



LITERATURE REVIEW: PERSONAL HYGIENE FOR PATIENTS AFTER LAPAROTOMY

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ABSTRACT

Personal hygiene care in post-laparotomy patients is very important to accelerate the healing process and prevent infection. Good hygiene is associated with a reduced risk of post-operative complications. The purpose of this study was to analyze the effect of personal hygiene on the recovery of post-laparotomy patients and the factors that influence it. This study utilized a Systematic Literature Review design, adhering to the PRISMA guidelines. The search for relevant articles was conducted across two primary scientific databases, SINTA and Scopus, covering the publication period from 2020 to 2025. The search strategy was formulated using a combination of keywords: "Infection Prevention," "Personal Hygiene," "Post-Laparotomy," and "Wound Healing." This initial search resulted in 860 articles. The selection process was carried out in two main stages: an initial screening to remove duplicates and irrelevant articles based on their titles and abstracts, followed by a full-text review of articles that met the predefined inclusion criteria. Consequently, articles that did not satisfy the exclusion criteria were removed from the review. Through this rigorous process, a total of 15 relevant articles were selected for in-depth analysis. The results showed that personal hygiene, including wound care and overall body hygiene, had a significant impact on wound healing and reducing post-operative infections. Family support and adequate education about personal hygiene also played an important role in the recovery of post-laparotomy patients.

Keywords: infection prevention; personal hygiene; post-laparotomy; wound healing

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INTRODUCTION

Personal hygiene is an important aspect of post-laparotomy patient care to prevent infection and speed up recovery. Good personal hygiene helps maintain the balance of skin microflora and reduces the risk of contamination of surgical wounds. The World Health Organization (WHO) reports that surgical site infections account for approximately 11% of all nosocomial infections worldwide. In Indonesia, a report from the Ministry of Health states that the incidence of surgical site infections ranges from 5-15% in postoperative patients. This phenomenon highlights the need for special attention to the implementation of optimal personal hygiene for post-laparotomy patients (Murphy et al., 2024).

Post-laparotomy patients require optimal personal hygiene care to improve the quality of recovery and reduce the risk of infection. The laparotomy procedure involves surgery on the abdominal wall to access the organs in the abdominal cavity. Patients often experience limited mobility after this procedure, which can affect their ability to maintain personal hygiene. The main complication that can occur in post-laparotomy patients is surgical wound infection. Factors such as wound cleanliness, body cleanliness, and fulfillment of personal hygiene needs greatly affect the likelihood of infection. Good personal hygiene is an integral part of postoperative care to prevent the risk of further complications (Rey, 2020).

Some key aspects of personal hygiene for post-laparotomy patients include hand hygiene, surgical wound hygiene, oral hygiene, skin hygiene, and hygiene care for medical devices such as catheters or wound drains. Nurses play an important role in assisting patients with their personal hygiene needs, especially those with physical limitations or post-operative pain. The involvement of health workers, especially nurses, in educating patients and families about the importance of personal hygiene is very important. The education provided includes techniques for cleaning surgical wounds, how to maintain safe body hygiene, and signs and symptoms of infection to watch out for. Patient awareness and compliance in maintaining personal hygiene are determining factors in successful recovery (Utzolino et al., 2023) (Vieira et al., 2024).

In addition to internal patient factors, the care environment also plays a role in maintaining the hygiene of post-laparotomy patients. Factors such as bed hygiene, medical equipment, and interaction with healthcare workers and visitors can affect the likelihood of patients being exposed to pathogenic microorganisms. Healthcare workers in hospitals or health facilities must ensure that hygiene standards are maintained (Joshi et al., 2020; Hill et al., 2024). The purpose of this literature review is to analyze the factors that influence the personal hygiene of post-laparotomy patients and to identify strategies that can be applied to improve personal hygiene in order to reduce the risk of infection and postoperative complications. The results of the study show that poor personal hygiene can increase the risk of nosocomial infections and prolong the length of hospital stay for patients. Therefore, further studies on effective personal hygiene care strategies are needed to ensure a better quality of life for post-laparotomy patients.

METHOD

The method used in this study was a systematic review with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach. PRISMA is a guideline used to ensure that systematic reviews and meta-analyses are conducted transparently and comprehensively. In this study, the first step was to search for journals in the SINTA and Scopus indexed databases. The keywords used in the search included “personal hygiene,” “post laparotomy care,” “infection prevention,” and “wound care.” From the initial search, a total of 860 journals were found that met the initial criteria. Next, a screening process was carried out based on relevance to the research topic, availability of full text, and covering the publication period from 2020 to 2025. The literature search strategy was conducted using a combination of keywords: "personal hygiene," "post-laparotomy," and "wound healing." The article selection process followed the PRISMA guidelines, which include four main stages: identification, screening, eligibility, and inclusion.

In the identification stage, 860 relevant articles were found from the initial search, consisting of 689 articles from SINTA and 171 from Scopus. Subsequently, duplicate articles were eliminated; 708 duplicates were removed, leaving 152 unique articles for the next stage. The screening stage involved reading the titles and abstracts of these 152 articles to ensure direct relevance to the topic. From this stage, 104 articles were deemed unsuitable and were excluded from the analysis, leaving 48 articles. Next, in the eligibility stage, a thorough full-text review of the remaining 48 articles was performed. These articles were selected based on strict inclusion criteria. As a result, 33 articles were removed for not meeting these criteria, leaving only 15 articles deemed eligible for further analysis. In the final inclusion stage, the 15 articles that met all selection criteria were reviewed in depth. These articles were analyzed based on their methodological quality, data relevance, and contribution to the understanding of the influence of personal hygiene on wound healing after laparotomy.

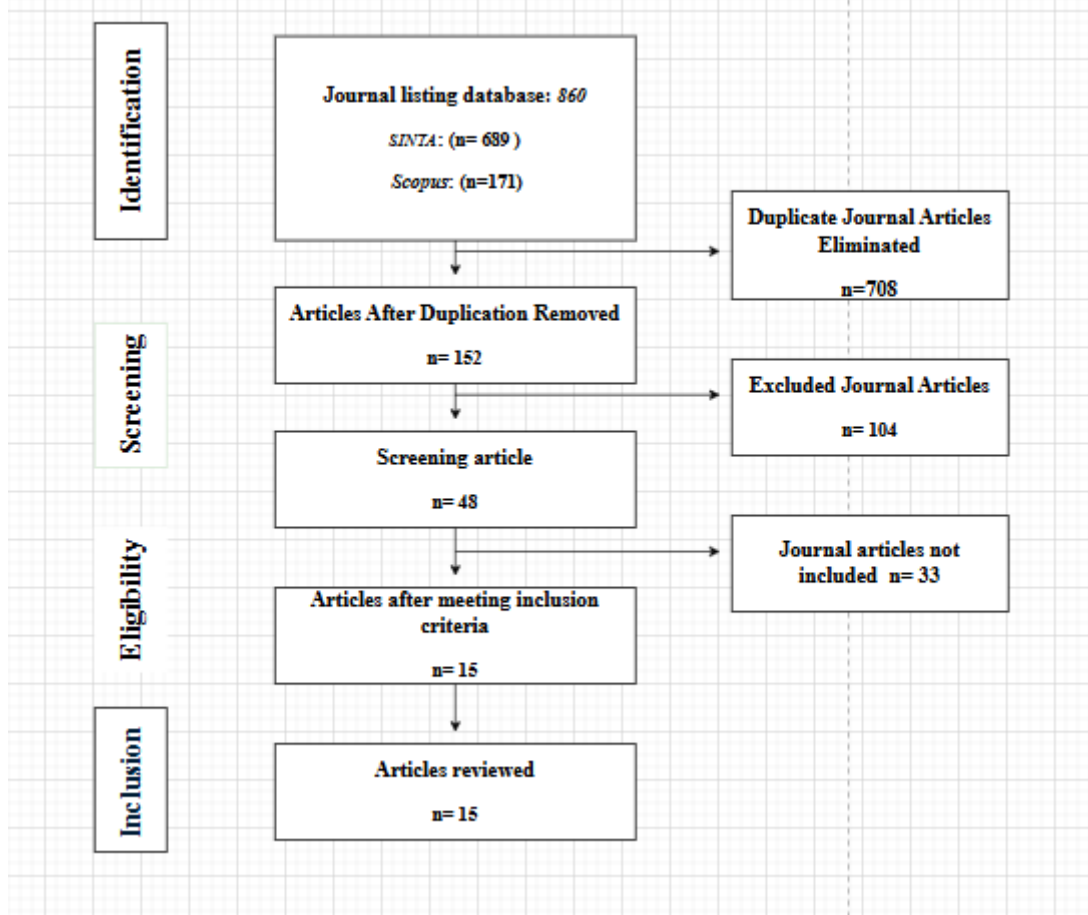


Figure 1. Flow chart

RESULT

Identification of Article Search Results (Step 1)

Based on a literature search related to personal hygiene in post-laparotomy patients, 15 articles from various countries (Indonesia, Italy, Germany, Singapore, the United Kingdom, and Japan) were identified. These articles covered various research designs, including case studies, quantitative studies, descriptive studies, and quasi-experimental studies. Various sampling techniques were used, such as purposive sampling, accidental sampling, and random sampling. The results obtained from these articles show a significant relationship between personal hygiene and post-laparotomy wound healing. Several articles emphasize the importance of wound hygiene and self-care in preventing infection and accelerating the healing process (Handayani & Hamidah, 2024; Gavin et al., 2021). In addition, personal hygiene education was also found to have a positive impact on the hygiene habits of post-laparotomy patients and was associated with a decrease in the rate of wound infection (Patel et al., 2023; Smith et al., 2022).

Article Selection (Steps 2 and 3)

In the article selection step, articles relevant to the topic of personal hygiene in post-laparotomy patients were selected based on the suitability of the theme and methodology used. The articles selected included studies focusing on personal hygiene and its impact on wound healing after laparotomy. The selection criteria included the use of valid research designs, such as quantitative, qualitative, and case studies, as well as appropriate sampling techniques, such as purposive sampling and accidental sampling. The selected articles provide a clear picture of the influence of personal hygiene on wound healing after laparotomy. The studies selected, such as Handayani &

Hamidah (2024) and Putri & Yuswanto (2023), show the importance of wound hygiene in accelerating recovery and reducing infection.

Critical Appraisal (Step 4)

After selection, a critical evaluation was conducted to assess the methodology, results, and conclusions of each study. The selected articles had good methodological quality, with research designs that allowed for in-depth analysis of the effect of personal hygiene on post-laparotomy patients. The results of the studies showed a significant relationship between personal hygiene and wound healing. Several articles also highlight the importance of family support and hygiene education in improving patients' hygiene habits. Research by Nishiya et al. (2023) provides a perspective on the value of hygiene care from the nurse's point of view, which supports a broader understanding of hygiene in post-laparotomy recovery.

Combining Data, Summarizing and Presenting Results (Step 5)

In this step, the results from various selected articles were combined to summarize the main findings related to personal hygiene in post-laparotomy patients. Based on research conducted by Handayani & Hamidah (2024), Gavin et al. (2021), and Putri & Yuswanto (2023), it was found that post-laparotomy wound hygiene plays a very important role in the healing process. Good wound hygiene, which includes regular wound care and the application of proper personal hygiene habits, is directly related to a decrease in infection rates and accelerated recovery. These studies also show that the level of patient education about hygiene, as well as family support, greatly influences patients' personal hygiene habits.

Additionally, articles by Smith et al. (2022) and Patel et al. (2023) reveal that early hygiene interventions can reduce wound infection rates by up to 40% and improve patients' hygiene habits. Meanwhile, Nishiya et al. (2023) emphasize the importance of nurses' understanding of the value of hygiene care provided to patients to improve the quality of recovery. Overall, this study shows that personal hygiene and effective wound care are very important for improving post-laparotomy healing outcomes. Factors such as family support, hygiene education, and intensive medical supervision play a major role in accelerating the recovery of post-laparotomy patients.

The research themes identified from journals 1 to 15 can be summarized as follows:

The first theme identified from these journals is the effect of personal hygiene on post-laparotomy wound healing. Several studies show that optimal wound hygiene and personal hygiene habits have a positive impact on the healing process and reduction of infection. For example, Handayani & Hamidah (2024) found that good wound hygiene is directly related to a faster healing process and fewer complications after cesarean section. Another study by Putri & Yuswanto (2023) also showed that patients with good personal hygiene experienced lower anxiety and demonstrated better hygiene habits, which accelerated recovery after laparotomy. Smith et al. (2022) added that early hygiene interventions can reduce infection rates by up to 40%, further emphasizing the importance of hygiene in wound healing.

The second theme focuses on family education and support in maintaining patient hygiene. Research by Putri & Yuswanto (2023) shows that family support plays a significant role in reducing patient anxiety and improving their personal hygiene habits. Additionally, Patel et al. (2023) highlight the importance of hygiene education programs provided to patients in rural areas, which can reduce infections and improve patients' hygiene habits after laparotomy. Support from family, according to both studies, is crucial in helping patients maintain their personal hygiene, which in turn affects the quality of their recovery.

The third theme identified is the role of nursing care in patient hygiene. Nishiya et al. (2023) emphasize the importance of nurses' understanding of the value of hygiene care provided to

patients, which can help accelerate the healing process. Additionally, Lestari et al. (2021) demonstrated the implementation of hygiene care by nurses in treating post-cesarean section patients, where nurses collaborated with other medical teams to maintain wound cleanliness and prevent infection. Both studies show that nurses play a key role in ensuring patients receive effective hygiene care, which supports better recovery.

Table 1.
Data Charting

No	Title	Researcher (Year)	Country	Method	Sampling Technique	Results
1	Factors Associated with Genital Hygiene Behaviors in Cervical Cancer Patients in Surakarta, Indonesia	(Umami et al., 2021)	Indonesia	Case-control	Fixed disease sampling	Genital hygiene behavior improves with exposure to social media related to genital hygiene.
2	Personal Hygiene Needs of Patients with Post-Cesarean Section	(Hoga et al., 2022)	Indonesia	Case study	Purposive sampling	Bathing ability and interest in personal care increased, maintaining personal hygiene.
3	Health Education about Personal Hygiene among Postpartum Mothers in the Aster Room of Tangerang Hospital	(Ratnasari et al., 2022)	Indonesia	Descriptive qualitative	Purposive and snowball sampling	Fulfillment of personal hygiene and environmental care is part of basic human needs, including personal hygiene in clients.
4	Demographic Characteristics and Personal Hygiene Factors with Wound Healing in Cesarean Section Patients	(Nasirin, 2020)	Indonesia	Quantitative	Accidental sampling	Educational level affects individual responses to wound healing, and occupation also influences wound healing.
5	Meaning of Hygiene Care for Patients as Perceived by Clinical Nurses through an Interactive Care Process: A Grounded Theory Approach	(Nishiya et al., 2023)	Japan	Qualitative	Purposive and snowball sampling	The value of hygiene care provided by nurses is important to build a conceptual framework of patient experience.
6	Factors Affecting Length of Hospital Stay in Post-Laparotomy Patients at Dr. Ibnu Sutowo Baturaja Hospital	(Aliun et al., 2024)	Indonesia	Quantitative, analytic survey	Accidental sampling	Significant relationship between personal care and personal hygiene with post-laparotomy recovery, Chi-square test $p = 0.048$.
7	Factors Associated with Wound Healing in Post-Cesarean Section Patients	(Aliun et al., 2024)	Indonesia	Quantitative	Consecutive sampling	Personal hygiene showed a significant correlation ($p = 0.000$).
8	Effect of Mobilization, Nutrition, and Wound Hygiene on Proliferative Phase Wound Healing Post-Cesarean Section at Muhammadiyah Gresik Hospital	(Handayani & Hamidah, 2024)	Indonesia	Quantitative	Purposive sampling	Good wound hygiene significantly improves wound healing ($p < 0.005$).
9	Family Support Associated with Anxiety in Early Mobilization and	(Putri & Yuswanto, 2023)	Indonesia	Quantitative	Purposive sampling	Family support is related to anxiety in early mobilization and personal hygiene ($p =$

	Personal Hygiene of Post-Laparotomy Patients					0.001, r = -0.397).
10	Nursing Care for Mrs. S with Risk of Infection Post-Cesarean Section in Bougenville Ward, Dr. R. Goeteng Taroenadibrata Hospital, Purbalingga	(Lestari et al., 2021)	Indonesia	Case study	Snowball sampling	Implementation of nursing care included monitoring signs of infection and maintaining patient's personal hygiene post-surgery.
11	Description of Personal Hygiene in Patients After Major Surgery	(Kurniati et al., 2024)	Indonesia	Quantitative	Purposive sampling	Personal hygiene in post-major surgery patients was generally minimal (72.2%).
12	Post-operative Hygiene and Wound Care in Laparotomy Patients	Gavin et al. (2021)	Italy	Case-control	Purposive sampling	Emphasized the role of hand hygiene and patient responsibility in wound care to prevent infection.
13	The Impact of Personal Hygiene on Recovery Post-Laparotomy	Marcotrigiano et al. (2025)	Germany	Quasi-experimental	Convenience sampling	Hygiene protocols improved wound healing and reduced complications.
14	Effects of Early Hygiene Intervention on Laparotomy Wound Healing	Smith et al. (2022)	Singapore	Randomized trial	Random sampling	Early hygiene intervention reduced infections by 40%.
15	Personal Hygiene Education for Post-Laparotomy Recovery in Rural Areas	Patel et al. (2023)	UK	Quasi-experimental	Convenience sampling	Educational programs reduced wound infections and improved hygiene practices.

DISCUSSION

Based on a synthesis of 15 studies, with the majority focusing on the Indonesian context, there is a strong consensus regarding the importance of personal hygiene for post-laparotomy patients. Findings consistently demonstrate a significant relationship between good hygienic practices and positive recovery outcomes, particularly in terms of wound healing and infection prevention.

Relevance of Findings and Methodological Limitations

The link between personal hygiene and wound healing (Aliun et al., 2024; Handayani & Hamidah, 2024) and infection prevention (Patel et al., 2023) is a robust finding. However, this review also reveals several important limitations. The majority of studies originate from Indonesia, which points to a gap in the generalizability of the findings to patient populations in other countries. Studies from Japan, Italy, Singapore, and other nations provide valuable perspectives, but their number is still limited. Furthermore, most studies employ quantitative or case study methodologies, which provide statistical data but fall short of exploring the subjective experience of patients, such as the meaning of personal hygiene from their perspective (Hoga et al., 2022). Qualitative studies, such as that by Nishiya et al. (2023), offer a conceptual overview of the significance of hygienic care provided by nurses, but their scope is also limited. Factors such as educational level (Nasirin, 2020) and family support (Putri & Yuswanto, 2023) are also identified as critical variables influencing adherence to hygienic practices. This suggests that nursing interventions cannot solely focus on procedures but must incorporate a holistic approach that considers the patient's social and individual context.

Practical Implications and Recommendations

The findings from this review have direct implications for clinical practice. Nurses play a central role in ensuring patient hygiene, both through physical assistance (Lestari et al., 2021) and effective

education (Ratnasari et al., 2022; Patel et al., 2023). Given Kurniati et al.'s (2024) finding that the level of hygiene among post-operative patients is still low, there is a need for more structured and strict hygiene protocols in healthcare facilities. Educational programs must be comprehensively designed not only to provide information but also to empower patients and families to take an active role in the recovery process, as emphasized by Gavin et al. (2021) and Smith et al. (2022).

Although personal hygiene is often considered a routine action, this review confirms that it is an integral component of post-operative care that directly correlates with clinical outcomes. Interventional programs based on education and family support have proven effective and should be a standard part of care plans.

CONCLUSION

Overall, this literature review underscores the urgency and critical importance of personal hygiene practices for post-laparotomy patients. Based on an analysis of various studies, it can be concluded that personal hygiene is not merely a routine aspect of care but a factor that directly influences the success of recovery, particularly in preventing infections and accelerating wound healing. The effectiveness of these practices is also highly dependent on supporting factors, such as comprehensive education, family support, and an understanding of a patient's socio-demographic background. Nevertheless, a persistent gap exists between theoretical knowledge and practical implementation in the field, indicating the need for more structured and holistic nursing interventions to enhance patient awareness and adherence. Therefore, personal hygiene must be considered a top priority in every post-laparotomy care plan, as it is a simple yet highly impactful measure for ensuring optimal patient recovery.

REFERENCES

- Aliun, F. W., Yunitasari, E., & Fitri, F. E. (2024). Faktor-faktor yang berhubungan dengan penyembuhan luka post sectio caesarea. *THE JOURNAL OF Mother and Child Health Concerns*, 4(1), 1–7. <https://doi.org/10.56922/mchc.v4i1.456>
- Handayani, P., & Hamidah, S. (2024). Pengaruh Mobilisasi, Nutrisi dan Hygiene Luka Terhadap Penyembuhan Luka Fase Poliferasi Post Sectio Caesarea di Rumah Sakit Muhammadiyah Gresik. *IJMT: Indonesian Journal of Midwifery Today*, 3(2), 77. <https://doi.org/10.30587/ijmt.v3i2.7726>
- Hill, B., Lamichhane, G., & Wamburu, A. (2024). Infection prevention and control: critical strategies for nursing practice. *British Journal of Nursing*, 33(17), 804–811. <https://doi.org/10.12968/bjon.2024.0286>
- Hoga, D., Florida Boa, G., & Agustine, U. (2022). KEBUTUHAN PERSONAL HYGIENE PADA PASIEN DENGAN POST SECTIO CAESAREA. *JKS: Jurnal Keperawatan Sumba*, 1. <https://jurnal.poltekkeskupang.ac.id/index.php/jks>
- Joshi, Dr. M., S, Dr. S., & BN, Dr. J. (2020). Retrospective and prospective study of surgical site infection, associated risk factors and profile of causative micro-organisms in laparotomy wounds. *International Journal of Surgery Science*, 4(2), 245–249. <https://doi.org/10.33545/surgery.2020.v4.i2d.426>
- Kurniati, N., Deli, H., & Utami, S. (2024). Gambaran Personal Hygiene pada Pasien Pasca Bedah Bedah Mayor. *JETISH: Journal of Education Technology Information Social Sciences and Health E-ISSN*, 1.
- Lestari, P., Haniah, S., & Utami, T. (2021). Asuhan Keperawatan pada Ny. S dengan Masalah Risiko Infeksi Post-Operasi Sectio Caesarea di Ruang Bougenville RSUD Dr. R. Goeteng Taroenadibrata Purbalingga. *Seminar Nasional Penelitian Dan Pengabdian Kepada Masyarakat (SNPPKM)*.
- Murphy, C., Banasiewicz, T., Duteille, F., Ferrando, P. M., Jerez González, J. A., Koullias, G., Long, Z., Nasur, R., Salazar Trujillo, M. A., Bassetto, F., Dunk, A. M., Iafrazi, M., Jawień, A., Matsumura, H., O'Connor, L., Sanchez, V., & Wu, J. (2024). A proactive healing strategy for

- tackling biofilm-based surgical site complications: Wound Hygiene Surgical. *Journal of Wound Care*, 33(Sup5c), S1–S30. <https://doi.org/10.12968/jowc.2024.33.Sup5c.S1>
- Nasirin, C. (2020). Demographic Characteristics and Personal Hygiene Factors with Wound Healing in Patients with Cesarean Section. *International Journal of Psychosocial Rehabilitation*, 24(5), 7204–7209. <https://doi.org/10.37200/ijpr/v24i5/pr2020731>
- Nishiya, K., Takashima, R., Shishido, I., & Yano, R. (2023). Meaning of hygiene care for patients as perceived by clinical nurses through an interactive care process: A grounded theory approach. *Japan Journal of Nursing Science*, 20(4). <https://doi.org/10.1111/jjns.12538>
- Putri, C. S. K., & Yuswanto, T. J. A. (2023). Dukungan Keluarga Berhubungan dengan Kecemasan Mobilisasi Dini dan Personal Hygiene Pasien Post Operasi Laparatomi. *Jurnal Penelitian Kesehatan Suara Forikes*. <https://doi.org/10.33846/sf14405>
- Ratnasari, F., Lubis, M. S., Febriliyani, A., Ali, A. S., Firman, A., Handika, A., Fuadi, A., & Fauziah, A. N. (2022). Health Education about Personal Hygiene on Postpartum Mothers in The Aster Room of Tangerang Hospital. *Nusantara Hasana Journal*, 1(11).
- Rey, F. (2020). Vermeidung postoperativer Wundinfektionen. *Im OP*, 10(02), 61–65. <https://doi.org/10.1055/a-1062-4393>
- Umami, A., Sudalhar, S., Lufianti, A., Paulik, E., & Molnár, R. (2021). Factors associated with genital hygiene behaviors in cervical cancer patients in surakarta, indonesia. *Nurse Media Journal of Nursing*, 11(1), 94–103. <https://doi.org/10.14710/NMJN.V11I1.35829>
- Utzolino, S., Eckmann, C., & Lock, J. F. (2023). Prävention postoperativer Wundinfektionen. *Allgemein- Und Viszeralchirurgie Update*, 17(05), 425–439. <https://doi.org/10.1055/a-2127-2069>
- Vieira, L. V. V., Coelho, T. A., & Farias, P. (2024). Cuidados De Enfermagem Na Prevenção De Infecções Hospitalares: Estratégias E Protocolos. *Revista Ft*, 36–37. <https://doi.org/10.69849/revistaft/pa10202410150936>