

Effect of Epsom Salt Soak on Migraine among Nursing Students at SUM Nursing College, Bhubaneswar

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Abstract

Background: Migraine, a genetically influenced disorder, manifests as recurring episodes of intense headache, typically on one side of the head, often accompanied by nausea and sensitivity to light and sound. It constitutes a significant source of chronic illness and is a leading contributor to various types of headaches globally. Epsom salt, known for its anti-inflammatory and pain-relieving properties, offers a side-effect-free option for alleviating migraine pain and serves as a readily available and affordable complementary alternative medicine for this condition. **Aim:** To assess the effect of Epsom salt soak on migraine pain among B.Sc. nursing students. **Materials and Methods:** A quasi-experimental design, specifically a non-randomized control group approach, was utilized for this study. The research involved 30 nursing students from SUM Nursing College, Bhubaneswar, selected through the purposive sampling technique rather than random selection. **Result:** The findings revealed that the post-test mean value (14+2.10) in the experimental group had a *t* test value of -2.20 and a *P* value of 0.02, which was a statistically significant difference between the experimental and control groups at $P \leq 0.05$. **Conclusion:** The results of this study indicated a noteworthy decrease in migraine occurrence among the students. Hence, the administration of Epsom salt soak was effective in treating the migraine ailments.

Keywords: Effectiveness, chronic illness, complementary alternative medicine, Epsom salt soak, migraine

INTRODUCTION

Migraine is a prevalent, enduring neurological condition involving cranial autonomic features. It presents as recurrent, intense headaches accompanied by additional symptoms, leading to significant disability, and impacting individuals, families, and society. It affects about 12% of the general population in Western nations and is three times more prevalent among women than men [1].

Migraine attacks typically occur episodically, with most individuals experiencing them 1–3 times per month. Chronic migraine, on the other hand, is characterized by headaches occurring at least 15 days per month over a span of 3 months in patients with a prior history of episodic migraine. These patients must exhibit migraine features on at least 8 days per month. Approximately 30% of migraine sufferers experience accompanying headaches lasting around 20 minutes. The primary objectives of preventive treatment for migraine include reducing the frequency, severity, and intensity of headaches, restoring functionality, and preventing the transition to chronic migraine [2].

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Migraine is a highly common neurological condition, impacting approximately 38 million individuals in the United States and an estimated 1 billion people globally [3–7]. Based on the studies, the prevalence of migraine ranges from 6–15% in adult men to 14–35% in adult women. Approximately 4–5% of children under the age of 12 suffer from migraine. A total of 182 migraine patients participated in the study, with ages ranging from 14 to 58 years, of whom 131 were female. The duration of migraines varied between 6 and 260 months. Among the participants, 160 individuals (87.9%) reported experiencing migraine triggers, including emotional stress in 70% of cases, fasting in 46.3%, physical exhaustion or travel in 52.5%, sleep deprivation in 44.4%, menstruation in 12.8%, and weather changes in 10.1%. Migraine sufferers were observed to be more emotionally sensitive and significantly impacted by stressful events. Migraine headaches vary; some originate in the brain and stem, and genetically disposed studies of twins indicate a 60–65% genetic influence on their propensity to develop headaches. 75% of adult patients are women, and it effects boys and girls equally [8–15].

STATEMENT OF THE PROBLEM

Effect of Epsom salt soak on migraine among nursing students at SUM Nursing College, Bhubaneswar.

OBJECTIVES

- To evaluate the severity of migraine in both the experimental and control groups.
- To assess the effect of Epsom salt soak on migraine pain among the nursing students.
- To associate the post-test level of migraine pain with selected socio-demographic variables in both experimental and control group.

HYPOTHESIS

H01: There will be no significant difference between the level of migraine pain among nursing students after Epsom salt soak.

H11: There will be significant difference between the level of migraine pain among nursing students after Epsom salt soak.

H02: There will be no notable correlation between post-test migraine pain levels and chosen socio-demographic factors in both the experimental and control groups.

H12: There will be a notable correlation between post-test migraine pain levels and selected socio-demographic variables in both the experimental and control groups.

MATERIALS AND METHODS

For this study, a quasi-experimental research design, specifically a non-randomized control group design, was utilized. The independent variable under investigation was the use of Epsom salt soak, while the dependent variable was the level of migraine pain. A sample size of 30 participants meeting the inclusion criteria was selected using the purposive sampling technique, which is a non-probability method. The demonstration of intervention was explained to the experimental and control groups. Among them, 15 students had undergone the Epsom salt soak with Investigator, which was implemented three times in a week, each time by adding 2 spoons of Epsom salt with 2 litres of warm water, and that water was soaked with the towel. They used this towel to cover their heads for 10–12 minutes. The intervention was exclusively administered to the experimental group, lasting for a duration of one month. The control group (15 students) was instructed to follow the Epsom salt soak procedure by themselves as needed.

RELIABILITY

In this study, the reliability of the tool was tested on 10 patients at KINS College, Bhubaneswar, using the Chronbach reliability formula, and the value was 0.86, which indicates the tool was reliable. Data was collected from October 3 to October 17 for the pilot study. The collected data are examined through both descriptive and inferential statistics.

RESULTS

Table 1 data depicts that the pre-test mean value (15.8 + 3.7) is greater than the post-test mean value (14+2.10) in the experimental group with a t test value of “t = 2.20 and a P-value of 0.02, which is a statistically significant difference. Therefore, the research hypothesis was accepted.

Table 1. Comparison of pre-test and post-test scores of Epsom salt soak by using the mean, SD, and paired ‘t’ test in the experimental group N = 30 (n1 = 15, n2 = 15).

Group	Mean ± SD		t-value	P-value
	Pre-test	Post-test		
Experimental	15.8 ± 3.7	14 ± 2.10	-2.201	0.022*

$P \leq 0.05$

Table 2. Comparison of pre-test and post-test scores of Epsom salt soak by using the mean, SD, and paired ‘t’ test in the control group.

Group	Mean ± SD		t-value	P-value
	Pre-test	Post-test		
Control	20.3 ± 2.5	15.5 ± 1.84	-1.160	0.13*

$P \geq 0.05$

Table 2 revealed that the calculated ‘t’ value is “t”=1.16 and P value is 0.13 that was not statistically significant on the level of migraine pain which depicts the research hypothesis is accepted and null hypothesis is rejected.

DISCUSSION

In the present study, the result revealed that there was statistically significant reduction on the level of migraine pain by using the Epsom salt soak. Thus, it represents that the Epsom salt soak on migraine pain was effective [16–20].

Recommendation

- A comparable study could be conducted with a larger sample size over an extended period.
- Similar kinds of studies can be undertaken in different settings with different target populations.
- A similar study can be conducted by using the Epsom salt and interaction intervention in a different session.
- A standard nursing interaction protocol can be implemented as nursing care by the nursing personnel in the clinical and community settings.

CONCLUSION

Based on the findings of the study, the following conclusions are drawn; there was significant reduction of migraine headache in students who were undergoing Epsom salt soak. Epsom salt soak is a procedure found to be effective intervention in the reduction of migraine headache among the students.

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