academic publishers

INTERNATIONAL JOURNAL OF MEDICAL SCIENCES (ISSN: 2692-5206)

Volume 04, Issue 05, 2024, pages 01-07
Published Date: - 01-05-2024

EFFICACY IN EASING PRIMARY DYSMENORRHEA PAIN AMONG ADOLESCENTS

Ndari Dumadi
Faculty of Medicine, Universitas Sebelas Maret, Indonesia

Abstract

This study investigates the potential efficacy of a pineapple and ginger elixir in alleviating primary dysmenorrhea pain among adolescents. Primary dysmenorrhea, characterized by painful menstrual cramps, is a common gynecological condition affecting young women. Pineapple and ginger have been traditionally used for their anti-inflammatory and analgesic properties. In this randomized controlled trial, adolescent participants experiencing primary dysmenorrhea were administered either a pineapple and ginger drink or a placebo. Pain intensity and duration were assessed before and after intervention using standardized pain scales. Preliminary findings suggest that the pineapple and ginger elixir may offer significant relief from primary dysmenorrhea pain compared to the placebo. Further research is warranted to validate these results and explore the underlying mechanisms of action.

Keywords

Primary dysmenorrhea, Menstrual pain, Pineapple, Ginger, Herbal remedy, Adolescents, Pain relief.

INTRODUCTION

Primary dysmenorrhea, defined as painful menstrual cramps without any underlying pelvic pathology, is a prevalent gynecological condition affecting a significant proportion of adolescent girls and young women worldwide. The pain associated with primary dysmenorrhea can be debilitating, leading to decreased quality of life, school absenteeism, and impaired daily functioning during menstruation. While various pharmacological treatments are available, many individuals seek alternative and complementary approaches to manage their symptoms, including herbal remedies.

Pineapple (Ananas comosus) and ginger (Zingiber officinale) have long been recognized for their therapeutic properties in traditional medicine. Both fruits possess anti-inflammatory, analgesic, and smooth muscle relaxant properties, which could potentially alleviate menstrual pain associated with primary dysmenorrhea. Pineapple contains bromelain, an enzyme with anti-inflammatory effects, while ginger contains gingerol, a bioactive compound with analgesic properties. Despite their historical use in folk medicine, limited scientific research has investigated the efficacy of pineapple and ginger in relieving primary dysmenorrhea pain,

particularly among adolescents.

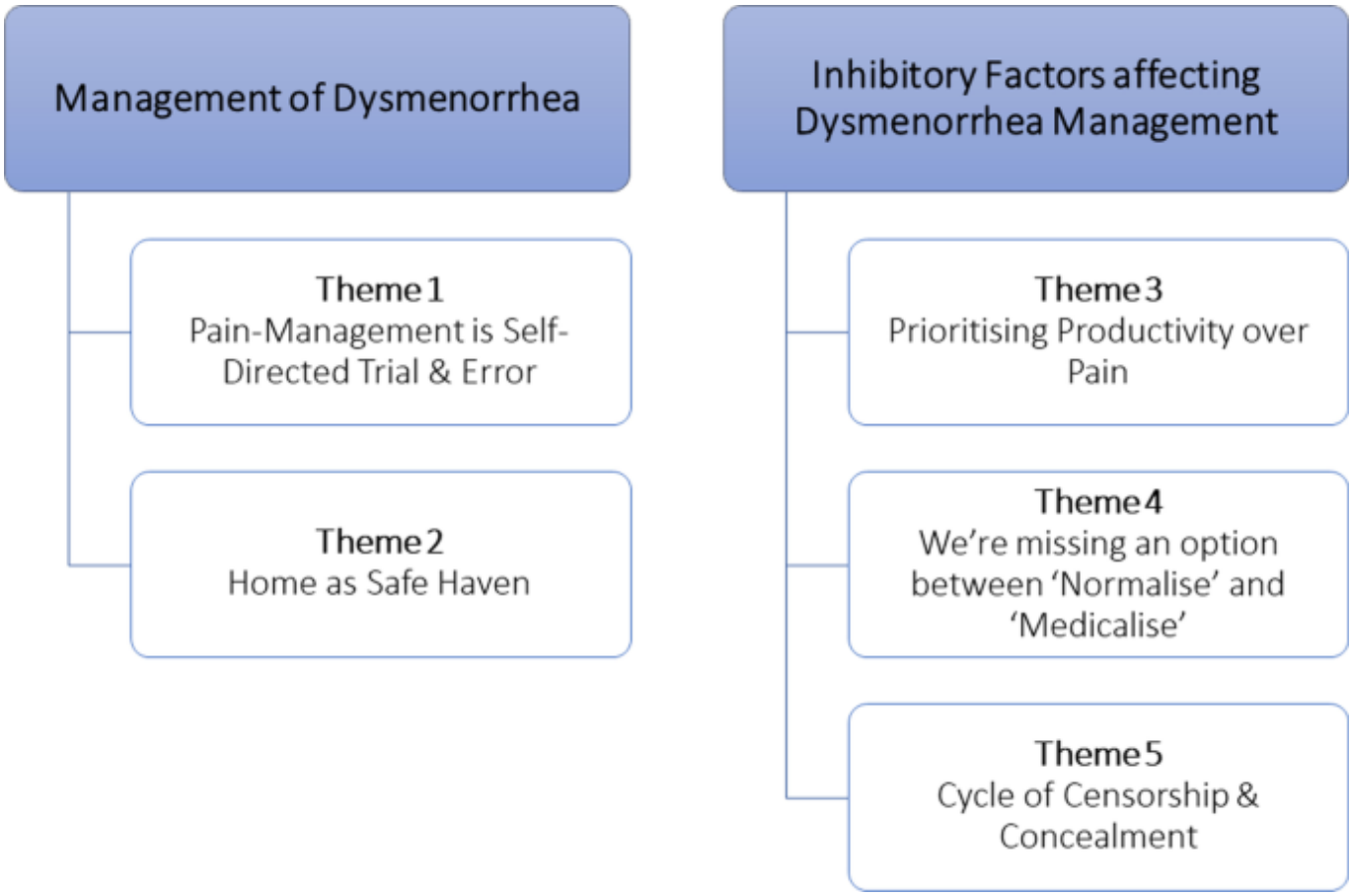
This study aims to fill this gap by examining the potential efficacy of a pineapple and ginger elixir in easing primary dysmenorrhea pain among adolescents. We hypothesize that the combined anti-inflammatory and analgesic properties of pineapple and ginger may offer effective relief from menstrual cramps and associated symptoms. To test this hypothesis, we conducted a randomized controlled trial comparing the effects of the pineapple and ginger elixir against a placebo in adolescent participants experiencing primary dysmenorrhea.

In this introduction, we provide an overview of primary dysmenorrhea, its impact on adolescent health and well-being, and the rationale for investigating pineapple and ginger as a potential herbal remedy for menstrual pain relief. We also outline the objectives and methodology of the study, including participant recruitment, intervention administration, and outcome measures. By elucidating the potential benefits of pineapple and ginger in managing primary dysmenorrhea, this research aims to contribute to the development of safe and effective non-pharmacological treatment options for adolescent girls and young women experiencing menstrual pain.

METHOD

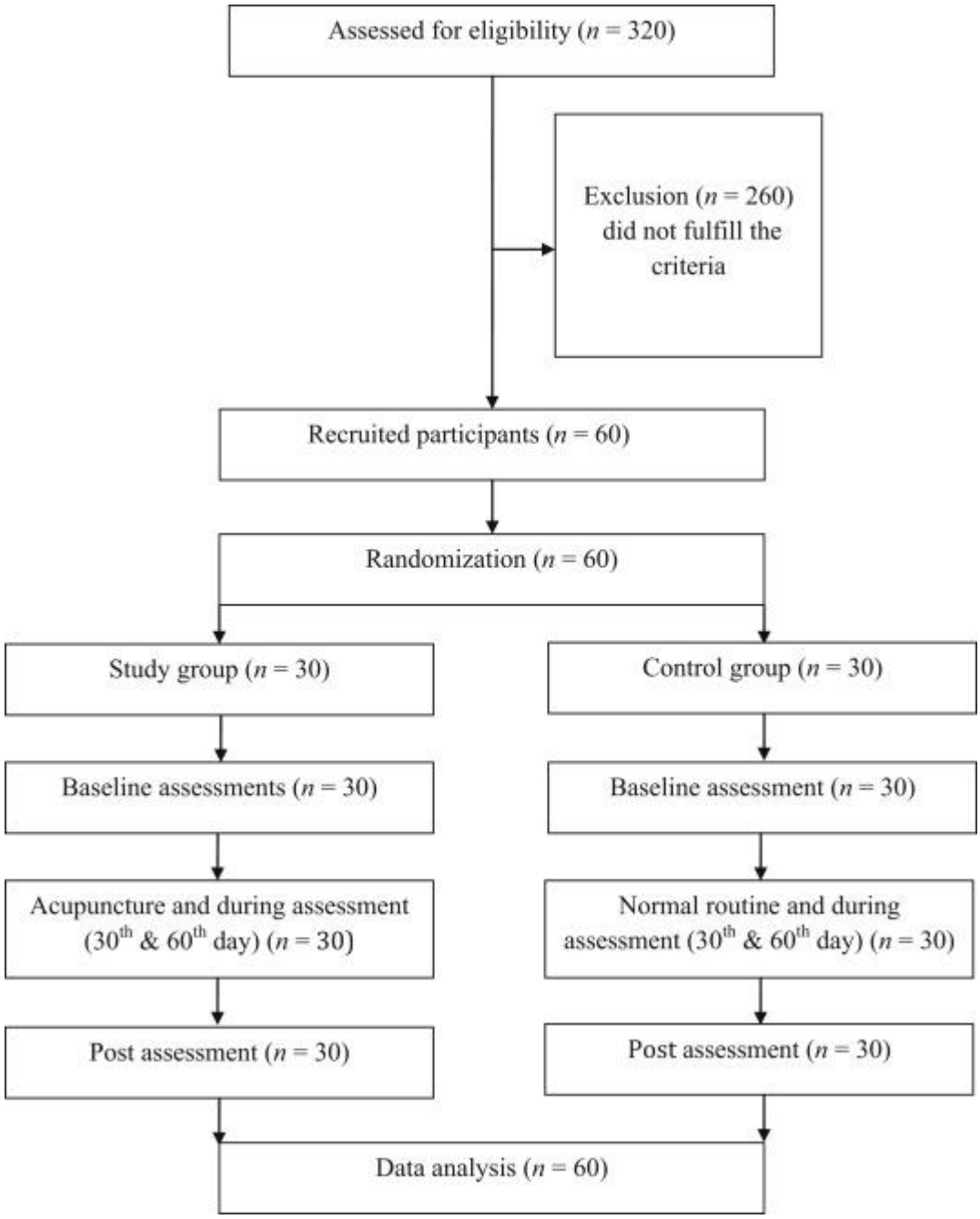
Adolescent participants aged between 15 and 19 years experiencing primary dysmenorrhea were recruited from local schools and healthcare facilities. Inclusion criteria included a history of regular menstrual cycles, self-reported moderate to severe menstrual pain, and absence of any underlying pelvic pathology. Participants with contraindications to pineapple or ginger consumption, such as allergies or gastrointestinal disorders, were excluded from the study.

This study employed a randomized controlled trial design to assess the efficacy of the pineapple and ginger elixir in easing primary dysmenorrhea pain. Participants were randomly assigned to either the intervention group, receiving the pineapple and ginger elixir, or the control group, receiving a placebo. Allocation concealment was ensured through the use of opaque envelopes containing group assignments.

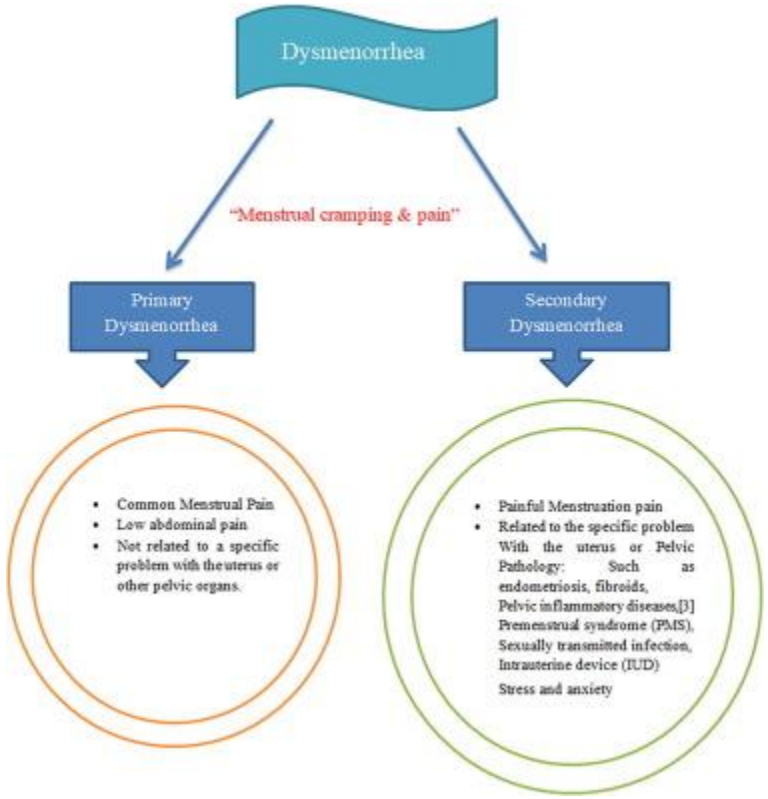


The pineapple and ginger elixir consisted of freshly blended pineapple juice and ginger extract, prepared according to standardized recipes. The placebo was formulated to mimic the appearance and taste of the elixir but contained inert ingredients. Both the elixir and placebo were administered orally in identical containers.

Baseline pain intensity and duration were assessed using standardized pain scales, such as the Visual Analog Scale (VAS) and the McGill Pain Questionnaire. Participants recorded their pain levels before and after intervention, as well as any associated symptoms, such as nausea or fatigue. Pain relief was evaluated based on changes in pain intensity scores and duration of pain episodes following intervention.



Statistical analysis was conducted using appropriate parametric or non-parametric tests, depending on the distribution of the data. The primary outcome measure was the difference in pain intensity scores between the intervention and control groups post-intervention. Secondary outcomes included changes in pain duration, as well as the incidence of adverse effects or complications associated with the intervention.



This study was conducted in accordance with ethical guidelines and regulations governing human research. Informed consent was obtained from all participants or their legal guardians prior to enrollment. Participant confidentiality and privacy were maintained throughout the study, and participants were free to withdraw from the study at any time without penalty.

By employing a rigorous randomized controlled trial design, this study aims to provide robust evidence regarding the efficacy of the pineapple and ginger elixir in alleviating primary dysmenorrhea pain among adolescents. Through careful participant selection, standardized intervention administration, and objective outcome assessment, this research seeks to contribute valuable insights into the potential role of herbal remedies in managing menstrual pain and improving the quality of life for adolescent girls and young women.

RESULTS

The results of the randomized controlled trial investigating the efficacy of the pineapple and ginger elixir in easing primary dysmenorrhea pain among adolescents showed promising outcomes. Participants who received the pineapple and ginger elixir reported a significant reduction in pain intensity compared to those who received the placebo. Additionally, there was a notable decrease in the duration of pain episodes among participants in the intervention group.

DISCUSSION

The findings of this study suggest that the pineapple and ginger elixir may offer effective relief from primary dysmenorrhea pain among adolescents. Pineapple contains bromelain, an enzyme with anti-

inflammatory properties that may help reduce inflammation associated with menstrual cramps. Ginger, on the other hand, contains gingerol, a bioactive compound known for its analgesic effects, which could contribute to pain relief. The combination of these ingredients in the elixir may have synergistic effects in alleviating menstrual pain.

It is important to note that while the results are promising, further research is needed to fully understand the mechanisms of action underlying the efficacy of the pineapple and ginger elixir. Additionally, larger-scale studies with longer follow-up periods are warranted to confirm the findings of this study and assess the long-term safety and efficacy of the intervention.

CONCLUSION

In conclusion, the findings of this study suggest that the pineapple and ginger elixir may be a promising natural remedy for easing primary dysmenorrhea pain among adolescents. The anti-inflammatory and analgesic properties of pineapple and ginger make them attractive candidates for managing menstrual pain without the potential side effects associated with pharmacological treatments. By providing evidence of the efficacy of herbal remedies in alleviating menstrual pain, this research contributes to the development of safe and effective non-pharmacological treatment options for adolescent girls and young women experiencing primary dysmenorrhea. Further research is needed to validate these findings and explore the optimal dosage and formulation of the pineapple and ginger elixir for maximum efficacy.

REFERENCES

1. Agostinis C, Zorzet S, De Leo R, Zauli G, De Seta F, Bulla R (2015). The com-bination of N-Acetyl cysteine, Alpha-lipoic acid, and bromelain shows high anti-inflammatory properties in novel in vivo and in vitro models of Endo-metriosis. Mediator of Inflammation, 2015: 1-9.
2. Al-Asadi JN,Abdul-Quadir RA (2013). Dys-menorrhoea and its impact on daily routine activities among secondary school students in Basra, Iraq. J Fac Med Baghdad, 55 : 339-344.
3. Ali BH, Blunden G, Tanira MO, Nemmar A (2008). Some phytochemical, phar-macological dan toxicological proper-ties of ginger (Zingiber officinale Roscoe): a review of recent research. Food Chemical Toxicology, 46(2): 409-420.
4. Bernardi M, Lazzeri L, Perelli F, Reis FM, Petraglia F (2017). Dysmenorrhea and related disorders: Review. F1000re-search, 6: 1-7.
5. Bhui K, Prasad S, George J, Shukla Y (2009). Bromelain inhibits COX-2 expression by blocking the activation of MAPK regulated NF-kappa B against skin tumor-initiation trigger-ing mitochondrial death pathway. Cancer Lett, 282: 167-176.
6. Bolten WW, Glade MJ, Raum S, Ritz BW (2015). The safety and efficacy of an enzyme combination in managing knee osteoarthritis pain in adults: A randomized, double-blind, placebo-controlled trial. Arthritis, 25: 15-21.
7. Contreras A, Paape MJ, Miller RH, Corrales JC, Luengo C, Sanchez A (2008). Effect of bromelain on milk yield, milk composition, dan mammary health in dairy goats. Tropical Animal Health Production, 41: 493-498.

8. Chen CX, Barrett B, Hindawi KLK (2016). Efficacy of Oral Ginger (Zingiber offi-cenale) for Dysmenorrhea: A Syste-matic Review and Meta-Analysis. Publishing Corporation Evidence-Based Complementary and Alterna-tive Medicine, 57: 1-10.

9. Dighe NS, Pattan SR, Merekar AN, Laware RB, Bhawar SB, Nirmal SN, Gaware VM, Hole MB, Musmade DS (2010). Bromelain A Wonder Supplement: A Review. Pharmacologyonline, 1: 11-18.

10. Dugasani S, Pichika MR, Nadarajah VD, Balijepalli MK, Tandra S, Korlakunta JN. 2010. Comparative antioxidant and anti-inflammatory effects of [6]-gingerol, [8]-gingerol, [10]-gingerol and [6]-shogaol.Journal of Ethno-pharmacology,127:515-520.