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Development of a palliative end of life care (PEOLC) model based on transcultural nursing for patients in need of long-term care

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ABSTRACT

Introduction: Palliative end-of-life care (PEOLC) is heavily impacted by culture and always discusses death, bereavement, uncertainty, loss, grief, and incurable disease. Long-term care and more culturally sensitive nursing care are essential to address the diverse needs of patients. This study aimed to develop a PEOLC model grounded in transcultural nursing principles, with a focus on enhancing the quality of care for patients requiring long-term support.

Methods: This study employed a cross-sectional explanatory design involving 180 patients with chronic illnesses as participants selected using simple random sampling. The proposed model involved eight variables: patient factors, nurse factors, service factors, family factors, technology factors, the PEOLC model, quality of life, and quality of death. A valid questionnaire was used to collect data, and we employed SEM-PLS to analyse the results.

Results: The PEOLC model had an R2 value of 0.61. These findings showed that 60.1% of the variability of PEOLC variables was explained by the patient, family, nurse, service, and technology aspects. For each construct, a value of Q2 > 0 (0.083) indicated that the model was appropriate. The path coefficient value of 0.343 indicates that the service factors make the most significant contribution to the PEOLC model.

Conclusions: This research led to the development of the PEOLC model, which comprises eight variables. It provides a comprehensive framework for integrating transcultural nursing principles into long-term care and emphasises the importance of cultural sensitivity in delivering personalised and effective end-of-life care.

Keywords: hospice care, indonesia, supportive care, transcultural nursing

Introduction

Chronic illness can increase the risk of a person experiencing physical limitations so that they are unable to fulfil their daily needs independently (life-limiting illness), thus requiring long-term care (LTC). This can cause a person to feel hopeless and helpless, impacting the quality of life and the quality of death(Prado *et al.*, 2022; Agusini *et al.*, 2023). This condition requires nursing care that fosters a more humane (authentic) relationship by prioritising the cultural aspects of the patient. Nursing care so far still focuses on physical aspects and diseases, which have not optimally led to the psychological impact caused by suffering from chronic diseases that require long-term care. This fact contradicts the paradigm of palliative care, which focuses on patient-centred care rather than disease-centred care. Palliative End of Life Care (PEOLC) believes that everyone has the right to themselves and be free from pain, fulfil biopsychosocial and spiritual needs, and die with dignity (Linda *et al.*, 2019; Prado *et al.*, 2022).

Palliative and end-of-life nursing care remains limited due to the absence of an effective and empirically proven model that can enhance the success of care provided to improve the quality of life and the quality of death. Cultural philosophy from the perspective of transcultural theory in nursing focuses on the cultural diversity in Indonesia that has the potential to influence the search for health services, such as family values (where family is often the primary determinant in making health decisions for patients), religious values, views on death, and attitudes towards serious illness. Cultural aspects, especially in Indonesia, have significantly influenced patient autonomy when making decisions about the needed health services (Berhanu *et al.*, 2021; Paiva *et al.*, 2023; Nuuyoma, Muvumwaeni and Chihururu, 2024). Providing culture-based PEOLC nursing care is a crucial competency that nurses must possess. It is vital for nurses to comprehensively understand the challenges faced when providing professional and moral sensitive nursing care (Wilson *et al.*, 2024).

Palliative and end-of-life care has not yet addressed the cultural aspects of patients. In addition, the focus of palliative care is still on patients with cancer at the end of their lives, resulting in unequal access to palliative and end-of-life care (Wenham, Cumming and Saurman, 2020; Barker, Wilson and Butler, 2021). This impacts reducing patients' quality of life and quality of death while receiving health services, especially patients with chronic diseases that require long-term care (An *et al.*, 2022; Eng, Hewitt and Kekalih, 2022). The absence of an empirically proven model of transcultural-based PEOLC nursing care in nursing was identified as a factor that led to this condition (Nuuyoma, Muvumwaeni and Chihururu, 2024).

Research surveys indicate that Indonesia's Quality of Death Index (QODI) ranks 51st among 81 countries globally in the quality of death category. Most end-of-life patients die in pain after dealing with their chronic illnesses, often face significant psychological distress before death, and usually die not in the place of their choice, worsening their end-of-life experience (Lee and Choi, 2021; Grudzen *et al.*, 2022; Mayland *et al.*, 2022; Hoare *et al.*, 2024). Data from the World Health Organisation (WHO) estimate that globally, only 14% of patients receive PEOLC treatment, out of 76% of patients who need it. This fact is predicted to hinder the achievement of goal number three of the Sustainable Development Goals (SDGs) (Connor, 2014).

Providing PEOLC nursing care presents considerable challenges; health workers, especially nurses, are responsible for delivering culturally sensitive, compassionate PEOLC nursing care. Currently, PEOLC focuses primarily on physical and mental aspects, rather than comprehensively considering social and cultural factors that influence the quality of life and the quality of death. This current study focuses on the framework of comprehensive nursing care, encompassing physical, mental, social, and cultural aspects. Towards Golden Indonesia 2045, especially in the field of palliative care and end-of-life care, innovative breakthroughs are needed and positively contribute to improving the quality of life and death, focused on patients with chronic diseases. For this reason, it is necessary to develop a PEOLC nursing care model based on transcultural nursing that effectively improves the quality of life and death of patients requiring long-term care.

Palliative and end-of-life care has not yet touched on the cultural aspects of patients. In addition, the focus of palliative care is still on patients with cancer at the end of their lives, resulting in unequal access to palliative and end-of-life care (Wenham, Cumming and Saurman, 2020; Barker, Wilson and Butler, 2021). This has an impact on reducing the quality of life and quality of death of patients while receiving health services, especially patients with chronic diseases that require long-term care (An *et al.*, 2022; Eng, Hewitt and Kekalih, 2022). The absence of an empirically proven model of transcultural-based PEOLC nursing care was identified as a factor that contributed to this condition. Therefore, this study aimed to establish a PEOLC model grounded in transcultural nursing principles, with a focus on enhancing the quality of care for patients requiring long-term support.

Materials and Methods

Study design and sample

This study employed a cross-sectional explanatory design involving patients with chronic diseases at Bali Mandara General Hospital. The inclusion criteria in this study were patients suffering from chronic diseases (including cardiovascular diseases, hypertension, stroke, diabetes mellitus, dan chronic kidney diseases), aged 18 and above, with compositional consciousness, Glasgow coma scale 4-5-6, and willing to become respondents, as evidenced by the signature on the consent sheet. The sample in this study consisted of 180 respondents selected using a simple random sampling technique with a lottery method from a sampling frame made through the patient's medical record. We followed the guidelines from a previous study, which recommended a minimum sample size to parameter ratio for SEM is 20:1 (Kline, 2016). Considering we had 8 variables, we needed a minimum sample of 160. We increased the sample size by 10% to a minimum of 180 respondents to account for potential missing responses.

Inclusion criteria were used to recruit participants. First, potential respondents were screened based on medical record data to identify patients who met the inclusion criteria; second, those met the inclusion criteria became sampling frame and we conducted randomization; third, potential respondents received a detailed explanation of the study; fourth, potential respondents provided; feedback on their willingness to participate as respondents; fifth, verified their voluntary involvement, and then asked to sign informed consent. All respondents had the option to withdraw before or during the study, and their participation was guaranteed anonymous; sixth, potential respondents received a detailed explanation of how to complete the questionnaire; a member of the research team

Table 1. Variables and sub-variables

No	Variables	Sub variables
1	(X) Patient factors	(X1.1) Knowledge, (X1.2) Attitude, (X1.3) Trust, (X1.4) Cultural values, (X1.5) Experience
2	(X2) Nurse factors	(X2.1) Empathy, (X2.2) Communication, (X2.3) Readiness
3	(X3) Service factors	(X3.1) Policy, (X3.2) Availability of human resources (X3.3) Affordability, (X3.4) Satisfaction
4	(X4) Family factors	(X4.1) Recognize, (X4.2) Decide, (X4.3) Maintain, (X4.4) Modify, (X4.5) Utilize
5	(X5) Technology factor	(X5.1) Availability, (X5.2) Suitability, (X5.3) Impact
6	(X6) PEOLC nursing care model	(X6.1) Assessment, (X6.2) Diagnosis, (X6.3) Intervention, (X6.4) Implementation, (X6.5) Evaluation
7	(Y1) Quality of dying and death (QODD)	(Y1) Quality of dying and death
8	(Y2) Quality of life (QOL)	(Y2) Quality of life

accompanied the respondents during the questionnaire to ensure that respondents completed all questionnaires entirely according to the objectives of the study.

The proposed model involves eight variables: patient factors, nurse factors, service factors, family factors, technology factors, the PEOLC nursing care model, quality of life, and quality of death. Each variable contains a subset of the variables shown in Table 1.

Instruments

A literature survey was used to create the questionnaire for this investigation. The questionnaire for eight variables in this model development study was developed from various relevant literature, namely patient factors (Yüksekol *et al.*, 2023), nurse factors (Mastroianni *et al.*, 2015; Pruthi *et al.*, 2022), service factors (Guirimand *et al.*, 2021), family factors (Cooper, Kinsella and Picton, 2006), technology factors (Mills *et al.*, 2021), the PEOLC model (Holland *et al.*, 1998; Kaasa and Wessel, 2001; Morita *et al.*, 2001; Sulmasy *et al.*, 2002; Doorenbos *et al.*, 2005; Cooper, Kinsella and Picton, 2006; Claessen *et al.*, 2012; Wilkinson *et al.*, 2018; Nnadiekwe, 2019; Morais *et al.*, 2020; Wagner, 2024), quality of life (Steinhauser *et al.*, 2004; Downey *et al.*, 2010), and patient quality of death (Downey *et al.*, 2010). The Likert scale response options were used in the questionnaires. For the interpretation, we obtain the total scores from each questionnaire, with the interpretation that the higher the score, the better the results. The questionnaire content was evaluated using expert judgment, with an Item Content Validity Index (I-CVI) of 1, indicating perfect agreement among experts on the relevance of each item. To ensure reliability and avoid bias, multiple experts independently assessed each item. Statistical validity was further tested using R-value and Pearson Product-Moment correlation, ensuring that items were both statistically valid and free from subjective bias. The two-tailed Product Moment r table with $\alpha = 0.05$ was then compared to the computation results. After removing specific items, the remaining items demonstrated validity with an r-count greater than 0.361, $P < 0.05$. 2-tailed ($\alpha = 0.05$), and $n = 30$. Internal Consistency Reliability was the reliability test employed in this investigation. Cronbach's alpha (α) computation yielded a value exceeding 0.7 in all questionnaires, indicating reliability. The final questionnaire showed strong internal consistency across all factors: patient ($\alpha = 0.846$), nurse ($\alpha = 0.827$), service ($\alpha = 0.927$), family ($\alpha = 0.850$), technology ($\alpha = 0.791$), PEOLC model ($\alpha = 0.906$), quality of life ($\alpha = 0.936$), and quality of dying and death ($\alpha = 0.955$). The data was collected in September 2024 using self-administered questionnaires in Bahasa Indonesia.

Data Analysis

Data analysis was conducted descriptively and inferentially. Descriptive analysis includes frequency and presentation. Inferential analysis employs a structural equation model (PLS-SEM), a model designed to describe the relationships between variables. The Smart-PLS 3.0 statistical package, containing 1) a measurement model (outer model), 2) a structural model (inner model), and 3) hypothesis testing, was used to test this model. Outer model to determine the relationship between latent variables and their indicators by considering convergent validity using the average variance extracted (AVE) value with a loading factor of more than 0.5 and the Construct Reliability test with a Cronbach alpha value greater than 0.6 (Ghozali, 2021). The inner model is a structural model that estimates the causal relationship between latent variables. The inner model is assessed by the results of the R^2 goodness-of-fit test calculating how much the independent variable changes to the dependent variable, the observed values and predicted parameters of the structural model are measured using the predictive relevance test (Q^2 predictive relevance), and hypothesis testing with the path coefficient value shows significance if the t-statistic value is greater than 1.96 and p-value ≤ 0.05 (Ghozali, 2021).

Ethical Consideration

In addition to obtaining ethical approval, this study carefully addressed several critical ethical issues. These included securing informed consent, ensuring participant anonymity, minimising potential harm, respecting cultural sensitivities, promoting fairness in participant selection, maintaining the integrity and confidentiality of data, protecting vulnerable groups, and adhering to ethical publication practices. These efforts were made to protect participants' rights, ensure their safety, and guarantee accurate reporting. Data collection began only after receiving ethical approval from the Health Research Ethics Committees of RSBM (No. 066/EA/KEPK.RSBM.Diskes/2024) and ITEKES Bali (No. 03.0247/KEPITEKES-BALI/VI/2024).

Results

As shown in Table 2, most respondents were around 61-80 years old, with a percentage of 46.1%. Regarding gender, most respondents were female, totalling 93 individuals (51.7%), while the remainder were male. The marital status of the respondents showed that most were married. Regarding occupation, most respondents worked in the private sector, with a total of 59 people (32.8%). Based on their religion, most respondents identified as Hindu, totalling 166 people (92.2%), while the remainder were Catholic and Muslim. Most respondents were from the Balinese ethnic group, totalling 164 people (91.1%). The most common level of education respondents own is senior high school, with as many as 70 people (38.9%). As shown in Table 1, most respondents fell into the poor knowledge group, comprising 106 (58.9%). Based on the beliefs of patients in need of palliative care, most of them reported having as many as 108 (60%) of these beliefs. The majority of respondents never experience grief, loss, and caring for a family member/closest person with palliative care, as many as 121 (67.2%).

Figure 1 shows that based on the results of the outer model analysis, loading factor for each indicator in the variables X1: Patient factors (0.781-0.917), X2: Nurse factors (0.786-0.909), X3: Service factor (0.853-0.927), X4: Family factors (0.770-0.884), X5: Technology factor (0.905-0.913), X6: PEOLC model (0.814-0.915), Y1: Quality of dying and death (0.543-0.770), Y2: Quality of life (0.529-0.902). Because all indicators have a loading factor value of more than 0.5, it indicates that these indicators are valid measurement indicators for each variable.

Table 4 shows that, based on the internal model analysis, patient, nurse, service, family, and technology factors collectively contribute 60.1% to the PEOLC Model. The PEOLC Model makes an influential contribution of 73.2% to QODD and an influential contribution of 72.4% to QOL. These results indicate that the developed PEOLC model has a relatively high influential contribution to QODD and QOL in palliative patients..

Table 5 presents the results of the inner model analysis on predictive relevance (Q^2), which measures how well the model and parameter estimates align with the observed values. A Q^2 value greater than 0 (zero) indicates that the model is good enough, while a Q^2 value less than 0 (zero) indicates that the model has no predictive relevance. The Q^2 of the transcultural-based palliative end-of-life care model in nursing (X6) was 0.385. Q^2 of the quality of dying and death variable (Y1) was 0.987, and Q^2 of the quality of life variable (Y2) was 0.970. The results showed that each construct had a Q^2 value > 0. It can be said that the transcultural-based palliative end-of-life care model in nursing, in terms of the quality of life and quality of dying and death of patients in long-term care, proved satisfactory.

Table 2. Respondent's characteristics and patient factors (n=180)

Respondents's characteristics	n	%
Age (y.o)		
21–40	26	14.4
41–60	71	39.4
61–80	83	46.1
54.1(12.3) Mean (SD)		
Gender		
Male	87	48.3
Female	93	51.7
Marital Status		
Married	172	95.6
Not yet/Not married	8	51.7
Jobs		
Retired	35	19.4
Private	59	32.8
Housewife	53	29.4
Not Working	32	17.8
Civil Servant	1	0.6
Religion		
Hindu	166	92.2
Catholic	4	2.2
Islam	10	5.6
Tribe		
Balinese	164	91.1
Javanese	13	7.2
Manggarai	2	1.1
Batak	1	0.6
Education		
Primary education	24	13.3
Junior secondary school	32	17.8
Senior high school	70	38.9
Higher Education	54	30
Level patient knowledge about palliative care on quality of life and quality of death		
Good	74	41.1
Poor	106	58.9
Beliefs of patients in need about palliative care on the quality of life and quality of death of patients		
Yes	108	60
No	72	40
Experience of grief, loss and caring for a family member/closest person with palliative care		
Yes	59	32.8
No	121	67.2

Table 6 shows that, based on the hypothesis test, patient factors, nurse factors, service factors, family factors, and technology factors in the PEOLC model had a p-value ≤ 0.05 and a t-statistic value greater than the t-table value (1.96). The test results for the PEOLC model on QODD and QOL also yielded a p-value ≤ 0.05 and a t-statistic greater than the t-table value of 1.96. The test results showed a significant influence of patient, nurse, service, family, and technology factors on the PEOLC Model and a considerable influence of the PEOLC Model on QOL and QODD in palliative patients who needed long-term care. The test results found that the path coefficient values were positive, meaning that the better the PEOLC model provided, the better the QOL and QODD in palliative patients who require long-term care.

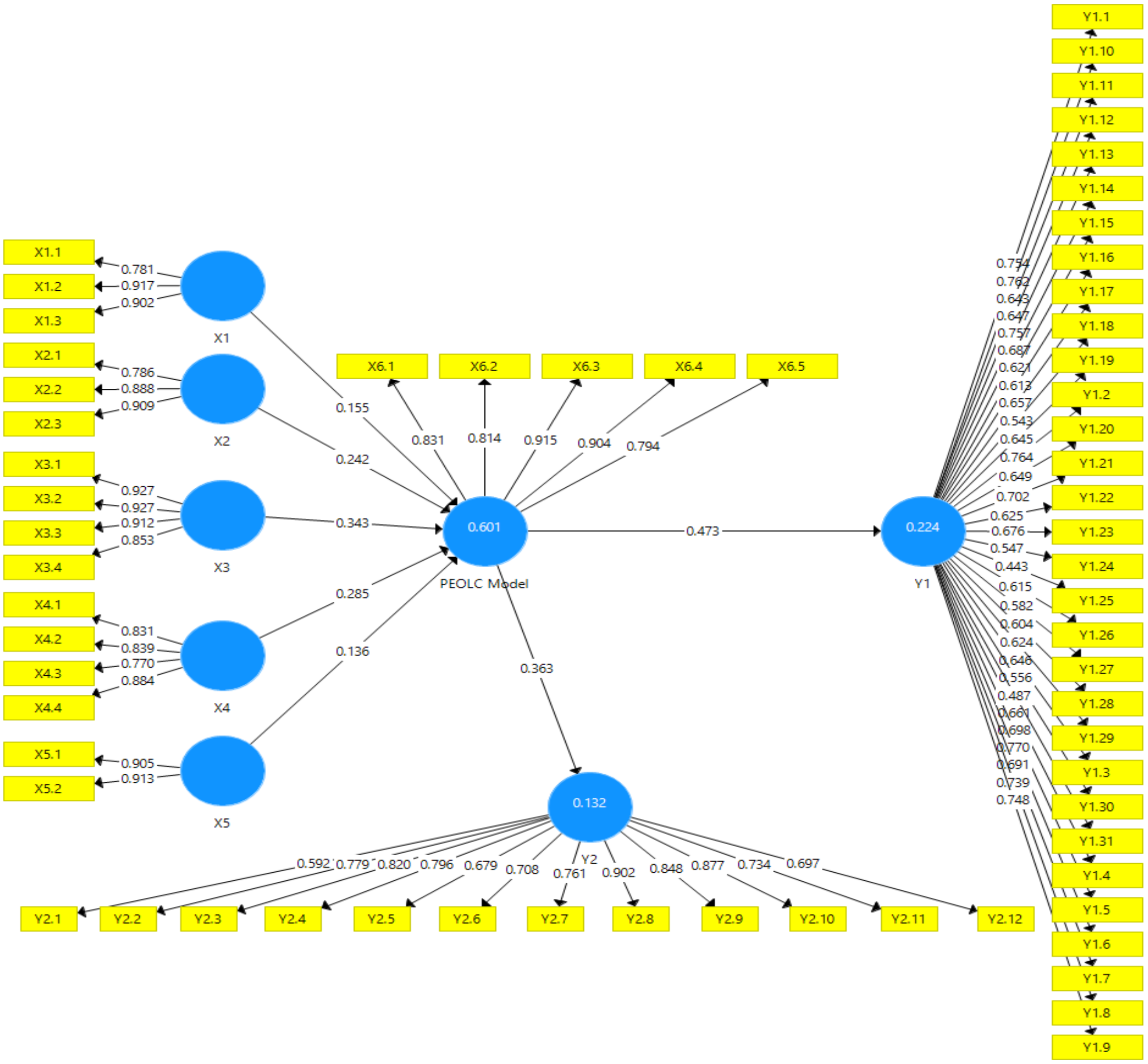

Figure 1. Constructs of PLS Algorithm (Outer Model) Development of a Palliative End of Life Care Model Based on Transcultural in Nursing for Patients who Need Long Term Care

Table 3. Figure 1 Explanation

X1: Patient factors	X1.1: knowledge, X1.2: attitude, X1.3: trust
X2: Nurses factors	X2.1: empathy, X2.2: communication, and X2.3: readiness
X3: Service factor	X3.1: policy, X3.2: availability of human resources, X3.3: affordability, X3.4 satisfaction
X4: Family factors	X4.1: recognize, X4.2: decide, X4.3: maintain, X4.4: modify
X5: Technology factor	X5.1: availability, X5.2: suitability
X6: PEOLC model	X6.1: assessment, X6.2: diagnosis, X6.3: intervention, X6.4: implementation, and X6.5: evaluation.
Y1: Quality of dying and death	Y1.1 – Y1. 31: overall of quality of dying and death
Y2: Quality of life	Y2.1 – Y2. 12: overall of quality of life

A fit model found that QODD and QOL in palliative patients are influenced by the PEOLC Model. The PEOLC model (assessment, diagnosis, intervention, implementation, evaluation) was influenced by patient factors (knowledge, attitude, trust), nurse factors (empathy, communication, readiness), service factors (policy, availability of human resources, affordability, satisfaction), family factors (recognise, decide, maintain, modify), and technology factors (availability, suitability).

Table 4. R-Square analysis

	R Square	R Square Adjusted
PEOLC Model	0.601	0.590
QODD	0.732	0.727
QOL	0.724	0.719

Service factors were found to have the most decisive influence in the PEOLC model.

Discussions

Based on the research results of this study, the transcultural-based PEOLC model involves eight key variables (patient factors, nurse factors, service factors, family factors, technology factors, PEOLC care model, quality of life, and quality of death), which contribute

Table 5. Predictive relevance (Q2) Model QOL-QODD

	Q^2
PEOLC Model	0.385
Y1	0.987
Y2	0.970

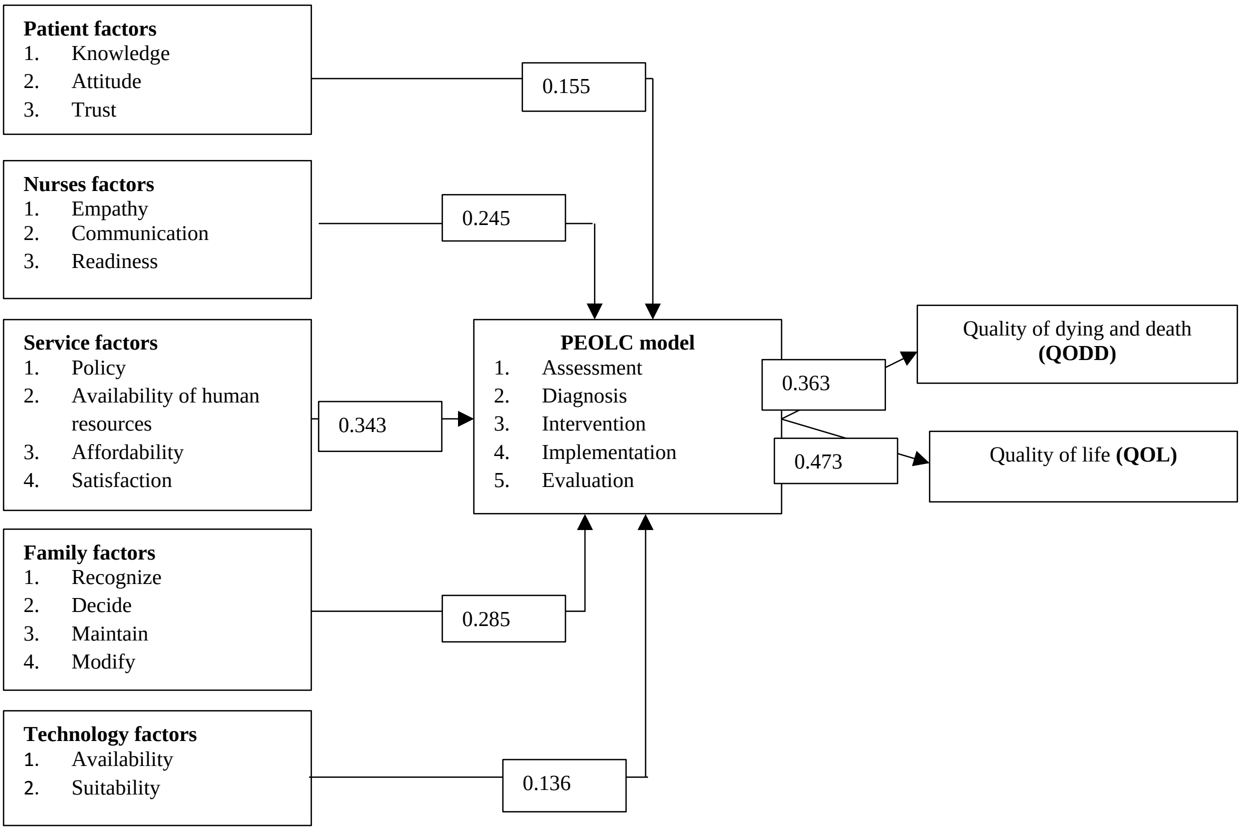

Figure 2: Model fit of Palliative End of Life Care (PEOLC) Based on Transcultural Nursing for Patients in Need of Long-Term Care

60.1% to the overall model. This implies that the current model supports previous findings that every individual has the right to receive care that follows their values, including the right to be free from pain and undergo the dying process (Uddin, 2019; Agustini *et al.*, 2020), and highlights the importance of understanding and respecting patients' cultural values and beliefs in providing care to palliative patients.

In the context of palliative care in Indonesia, there are still significant challenges related to access and the quality of care. According to WHO, only 14% of patients requiring PEOLC receive adequate care. This indicates a gap between the need and service provision (Pruthi *et al.*, 2022). Therefore, a transcultural-based PEOLC development model is essential for improving the quality of life and mortality outcomes for patients. Training nurses on the cultural aspects of care is necessary to implement this model effectively. Knowledge of family values and religious beliefs can help nurses provide the emotional and spiritual support needed by patients and their families (Wenham, Cumming and Saurman, 2020).

Patient factors showed a significant influence on both mortality and quality of life. This highlights the importance of individual patient characteristics in determining quality of life and mortality in the context of palliative care. This influence suggests that patient conditions, such as mental and physical health, are key to achieving quality care (Zhang, Nilsson and Prigerson, 2012). In the context of transcultural nursing-based care, the relationship of patient factors to quality of life and quality of death can be explained through theories highlighting the importance of patient characteristics (such as culture, beliefs, and physical and emotional needs). In the development of nursing care, the transcultural approach emphasises that nurses should tailor interventions to the patient's cultural values and individual needs (Glyn-Blanco, Lucchetti and Badanta, 2023). Nursing intervention by providing modules about culture that are useful for patients in improving their health status can be an option to increase patient participation in palliative care by respecting their culture in care and improving their quality of life (Israfil, Yusuf and Efendi, 2024).

Table 6. Hypothesis Testing Development of a Palliative End-of-Life Care Model Based on Transcultural in Nursing for Patients Who Need Long-Term Care

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Explanation
Patient → PEOLC Model	0.155	0.159	0.049	3.159	0.002	Significant
Nurse → PEOLC Model	0.242	0.266	0.091	2.658	0.008	Significant
Family → PEOLC Model	0.285	0.269	0.075	3.796	<0.001	Significant
Service → PEOLC Model	0.343	0.332	0.084	4.111	<0.001	Significant
Technology→ PEOLC Model	0.136	0.140	0.057	2.381	0.018	Significant
PEOLC Model → QODD	0.363	0.352	0.092	3.933	<0.001	Significant
PEOLC Model → QOL	0.473	0.470	0.080	5.882	<0.001	Significant

Nurse factors also significantly affect patients' quality of death and quality of life. This underscores the critical role of nurses in providing adequate emotional and physical support to ensure comfortable and meaningful patient care. This model's success relies heavily on nurses' competence and sensitivity in addressing the unique needs of patients in palliative care. Culturally tailored care for patients can improve their quality of life, as patients feel grateful, comfortable, and supported by their values (Mosadeghrad, 2014). Nurses who respect patients' cultural beliefs and practices at the end of life can help patients face death peacefully and meaningfully, allowing them to complete their lives in a manner that is consistent with their cultural and spiritual values. Nurse competency regarding palliative patient care is critical to develop in clinical nurse training or learning development at nursing schools (Agustini *et al.*, 2023)

The results of this study indicate that nearly all indicators of transcultural nursing-based nursing care development are adequate, including those related to family factors. Impressively, family factors have significance in the development of models in improving the quality of death compared to the overall quality of life. Family involvement in palliative and end-of-life patient care is crucial because it is linked to the process of family acceptance of the patient's condition, as well as palliative care consultations and visits by religious figures, who serve as a source of strength for both the family and the patient. This indicates that family contributions are perceived better at the patient's end of life (Sudore *et al.*, 2014). The role of the family as a patient companion in palliative care will positively contribute to preventing the patient's condition from worsening (Israfil, Sinaga and Ludji, 2018). Family caregivers are critical in end-of-life care, but they need better support from the family system, health care team, and community (Tripodoro *et al.*, 2024)

Service factors significantly affected the nursing development model, both the quality of death and the quality of life. This suggests that the services provided in palliative care significantly improve the patient experience, especially in terms of satisfaction and comfort. This means that the service aspect should be the primary focus to provide optimal care for patients in end-of-life situations (McCaffrey *et al.*, 2016). Service factors based on cultural understanding, empathy, and humanistic approaches significantly improve patients' quality of life and death in transcultural-based care models. By respecting the patient's beliefs, cultural preferences, and values, the care provided can provide a meaningful experience of care. Thus, the role of nurses in delivering competent and empathetic, culturally based care will influence the well-being of patients during life and at the end of life (Zhang, Nilsson and Prigerson, 2012; Hansen *et al.*, 2020). Accessibility of health services has a vital role in meeting patient treatment and care needs, serving patient health needs, forming awareness, and increasing community involvement in the management of the diseases they experience (Israfil *et al.*, 2024)

Technological factors have a significant relationship with the development of palliative care models. The development of digital technology in long-term care of palliative patients has considerable potential to improve the quality of life of patients and ease the burden of symptoms through good feedback through the development of digital technology (Portz, Cognetta and Bekelman, 2018; Tan *et al.*, 2024). Studies have found significant positive impacts on the development of innovative technology in improving palliative care. However, technological developments must still strike a balance between ethics and practicality to ensure that technological advances truly enhance palliative care. (Maguraushe and Ndlovu, 2024).

The current research is based on transcultural nursing. It is limited to eight key variables, including patient factors, nurse factors, service factors, family factors, technology factors, the PEOLC care model, quality of life, and quality of dying and death. These factors contribute significantly to 60.1% of the overall model. Other contributors are not investigated in this study, highlighting the importance of future studies to expand their investigation to different contributing factors.

Conclusion

Various indicators, including those related to patients, nurses, families, health services, and the use of technology, play a crucial role in developing a palliative care model centred on power for palliative patients who require long-term care throughout their end-of-life journey. The development of this nursing care model has a significant impact on the quality of life and quality of death of palliative patients. Emphasis on the quality of the relationship between patients, nurses, families, and services is necessary to achieve a good quality of life and end-of-life care for patients in the future.

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Availability of data and materials

We kindly request you to complete this section. The following explanation may be deleted after providing the required information.

Authors' contributions

NLPIBA: conceptual, research method design, data collection, reporting of results, manuscript draft, IKS: data validation, data accuracy, II: conceptual, research method, data collection, manuscript review, editing. IGPDS: manuscript review, proofreading, editing.

Declaration of Interest

According to the researcher, this study did not involve conflicts of interest. Its methods and procedures were conducted honestly and independently of outside influence.

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