

The Use of Olive Oil in Pregnant Women in Their Third Trimester with Striae Gravidarum

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ABSTRACT

Background & Objective: Striae gravidarum is a skin change that commonly occurs in pregnant women, especially in the second and third trimesters, characterized by the appearance of lines on the skin and often accompanied by itching and discomfort. The lack of knowledge among pregnant women regarding striae gravidarum care leads to improper management. One non-pharmacological therapy that is safe and easy to apply is the use of olive oil. The purpose of this scientific paper is to apply maternity nursing care through health education and the use of olive oil in reducing itching caused by striae gravidarum in pregnant women. **Method:** The method used was a descriptive case study on two third-trimester pregnant women in the Marunda Makmur area, Kampung Bidara, North Jakarta. The intervention provided included health education about abdominal skin care during pregnancy and topical use of olive oil twice. **Result:** The results showed an increase in pregnant women's knowledge, indicated by an increase in pre-test to post-test scores (Mrs. A from 9 to 14 and Mrs. N from 7 to 13). In addition, there was a gradual decrease in itching complaints, with the skin condition becoming more moisturized and reduced scratch marks on the third day of intervention. **Conclusion:** The conclusion of this scientific paper is that health education accompanied by the routine use of olive oil is effective in increasing knowledge and reducing itching complaints in striae gravidarum, so it can be recommended as a non-pharmacological nursing intervention for pregnant women.

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Introduction

Pregnancy is a period that begins with conception until the birth of a baby, with a normal pregnancy duration of approximately 280 days or 40 weeks calculated from the first day of the last menstrual period. During pregnancy, mothers experience various physiological and psychological changes. In the second to third trimester, physical changes begin to become clearly visible, one of which is skin changes due to increasing tissue stretching. Skin elasticity that reaches its maximum point causes the appearance of striae gravidarum or stretch marks in pregnant women (Meisura & Triana, 2022).

Striae gravidarum is a skin change that commonly occurs during pregnancy and is characterized by the appearance of red, purple, or white lines on certain body areas such as the abdomen, breasts, thighs, hips, and arms. This condition arises due to excessive skin stretching during pregnancy and is often accompanied by complaints of itching, a burning sensation, and skin discomfort (Giska Aryunisari et al., 2024). Although not medically dangerous, striae gravidarum can affect the physical comfort and psychological condition of pregnant women.

Based on the World Health Organization (WHO) report in 2020, there was an increase of approximately 5% in the incidence of striae gravidarum in pregnant women compared to the previous year, with an incidence rate reaching approximately 66% in women during pregnancy (Farahnik et al., 2017). Research conducted by Giska Aryunisari et al. (2024) showed that the incidence of striae gravidarum is more commonly found at gestational ages in the second and third trimesters. The results of that study showed that at a gestational age of 15–28 weeks, 9 respondents (22.8%) experienced striae gravidarum, while at a gestational age of 29–42 weeks, 6 respondents experienced striae gravidarum. These data indicate that as gestational age increases, the risk of striae gravidarum appearing also increases.

Various efforts have been made to reduce complaints due to striae gravidarum, both pharmacologically and non-pharmacologically. One non-pharmacological method that is widely used is the application of olive oil. Research by Diana and Anggraeni (2025) regarding the effect of topical application of olive oil on the incidence of striae gravidarum in pregnancy showed a decrease in the severity level of striae gravidarum after the intervention. Another study by Safitri et al. (2024) also showed that the use of olive oil in third-trimester pregnant women can help reduce itching in the striae gravidarum area. The results of these studies indicate that olive oil has the potential to be a safe, easy-to-apply, and economical non-pharmacological intervention in overcoming discomfort due to striae gravidarum.

Striae gravidarum that is not properly treated can persist permanently, thereby affecting the mother's physical appearance. Besides causing itching and discomfort, this condition can also cause psychological disturbances in the form of decreased self-confidence and anxiety about body shape changes during pregnancy (Ningsih et al., 2021). Dissatisfaction with skin condition often causes emotional stress that affects the overall mental health of pregnant women. Therefore, appropriate and safe care efforts are needed to help reduce these complaints.

Olive oil is known to have a high vitamin E content and is rich in monounsaturated fats that are beneficial for maintaining skin moisture and elasticity. The vitamin E content in olive oil functions as an antioxidant capable of protecting cell membranes and skin tissues from damage caused by free radicals. In addition, olive oil also contains various nutrients such as vitamins A, B1, B2, C, D, E, and K, which

play a role in maintaining skin health (Nugraha & Yuliaswati, 2023). These contents make olive oil effective for use as a topical therapy to help reduce itching and improve the condition of striae gravidarum in pregnant women.

Health workers have an important role in the management of striae gravidarum, particularly as educators and implementers of maternity health care. Education regarding skin care during pregnancy needs to be provided so that pregnant women understand how to reduce discomfort due to striae gravidarum safely. One form of education that can be carried out is the socialization of the use of olive oil as an alternative non-pharmacological treatment. Besides being easy to obtain and safe to use, olive oil also has good benefits in maintaining skin moisture and reducing itching due to skin stretching during pregnancy (Meisura & Triana, 2022).

Based on the results of a preliminary study conducted in January 2026 in the Jalan Marunda Makmur area, Kampung Bidara, North Jakarta, two third-trimester pregnant women with gestational ages of 33 weeks and 37 weeks were found to have striae gravidarum accompanied by itching and discomfort. Both mothers said they did not yet know how to care for stretch marks, so when itching appeared, they only rubbed the area or scratched until it caused wounds. In addition, the mothers also felt less confident due to skin changes during pregnancy. Based on these conditions, the researcher is interested in implementing the socialization of the use of olive oil in third-trimester pregnant women with striae gravidarum as an effort to increase knowledge and reduce discomfort due to striae gravidarum.

Objective

Providing maternity nursing care to pregnant women with striae gravidarum who experience itching by educating them on the use of olive oil.

Method

This study employed a descriptive case study design involving two third-trimester pregnant women with striae gravidarum who experienced itching complaints. The study was conducted in the Marunda Makmur area, Kampung Bidara, North Jakarta, in January 2026. The intervention consisted of two components. First, health education was provided using a pocketbook, explaining the definition, causes, types, risk factors, and impacts of striae gravidarum, as well as skin care. Second, olive oil was applied twice a day (morning and evening) for 3 days, with one teaspoon smeared and gently massaged onto the abdominal area. The instruments and measurements used in this study included pre-test and post-test questionnaires (20 questions), the Davey score to assess the severity of striae gravidarum, and skin observation (moisture, redness, scratch marks). Data were presented descriptively by comparing knowledge scores before and after the intervention as well as the progression of itching complaints.

Results

Respondent Characteristics

TABLE 1. Characteristics of Pregnant Women with Striae Gravidarum

Age	24 years old	32 years old
Last Education	Senior High School	Junior High School
Occupation	RPTRA Manager	Trader
Obstetric Status	G2P1A0	G3P2A1
Gestational Age	30 weeks	33 weeks
Pre-pregnancy Weight	55 kg	62 kg
Weight During Pregnancy	67 kg	68 kg
Davey Score (SG Severity)	8 (Severe)	8 (Severe)

Knowledge of Pregnant Women

Pre-test results indicated low knowledge (Mrs. A = 9, Mrs. N = 7). After health education, post-test scores increased to Mrs. A = 14 and Mrs. N = 13.

Itching Complaints and Skin Condition

1. Day 1: Both women still experienced frequent itching, were seen scratching, and had dry skin.
2. Day 2: Itching began to subside, and the skin felt more moisturized.
3. Day 3: Itching was less frequent; the skin was moisturized, with no redness or new scratch marks.

Nursing Diagnosis

1. Knowledge deficit regarding the care of striae gravidarum (D.0111)
2. Comfort disturbance (D.0074)
3. Body image disturbance (D.0083) – only in Mrs. N

Evaluation

The knowledge issue was resolved, the comfort disturbance was partially resolved, and the mother was advised to continue using olive oil on her own.

Discussion

The results of this study indicate that health education effectively increases pregnant women's knowledge about striae gravidarum and its management. This is consistent with the Health Belief Model and the Transtheoretical Model, in which increased knowledge drives changes in attitudes and healthy behaviors (Muharram et al., 2021). A study by Fernanda & Yuliaswati (2023) also reported that, on average, pregnant women with striae gravidarum have limited knowledge about the effects of striae gravidarum.

Topical application of olive oil twice daily for 3 days successfully reduced the frequency of itching and improved skin moisture. The vitamin E content (approximately 14.39 mcg per 100 grams) and monounsaturated fats in olive oil act as antioxidants, reduce inflammation, and maintain skin elasticity (Nugraha & Yuliaswati, 2023; Nurul, 2023). These results are consistent with a study by Hastuti & Sukei (2023) in Semarang, which showed an increase in skin elasticity and moisture after 3 days of olive oil application.

From an Islamic perspective, olive oil is mentioned in Surah An-Nur, verse 35, as a blessed tree whose oil almost gives light. This indicates that olive oil holds added value as a beneficial ingredient for health, including skin care for pregnant women.

Conclusion

The assessment revealed that both mothers experienced itching associated with striae gravidarum, inappropriate self-care practices, and low self-confidence.

The established nursing diagnoses were a knowledge deficit and impaired comfort. Health education interventions and the application of olive oil twice daily for 3 days proved effective. Implementation proceeded as planned using a pocket guide.

The evaluation showed an increase in knowledge and a decrease in the intensity of itching. Olive oil is effective, safe, economical, and can be applied independently by pregnant women.

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