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Effect of ginger tea versus mint tea in reducing dysmenorrhoea among adolescent girls

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Abstract

The present study aims at assessing the effectiveness of ginger tea versus mint tea in reducing dysmenorrhoea among adolescent girls of selected hostel, at Thrissur. The current study was based on Modified Pender's Health promotion model (1996). The research approach was a quantitative approach and the design selected for the study is true experimental design. Sample consists of 45 adolescent girls of Aswini girl's hostel suffering from dysmenorrhoea and who are satisfying inclusion criteria. Only those adolescent girls who are satisfying my inclusion criteria were considered as samples. The main objective of the present study was to compare the effectiveness of ginger tea and mint tea in reducing dysmenorrhoea among adolescent girls. The tools used were demographic data of the adolescent girls and Karen Lee Richard's pain scale. Content validity was done with the help of experts. The actual study was conducted after finding the feasibility of the tool by using pilot study. The data obtained were tabulated and analyzed using descriptive and inferential statistics. The findings revealed that majority of the samples (66.66% from ginger group, 80% from mint group and 53.33% from control group) had moderate level of pain. When comparing the effects of ginger tea and mint tea, in reducing dysmenorrhoea, the mean score of reduction is more in ginger group (2.7333) than that of mint group (1.800) and control group (1.000). It shows that ginger tea is more effective than mint tea in reducing dysmenorrhoea.

Keywords: Effectiveness, ginger tea, mint tea, dysmenorrhoea, adolescent girls.

1. Introduction

Adolescence is the phase, in which children undergo rapid changes in body size, physiological, psychological and social functioning. During this period, all body dimensions, development and maturation are completed^[1]. During adolescence, young people go through many changes as they move from childhood into physical maturity. One of the major physiological changes that take place in adolescent girls is onset of menarche. It may occur as early as age 10 or as late as 15^[3]. Menstruation is a major stage of puberty in girls. It is one of the many physical signs that a girl is turning into a woman and it's for the purpose of sexual reproduction^[4].

In today's busy life, dysmenorrhoea is a serious problem affecting the adolescent's day-to-day life. The investigator sees many adolescents having difficulty to perform their regular activities due to menstrual cycle, and as the researcher herself experienced the effectiveness of natural remedies in reducing dysmenorrhoea, she was motivated to conduct a study on effectiveness of ginger and mint tea in alleviating the menstrual pain of adolescent girls. The study is undertaken because of the adverse effects of prolonged use of analgesics and over the counter medications, which are readily available and causing so many health problems. The natural remedies like ginger tea and mint tea are the safest methods for relieving dysmenorrhoea. The researcher is interested to compare the safe and beneficial values of mint and ginger, so that this will be an effective study for those who are affected severely with dysmenorrhoea.

2. Statement of the problem

"A study to assess the effectiveness of ginger tea versus mint tea in reducing dysmenorrhoea among adolescent girls of selected hostel, at Thrissur."

3. Objectives of the study

- To assess the severity of dysmenorrhoea among adolescent girls.
- To assess the effectiveness of ginger tea in reducing dysmenorrhoea among adolescent girls

- To assess the effectiveness of mint tea in reducing dysmenorrhoea among adolescent girls
- To compare the effectiveness of ginger tea and mint tea in reducing dysmenorrhoea among adolescent girls.
- To find out the association between severity of dysmenorrhoea and selected variables.

4. Hypothesis

H₁-There is a significant difference in the intensity of pain associated with dysmenorrhoea between the experimental group 1, (taking ginger tea) and control group.

H₂- There is a significant difference in the intensity of pain associated with dysmenorrhoea between the experimental group 2(taking mint tea) and control group.

H₃ - There is a significant difference in the intensity of pain associated with dysmenorrhoea between experimental group 1 and experimental group 2.

H₄- There is a significant association between intensity of pain associated with dysmenorrhoea and selected variables.

5. Conceptual framework

In this research study, modified Pender's health promotion model (1996), proposed by Nola J. Pender in 1982, and is used as the conceptual framework.

6. Methodology

- a. **Research approach** - Quantitative research approach
- b. **Research design** - True experimental design
- c. **Dependant variable** - Dependent variable is dysmenorrhoea
- d. **Independent variable** - Effectiveness of ginger tea and mint tea in reducing dysmenorrhoea.
- e. **Demographic variables** - It includes the base line information like age, educational status, dietary pattern, home remedies for dysmenorrhoea, age of menarche, pain level, length, regularity and duration of menstrual cycle, and family history of dysmenorrhoea.
- f. **Setting of the study** - Aswini girl's hostel, which is a part of Aswini College of nursing, Nadathara, Thrissur, and located inside the campus.
- g. **Population** - In this study, the population was adolescent girls of Aswini College of nursing, who are studying B.Sc nursing, and between the age group of 17-19 years
- h. **Sample and sampling technique**- Samples were all adolescent girls having dysmenorrhoea, who fulfil the inclusion criteria and who are residing inside Aswini girl's hostel, Nadathara. The sample size was 45. Simple random sampling (Lottery method) was used for this study.
- i. **Inclusion criteria**
 - B.SC nursing students who are staying in hostel
 - Adolescent girls who are suffering from dysmenorrhoea
 - Adolescent girls who have regular menstrual cycle
- j. **Exclusion criteria**
 - Adolescent girls who are....
 - Not willing to participate in this study
 - Suffering with gynaecological disorders and undergoing treatment.
- k. **Tools or instruments**

Section A: - Demographic data of the adolescent girls
Section B: - Karen Lee Richard's modified pain scale

7. Data collection process

To conduct the research study in Aswini girl's hostel, Nadathara, a formal written permission was obtained from the Principal of Aswini College of Nursing, prior to data collection procedure. The data collection period was between 6-01-14 and 28-02-14. On the first day of data collection, all the subjects were gathered in the recreation room of college hostel. A detailed introduction about the research study and its objectives were given to the subjects. The researcher cleared the doubts of the respondents for providing complete information about the study. After that, samples were selected for two experimental groups and for the control group by lottery method. Informed consent were taken from the selected samples. Confidentiality was assured to all the students throughout the study to get their co-operation. The students were instructed to report dysmenorrhoea, immediately after the onset of menstruation.

For the ginger group and mint group, immediately after the onset of dysmenorrhoea, ginger tea and mint tea were distributed respectively (8 hourly for 2 days). Ginger tea was prepared by mixing 2gm of sliced and crushed fresh ginger root and 1 gm of jaggery in one cup of boiling water (100 ml), whereas mint tea was prepared by mixing 2gm of crushed fresh mint leaves and 1 gm of jaggery in one cup of boiling water (100 ml).

The pain scales were distributed during the time of reporting and after 48 hours for each group and assessed the pre and post experimental pain level. For the control group, simply the pain scale was administered during the onset of pain and after 48 hours. The samples were very comfortable and co-operative during the course of the study and there was no drop out. The researcher maintained confidentiality, throughout the study to prevent contamination. The researcher expressed her sincere gratitude to the samples for their co-operation.

8. Results

1. Regarding the age group of adolescent girls, (15.6%) were in the age group of 17 years, 55.6% were in the age group of 18 years, and 28.9% were in the age group of 19 years
2. In relation to educational status, 37.8% of adolescent girls were from I year B.Sc nursing, 40% were from II year B.Sc nursing, and 22.2% were from III year B.Sc nursing.
3. In relation to the dietary pattern of adolescent girls, 97.8% were non-vegetarians and 2.2% were vegetarians.
4. 35.55% of adolescent girls attained menarche at the age of 12 yrs, 60% at 13yrs and only 4.44% at the age of 14 yrs.
5. Regarding the length of menstrual cycle of adolescent girls, 17.8% had 28 day cycle, 48.9% had 30 day cycle, and 33.3% had more than 30 day cycle.
6. In relation to duration of menstruation of adolescent girls, 4.4% had 3 days, 33.3% had 4 days, 26.7% had 5 days, 24.4% had 6 days, and 11.1% had 7 days of menstruation.
7. Most of the adolescent girls, (64.4%) had family history of dysmenorrhoea.
8. Majority of adolescent girls, (84.4%) didn't have the habit of taking home remedies for dysmenorrhoea.
9. The pain level of adolescent girls according to Karen Lee Richard's Pain Scale were 22.22% at score 3, 26.66% at score 4, 28.88% at score 5, 11.11% for score 6, 8.88% at score 7 and 2.22% at score 8.

10. The results shows that majority of the samples, 66.66% of adolescents from ginger group, 80% from mint group and 53.33% from control group had moderate level of pain, 26.66% of adolescent girls from ginger group, and 6.66% from control group had severe dysmenorrhoea and 6.66% of adolescents from ginger group, 20% from mint group and 40% from control group had mild pain.
11. The pre-test pain scores were, 6.66% (mild), 66.66% (moderate), and 26.66% (Severe) and the post-test pain scores were 66.66% (mild), 26.66% (moderate) and 6.66% (No pain). When comparing the pre and post-test pain scores using Wilcoxon Signed rank test, the mean pain score in the pre-test was 5.40 and the post-test score was 2.67. The calculated Z- value at df 14 was 3.449, which is significant at 0.01 level. It concludes that there was a true difference found between the pre-test level of pain score and the post-test level of pain score after administration of ginger tea and there is a significant reduction in the level of pain after administration of ginger tea. Hence, it is interpreted that ginger tea is effective in reducing dysmenorrhoea.
12. The pre-test pain scores were, 20% (mild) and 80% (moderate). The post-test pain scores were 66.66% (mild), and 33.3% (moderate). No samples had severe pain and absence of pain. When comparing the Pre and post-test pain scores using Wilcoxon Signed rank test, the mean pain score in the pre-test was 4.6 and the post-test score was 2.8. The calculated Z- value at df 14 was 3.482, which is significant at 0.01 level. It concludes that there was a true difference found between the pre-test level of pain score and the post-test level of pain score after administration of mint tea. There is a significant reduction in the level of pain after administration of mint tea. Hence, it is interpreted that mint tea is effective in reducing dysmenorrhoea.
13. In all the three groups, there was a significant difference between pre and post test score. Hence a reduction in pain score after the intervention was worked out for all the group. And that reduction was compared using Kruskal Wallis test. χ^2 values for the a means at df 2 was found to be 21.963 which is significant at 0.01 level, which indicates that there exists significant difference in the reduction of pain score, among the three groups.
14. To find out which group has more reduction, groups were compared pair wisely by using Mann – Whitney U test.

The results of pair wise comparison of Ginger group and control group using Mann- Whitney U test shows that Z- value at df 1 is 4.18 which is significant at the level 0.01. Which reveals that there is a significant difference in the intensity of pain associated with dysmenorrhoea between the experimental group 1, (taking ginger tea) and control group.

Results of pair wise comparison of Mint group and control group using Mann-Whitney U test shows that Z- value at df 1 is 2.836, which is significant at the level 0.01. Which reveals that there is a significant difference in the intensity of pain associated with dysmenorrhoea between the experimental group 2, (taking Mint tea) and control group.

Results of pair wise comparison of Ginger group and Mint group using Mann-Whitney U test shows that Z- value at df 1 is 2.811 which is significant at the level 0.01. It reveals that there is a significant difference in the

reduction of pain associated with dysmenorrhoea between experimental group 1 and experimental group 2. So it is concluded that there is a significant difference in the reduction of pain associated with dysmenorrhoea between the experimental group 1, (taking Ginger tea) and experimental group 2, (taking mint tea). When comparing these three groups, mean score of reduction is high in ginger (2.7333) than that of mint group (1.800) and control group (1.000). So it is concluded that ginger tea is more effective than mint tea in reducing dysmenorrhoea.

15. There is no significant association between the intensity of pain associated with dysmenorrhoea and selected demographic variables like age, educational status, age of menarche, length of menstrual cycle, duration of menstruation, and family history of dysmenorrhoea.

9. Discussion

In the present study, the researcher compared the effectiveness of ginger tea and mint tea in reducing dysmenorrhoea among adolescent girls. The study reveals that both ginger and mint tea are effective in reducing dysmenorrhoea. But when comparing the effectiveness, the mean score of reduction is more in ginger group. It shows that ginger tea is more effective than mint tea in reducing dysmenorrhoea. The study also reveals that there is no significant association between severity of dysmenorrhoea and selected demographic variables. So, ginger tea is an effective way of relieving dysmenorrhoea in homely environment. Ginger is easily available in the community setup and it is cost effective also. When comparing to the side effects of analgesics, ginger is too safe. It is too easy to prepare ginger tea and it is tasty also. So, as a community health nurse, the researcher considers that providing education to the local people, regarding the effectiveness of ginger tea on dysmenorrhoea, will be helpful for them.

10. Conclusion

The main aim of the study was to compare the effectiveness of ginger tea and mint tea in reducing dysmenorrhoea among adolescent girls. The results revealed that even though both are effective, ginger tea is more effective than mint tea in reducing dysmenorrhoea. So the researcher concludes that use of ginger tea 3 times a day during menstruation (48hrs) is effective for those who are suffering from dysmenorrhoea.

11. References

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