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Investigation of the Relationship between Personality Traits of Intensive Care Nurses and Their Attitudes and Behaviours towards End-of-life Care

Yoğun Bakım Hemşirelerinin Kişilik Özellikleri ile Yaşam Sonu Bakıma Yönelik Tutum ve Davranışları Arasındaki İlişkinin İncelenmesi

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ABSTRACT

Introduction: End-of-life care is often provided by nurses in intensive care units, and enhancing the quality of patient care largely depends on personality traits.

Aim: The study aimed to investigate the associations between the attitudes and practices of intensive care nurses toward end-of-life care and their personality traits.

Method: This cross-sectional study involved 201 intensive care nurses. The Ten-item Personality Inventory and the Attitudes and Behaviors Towards End-of-Life Care Scale were used. Regression analysis and the independent samples t-test were used to analyze the data.

Results: The nurses' average age was 29.90 ± 4.64 years. The highest-scoring personality traits were extroverted and willing, sympathetic and warm, and reliable and self-disciplined. Age was significantly associated with agreeableness ($p = 0.043$). Emotional stability scores were lower for nurses in anesthesia and reanimation units compared to other units ($p = 0.004$). The duration of working in the intensive care unit was inversely connected with extraversion ($p = 0.023$). The mean overall score for attitudes and behaviors about end-of-life care was 56.29 ± 5.62 . No significant correlation was found between personality traits and the Attitudes and Behaviors towards the End-of-Life Care Scale.

Conclusion: Age, the type of intensive care unit, and years of experience were associated with certain personality traits among nurses. Yet, no statistically significant correlation was discovered between personality characteristics, beliefs, and practices around end-of-life care.

Keywords: Attitude; behavior; nurse; intensive care; personality.

ÖZ

Giriş: Yaşam sonu bakımı sıklıkla yoğun bakım ünitelerinde hemşireler tarafından sağlanır ve hasta bakım kalitesinin artırılması büyük ölçüde hemşirelerin kişilik özelliklerine bağlıdır.

Amaç: Bu çalışmada, yoğun bakım hemşirelerinin kişilik özellikleri ile yaşam sonu bakıma yönelik tutum ve davranışları arasındaki ilişki incelendi.

Metot: Bu kesitsel çalışma, 201 yoğun bakım hemşiresi ile gerçekleştirilmiştir. Verilerin toplanmasında On Maddelik Kişilik Özellikleri Envanteri ve Yaşam Sonu Bakıma Yönelik Tutum ve Davranışlar Ölçeği kullanıldı. Veriler bağımsız örneklem t-testi ve regresyon analizi ile analiz edildi.

Bulgular: Hemşirelerin yaş ortalaması $29,90 \pm 4,64$ idi. En yüksek puan alan kişilik özellikleri dışa dönük ve istekli, sempatik ve sıcak ve güvenilir ve disiplinli idi. Yaş ile uyumluluk arasında güçlü bir bağlantı vardı ($p = 0,043$). Anestezi ve reanimasyon ünitelerinde çalışan hemşirelerin duygusal stabilite puanları diğer ünitelerdekilerden daha düşüktü ($p = 0,004$). Dışadönüklük ve yoğun bakım ünitesinde çalışma süresi arasında negatif bir korelasyon bulundu ($p = 0,023$). Yaşam sonu bakımı hakkındaki tutum ve davranışlar için ortalama toplam puan $56,29 \pm 5,62$ idi. Kişilik özellikleri ile Yaşam Sonu Bakıma Yönelik Tutum ve Davranışlar Ölçeği arasında anlamlı bir korelasyon bulunmadı.

Sonuç: Yaş, yoğun bakım ünitesi türü ve deneyim yılı, hemşirelerin belirli kişilik özellikleri ile ilişkilendirildi. Hemşirelerin kişilik özellikleri ile yaşam sonu bakıma yönelik tutum ve davranışları arasında bir ilişki bulunmadı.

Anahtar Kelimeler: Davranış; hemşire; kişilik; tutum; yoğun bakım.



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Introduction

An intensive care unit (ICU) is an environment where patients fight for survival, receiving continuous monitoring and advanced medical interventions (Sole, Klein & Moseley, 2020). Nurses working in this environment undertake many critical tasks, including patient care, communication with families, implementation of medical procedures, and providing emotional support. The personality traits of nurses in critical care have an important role in defining their attitudes and behaviors in this difficult environment. End-of-life care (EoLC), in particular, stands out as a process that tests nurses' emotional resilience and professional skills (Ferrell, Dahlin, Campbell, Paice, Malloy & Virani, 2007; Adams, Mannix & Harrington, 2017; Brooks, Manias & Nicholson, 2017).

A person's personality is made up of a variety of enduring traits that influence their ideas, emotions, and actions. To comprehend people's personality structures, the five-factor model of personality traits is frequently employed (Chmielewski & Morgan, 2020; Alderotti, Rapallini & Traverso 2023). Extraversion encompasses the characteristics of individuals who enjoy being in social environments and interacting with others. These individuals tend to be talkative and energetic, enjoying social activities and an active lifestyle. They often seek excitement and lead a lively and energetic life. They have an optimistic attitude; they are cheerful and lively. These individuals care about others' feelings and can empathize with them. They trust others and behave generously. They prioritize helping others and living in harmony with society (Wilt, Sun, Jacques-Hamilton & Smillie 2023). Emotionally stable people possess traits that enable them to manage challenging and stressful circumstances. These individuals can remain calm and controlled, have low levels of anxiety, and are often peaceful and relaxed. They exhibit resilience and determination by remaining composed in the face of adversity and exhibiting high levels of self-confidence (Chmielewski & Morgan, 2020; Pakou, Tsartsalis, Papatthanakos, Dragioti, Gouva & Koulouras, 2024). Every dimension of the five-factor personality model has a big influence on how people act and think in the workplace (Albrecht & Marty, 2020). Comprehending personality qualities is crucial for nurses working in the healthcare sector, as it can enhance professional performance and raise patient care standards (Myhren, Ekeberg & Stokland, 2013; Ntantana et al., 2017; Barr, 2018; Altuntaş, Harmanci Seren, Alaçam & Baykal, 2022). Determining personality traits is important for understanding how nurses behave in EoLC what attitudes they exhibit during this process (Okumura, Ishigaki, Mori & Fujiwara, 2022). A study of the literature reveals that there are few research looking at personality features in ICU nurses (Ntantana et al., 2017; Okumura et al., 2022; Eren & Yiğitoğlu, 2023). Furthermore, the association between the personality types of ICU nurses and their attitudes and behaviors toward EoLC has not been examined in any research. Therefore, more investigation is needed to ascertain this link.

Aim

The study aimed to investigate the associations between the attitudes and practices of critical care nurses toward end-of-life care and their personality traits.

Research Questions

1. Are the attitudes and practices of ICU nurses toward EoLC correlated with any particular personality traits?
2. What connection, if any, exists between nurses' attitudes and actions toward EoLC and personality traits?

Method

Study Design

This cross-sectional study was conducted in September and October of 2022.

Study Setting

This study was conducted with nurses working in the internal medicine intensive care unit, surgical intensive care unit, and anesthesia intensive care unit of a training and research hospital.

Study Population and Sample

The study population consisted of ICU nurses who participated in the research and met the inclusion criteria. The sample size of 183 with a 95% confidence interval, 5% margin of error, and 95% power to represent the study population was determined using the G*Power 3.1 program. Considering the data loss, the study was completed with 201 intensive care nurses. The criteria for research inclusion were as follows: (1) completion of a bachelor's degree program; (2) at least one year of ICU employment; and (3) willingness and voluntary participation in the study. The study did not include nurses with a significant psychiatric disorder who are not actively practicing their profession (for example, because they are on yearly, medical or other leave).

Data Collection Tools

Information Form: This form, consisting of ten questions, was prepared by the researchers in line with the literature (Ntantana et al., 2017; Okumura et al., 2022; Eren & Yiğitoğlu, 2023). The form included the socio-demographic characteristics of the nurses (age, gender, education level, etc.) and their professional experiences (type of ICU worked in, participation in in-service training on EoLC, etc.).

Ten-Item Personality Inventory: Gosling et al. (2003) generated this inventory, which Atak (2013) translated into Turkish. This inventory has five sub-dimensions. Each sub-dimension consists of two items and there are 10 items in total. These sub-dimensions were conscientiousness, agreeableness, extraversion, emotional stability, and openness to new experiences. The five-factor theory of personality serves as its foundation. Each sub-dimension is assessed with two items. The openness to experience sub-dimension includes creative and unconventional traits, the conscientiousness sub-dimension includes reliability and self-discipline, the extraversion sub-dimension includes sociability and energy, the agreeableness sub-dimension includes politeness and cooperation, and the emotional stability sub-dimension includes anxiety levels and stress management. It's a seven-point Likert scale. Participants

are asked to mark the number between “1 = completely disagree”, “2 = Partly disagree”, “3 = somewhat disagree”, “4 = undecided”, “5 = somewhat agree”, “6 = partially agree”, and “7 = completely agree” describes themselves after reading each statement. Total score is not obtained from the inventory, total score is obtained for each subscale. Individuals’ scores from each sub-scale are taken into consideration. It is accepted that the personality trait belonging to the sub-dimension in which the individual has the highest score is the basic personality trait of that person. In the adaptation study of the scale, Cronbach’s α values were between 0.81 and 0.86. In our study, these values were found between 0.76 and 0.84.

Attitudes and Behaviors Towards EoLC Scale for ICU Nurses:

The scale for ICU nurses was developed by Zomordi (2008) and adapted into Turkish by Yalçinkaya Özel (2016). The scale consists of 16 items in total. The scale consists of 16 items in total and two sub-dimensions. The attitude sub-dimension measures nurses’ feelings and thoughts towards EoLC and consists of 10 items. The behavior sub-dimension consists of 6 items measuring nurses’ behaviors in EoLC situations. The scale is a five-point Likert-type scale, and the attitude sub-dimension is evaluated as “1 = totally disagree” to “5 = totally agree” and the behavior sub-dimension is evaluated as “1 = never” to “5 = always”. The 8th item on the scale is reverse-coded. The highest score to be obtained from the scale in total is 80, while the lowest score is 16. As the scale score increases, it is interpreted that attitudes and behaviors will be positive. The scale’s Cronbach’s α value was 0.70 in the adaptation study, while it is 0.76 in this study.

Ethical Considerations

Ethics committee approval was obtained from Van Training and Research Hospital (Date: 10.08.22 and No: 2022/17-02). The study also gathered informed consent from the nurses by informing them about it. Furthermore, the authors granted permission for the scale to be used.

Data Collection

Data was collected by one of the researchers using a face-to-face interview method. The purpose and scope of the study were explained to the nurses. Nurses who volunteered to participate were included in the study. Nurses completed the data collection instruments in an average of 20 minutes.

Data Analysis

The study data was analyzed using IBM Corp.’s (Armonk, NY, USA SPSS Version 26.0 software packages. Descriptive statistics like mean, standard deviation, percentage, and minimum (Min) - maximum (Max) were employed along with comparative analyses like the ANOVA test and the t-test for independent samples to examine the data. An investigation of linear regression analysis was carried out. An exploratory association study was conducted using the Pearson correlation test. At a significance threshold of $p < 0.05$.

Results

In this study, of the ICU nurses, 59.72% were female. The nurses were 29.90 ± 4.64 (Min: 22, Max: 45) years old on average, and 85.6% of them had a bachelor’s degree. More than half (51.2%) of the nurses stated that they chose their profession willingly. The mean years of working in the ICU was 4.85 ± 3.23 (Min: 1, Max: 20) years (Table 1).

When examining nurses’ scores on the Ten-Item Personality Inventory, the mean score for openness to experience was 8.53 ± 2.33 , for conscientiousness was 8.47 ± 2.16 , for extraversion was 8.72 ± 1.98 , for agreeableness was 8.92 ± 2.19 , and for emotional stability was 8.18 ± 2.50 (Table 2).

Table 1: Distribution of Demographic and Professional Characteristics of Intensive Care Unit Nurses (n = 201)

Characteristics	Mean \pm SD	Min - Max
Age (years)	29.90 ± 4.64	22 - 45
ICU nursing experience (years)	4.85 ± 3.23	1 - 20
Characteristics	n	%
Gender		
Female	120	59.7
Male	80	40.3
Education status		
Undergraduate	172	85.6
Graduate	29	14.4
Type of ICU		
Medical	92	45.8
Surgical	54	26.9
Anesthesia and reanimation	55	27.4
Believing that personality traits affect patient care		
Yes	192	95.5
No	9	4.5
Having previously received psychological support		
Yes	11	5.5
No	190	94.5
Participation in in-service training related to EoLC		
Yes	43	21.4
No	158	78.6
Receiving education on EoLC during undergraduate		
Yes	87	43.3
No	114	56.7

EoLC: End-of-life care; SD: Standard deviation; ICU: Intensive care unit; Min: Minimum value; Max: Maximum value.

Table 2: Mean scores of Ten Items Personality Traits Inventory and Intensive Care Nurses’ Attitudes and Behaviour Scale towards End-of-Life Care (n = 201)

Variables		Mean ± SD	Min - Max
Ten Items Personality Traits Inventory	Openness to experience	8.53 ± 2.33	2 - 13
	Responsibility	8.47 ± 2.16	2 - 14
	Extraversion	8.72 ± 1.98	2 - 14
	Agreeableness	8.92 ± 2.19	2 - 14
	Emotional stability	8.18 ± 2.50	2 - 14
Attitude and behavior toward EoLC	Attitude toward EoLC	36.60 ± 3.84	23 - 49
	Behavior toward EoLC	19.70 ± 3.28	11 - 28
	Total EoLC	56.29 ± 5.62	38 - 72

SD: Standard deviation; Min: Minimum value; Max: Maximum value; EoLC: End-of-life care.

Table 3: Relationship between Personality Traits and Attitudes and Behaviour Towards End-of-Life Scores (n = 201)

Variables	Attitude		Behavior		Attitude and Behavior	
	r	p	r	p	r	p
Openness to experience	0.108	0.127	- 0.025	0.724	0.059	0.404
Responsibility	0.094	0.185	- 0.089	0.208	0.012	0.864
Extraversion	0.004	0.953	0.013	0.851	0.011	0.881
Agreeableness	0.050	0.479	- 0.079	0.268	- 0.011	0.872
Emotional stability	0.097	0.170	0.047	0.504	0.094	0.185

r : Pearson correlation coefficient.

The mean attitude score towards EoLC was 36.60 ± 3.84 (Table 2). There were no statistically significant correlations between the personality traits of ICU nurses and their views and practices about end-of-life care (p > 0.05) (Table 3).

The examination of nurses’ personality traits, attitudes, and behaviors toward EoLC was conducted based on several professional and demographic factors. The agreeableness subscale and age were shown to be statistically significantly correlated (r = 0.149, p = 0.043), meaning that senior nurses scored higher on the agreeableness scale. Years spent working in the ICU were significantly correlated negatively with extraversion (r = - 0.160, p = 0.023), indicating that nurses with longer working experience in the ICU were less extroverted.

Table 4 showed the impact of intensive care nurses’ age, intensive care experience, and attitudes and behaviors toward end-of-life care on their personality traits. Intensive care nursing experience had a negative and significant effect on extraversion. The β coefficient was - 0.261, the standard error was 0.114, the t value was -2.283, and the p value was 0.023. The F value was 5.213, the significance p value of the model was 0.023, and the R² value was 0.026. These results indicated that extroversion decreased as intensive care experience increased. The regression model lacked statistical significance because the p-values of all predictors were higher than 0.05, except for intensive care experience.

Discussion

In this study, personality traits were compared to the attitudes and behaviors of ICU nurses toward EoLC. Intensive care units are places where patients struggle for their lives while receiving cutting-edge medical care and round-the-clock monitoring. Among the numerous vital duties performed by nurses in these units are patient care, family communication during end-of-life care, medical procedure execution, and emotional support. The attitudes and behaviors that nurses exhibit in this challenging setting are greatly influenced by their personality traits (Alshammari, Sim, Mcerlean & Lapkin, 2023).

The Ten-Item Personality Inventory was used as an assessment instrument in the study. Total scores indicate individuals’ overall tendencies across these five main personality traits. Openness to experience, conscientiousness, extraversion, agreeableness, and emotional stability were assessed as being above the moderate range based on the average values that nurses received on the measure. These scores indicate that ICU nurses are generally creative, reliable, social, gentle, and emotionally balanced individuals. They scored highest in the dimension of agreeableness. An analysis of the literature reveals that ICU nurses also had above-average scores on conscientiousness, agreeableness, and openness to new experiences (Ntantana et al., 2017; Altuntaş et al., 2022; Okumura et al., 2022). Intensive care unit nurses likewise had the greatest agreeableness scores in the Okumura et al. (2022)

investigation. These results highlight the propensity of ICU nurses to be collaborative and empathic in their interactions with patients and other nurses. Our study found that age is positively associated with the agreeableness personality trait, which aligns with literature suggesting increased empathy and social harmony with age (Ng, Lin, Marsh, Chan & Ramsay, 2021). The negative relationship between ICU experience and extraversion suggests that the high-stress work environment may lead nurses to become more introverted over time (Pakou, Tsartsalis, Papathanakos, Dragioti, Gouva & Koulouras, 2024). These findings highlight the importance of professional support systems to help nurses maintain their extraversion.

According to the study, ICU nurses' average scores on EoLC attitudes and actions were notable when accounting for the lowest and highest possible values on the scale. This suggests that nurses generally behave and have a positive attitude about EoLC. However, reviewing other study results shows that ICU nurses' views and actions concerning EoLC differ (Erzincanlı & Kasar, 2022; Efil, Turen & Demir, 2023; Hamdan et al., 2023). Studies have also shown that the quality of care given to patients and their families is significantly impacted by the attitudes and behaviors of ICU nurses regarding EoLC (Griffiths, 2019; Meilando, Kosasih & Emaliyawati, 2022; Liu et al., 2024). It's important to determine the factors affecting ICU nurses' attitudes and actions about EoLC.

The literature notably lacks research examining the connection between ICU nurses' personality qualities and their attitudes and behaviors related to EoLC. Nonetheless, it has been discovered that personality qualities have a big impact on the sorts of stress that ICU nurses deal with and how they deal with it. For instance, high-neuroticism nurses are more prone to experience stress and resort to unhealthy coping strategies (Burgess, Irvine & Wallymahmed, 2010). It has been documented that personality factors affect ICU nurses' degrees of burnout and job satisfaction (Myhren et al., 2013). It has been found that personality traits influence how ICU nurses provide care and identify and manage delirium (Chon & Yang, 2016; Eren & Yiğitoğlu, 2023). It has been noted that characteristics like experience and responsibility increase the efficacy of delirium treatment (Eren & Yiğitoğlu, 2023). These studies demonstrate how the personalities of ICU nurses influence their attitudes and actions in various work and care environments. Consequently, greater investigation is needed to ascertain the relationships between the personality traits of ICU nurses and their attitudes and behaviors about EoLC. This study enriches the existing body of knowledge by exploring the underlying factors that influence ICU nurses' attitudes and behaviors, offering a foundation for future research and practical improvements in EoLC.

Limitations

The study's cross-sectional design, small sample size, narrow geographic reach, and dependence only on survey tools are among its methodological flaws. These limitations may restrict the generalizability and applicability of the findings. Furthermore, a more thorough examination of particular personality traits may be ham-

pered by the Ten-item Personality Scale's use of only two items to evaluate each personality dimension.

Conclusions

This study looked into the attitudes and actions of ICU nurses about the personality traits of EoLC. The results show that people generally view intensive care unit nurses as imaginative, dependable, sociable, compassionate, and emotionally stable people. However, no statistically significant correlation was discovered between the personality traits and the attitudes and behaviors related to EoLC. Age, the type of intensive care unit, and years of experience were associated with certain personality traits among nurses. To enhance the future directions of the study, research should be expanded to include a broader sample that covers different hospitals and geographic regions. Longitudinal research may provide light on the causal connections between personality traits and attitudes and behaviors, and extended personality scales may be utilized to examine personality traits in greater depth. Such enhancements can contribute to future research yielding stronger and more universally applicable results. Therefore, it is possible to better understand the attitudes and actions of intensive care nurses toward EoLC and to provide education and interventions in this area.

Ethical Considerations: Ethical approval was obtained from the Scientific Research and Publication Ethics Committee of Van Training and Research Hospital for this study (Date: 10.08.2022 and No: 2022/17-02).

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References

- Adams, A., Mannix, T., & Harrington, A. (2017). Nurses' communication with families in the intensive care unit - a literature review. *Nursing in Critical Care*, 22(2), 70-80. doi: 0.1111/nicc.12141
- Albrecht, S. L., & Marty, A. (2020). Personality, self-efficacy, and job resources and their associations with employee engagement, affective commitment, and turnover intentions. *The International Journal of Human Resource Management*, 31(5), 657-681. doi: 10.1080/09585192.2017.1362660
- Alderotti, G., Rapallini, C., & Traverso, S. (2023). The big five personality traits and earnings: A meta-analysis. *Journal of Economic Psychology*, 94, 102570. doi: 10.1016/j.joep.2022.102570

- Alshammari, F., Sim, J., Mcerlean, G., & Lapkin, S. (2023). Registered Nurses' beliefs about end-of-life care: A mixed method study. *Nursing Open*, 10(12), 7796-7810. doi: 10.1002/nop2.2027
- Altuntaş, S., Harmancı Seren, A. K., Alaçam, B., & Baykal, Ü. (2022). The relationship between nurses' personality traits and their perceptions of management by values, organizational justice, and turnover intention. *Perspectives in Psychiatric Care*, 58(3), 910-918. doi: 10.1111/ppc.12873
- Atak, H. (2013). The Turkish adaptation of the ten-item personality inventory. *Archives of Neuropsychiatry*, 50(4), 312-319. doi: 10.4274/npa.y6128
- Barr, P. (2018). The five-factor model of personality, work stress and professional quality of life in neonatal intensive care unit nurses. *Journal of Advanced Nursing*, 74(6), 1349-1358. doi: 10.1111/jan.13543
- Brooks, L. A., Manias, E., & Nicholson, P. (2017). Communication and decision-making about end-of-life care in the intensive care unit. *American Journal of Critical Care*, 26(4), 336-341. doi: 10.4037/ajcc2017774
- Burgess, L., Irvine, F., & Wallymahmed, A. (2010). Personality, stress and coping in intensive care nurses: A descriptive exploratory study. *Nursing in Critical Care*, 15(3), 129-140. doi: 10.1111/j.1478-5153.2009.00384.x
- Chmielewski, M. S., Morgan, T. A. (2020). Five-Factor Model of Personality. In: Gellman, M.D. (eds) Encyclopedia of Behavioral Medicine. Springer, Cham. Retrieved Date: 06. 05.2024. Retrieved From: https://link.springer.com/referenceworkentry/10.1007/978-3-030-39903-0_1226
- Chon, K., & Yang, N. (2016). Relationship on the type A/B personality, attitudes and behaviors to oral care in intensive care unit nurses. *International Journal of Bio-Science and Bio-Technology*, 8(2), 383-394. doi: 10.14257/ijbsbt.2016.8.2.36
- Efil, S., Turen, S., & Demir, G. (2023). Relationship between intensive care nurses' attitudes and behaviors toward end-of-life care and ethical attitudes. *Dimensions of Critical Care Nursing*, 42(6), 325-332. doi: 10.1097/DCC.0000000000000604
- Eren, N., & Yiğitoğlu, G. T. (2023). Delirium awareness and management of intensive care nurses in terms of their personality traits. *Ordu University Journal of Nursing Studies*, 6(2), 393-403. doi: 10.38108/ouhcd.1128273
- Erzincanlı, S., & Kasar, K. S. (2022). The effects of nurses' attitudes and behaviors toward end-of-life care on clinical decision-making. *Turkish Journal of Intensive Care*, 20(4), 230-236. doi: 10.4274/tybd.galenos.2021.00710
- Ferrell, B. R., Dahlin, C., Campbell, M. L., Paice, J. A., Malloy, P., & Virani, R. (2007). End-of-life nursing education consortium (ELNEC) training program: Improving palliative care in critical care. *Critical Care Nursing Quarterly*, 30(3), 206-212. doi: 10.1097/01.CNQ.0000278920.37068.e9
- Gosling, S. D., Rentfrow, P. J., & Swann Jr, W. B. (2003). A very brief measure of the big-five personality domains. *Journal of Research in Personality*, 37(6), 504-528. doi: 10.1016/S0092-6566(03)00046-1
- Griffiths, I. (2019). What are the challenges for nurses when providing end-of-life care in intensive care units? *British Journal of Nursing*, 28(16), 1047-1052. doi: 10.12968/bjon.2019.28.16.1047
- Hamdan, K. M., Al-Bashaireh, A. M., Al-Dalameh, M., Saifan, A. R., Albqoor, M. A., & Shaheen, A. M. (2023). Palliative care knowledge and attitudes toward end-of-life care among intensive care unit nurses in Jordan. *Acute and Critical Care*, 38(4), 469-478. doi: 10.4266/acc.2023.00430
- Liu, M., Zhang, T., Chen, L., Liu, Y., Yin, A., Mei, X., & Qiu, F. (2024). Intensive care unit nurses' attitudes toward truth-telling, life-sustaining treatment, and decision-making intention for end-of-life patients: A cross-sectional survey. *Journal of Hospice & Palliative Nursing*, 26(2), E46-E54. doi: 10.1097/NJH.0000000000000989
- Meilando, R., Kosasih, C. E., & Emaliyawati, E. (2022). Barriers and challenges of end-of-life care implementation in the intensive care unit: literature review. *Jurnal Keperawatan Komprehensif (Comprehensive Nursing Journal)*, 8(1), 93-108. doi: 10.33755/jkk.v8i1.296
- Myhren, H., Ekeberg, Ø., & Stokland, O. (2013). Job satisfaction and burnout among intensive care unit nurses and physicians. *Critical Care Research and Practice*, 786176. doi: 10.1155/2013/786176
- Ntantana, A., Matamis, D., Savvidou, S., Giannakou, M., Gouva, M., Nakos, G., & Koulouras, V. (2017). Burnout and job satisfaction of intensive care personnel and the relationship with personality and religious traits: An observational, multicenter, cross-sectional study. *Intensive and Critical Care Nursing*, 41, 11-17. doi: 10.1016/j.iccn.2017.02.009
- Ng, D. X., Lin, P. K., Marsh, N. V., Chan, K. Q., & Ramsay, J. E. (2021). Associations between openness facets, prejudice, and tolerance: A scoping review with meta-analysis. *Frontiers in Psychology*, 12, 707652. doi: 10.3389/fpsyg.2021.707652
- Okumura, M., Ishigaki, T., Mori, K., & Fujiwara, Y. (2022). Personality traits affect critical care nursing competence: A multicentre cross-sectional study. *Intensive and Critical Care Nursing*, 68, 103128. doi: 10.1016/j.iccn.2021.103128
- Özel Yaşınkaya, S. (2016) Yoğun bakım hemşirelerinin yaşam sonu bakıma yönelik tutum ve davranışları ölçeğinin Türk kültürüne uyarlanması: geçerlik ve güvenilirlik çalışması. Abant İzzet Baysal Üniversitesi, Sağlık Bilimleri Enstitüsü, Hemşirelik Ana Bilim Dalı, Yüksek Lisans Tezi.
- Pakou, V., Tsartsalis, D., Papatthanakos, G., Dragioti, E., Gouva, M., & Koulouras, V. (2024). Personality traits, burnout, and psychopathology in healthcare professionals in intensive care units - A moderated analysis. *Healthcare*, 12(5), 587 doi: 10.3390/healthcare12050587
- Sole, M. L., Klein, D. G., & Moseley, M. J. (2020). Introduction to critical care nursing E-book: Introduction to critical care nursing E-book: Elsevier Health Sciences.
- Wilt, J. A., Sun, J., Jacques-Hamilton, R., & Smillie, L. D. (2023). Why is authenticity associated with being and acting extraverted? Exploring the mediating role of positive affect. *Self and Identity*, 22(6), 896-931. doi: 10.1080/15298868.2023.2246672
- Zomorodi, M., & Lynn, M. R. (2010). Instrument development measuring critical care nurses' attitudes and behaviors with end-of-life care. *Nursing Research*, 59(4), 234-240. doi: 10.1097/NNR.0b013e3181dd25ef