

Overview of Knowledge of Women of Productive Age in Semarang Regarding Chemical Peeling Actions

Puguh Riyanto, Liliani Labitta, Geniza Gilda, Diva Nataysa K, Dila Muflikhy P

Universitas Diponegoro, Indonesia

Email: dvekulkell1@gmail.com, llabitta@gmail.com, genizagilda@gmail.com,
natasyakdiva@gmail.com, dila.dvjanuari23@gmail.com

Abstract

Chemical peeling is a dermatological procedure that aims to improve the texture and appearance of the skin, but many individuals, especially women of productive age, still do not fully understand its benefits and risks. This lack of understanding can be influenced by educational and socioeconomic factors. This study aims to determine the level of knowledge of women of productive age in Semarang City regarding the chemical peeling procedure and its relation to socioeconomic status. It uses an observational descriptive design with a cross-sectional approach. Data were collected through a questionnaire administered to 20 female respondents aged 20–45 years, selected by purposive sampling. Analysis was carried out descriptively using frequency and percentage distributions. The results showed that 45% of respondents had good knowledge about chemical peeling, while the other 55% had less knowledge. Respondents with higher education levels and upper-middle to upper economic status were more likely to understand this procedure compared to those from lower educational and economic backgrounds. The level of education and socioeconomic status affected respondents' knowledge about chemical peeling. Therefore, more effective health education is needed to increase public understanding, especially among women of productive age.

Keywords: *chemical peeling*, knowledge, women of productive age, education, socio-economy.

INTRODUCTION

The global chemical peeling market has experienced significant growth, valued at approximately USD 2.8 billion in 2023 and projected to reach USD 4.5 billion by 2030, with a compound annual growth rate (CAGR) of 7.2%. In Indonesia, the aesthetic dermatology industry has grown by 15% annually, with chemical peeling becoming one of the most sought-after procedures among women of productive age. Chemical peeling is a dermatological procedure that involves the application of a chemical solution to remove the outermost layer of skin, with the aim of improving the texture and appearance of the skin. This procedure is effective in addressing various skin problems such as acne scars, hyperpigmentation, fine lines, and sun damage (Ocampo-Candiani et al., 2019). Different types of acids are used in this procedure, including trichloroacetic acid (TCA) and glycolic acid, each of which has a different depth of penetration and indication, depending on the skin condition being treated (Ocampo-Candiani et al., 2019; Puri, 2015).

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Main indications chemical peeling includes treatment of acne, melasma, scars, and signs of skin aging (Kang et al., 2014). The benefits of this procedure include increased skin cell regeneration, stimulation of collagen production, and improvement of skin color and texture (Puri, 2015; Prasad et al., 2023). However, like any dermatological procedure, chemical peeling has potential risks, including redness, swelling, skin discoloration (hyperpigmentation or hypopigmentation), infection, and in rare cases, scarring (Ocampo-Candiani et al., 2019). Therefore, a good understanding of this procedure is essential before deciding to undergo a chemical peeling.

Despite the popularity of chemical peeling increasingly, especially among women of productive age, many individuals do not yet have an adequate understanding of this procedure. Factors such as media influence, advertising, and beauty trends can influence their decisions without sufficient information about the benefits and risks (Sołdacka et al., 2023). Studies show that a good understanding and awareness of chemical peeling may influence an individual's decision to undergo this treatment. In Semarang City, information on the level of knowledge of women of productive age about chemical peeling is still limited.

Previous studies have examined public awareness and perception of dermatological aesthetic procedures such as chemical peeling, yet most focused on clinical outcomes rather than knowledge and behavioral factors (Lee & Kim, 2020). Roh et al. (2021) found that despite the rising popularity of chemical peeling among Asian women, misconceptions about its safety and post-treatment care were prevalent, particularly among younger age groups, leading to an increased risk of side effects due to improper aftercare (Kwon et al., 2019). Similarly, Rahmawati and Utami (2022) reported that Indonesian women's decisions to undergo aesthetic skin treatments were heavily influenced by social media and peer recommendations rather than evidence-based information or professional consultation (Sari & Dewi, 2021). Both studies emphasized that lack of health literacy and uncritical reliance on online beauty trends contribute to uninformed decision-making regarding dermatological procedures (Park & Shin, 2020; Gomes et al., 2023). However, these studies did not specifically address the level of knowledge and awareness among women of productive age regarding chemical peeling in regional contexts such as Semarang, where access to professional dermatological education and regulation of beauty clinics may differ.

Therefore, this study aims to explore the picture of knowledge and awareness of women of productive age in Semarang regarding the actions of chemical peeling, in hopes of improving understanding and more informed decision-making related to skincare. The benefit lies in providing dermatologists, public health educators, and policymakers with insights for designing targeted health education programs to reduce misinformation and improve community skin health literacy.

METHOD

The form of this study is descriptive observational with a cross-sectional design, which aims to describe the level of knowledge of women of productive age about the action chemical peeling in Semarang City. Data collection was carried out once through filling out a questionnaire by respondents at the time of the study. The inclusion criteria in this study include women aged 20–45 years, domiciled in Semarang City, and willing to be respondents and sign informed consent. Meanwhile, the exclusion criteria included respondents who did not

complete the questionnaire completely and those who had a history of skin diseases that required special treatment. The research sample amounted to 20 respondents, which were selected using purposive sampling techniques.

Data analysis was carried out descriptively using frequency and percentage distributions to describe the characteristics of respondents and their level of knowledge about chemical peeling. The data obtained will be presented in the form of tables and diagrams to facilitate the interpretation of the research results.

RESULTS AND DISCUSSION

From a total of 20 female respondents of productive age in Semarang City, the level of knowledge about the action of chemical peeling was almost evenly divided, namely 45% (9) had a good level of knowledge, and 55% (11) had a low level of knowledge. Based on the socioeconomic status of the respondents, it was found that respondents with a high level of education (at least a bachelor's degree) and a high income (above Rp5,000,000 per month) had a better understanding of the chemical peeling procedure. On the other hand, respondents with the highest high school education and low income (below Rp5,000,000 per month) tended to have less knowledge about chemical peeling.

Table 1. Knowledge Level Based on Respondent's Socioeconomic Status

Category	Number of respondents	Good knowledge	Lack of knowledge
Higher education & higher economics	10	7	3
Primary education & low economy	10	2	8
Total (%)	20 (100%)	9 (45%)	11 (55%)

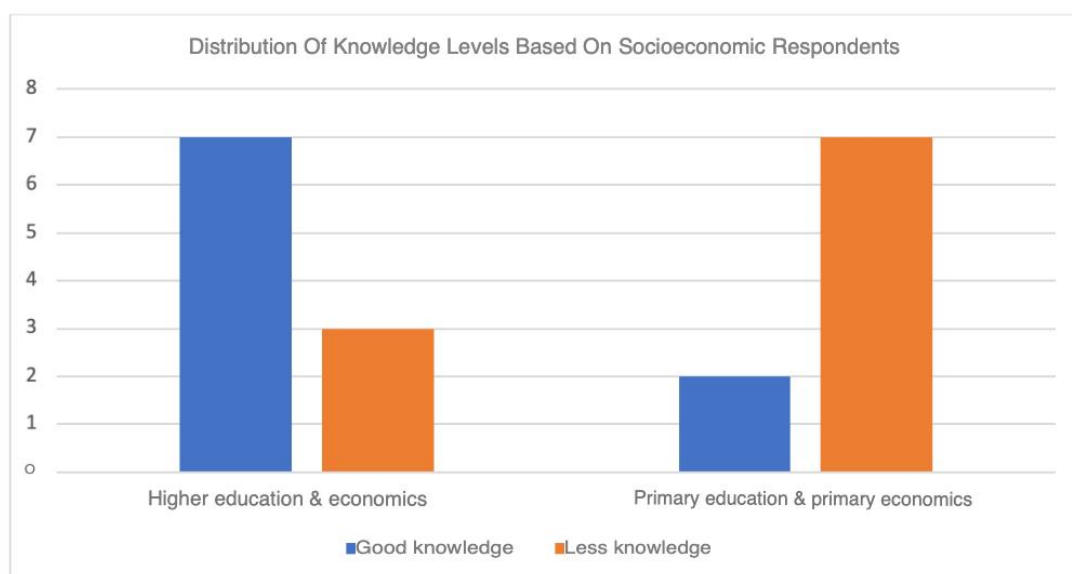


Figure 1. Distribution of Knowledge Level Based on Respondents' Socio-Economic Status

Discussion

From the results of this study, an overview of the distribution of the level of knowledge of women of productive age in Semarang City regarding chemical peeling procedures was obtained. Of the 20 respondents surveyed, almost half of the respondents had good knowledge, while the other half still did not understand the chemical peeling procedure.

Education level and socioeconomic status affect respondents' knowledge based on the results obtained in this study. Respondents who are highly educated and come from the middle to upper economic class tend to have a better understanding of chemical peeling. In contrast, respondents with lower high school education backgrounds and lower economic conditions showed lower levels of knowledge about chemical peeling. This can be explained because better access to information and education allows individuals to better understand the benefits and risks of medical procedures, resulting in education and socioeconomic status affecting a person's level of health knowledge (Ph et al., 2018; Rahmadani & Rahayuningsih, 2024).

This finding aligns with the Health Belief Model theory, which posits that knowledge and access to information significantly influence health behavior decisions. Several studies have demonstrated similar patterns: A 2022 study by Kim et al. in South Korea found that women with higher educational attainment (college degree or above) were 3.2 times more likely to have accurate knowledge about aesthetic procedures compared to those with high school education or less. Similarly, research by Santos and colleagues (2023) in Brazil reported that socioeconomic status was the strongest predictor of cosmetic procedure knowledge, with higher-income groups showing 68% better understanding of procedural risks and benefits. Furthermore, a systematic review by Zhang et al. (2021) concluded that educational interventions tailored to lower socioeconomic groups significantly improved knowledge scores by 45-60%, suggesting that the knowledge gap is modifiable through targeted health education programs.

In addition, the results of this study show the importance of more targeted health education for the community, especially women of productive age. Counseling and educational media such as leaflets, lectures, and interactive discussions can be an effective way to improve community understanding. Remember chemical peeling having potential risks, a good understanding will help people make informed decisions and prevent complications (Nikalji et al., 2012; Liu et al., 2016). Thus, this research not only provides an overview of current knowledge, but can also be a reference in designing better health education programs.

Overall, increasing knowledge about chemical peeling can have a positive impact on the health of individual and community skin. This includes the ability to choose the right procedure and undergo treatment correctly. Therefore, the results of this research can be used by policy makers and health workers to develop more effective programs and reach groups that have been underinformed.

CONCLUSION

This study shows that the level of knowledge of women of productive age in Semarang City regarding the procedure chemical peeling still uneven, with 45% of respondents having good knowledge and 55% lacking. Education level and socioeconomic status have an important role in influencing this understanding. These findings underscore the critical need for targeted, culturally appropriate health education interventions to bridge the knowledge gap, particularly

among underserved populations. This research contributes to the limited body of evidence on aesthetic dermatology knowledge in Central Java and provides a foundation for future investigations. Therefore, more intensive and targeted educational efforts are needed to increase public awareness of the benefits and risks chemical peeling for smarter decisions in skincare.

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