## The Influence of Knowladge and Atitudes on the Implementation of End of Life Care among Nurses in the Emergency Room and Intensive Room

Anastasia Alvareza Ratih Damayanti[1], Dheni Koerniawan[1*], Keristina Ajul[1]

[1]Department Of Nursing Science, Musi Charitas Catholic University, South Sumatra Indonesia

*Correspondence: dheni@ukmc.ac.id

**ABSTRACT**

**Background**: End of life (EoL) care is a care process that is carried out comprehensively. Knowledge and attitudes are competencies that nurses must have in carrying out EoL care. The impact of implementing EoL care if it is not carried out is that the patient feels uncontrolled pain, does not feel comfortable and peaceful, does not feel respected and close to other people.

**Objective** : To determine the influence of knowledge and attitudes on the implementation of end of life care among nurses in the emergency room and intensive care unit.

**Methods** : Using a cross-sectional method, 37 respondents were sampled in total via questionnaires

**Result** : Most respondents had good knowledge (66.7%), adequate attitude (55.6%), adequate implementation (58.3%). The results show that there is a moderate positive relationship between knowledge ($\tau = 0.507$; $p=0.002$) and attitude ($\tau = 0.611$; $p<0.001$) with the implementation of EoL care. There is a moderate positive relationship between knowledge and EoL care attitudes ($\tau = 0.445$; $p = 0.007$).

**Conclusion** : There is a moderate positive relationship between knowledge and attitude and implementation. There was a moderate positive relationship between knowledge and EOL care attitudes.

**Keywords**: Attitude, End of Life, Implementation, Knowledge, Nursing

## INTRODUCTION

End of life (EoL) care or care before dying is a comprehensive care process that provides physiological, psychological, and spiritual support to patients undergoing intensive care with terminal conditions and referring to death. The purpose of EoL care is to help patients nearing death by increasing comfort so that they can experience a dignified death (Alifariki et al., 2023; Naimah et al., 2023).

EoL care is based on the theory of Ruland and Moore where there are five main concepts of EoL care that include the concept of preparation for facing a good death. The concept of EoL theory is that the patient does not feel pain, the patient feels comfortable, the patient has a dignified experience and has respect, the patient is at peace, and the patient feels close to others (family, friends and life partners) (Alligood, 2014, p. 703).

According to the World Health Organization (WHO) (2020), the number of patients requiring EoL care is estimated at 56.8 million people each year and 14% of patients lack EoL care services. The results of a study by Demass et al., (2023) at the Tibebe Ghion Specialist Hospital, Northwest Ethiopia, on the high mortality rate in the intensive care unit in 2019, namely 20.9% (49 patients out of 234) patients died, while in 2020 it increased to 35.6% (119 out of 334) patients died. The results of a

study by Stefanovski et al.,(2017, p. 555) in the emergency room at the University Hospital in Pleven on mortality analysis conducted from 2011 to 2015, namely 70.9% of patients died within 2-3 hours of arriving in the emergency room. The total number of deaths in Indonesia in 2017-2022 reached 8.07 million people. According to the Ministry of Health (2019) in a study by Maryuni, et al., (2023, p. 962) the number of critical patients in Indonesia in 2019 was 33,148 patients with cases of patient deaths in the Intensive Care Unit reaching 36.5%. According to Cable News Network (CNN) Indonesia in 2021 in Indonesia the death rate in the emergency room reached 102,375 people. According to the Directorate General of Population and Civil Registration (Dukcapil) of the Ministry of Home Affairs, the total population that died in 10 provinces on the island of Sumatra was 52.19 thousand people. South Sumatra Province contributed the highest death rate on the island of Sumatra, namely 14,878 people. One of the hospitals in South Sumatra is the Siti Khadijah Islamic Hospital (RSI), the number of deaths at RSI Siti Khadijah in 2023 in all rooms reached 662 patients. In the emergency room, 109 patients were recorded, and in the intensive care room 403 patients, around 33 patients die each month while in the inpatient ward 150 patients were recorded. From the data on the number of deaths above, it was found that the death rate in the intensive care room was higher than the death rate in the inpatient room.

The high mortality rate in the emergency room and intensive care unit will increase EoL care (Enggune et al., 2014, p. 35). Nurses play a role and are responsible for caring for patients and their families who are in the end-of-life phase to try to provide hope for patients and families and explore other alternatives such as social and spiritual support (Kurniati et al., 2017, p. 151).

Knowledge and attitude are competencies that must be possessed by nurses in the emergency room and intensive care unit. The factor that influences the implementation of EoL is knowledge, where the level of knowledge will determine the nurse's attitude in implementing EoL care (Naimah et al., 2023, pp. 82–84).

The impact of implementing EoL care if it is not carried out on patients, the patient will feel uncontrolled pain, not feel comfort and peace, not feel respected as a human being and not feel close to the closest (Enggune et al., 2014, p. 38).

## METHODS

This study used a quantitative method with a cross-sectional design and used bivariate analysis. This study aims to analyze the relationship between knowledge and attitudes with the implementation of end-of-life care for nurses in the emergency room and intensive care unit. This study was conducted from December to June 2024. The population in this study were all nurses working in the emergency room and intensive care unit totaling 38 people. The sample in this study were nurses

working in the emergency room and intensive care unit totaling 36 people. At the time of data collection, there were 2 respondents who fell into the exclusion criteria, namely 1 nurse who changed room assignments and 1 respondent who did not complete the attitude and implementation questionnaire. Data collection used a questionnaire sheet for knowledge, attitudes and implementation of end-of-life care that had been tested for validity and reliability. Data analysis techniques used univariate and bivariate analysis.

## RESULT AND DISCUSSION

Table 1 Frequency distribution and univariate percentage of nurses in the emergency room and intensive care unit in 2024 (n=36)

| Variabel | Frequency | % |
|---|---|---|
| **Usia** | | |
| Late teens | 3 | 8,3 |
| Early adults | 5 | 13,9 |
| Late adults | 25 | 69,4 |
| Early elderly | 3 | 8,3 |
| **Gender** | | |
| Male | 5 | 13,9 |
| Female | 31 | 86,1 |
| **Education level** | | |
| Nursing | 7 | 19,4 |
| Diploma 3 nursing | 29 | 80,6 |
| **Working period** | | |
| Long | 28 | 77,8 |
| Medium | 4 | 11,1 |
| New | 4 | 11,1 |
| **Knowladge** | | |
| Good | 24 | 66,7 |
| Moderate | 12 | 33,3 |
| Low | 0 | 0 |
| **Attitudes** | | |
| Good | 13 | 36,1 |
| Moderate | 20 | 55,6 |
| Less | 3 | 8,3 |
| **Pelaksanaan** | | |
| Good | 14 | 38,9 |
| Moderate | 21 | 58,3 |
| Less | 1 | 2,8 |

Based on the age of the respondents, most of them are in their late teens (36-45 years). Late adulthood (36-45 years) is an age that has a higher level of productivity and has skills and professionals who are able to apply and develop knowledge according to their fields, especially in nursing (Kurniasari et al., 2022, p. 3). This study is in line with research conducted by Kurniasari et al., (2022, p. 1) regarding the description of nurses' knowledge of EoL care, the results of the study showed that more adults (26-40) years (69.4%). This study is also in line with research conducted by Eleke et al.,(2020, p. 3) who said that the age of 30-39 years is more (34%) compared to those under 30 years old. This is because body fat reserves are greater in women than in men, and metabolism in women is

slower than in men. Women convert more food into fat, while men convert more food into muscle and later use it for energy expenditure.

The researcher's analysis is that nurses as research respondents in the emergency room and intensive care unit are mostly late adults (36-45 years old) because in the emergency and intensive care unit there are certain criteria, namely having to undergo training and the majority of respondents have a long work period so that at that age the respondents already have experience and skills so that they are able to apply knowledge according to their fields, especially in emergency and intensive care nursing.

Based on the gender of the respondents, there are more women than men, because men are less interested in the field of nursing so that the field of nursing is dominated by women (Sulaeman, 2016, p. 43). Male nurses are also concerned that when providing care that involves touch, it can cause misunderstandings, therefore men are less interested in the world of nursing (Eleke et al., 2020, p. 2).

This study is in line with research conducted by Kurniasari et al., (2022, p. 1) regarding the description of nurses' knowledge of EoL care, showing that most respondents are female (86.1%). This study is also in line with the study of Eleke et al., (2020, p. 2) showing that most respondents were female (97.6%). The researcher argues that women are more likely to become nurses because interest in the field of nursing is dominated by women.

Based on the level of education of respondents, professional education is one of the factors reflecting the ability of nurses to be able to complete a good job, besides that nurses have high experience and have a mature mindset so that they can adjust between patient needs and skills, knowledge and attributes of nursing care given to patients (Kurniasari et al., 2022, p. 4).

This study is also in line with research conducted by Muthia et al., (2023, p. 40) stating that most respondents have a Diploma 3 Nursing education (48.4%). Nurses who graduated from Nursing and Diploma 3 Nursing education in 2020 and below did not receive learning about palliative and dying care, because palliative and dying nursing courses have been around since 2015 (Fitri et al., 2014, p. 221).

From the results of this study, more respondents have a Diploma 3 Nursing education. The age of the respondents is dominated by late adulthood, which means that the education taken by the majority of respondents is Diploma 3 Nursing which can be influenced by the new curriculum where in 2015 the Diploma Nursing education will only be revitalized into a Bachelor of Nursing and Profession program, so when respondents will continue their education to the Bachelor's program, the age of the respondents is approaching retirement age.

Based on the length of service, respondents determine the quality of nurses in the room where they are on duty. Nurses who have just started working have limited experience, while nurses who have been working for a long time have more experience (Kurniasari et al., 2022, p. 7).

This study is not in line with the study conducted by Kurniasari et al., regarding the description of nurses' knowledge of EoL care, which stated that most respondents in this study had a work period of 1-5 years (60%), but a work period of more than 10 years had a good level of knowledge about EoL care (100%).

The results of this researcher's analysis are that the long work period of respondents is also related to the age of the respondents, the majority of whom are late adults, meaning that the older the age, the longer the working age. The length of service of respondents can be one of the factors that influences the knowledge and experience of implementing EoL care. The length of service of a nurse greatly

affects the quality of work because the longer the nurse works, the more experience is gained, with that the nurse carries out EoL care procedures well.

Based on knowledge, it is an understanding related to information about things obtained from experience or research carried out by someone (Swarjana, 2022, p. 3). This study is also in line with the study conducted by Teresa et al., (2021, p. 75) on the evaluation of nurse performance in providing end-of-life nursing care at hospital X in Jakarta, stating that most respondents have good knowledge (60.9%).

The researcher is of the opinion that the majority of respondents have good knowledge because it is supported by experience from the respondents' work period and the respondents' level of education so that it will increase the ability to think and have a high curiosity. Therefore, respondents will have a sense of awareness and improve their attitude to carry out EoL care well and have high experience. Based on attitudes influenced by several factors including knowledge from experience, the influence of others, emotional factors from oneself (Candrasari et al., 2023, p. 1592). This study is in line with the study conducted by Siagian et al., (2020, p. 128) on the knowledge and attitudes of nurses about palliative care in hospitals, stating that most respondents' attitudes are sufficient (70.83%).

From the results of the study, the researcher's assumption is that attitudes will be influenced by several factors, one of which is knowledge. Knowledge determines nurses in understanding the benefits of implementing EoL care for patients so that respondents' responses to the implementation of EoL care are good. Based on the implementation which is an individual activity behavior that can be observed directly or indirectly by outsiders. In this study, the form of behavior that will be measured is the implementation of EoL care that will be carried out by nurses in the emergency room and intensive care unit.

This study is not in line with the study conducted by Muthia et al., (2023, p. 41) on the relationship between knowledge and implementation of end of life care during the Covid-19 pandemic, which stated that implementation was good/high at 85.7%.

The researcher argues that the experience of the respondents' work period and knowledge are factors that influence taking action. The results of this study prove that good knowledge and attitudes will determine good implementation.

**Table 2** Relationship between Knowledge and Implementation of End of Life Care in Nurses in Emergency Rooms and Intensive Care Units in 2024 (n=36)

| | Pelaksanaan | | |
|---|---|---|---|
| **Pengetahuan** | **Baik** | **Cukup** | **Kurang** |
| Good | 14 (58,3%) | 9 (37,5%) | 1 (4,2%) |
| Moderate | 0 (0%) | 12 (100%) | 0 (0%) |
| Low | 0 (0%) | 0 (0%) | 0 (0%) |
| **Total** | 14 (38,9%) | 21 (58,3%) | 1 (2,8%) |

Based on the results of the research that has been conducted, a p value of 0.002 was obtained with a correlation coefficient value ($\tau = 0.507$), it can be concluded that there is a significant moderate positive relationship between knowledge and the implementation of EoL care where the better the knowledge, the better the implementation of EoL care.

Nurses' knowledge and skills are seen as contributing to EoL care for patients and their families. Adequate information and nursing skills are very important when dealing with patients nearing death (Soikkeli-Jalonen et al., 2019, p. 736). Lack of nurse knowledge about EoL care will be an obstacle to providing high-quality EoL care services (Eleke et al., 2020, p. 3).

This study is not in line with the study conducted by Muthia et al., (2023, p. 43) which stated that there was no significant relationship between knowledge and the implementation of EoL care during the COVID-19 pandemic (p = 0.451). Although respondents carried out EoL care well, it does not necessarily mean that respondents also had good knowledge. From the results of this study, the researcher's analysis is rational when respondents have good knowledge, then their behavior is also good. It is proven in this study that the analysis of respondents with good knowledge with good implementation is 14 people, and moderate knowledge with sufficient implementation is 12 people. A positive direction was obtained in this study, so the better the knowledge, the better the behavior. Knowledge will be a direction for respondents to carry out EoL care properly, so as to prevent losses to patients and families that should be done properly. Knowledge can be obtained from education, experience from work and other factors such as information and culture.

**Table 3** Relationship between Attitude and Implementation of End of Life Care in Nurses in Emergency Rooms and Intensive Care Units in 2024 (n=36)

| Sikap | Pelaksanaan | | |
|---|---|---|---|
| | **Baik** | **Cukup** | **Kurang** |
| Good | 12 | 1 | 0 |
| | (92,3%) | (7,7%) | (0%) |
| Moderate | 0 | 19 | 1 |
| | (0%) | (95%) | (5%) |
| Less | 2 | 1 | 0 |
| | (66,7%) | (33,3%) | (0%) |
| **Total** | 14 | 21 | 1 |
| | (38,9%) | (58,3%) | (2,8%) |

Based on the results of the research that has been conducted, a p value <0.001 was obtained with a correlation coefficient value ($\tau$ = 0.611) it can be concluded that there is a significant moderate positive relationship between attitude and the implementation of EoL care where the better the nurse's attitude, the better the implementation of EoL care.

The positive attitude of nurses can be influenced by interactions that occur between colleagues. This interaction will create an exchange of information related to the implementation of nursing care, especially in this study, EoL care. Nurses will pay attention to the needs of patients and invite other colleagues to carry out and discuss the condition of patients approaching death (Kiran & Dewi, 2017, p. 187).

Research conducted by Izah et al., (2020, p. 15) on the attitudes of nurses towards preparation for death in patients, the results of this study indicate that nurses have a positive attitude towards preparation for death in patients. Most nurses consider it very possible for nurses to help patients prepare for a peaceful death. Nurses will try to empathize with the suffering experienced by patients who are in the EoL phase and try to be nurses who are able to help as best as possible in providing quality EoL care for patients (Kondo & Nagata, 2015, p. 295).

From the results of this study and related studies, the researcher's analysis is that there is a relationship between attitude and implementation because of the nurse's self-awareness and willingness to care for patients who are nearing death. Thus, the attitude possessed by nurses is one of

the factors of good or bad behavior in implementing EoL care. The results obtained from the data show that respondents who have a good attitude with good implementation are 12 people, and a sufficient attitude with sufficient implementation are 19 people. A positive direction was obtained in this study, so the better the attitude, the better the behavior.

**Table 4** Relationship between Knowledge and Attitude in End of Life Care in Nurses in Emergency Rooms and Intensive Care Units in 2024 (n=36)

| Pengetahuan | Sikap | | |
|---|---|---|---|
| | **Baik** | **Cukup** | **Kurang** |
| **Baik** | 13 | 9 | 2 |
| | (54,2%) | (37,5%) | (8,3%) |
| **Sedang** | 0 | 11 | 1 |
| | (0%) | (91,7%) | (8,3%) |
| **Rendah** | 0 | 0 | 0 |
| | (0%) | (0%) | (0%) |
| **Total** | 13 | 20 | 3 |
| | (36,1%) | (55,6%) | (8,3%) |

Based on the results of the research that has been conducted, a p value of 0.007 was obtained with a correlation coefficient value (τ = 0.445), it can be concluded that there is a significant positive moderate relationship between knowledge and attitude in EoL care. Therefore, the better the knowledge, the better the nurse's attitude in implementing EoL care.

Knowledge is one of the factors that causes a person to behave and behave, with that a person's attitude and behavior can occur according to what is known and the knowledge they have (Candrasari et al., 2023, p. 1591). Likewise, it is better that the attitude in carrying out EoL care is influenced by the educational qualifications, experience, and knowledge possessed by the nurse. Knowledge plays an important role in determining a complete attitude. Changes in attitude are carried out by increasing knowledge. The higher the level of knowledge, the better the nurse's attitude in carrying out EoL care. Good knowledge and attitudes can be obtained from experience. The longer the nurse works, the more experience they get. Good knowledge and skills are obtained by expanding experience. (Siagian & Perangin-angin, 2020, p. 130).

This study is in line with research conducted by Candrasari et al., (2023, p. 1591) on the relationship between knowledge and nurses' attitudes towards end-of-life care in palliative patients in the ICU, the results of this study stated that there was a relationship with nurses' attitudes towards end-of-life care in palliative patients in the ICU (p-value = 0.005).

The researcher's analysis in this study is that nurses must have good knowledge from experience so that they are able to create good attitudes as well. Knowledge of EoL care plays an important role in determining attitudes in EoL care. It is proven in the results of this study that respondents who have good knowledge with good attitudes are 13 people. A positive direction was obtained in this study, so the better the knowledge, the better the attitude.

## CONCLUSION

There is a significant relationship between knowledge and attitude towards the implementation of End of Life care. So nurses can take training that not only improves knowledge but also improves attitudes and character so that they can carry out EoL care through good attitudes

.

## REFERENCES

Alifariki, L. O., Jundapri, K., Rahmadhani, D. Y., Laoh, J. M., Ardenny, Muin, Husana, U., Daniati, M., Puswati, D., Gumilar, M. S., & Hutagalung, R. (2023). *Bunga Rampai Keperawatan Gawat Darurat*. PT Media Pustaka Indo.

Alligood, M. R. (2014). *Nursing Theorists and Their Work*. Elsevier.

Candrasari, K. M., Sutrisno, & Widiyono. (2023). Hubungan Pengetahuan dengan Sikap Perawat terhadap Perawatan Menjelang Ajal pada Pasien Paliatif di Ruang ICU. *Jurnal Perawat Indonesia*, 7(2), 1588–1595.

Demass, T. B., Guadie, A. G., Mengistu, T. B., Belay, Z. A., Melese, A. A., Berneh, A. A., Mihret, L. G., Wagaye, F. E., & Bantie, G. M. (2023). The magnitude of mortality and its predictors among adult patients admitted to the Intensive care unit in Amhara Regional State, Northwest Ethiopia. *Scientific Reports*, 13(1), 1–7. https://doi.org/10.1038/s41598-023-39190-7

Eleke, C., Azuonwu, G., Agu, I. S., Nnorom, R. M., Ogini, A. N., Esther, B., & Uzoma, R. (2020). Knowledge of Palliative Care Among Professional Nurses in South East Nigeria: A Needs Assessment for Continuing Education. *International Journal of Africa Nursing Sciences*, 13.

Enggune, M., Ibrahim, K., Agustina, H. R., Bethesda, A. K., Keperawatan, F., & Padjadjaran, U. (2014). *Persepsi Perawat Neurosurgical Critical Care Unit terhadap Perawatan Pasien Menjelang Ajal Nurses Perception toward End-of-Life Care*. 2(April 2014), 35–42.

Izah, N., Handayani, F., & Kusuma, H. (2020). Sikap Perawat Terhadap Persiapan Kematian pada Pasien Kanker Stadium Lanjut. *Jurnal Ilmu Keperawatan Medikal Bedah*, 3(1), 1–76.

Kiran, Y., & Dewi, U. S. P. (2017). Pengetahuan dan Sikap Perawat dalam Memenuhi Kebutuhan Psikologis dan Spiritual Klien Terminal. *Jurnal Pendidikan Keperawatan Indonesia*, 3(2), 182–189.

Kondo, M., & Nagata, H. (2015). Nurses' Involvement in Patients' Dying and Death: scale development and validation. *Journal of Death and Dying*, 70(3), 278–300.

Kurniasari, P. D., Tanujiarso, B. A., & Jona, R. N. (2022). Gambaran Pengetahuan Perawat Terhadap Perawatan End Of Life Di Ruang ICU. *Peta Nursing*, 1(1), 1–12.

Kurniati, A., Trisyani, Y., & Theresia, S. I. M. (2017). *Keperawatan Gawat Darurat dan Bencana Sheehy* (6th ed.). Elsevier.

Maryuni, R., Meilando, R., & Agustiani, S. (2023). Pengaruh Abdominal Massage terhadap Penurunan Volume Residu Lambung Pasien Kritis di Intensive Care Unit. *Jurnal Penelitian Perawat Profesional*, 5(3), 961–972. https://doi.org/10.37287/jppp.v5i3.1661

Muthia, R., Fitri, tiya rama, Mailani, F., Oktarina, E., & Huriani, E. (2023). Hubungan Pengetahuan dan Pelaksanaan End of Life pada Masa Pandemi Covid-19. *REAL in Nursing Journal*, 6(1).

Naimah, S., Susilo, C., Nandar, W., Chintya, Y., Lukman, S., Herniyatun, Andrianur, F., Rondonuwu, R., Immawanti, & Hidayatullah, A. (2023). *Keperawatan Onkologi*. Get Press Indonesia.

Siagian, E., & Perangin-angin, M. (2020). Pengetahuan dan Sikap perawat tentang Perawatan Paliatif di Rumah Sakit. *Jurnal Ilmiah Ilmu Keperawatan Indonesia*, 10.

Soikkeli-Jalonen, A., Stolt, M., Hupli, M., Lemetti, T., & Kennedy, C. (2019). Instruments for Assessing Nurses' Palliative Care Knowladge and Skills in Specialised Care Setting: An Integrative Review. *Journal of Clinical Nursing*, 29.

Stefanovski, P. H., Vladimir Radkov, R., Lyubomir Ilkov, T., Pencho Tonchev, T., Yoana Mladenova, T., Vihar Manchev, K., & Radko Nikolov, R. (2017). Analysis of mortality in the emergency department at a university hospital in Pleven. *Journal of International Medical Research*, 45(5), 1553–1561. https://doi.org/10.1177/0300060517707901

Sulaeman, A. S. (2016). *Gambaran Pengetahuan Perawat tentang Perawatan Paliatif pada Pasien dengan Kondisi Terminal di RSUD Kabupaten Bekasi*.

Swarjana, I. K. (2022). *Konsep Pengetahuan, Sikap, Perilaku, Persepsi, Stress, Kecemasan, Nyeri, Dukungan Sosial, Kepatuhan, Motivasi, Kepuasan, Pandemi Covid-19, Akses Layanan Kesehatan*. Penerbit ANDI. https://www.google.co.id/books/edition/KONSEP_PENGETAHUAN_SIKAP_PERILAKU_PERSEP

/aPFeEAAAQBAJ?hl=id&gbpv=1&dq=konsep+pengetahuan&pg=PA7&printsec=frontcover

Teresa, Handiyani, H., & Gayatri, D. (2021). Evaluasi Kinerja Perawat dalam Pemberian Asuhan Keperawatan end of life Rumah Sakit X di Jakarta. *Holistik Jurnal Kesehatan, 15*.