ORIGINAL

The Journal of Palembang Nursing Studies
https://jpns-journal.com/index.php/jpns
OPEN ACCESS

Examining the motivation and the implementation of early mobilization in post-lower extremity operations

Siti Restutin[1*]
Feriana Ira Handian[2]
Achmad Dafir Firdaus[2]

[1] Department of Surgical Inpatient Installation II, dr. Saiful Anwar Malang Hospital, Malang, Indonesia
[2] STIKES Maharani Malang, Malang, Indonesia

***Correspondence**:
Siti Restutin
Department of Surgical Inpatient Installation II dr. Saiful Anwar Hospital, Malang City, Indonesia, Postal Code : 65111, Phone 0341-362101, Fax 0341-369384, Mobile Phone +62 812-3417-668,
Email: sitirestutin@gmail.com

Volume 2(2), 118-125

http://dx.doi.org/10.55048/jpns58

e-ISSN 2827-8100
p-ISSN 2827-8496

Received : July 4, 2022
Revised : October 7, 2022
Accepted : January 2, 2023
Published: May 30, 2023

ABSTRACT

Background: Early mobilization is an effective approach for the healing process following lower extremity surgery. However, its successful implementation requires self-encouragement and motivation from patients.
Objective: This study aimed to investigate the relationship between motivation and the implementation of early mobilization in patients undergoing lower extremity surgery.
Methods: A cross-sectional analytic descriptive study was conducted involving 41 respondents who were selected using a purposive sampling technique. Data were collected through motivation questionnaires and early mobilization observation sheets. The collected data were analyzed using the Spearman Rho test with a significance level of α = 0.05.
Results: Out of the 41 respondents, 21 (51.2%) showed moderate levels of motivation for early mobilization, while 20 (48.8%) demonstrated sufficient to good implementation of early mobilization. The statistical test revealed a significant relationship between motivation and early mobilization (p=0.035 or p<0.05), with an r value of 0.329.
Conclusions: The results highlight a significant correlation between motivation and early mobilization, which is closely associated with psychological mechanisms. The need for quick recovery serves as an encouragement for optimal early mobilization. Higher motivation levels contribute to better implementation of early mobilization. Considering the importance of motivational variables, it is suggested that nurses increase educational exposure and involve the patient's family in order to enhance motivation for early mobilization.

Keywords: motivation; early mobilization; post surgery; lower extremity

INTRODUCTION

Fracture, also known as a broken bone, occurs when the normal continuity of bone tissue is disrupted (Yasmara et al., 2016). Fractures can happen in any part of the bone, including the upper and lower extremities. They can be caused by various accidents, such as work accidents, traffic accidents, falls, or physical exertion. The cause of a fracture depends on the type and extent of the injury (Sani et al., 2020).

Restutin, S., Handian, F. I., & Firdaus, A. D. (2023). Examining the motivation and the implementation of early mobilization in post-lower extremity operations. *The Journal of Palembang Nursing Studies, 2*(2), 118-125. http://dx.doi.org/10.55048/jpns58

Nursing and Healthcare Practices

- *51.2% of the surveyed nurses showed moderate levels of motivation for early mobilization.*
- *48.8% of the surveyed nurses demonstrated sufficient to good implementation of early mobilization.*
- *The study revealed a significant relationship between motivation and early mobilization, with higher motivation levels contributing to better implementation.*

In 2016, the World Health Organization (WHO) reported that over 5.6 million people died as a result of traffic accidents, and 1.3 million people suffered from fractures. Accidents have a relatively high prevalence, with lower extremity fractures accounting for 40% of these incidents (Jusuf et al., 2017). According to the Basic Health Research conducted by the Agency for Health Research and Development in 2018, Indonesia recorded a fracture incidence of 5.5%. Moreover, injuries to the lower extremities have the highest prevalence, representing 67.9% of all injuries, and in East Java, the prevalence rate is 64.5% (Kemenkes RI, 2018).

Orthopedic surgery is an approach used to restore fractures to their original shape (Syamsuhidayat, 2016). One specific type of orthopedic surgery that can be performed is open reduction using internal fixation (ORIF). The goal of this surgery is to maintain the position of the bone fragments until bone healing takes place (Smeltzer et al., 2014). Following the surgery, it is crucial for a nurse to implement an early mobilization plan for the patient. However, in some cases, the nurse may only encourage the patient to move the operated limb. Due to a lack of understanding regarding the importance of mobilization, patients may experience fear, which can lead to joint stiffness, tingling, swelling, pain, and paleness in the operated limb (Anggraeni, 2018).

The phenomenon observed by researchers in the field is the varying levels of implementation of early mobilization in post-lower extremity surgery patients, despite receiving information from healthcare workers with equal intensity. To investigate the factors that may contribute to this difference, researchers conducted a series of preliminary studies. During the interview, it was revealed that nurses consistently provided information to patients undergoing surgery about activities to be performed before and after the surgery, particularly regarding early mobilization for postoperative lower extremity patients. The head of the department emphasized the importance of motivating patients to move their limbs, such as legs and arms, and engage in activities like tilting the body to the right and left within 6-12 hours after surgery. The preliminary study involved 10 postoperative lower extremity patients who had undergone general anesthesia. Out of these, 4 patients (40%) reported being trained to move their hands and feet and lie down on their sides within 6 hours after surgery. However, the remaining 6 patients (60%) had not received training to move their hands and feet within the same timeframe.

Based on the aforementioned information, the authors of this study are interested in exploring the relationship between motivation and the implementation of early mobilization in post-lower extremity surgery patients. The aim of the study is to assess the level of motivation among respondents regarding the implementation of early mobilization and to determine whether early mobilization can expedite the healing process for post-lower extremity surgery patients.

METHODS

Design

The research design employed in this study was a descriptive analytic method with a cross-sectional design.

Sample and Setting

The population for this study consisted of all postoperative lower extremity patients at IRNA (called as ward) II Surgery RSUD Dr. Saiful Anwar Malang. The inclusion criteria were as follows: (1) Patients aged between 17 and 50 years, (2) Postoperative patients with lower extremity surgeries, (3) Stable condition with normal vital signs, and (4) Willingness to participate in the study. The exclusion criteria were: (1) Postoperative lower extremity patients experiencing severe pain with a pain score ranging from 7 to 10, and (2) Postoperative lower extremity patients who were unable

Restutin, S., Handian, F. I., & Firdaus, A. D. (2023). Examining the motivation and the implementation of early mobilization in post-lower extremity operations. *The Journal of Palembang Nursing Studies, 2*(2), 118-125. http://dx.doi.org/10.55048/jpns58

to read or write. The number of patients in the last two months of January 2021 was 30, and there were 15 patients in February 2021. Therefore, the total number of postoperative lower extremity patients treated over the course of two months was 45. The sample size for this study was determined using the Slovin formula, resulting in a required sample size of 41 respondents. The sampling technique employed in this study was purposive sampling technique.

Data Collection

The researchers conducted natural observations of early mobilization. The observation process took place from the day after the motivation questionnaire was completed until the second day after surgery. In addition to the researchers, three nurses from IRNA II Surgery were also involved as enumerators to assist in collecting research data. These enumerators were selected from primary nurses serving in the same unit. Their role was crucial in collecting data, particularly considering the limitations posed by the COVID-19 pandemic. Due to the pandemic conditions, the data collection process was significantly restricted, including limited face-to-face interactions and supervision duration, especially during the observation of early mobilization in postoperative lower extremity patients.

Data Analysis

The statistical test used in this study was the Spearman's rank correlation test. This test was chosen because the research design focused on investigating the correlation between motivation and the implementation of early mobilization. Furthermore, the data were collected on an ordinal scale, making the Spearman's rank correlation test highly suitable for analysis. The level of significance was set at 95% or $\alpha = 0.05$.

Ethical Consideration

This research underwent an ethical review at Dr. Saiful Anwar Hospital in Malang. The study obtained ethical approval with the reference number 400/161/K.3/302/2021.

RESULTS

General data on the characteristics of the respondents found that most of them were in the early elderly category (34.1%), male (70.7%), high school education background (48.8%), underwent ORIF surgery (61%), and almost all of them never had a history of previous surgery (97.6%) (Table 1).

Based on table 2, it is known that 21 respondents (51.2%) have a moderate category of motivation and 20 respondents or 48.8% carried out early mobilization in the sufficient and good categories. The following table presents a cross tabulation between motivation and the implementation of early mobilization.

Based on table 3, it is known that of the 21 respondents who have moderate motivation, 13 respondents (62.0%) have the implementation of early mobilization in the sufficient category. Meanwhile, of the 20 respondents who have a high category of motivation, 13 of them (65.0%) have the implementation of early mobilization in the good category. The results of the Spearman's rank correlation test showed a p-value of 0.035, which is less than 0.05 ($p < 0.05$). This indicates that the alternative hypothesis (H1) is accepted and the null hypothesis (H0) is rejected. Therefore, it can be interpreted that there is a relationship between the level of motivation and the implementation of early mobilization in post lower extremity surgery patients. The correlation coefficient obtained from the Spearman's rank correlation test was $r = 0.314$. This value suggests a weak relationship between motivation and the implementation of early mobilization. The positive correlation coefficient indicates that the level of motivation and the implementation of early mobilization are directly proportional. In other words, as the level of motivation increases, the implementation of early mobilization by post lower extremity surgery patients improves.

DISCUSSION

Based on the study's results, it is evident that more than half of the respondents had a moderate level of motivation for early mobilization. None of the respondents fell into the category of low motivation. These findings indicate that the overall level of motivation among all respondents was good, with the majority exhibiting moderate to high levels of motivation.

The researcher believes that the high level of motivation among respondents to engage in early mobilization is driven by the factor of need. This is supported by data from the motivational questionnaire, where the majority of respondents agreed that early mobilization

Table 1. Respondents Demographic Characteristics (n=41).

Characteristics	Category	n	%
Age	Late Teenagers (17-25 Year)	8	19.5
	Early Adult (26-35 Year)	10	24.4
	Late Adult (36-45 Year)	9	22.0
	Early Elderly (46-55 Year)	14	34.1
Gender	Man	29	70.7
	Woman	12	29.3
Education	Elementary School	6	14.6
	Junior high school	15	36.6
	Senior High School	20	48.8
Operation Type	Open reduction internal fixation	25	61.0
	Posterior-stabilized	12	19.5
	Open reduction external fixation	1	2.4
	Interlocking Nail	1	2.4
	Intermedial Nail	1	2.4
	Tension band wiring	1	2.4
Operation History	Never	40	97.6
	Once	1	2.4

Table 2. Respondents' Level of Motivation and Early Mobilization (n=41).

Characteristics	Category	n	%
Motivation Early Mobilization	Low	0	0
	Moderate	21	51.2
	High	20	48.8
Implementation Early Mobilization	Low	1	2.4
	Moderate	20	48.8
	High	20	48.8

Table 3. Cross Tabulation and Spearman Rho's Analysis between Motivation and the Implementation of Early Mobilization.

Motivation	Implementation Early Mobilization			Total	p	r
	Low	Moderate	High			
Low	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0.035	0.314
Moderate	1 (4.7%)	13 (62.0%)	7 (33.3%)	21 (100%)		
High	0 (0%)	7 (35.0%)	13 (65.0%)	20 (100%)		

would facilitate a quick recovery and enable them to regain their activity levels. Respondents firmly believed that early mobilization would expedite the healing process. This viewpoint reinforces the idea that the respondents' primary need after lower extremity surgery is to swiftly regain health through early mobilization exercises.

This perspective aligns with the theory presented by Suryadi & Efendi (2019), which suggests that one of the intrinsic factors influencing motivation is the factor of need. Individuals engage in activities or actions due to both biological and psychological needs. For instance, patients engage in early mobilization because they desire a speedy recovery after surgery. Additionally, apart from the need factor, the researcher also believes that other factors contributing to the high motivation among respondents are the

encouragement they receive from their families and healthcare providers. This is supported by the questionnaire responses, as the majority of respondents agreed that their families accompanied and supported them during early mobilization. Families played a crucial role in motivating patients to engage in early mobilization. Similarly, respondents stated that healthcare workers (nurses) motivated them to perform early mobilization by explaining the benefits of such exercises. Families play a vital role in motivating respondents to engage in early mobilization.

The researcher associates the encouragement from healthcare workers with the Standard Operating Procedure (SOP) on information communication and education received by respondents before surgery. According to the procedure at Dr. Saiful Anwar Hospital in Malang, every respondent scheduled for surgery receives information about early mobilization from healthcare workers. This information serves as a foundation to build the motivation of respondents following lower extremity surgery. This viewpoint aligns with the perspective of Yasmara et al. (2016) that understanding mobilization movements requires not only knowledge of physiological movements but also an understanding of movement regulation by the musculoskeletal and nervous systems. Individuals around the patient, such as family members or caregivers, need to know how to apply these principles in a clinical setting to determine the safest way to move the patient and understand the effects of immobilization on physiological, psychosocial, and developmental aspects of patient care. Early mobilization plays a significant role in reducing pain by diverting the patient's focus away from the location of pain or the surgical area, reducing the activation of chemical mediators in the inflammatory process that heighten pain response, and minimizing pain transmission to the central nervous system. Through these mechanisms, early mobilization proves effective in reducing postoperative pain intensity (Wulandari & Anindari, 2018).

Based on the study results, it was found that nearly half of the respondents implemented early mobilization in the sufficient and good categories. Only one respondent fell into the less category. The questionnaire responses regarding the implementation of early mobilization indicated that the aspects of the first, second, third, sixth, and seventh stages were adequately carried out. The majority of respondents showed good implementation at these stages. In the first stage, the respondents were able to demonstrate adequate breathing exercises on both the first and second days. The implementation of lying on the right side, left side, and upper limb joint range of motion did not encounter any issues (Kurillo et al., 2012). Additionally, the respondents displayed good ability in transitioning from supine to semi-sitting positions and sitting for approximately five minutes while practicing deep breathing. These stages were optimally carried out by the majority of the main respondents on the second day after surgery.

The researcher believes that the number of respondents demonstrating good implementation of early mobilization is due to the relatively easy movements involved. In stages one to three, the respondents did not encounter significant difficulties with breathing exercises, tilting movements, or upper extremity joint range of motion. These were relatively light and easy movements to perform. Similarly, the movements involved in transitioning from supine to sitting positions did not require a high tolerance for range of motion and did not cause significant pain. The implementation of early mobilization at these stages is indeed straightforward for patients after lower extremity surgery (Schweickert & Kress, 2011). Essentially, the patients only encountered issues with their lower extremities, while the movements focused on the upper extremities and breathing exercises that did not require much involvement of the lower extremities.

This is consistent with the theory presented by Smeltzer et al. (2014), which suggests that postoperative lower extremity patients experience limited activity due to severe pain caused by nerve friction in the fractured or operated area. This aligns with the research conducted by Andri et al. (2020) on postoperative lower extremity fracture patients at Dr. M Yunus Bengkulu, where respondents tended to exhibit limited characteristics, such as difficulty changing body positions and limited range of motion in the lower extremity joints.

The researcher believes that one respondent still faced challenges in mobilizing properly due to fear of experiencing pain during early mobilization. Patients often worry that certain body positions after surgery may affect the healing process of the surgical wound. However, this concern is not entirely warranted, as almost all types of surgeries require early mobilization or body movement

as part of the recovery process (Karyati et al., 2018). Therefore, complications that arise after surgery need to be addressed attentively, as some complications can prolong the patient's hospital stay and increase treatment costs (Corwin, 2014).

The aforementioned conditions likely arise from respondents' lack of understanding regarding the permission to mobilize after surgery and the specific types of mobilization they can perform. Consequently, respondents often feel afraid to move, despite receiving advice to mobilize. They fear re-injury, wound reopening, or stitches coming undone, and therefore choose to avoid mobilization, resulting in prolonged hospital stays due to delayed wound healing (Frykberg & Banks, 2015; Gouin & Kiecolt-Glaser, 2011). This situation can be prevented if nurses can provide assurance to patients that movement, within therapeutic limits, is highly beneficial. Assurances of nurse assistance, pain control, and achievement of activity goals can help alleviate discomfort and improve patient motivation (Barr & Tsai, 2021).

We discovered a significant relationship between the level of motivation and the implementation of early mobilization in patients who underwent lower extremity surgery. The researcher believes that this relationship is driven by psychological mechanisms. The main advantage of motivation for early mobilization is that it creates a sense of passion and the desire to engage in it independently. When something is done with motivation, the respondent feels happy to do it (Alaparthi et al., 2020). Respondents made an effort to exercise as much as possible due to their eagerness to achieve their healing targets. The research findings support this view, as the majority of highly motivated individuals also demonstrated good early mobilization. This aligns with the theory proposed by Hasibuan, M. (2017), which highlights the benefits of motivation in fostering work passion and increasing productivity. Motivated individuals tend to complete their work according to the appropriate standards and within the specified timeframe because they find value in their work and are driven to achieve their goals.

The results of the Spearman's rank correlation test yielded a correlation coefficient value of r = 0.314. This value indicates a weak relationship between motivation and the implementation of early mobilization. The weak level of correlation suggests that other factors may be more dominant in influencing the implementation of early mobilization after lower extremity surgery. Factors such as encouragement from healthcare workers, family participation, and various external factors can contribute to the implementation of early mobilization (Najjar et al., 2022; Zhang et al., 2022). However, the positive correlation coefficient indicates that there is a direct proportional relationship between motivation and the implementation of early mobilization. In other words, as the level of motivation increases, the quality of early mobilization efforts by postoperative patients in the lower extremity improved.

The researcher argues that there is a weak positive correlation specific to the type of motivation. The type of motivation examined in this study is positive motivation, specifically the desire for faster recovery after lower extremity surgery. This positive motivation fosters a synergistic attitude towards engaging in early mobilization (Hodgson et al., 2018). Consequently, the more encouragement the respondents receive regarding their recovery, the better their efforts towards early mobilization will be. This viewpoint aligns with the research conducted by Priansa & Suwatno (2018), which distinguishes between positive motivation and negative motivation. Positive motivation, or positive incentives, motivates individuals through positive encouragement. Motivated individuals are driven by the anticipation of favorable rewards. In the context of early mobilization, a desirable reward is faster postoperative recovery. This perspective is further supported by the findings of Arse (2017), which indicate that stronger motivation leads to faster goal achievement and greater satisfaction. Motivation serves as a driving force for patient behavior directed towards attaining specific goals in the healing process (Notoatmodjo, 2013). Additionally, Listautin (2019) demonstrated the influence of motivation on early mobilization behavior in postoperative patients.

CONCLUSION

The conclusion of this study is that there is a significant relationship between motivation and the implementation of early mobilization of post-lower extremity surgery patients. Based on the results of the study, it is known that the nurse's role is very large in providing external motivation for postoperative lower extremity patients. This allows nurses to continue to

Restutin, S., Handian, F. I., & Firdaus, A. D. (2023). Examining the motivation and the implementation of early mobilization in post-lower extremity operations. *The Journal of Palembang Nursing Studies, 2*(2), 118-125. http://dx.doi.org/10.55048/jpns58

improve education, encouragement, and supervision of patients in order to maximize the implementation of early postoperative lower extremity mobilization. In addition, the results of the study have also illustrated that the role of the family is still minimal in the role of the patient's support system, nurses should take part in providing direction to the patient's family to actively encourage the creation of a family who is present in every stage of recovery for post-lower extremity surgery patients. Hospitals can continue to develop promotive and educative efforts to encourage internal and external motivation of patients. Hospitals can play a role in providing support through nurses in order to achieve the target of increasing the implementation of early mobilization of patients after lower extremity surgery. Follow-up research with experimental models was conducted to identify various interventions that can increase patient motivation in increasing awareness of the implementation of early mobilization in patients with lower extremity surgery.

Declaration of Interest

None

Acknowledgment

I would like to thank to the respondents who participated in the study.

Funding

None

Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

REFERENCES

Alaparthi, G. K., Gatty, A., Samuel, S. R., & Amaravadi, S. K. (2020). Effectiveness, safety, and barriers to early mobilization in the intensive care unit. *Crit Care Res Pract, 2020*, 7840743. https://doi.org/10.1155/2020/7840743

Andri, J., Febriawati, H., Padila, Harsismanto, & Susmita, R. (2020). Nyeri pada pasien post op fraktur ekstremitas bawah dengan pelaksanaan mobilisasi dan ambulasi dini. *Journal of Telenursing (JOTING), 2*(1), 61-70. https://doi.org/https://doi.org/10.31539/joting.v2i1.1129

Anggraeni, R. (2018). Pengaruh penyuluhan manfaat mobilisasi dini terhadap pelaksanaan mobilisasi dini pada pasien pasca pembedahan laparatomi. Syntax Literature : *Jurnal Ilmiah Indonesia, 2*(2), 6–11.

Arse, D. (2017). *Pengaruh pemberian pendidikan kesehatan terhadap motivasi pasien untuk melakukan mobilisasi dini post operasi digestif di ruang bugenvil RSUD DR. Tjitrowardjoyo Purwokerto*. Universitas Alma Ata Yogyakarta.

Barr, J. A., & Tsai, L. P. (2021). Health coaching provided by registered nurses described: a systematic review and narrative synthesis. *BMC Nurs, 20*(1), 74. https://doi.org/10.1186/s12912-021-00594-3

Corwin, J. E. (2014). *Buku saku patofisiologi edisi revisi 3*. EGC. Jakarta.

Frykberg, R. G., & Banks, J. (2015). Challenges in the Treatment of Chronic Wounds. *Adv Wound Care (New Rochelle), 4*(9), 560-582. https://doi.org/10.1089/wound.2015.0635

Gouin, J. P., & Kiecolt-Glaser, J. K. (2011). The impact of psychological stress on wound healing: methods and mechanisms. *Immunol Allergy Clin North Am, 31*(1), 81-93. https://doi.org/10.1016/j.iac.2010.09.010

Hasibuan. M. (2017). *Organisasi dan Motivasi Dasar Peningkatan Produktivitas*.

Hodgson, C. L., Capell, E., & Tipping, C. J. (2018). Early Mobilization of Patients in Intensive Care: Organization, Communication and Safety Factors that Influence Translation into Clinical Practice. *Crit Care, 22*(1), 77. https://doi.org/10.1186/s13054-018-1998-9

Jusuf, A., Nurprasetio, I. P., & Prihutama, A. (2017). Macro data analysis of traffic accidents in indonesia. *Journal of Engineering & Technological Sciences, 49*(1). https://doi.org/10.5614/j.eng.technol.sci.2017.49.1.8

Karyati, S., Hanafi, M., & Astuti, D. (2018). Efektivitas mobilisasi dini terhadap penurunan skala nyeri post operasi sectio cesarea di RSUD Kudus. *Proceeding of The URECOL*, 866–872.

Kurillo, G., Han, J. J., Abresch, R. T., Nicorici, A., Yan, P., & Bajcsy, R. (2012). Development and application of stereo camera-based upper extremity workspace evaluation in patients with neuromuscular diseases. *PLOS ONE, 7*(9), e45341. https://doi.org/10.1371/journal.pone.0045341

Listautin, L. (2019). Hubungan motivasi ibu dan peran petugas kesehatan dengan pelaksanaan mobilisasi dini pasca sectio caesarea (sc) di Rumah Sakit Royal Prima Jambi Tahun 2018. *Scientia Journal, 7*(2), 67–72.

Najjar, C., Dima, D., & Goldfarb, M. (2022). Patient and Family Perspectives on Early Mobilization in Acute Cardiac Care. *CJC Open, 4*(2), 230-236. https://doi.org/10.1016/j.cjco.2021.10.007

Notoatmodjo, S. (2013). *Promosi kesehatan dan ilmu perilaku*.

Priansa, D. J., & Suwatno. (2018). *Manajemen sdm dalam organisasi publik dan bisnis*.

RI, K. (2018). *Hasil Utama Riset Kesehatan Dasar (Riskesdas) 2018*. Jakarta: Kementerian Kesehatan RI.

Sani, F. N., Ns, M. K., Sani, F. N., & Ns, M. K. (2020). *Modul Praktikum Keperawatan Medikal Bedah I*.

Schweickert, W. D., & Kress, J. P. (2011). Implementing early mobilization interventions in mechanically ventilated patients in the ICU. *Chest, 140*(6), 1612-1617. https://doi.org/10.1378/chest.10-2829

Smeltzer, S. C., Bare, B. G., Hinkle, J. L., & Cheever, K. H. (2014). *Brunner and suddarth's textbook of medical surgical nursing 14th ed. Volume 1, chapter 26, assessment of function*. Lippincott Williams and Wilkins.

Suryadi, I., & Efendi, S. (2019). Pengaruh motivasi intrinsik, kepuasan kerja dan budaya organisasi terhadap kinerja pegawai biro kepegawaian di Badan Kepegawaian Negara (BKN) Jakarta. *Oikonomia: Jurnal Manajemen, 14*(2). http://dx.doi.org/10.47313/oikonomia.v14i2.524

Syamsu Hidayat, R. (2016). B*uku ajar ilmu bedah, Edisi Revisi*. In EGC.

Wulandari, A., & Anindari, L. N. (2018). *Pengaruh mobilisasi dini terhadap nyeri post operasi TURP pada Pasien BPH di RSU PKU Muhammadiyah Bantul*. Naskah Publikasi Unisa Yogyakarta.

Yasmara, D., Nursiswati, N., & Arafat, R. (2016). *Rencana asuhan keperawatan medikal bedah diagnosis Nanda-I 2015-2017 intervensi NIC dan Hasil NOC*. Penerbit Buku Kedokteran EGC.

Zhang, H., Liu, H., Li, Z., Li, Q., Chu, X., Zhou, X., Wang, B., Lyu, Y., & Lin, F. (2022). Early mobilization implementation for critical ill patients: A cross-sectional multi-center survey about knowledge, attitudes, and perceptions of critical care nurses. *Int J Nurs Sci, 9*(1), 49-55. https://doi.org/10.1016/j.ijnss.2021.10.001

Restutin, S., Handian, F. I., & Firdaus, A. D. (2023). Examining the motivation and the implementation of early mobilization in post-lower extremity operations. *The Journal of Palembang Nursing Studies, 2*(2), 118-125. http://dx.doi.org/10.55048/jpns58