 3 Test of Normality

No	Kelompok	*Statistic*	*Df*	*Sig*
1	*Pretest*	0,910	15	0,138
2	*Posttest*	0,817	15	0,066

Based on the Saphiro Wilk test, it is known that the data distribution is normal. This can be seen from the Sig value. = 0.138 for pretest data and 0.066 for posttest data (> 0.05). It can be concluded that the significance value> α (0.05) then the distribution of the data is normal, so proceed with the paired t-test statistical test.

Table 4 Test of Normality

No	Kelompok	*Mean*	*Selisih Mean*	*SD*	*t*	*P-Value*
2	*Pretest* *Posttest*	6,00 2,87	3,13	1,363 0,743	13,256	0,000

According to the data in table 4, the average intensity of menstrual pain before consuming carrot juice is 6.00 on a scale, whereas after consuming carrot juice, the average intensity of menstrual pain is 2.87 on the same scale. The data indicates that the average participant observed a reduction of 3.13 points on the dysmenorrhea pain scale after consuming carrot juice.

The statistical test results using the paired t-test yielded a p-value of 0.000, which is less than the significance level of 0.05. Therefore, the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted, indicating that there is a significant difference in the pain scale of dysmenorrhea before and after administering carrot juice to female students of SMP Negeri 10 Kota Tebing Tinggi in 2022.

4. DISCUSSION

The results indicated a p-value of 0.000, which is less than the significance level of 0.05. Therefore, it can be inferred that there is a discernible disparity in the level of dysmenorrhea pain experienced by female students of SMP Negeri 10 Kota Tebing Tinggi before and after the administration of carrot juice in 2023.

The findings of this study align with the research conducted by Puspita (2018), which demonstrates a substantial correlation between the consumption of carrot juice and a p-value of 0.000, indicating a significance level lower than $\alpha = 0.05$. Consequently, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted. This implies that providing carrot juice has an impact on alleviating dysmenorrhea pain in adolescent girls.

This study is consistent with previous research (Assyifa, 2018), which found that administering carrot juice can decrease the pain scale by -3.82. Specifically, the pain scale decreased from 5.64 (before administering carrot juice) to 1.82 (after administering carrot juice). In the control group, the average pain scale decreased from 4.45 before to 3.35 after, resulting in a pain scale decrease of -0.9. The statistical test results indicate that the obtained ρ value of 0.000 (ρ value <0.05) signifies a significant effect of administering carrot juice in reducing primary dysmenorrhea pain.

This research aligns with the findings of the Noravita research journal (2017), which reported a P value of 0.000 in the experiment. This P value is smaller than 0.05, indicating a significant difference between the pretest and posttest results. Therefore, it can be concluded that giving carrot juice has an effect on reducing the level of primary dysmenorrhea. The P value in the experimental group is significantly lower than that in the control group (0.000 <0.031), indicating a more pronounced reduction in pain in the experimental group compared to the control group.

The findings of this study align with the research conducted by Ariyanti et al. (2020), which demonstrated that the Wilcoxon test yielded a P value of 0.000 <0.05. This indicates that administering carrot juice has a significant impact on alleviating dysmenorrhea pain. In a study conducted by Hunowu (2019), the paired sample t-test was used to determine the mean value of menstrual pain before and after treatment. The pretest mean value was found to be 7.00, while the posttest mean value was 3.10. The obtained p-value was 0.000, which is less than the significance level of 0.05. The initial measurement of menstrual pain was 6.00, while the subsequent measurement was 3.70. The statistical analysis yielded a p-value of 0.005, which is less than the significance level of 0.05. The p-value is less than 0.05, indicating a statistically significant effect of administering carrot juice in reducing primary menstrual pain among adolescent girls.

5. CONCLUSION

After conducting research on "The Effect of Giving Carrot Juice (Daucus Carota) on Decreasing Dysmenorrhea Pain in Students of SMP Negeri 10 Kota Tebing Tinggi in 2023", the following conclusions were obtained:

a. The average pain scale of dysmenorrhea in female students of SMP Negeri 10 before giving carrot juice was the majority in moderate pain (73.3%).

b. The average pain scale of dysmenorrhea in junior high school students after giving carrot juice is the majority in mild pain (80.0%).

c. There is an effect of giving carrot juice (daucus carota) on reducing dysmenorrhea pain in female students of SMP Negeri 10 Kota Tebing Tinggi in 2022 with a p-value = 0.000 (<0.05).

6. REFERENCES

[1] Alam, H. S. (2020). Upaya Mengurangi Nyeri Persalinan dengan Metode Akupresur (Pertama). CV. Media Sains Indonesia.

[2] Anugoro, D., & Wulandari, A. (2017). Cara Jitu Mengatasi Nyeri Haid (Hernita (ed.)). ANDI.

[3] Aranta, A. (2014). Terapi Herbal dalam Al-Quran dan As-Sunnah, Pijat Refleksi dan Obat Kuno. Pustaka Sandro Jaya.

[4] Ariyanti, V. D., Veronica, S. Y., & Kameliawati, F. (2020). Pengaruh Pemberian Jus Wortel terhadap Penurunan Skala Nyeri Dismenore Primer pada Remaja Putri. Wellness and Healthy Magazine, 2(February), 124–137.

[5] Assyifa, D. A. (2018). Pengaruh Pemberian Jus Wortel (Daucus Carota) Terhadap Penurunan Nyeri Dismenorea Primer Pada Mahasiswi Asrama Putri STIKes Muhammadiyah Pringsewu Tahun 2018. Skripsi.

[6] Carsel, S. (2018). Metodologi Penelitian Kesehatan dan Pendidikan. Penebar Media Pustaka.

[7] Damayanti, D. F., Aprilia, S., & Yulianti, E. (2020). Pengaruh Pemberian Jus Wortel Terhadap Nyeri Dismenorea pada Remaja Putri di Asrama Kebidanan Poltekkes Kemenkes Pontianak. Jurnal Kebidanan, 10(1), 25–29. https://doi.org/10.31983/jkb.v10i1.5552

[8] El-Manan. (2017). Kamus Pintar Kesehatan Wanita (V. Hany (ed.)). Bukubiru.

[9] Endah, Tri, & Jamil. (2020). Perkembangan Fisik Remaja. Ongka Book.

[10] Endra, F. (2017). Pengantar Metodologi Penelitian (Statistika Praktis) (Pertama). Zifatama Jawara.

[11] Ernawati, Saribanon, N., Nailus, S. S., Salamah, U., Murti, Y. A., Trisnamiati, A., & Lorita, S. (2017). Manajemen Kesehatan Menstruasi. Universitas Nasional, IWWAS, Global One. https://doi.org/`

[12] Hidayat, A. (2015). Metode Penelitian Kesehatan dan Teknik Analisa Data (Salemba Medika (ed.)).

[13] Hunowu, S. I. A. (2019). Pengaruh Pemberian Jus Wortel (Daucus Carota L) Terhadap Penurunan Tingkat Nyeri Haid (Dysmenorrhea) Primer Pada Remaja Puteri Di SMA Negeri 2 Bitungkota Bitung. Skripsi, 11(1), 1–14. http://scioteca.caf.com/bitstream/handle/

[14] Isramilda, & Martinus, F. D. (2022). Pengaruh Pemberian Jus Wortel Terhadap Penurunan Derajat Dismenore Pada Remaja Putri. Zona Kebidanan, 12(1), 16–23. https://doi.org/10.37776/zked.v12i1.978

[15] Judha, M., Sudarti, & Fauziah, A. (2019). Teori Pengukuran Nyeri dan Nyeri Persalinan (Kedua). Nuha Medika.

[16] Laila, N. N. (2018). Buku Pintar Menstruasi + Solusi Mengatasi Segala Keluhannya (D. Wijaya (ed.)). Bukubiru.

[17] Latifah, S. (2021). Pengaruh Pemberian Jus Wortel terhadap Tingkat Nyeri Dysmenorhea Primer pada Siswa Kelas XI SMA Negeri 3 Tasikmalaya. Jurnal IMU: Indonesia Midwifery Journal, 4(2), Jurnal IMJ: Indonesia Midwifery Journal. http://dx.doi.org/10.31000/imj.v4i2.4275

[18] Lowdermilk, D. L., Perry, S. E., & Cashion, M. C. (2013). Keperawatan Maternitas (8th ed.). Elsevier.

[19] Maryunani. (2018). Nyeri Dalam Persalinan, Teknik dan Cara Penanganannya. Trans Info Media.

[20] Muhammad, I. (2016). Pemanfaatan SPSS dalam Penelitian Bidang Kesehatan dan Umum (R. B. Suroyo, M. Hendri, & Raudhah (eds.); Keenam). Citapustaka Media Perintis.

[21] Muhlisin, A. (2020). Skala Nyeri, Jenis dan Cara Pengukuran Disertai Gambar. Medisweb. https://medisweb.com

[22] Natalia, L. (2021). Pengaruh Pemberian Jus Wortel Terhadap Penurunan Nyeri Dysmenorrhea Primer pada Remaja Putri Kelas VII dan VIII di SMPN 2 Majalengka Tahun 2020. Jurnal Ilmu Keperawatan Dan Kebidanan, 12(2), 307–321.

[23] Noravita. (2017). Pengaruh Pemberian Jus Wortel Terhadap Penurunan Tingkat Dismenore Primer Pada Mahasiswi DIV Bidan Pendidik Semester IV Di Universitas Aisyiyah Yogyakarta. Naskah Publikasi. http://digilib.unisayogya.ac.id/2791/1/NASPUB_NORAVITA_1610104181.pdf

[24] Pramardika, D. D., & Fitriana. (2019). Panduan Penanganan Dismenore (Pertama). Deepublish (Grup Penerbitan CV. Budi Utama).

[25] Puspita, N. L. M. (2018). Pengaruh Pemberian Jus Wortel Terhadap Nyeri Dismenorea Pada Remaja Putri. Jurnal STIKES Pemkab Jombang, 1(1), 14–19.

[26] Redaksi Agro Media. (2015). Buku Pintar Tanaman Obat. PT. Agromedia Pustaka.

[27] Rosuliana, N. E., Adawiyah, R., & Fithriana, D. (2020). Paket Edukasi Pada Remaja Terhadap Kecenderungan Menikah Dini (Pertama). Uwais Inspirasi Indonesia.

[28] Silviani, Y. E., Karaman, B., & Septiana, P. (2019). Pengaruh Teknik Relaksasi Nafas Terhadap Dismenorea. Hasanuddin Journal of Midwifery, 1(1), 30. https://doi.org/10.35317/hajom.v1i1.1791

[29] Susila, & Suyanto. (2016). Metode Penelitian Epidemiologi Bidang Kedokteran dan Kesehatan. Bursa Ilmu.

[30] Swastika, A., Safitri, K., & Wibisono, H. (2019). Perbandingan Efektivitas Pemberian Minuman Kunyit Asam Dan Jahe Terhadap Nyeri Menstruasi Pada Mahasiswi Keperawatan Semester II Di STIKES Yatsi Tangerang. Jurnal Kesehatan, 8(2). https://doi.org/10.37048/kesehatan.v8i2.141

[31] Tim Penerbit KBM Indonesia. (2020). Ensiklopedi Wortel (Deskripsi, Fiolosofi, Manfaat, Budidaya dan Peluang Bisnisnya). KBM Indonesia.

[32] Trismanjaya, V. H., & Rohana, T. S. (2019). Analisis Data Statistik Parametrik Aplikasi SPSS dan Statcal (Sebuah Pengantar Untuk Kesehatan). Yayasan Kita Penulis.

[33] Uliyah, M., & Hidayat, A. A. (2015). Keterampilan Dasar Praktik Klinik untuk Kebidanan (3rd ed.). Salemba Medika.

[34] Wardany, K. H. (2018). Raja Obat Alami Wortel, Si Orange Kaya Nutrisi. Rapha Publishing.

[35] Wirenviona, Ri., & Riris, I. D. C. (2020). Edukasi Kesehatan Reproduksi Remaja (I. Hariastuti (ed.)). Airlangga University Press.

[36] Yusuf, M. (2017). Metode Penelitian: Kuantitatif, Kualitatif dan Penelitian Gabungan. Kencana.