

AN INVESTIGATORY OF SERPENTINA (SERPENTINA RAUWOLFIA) AS PAIN RELIEVER ESSENTIAL OIL

ABSTRACT

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Rauwolfia serpentina is a medicinal plant renowned for its long-standing use in traditional medicine and its diverse pharmacological effects, largely attributed to its monoterpene indole alkaloids. While extensively studied for its internal therapeutic applications, its potential as a topical pain-relieving essential oil remains largely underexplored. This study investigates the efficacy and safety of a Rauwolfia serpentina essential oil formulation for external use in pain management. It aims to fill critical knowledge gaps related to optimal concentrations, ingredient interactions, long-term effects, and specific pain conditions. The research aspires to develop a safe, effective, and sustainable natural alternative for topical pain relief. This study adopted a quantitative-experimental research approach, utilizing purposive sampling to select respondents. A structured survey questionnaire was used to evaluate the acceptability of the proposed product based on five criteria: texture and consistency, cooling effect, fragrance and aroma, ease of use, and overall presentation. Data were analyzed using descriptive statistics such as frequency, percentage, Likert scale, and weighted mean, as well as inferential tools including the t-test and f-test to determine any significant differences between the evaluations of the two respondent groups. The results of the investigation indicate that the proposed model is considered "highly acceptable" in terms of product texture and consistency, cooling effect, fragrance and aroma, ease of use, and overall presentation. The chemists' evaluation yielded an overall weighted mean of 3.36 with a variance of 0.455, a computed t-value of 0.432, and a degree of freedom of 13, compared to a t-critical value of 3.012 at $\alpha = 0.01$. Similarly, the dermatologists' evaluation produced a weighted mean of 3.54 with a variance of 0.375, and the same computed t-value and degrees of freedom. Since the computed t-value is less than the critical value, there is no significant difference between the assessments of the two groups. Therefore, the evaluations of both chemists and dermatologists support the acceptability of the proposed product model. This study presents initial evidence supporting the acceptability of a Rauwolfia serpentina essential oil formulation for topical application. While the findings are encouraging, further research is needed to confirm its pain-relieving efficacy, optimize the formulation, and assess its long-term safety and effectiveness across various pain conditions. This research serves as a foundation for future clinical studies and deeper exploration of Rauwolfia serpentina as a natural alternative for pain management.

RECOMMENDED CITATION

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