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Urban Nursing Issues in Low-Middle Income Countries

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Anxiety, Depression, Loneliness, Spirituality, and Social Support in Older People During the COVID-19 Pandemic

Esti Widiani*, Nurul Hidayah, Abdul Hanan

Health Polytechnic Ministry of Health Malang, Malang 65211, Indonesia

*E-mail: esti_widiani@poltekkes-malang.ac.id

Abstract

The COVID-19 pandemic has resulted in the threat of death. Some older people feel they are not ready to face the end of their lives, so psychosocial problems arise, such as loneliness, anxiety, and depression. This research study aims to explore some psychosocial aspects, namely spirituality, social support, depression, anxiety, and loneliness in the elderly during the pandemic. The research design was cross-sectional. The total sample was 142 people selected using the purposive sampling method. Data collection used various scales to look at spirituality, depression, anxiety, and loneliness. The results showed that median spirituality and social support scores were high. The median depression and loneliness scores were mild. The average anxiety score for the elderly was normal. Based on the Pearson and Spearman correlation tests, relationships were shown between spirituality and anxiety scores, social support and anxiety scores, anxiety and depression scores, and loneliness and depression scores. The elderly need spirituality and social support when facing the end of life, and during the COVID-19 pandemic, to prevent the emergence of psychosocial problems. Social support and high spirituality must be maintained, even though the pandemic has subsided, in case such a health crisis occurs again.

Keywords: anxiety, depression, loneliness, social support, spirituality

Abstrak

Kecemasan, Depresi, Kesepian, Spiritualitas, dan Dukungan Sosial pada Lansia Saat Pandemi COVID-19. *Pandemi COVID-19 mengancam banyak jiwa. Sebagian dari lansia merasa belum siap menghadapi akhir kehidupan seperti kematian sehingga muncul masalah psikososial seperti kesepian, cemas, dan depresi. Penelitian ini bertujuan untuk mengetahui aspek psikososial lansia yaitu spiritualitas, dukungan sosial, depresi, kecemasan, dan kesepian selama pandemi COVID-19. Desain penelitian yang digunakan adalah cross-sectional. Jumlah sampel sebanyak 142 orang yang dipilih dengan metode* purposive sampling. *Pengumpulan data menggunakan berbagai kuisioner untuk melihat spiritualitas, depresi, kecemasan, dan kesepian. Hasil penelitian menunjukkan bahwa median skor spiritualitas dan dukungan sosial termasuk tinggi. Nilai median depresi dan kesepian tergolong ringan. Rata-rata skor kecemasan lansia adalah normal. Berdasarkan uji korelasi Pearson dan Spearman, ditunjukkan hubungan antara skor spiritualitas dan kecemasan, skor dukungan sosial dan kecemasan, skor kecemasan dan depresi, serta skor kesepian dan depresi. Lansia membutuhkan spiritualitas dan dukungan sosial dalam menghadapi akhir kehidupan maupun saat pandemi COVID-19 untuk mencegah munculnya masalah psikososial. Dukungan sosial dan spiritualitas yang tinggi harus tetap dijaga, walaupun pandemi COVID-19 sudah mereda, agar mampu bertahan jika krisis kesehatan muncul kembali.*

Kata Kunci: *depresi, dukungan sosial, kecemasan, kesepian, spiritualitas*

Introduction

Aging is a natural, progressive, and irreversible process. The most important consequences of the aging process are a decrease in life expectation (increased likelihood of death), interference in vital bodily functions, reduced range of adaptation, and a reduced state of general health (Andrieieva et al., 2019). These changes will impact all aspects of life, including psychosocial conditions. Psychosocial problems in the elderly include anxiety about death, loneliness due to the death of a partner, and depression due to chronic illness (Stuart, 2013). Older people

are otherwise prone to experiencing psychosocial problems or mental disturbance when isolating themselves or removing themselves from society's activities for various reasons, including the COVID-19 pandemic (Yildirim et al., 2021). The COVID-19 pandemic has forced older people to limit themselves leaving the house so they do have an impact on mental health in old age (Guner et al., 2021; Khademi et al., 2020; Yildirim et al., 2021). The restrictions caused problems such as increased boredom, loneliness, anxiety, worry, and psychological health disturbances. These conditions require good social support (Stuart, 2013). Older people can prevent depression and psychosocial problems through their spirituality (Mahwati, 2017).

In almost five decades (1971–2019), the percentage of older people in Indonesia has more than doubled, namely to 9.6% of the population (25 million), with about 1% more female elderly than male elderly (10.1% versus 9.10%) (Statistics Indonesia, 2019). Of all older people in Indonesia, the young older people (60–69 years) far dominate, with a magnitude of 63.82%, followed by the middle elderly (70–79 years) at 27.68%, and older people (80+ years) at 8.5% (Statistics Indonesia, 2019). This year, five provinces have a population structure where aging people account for more than 10%, namely DI Yogyakarta (14.5%), Central Java (13.36%), East Java (12.96%), Bali (11.3%), and West Sulawesi (11.15%) (Statistics Indonesia, 2019). Badan Pusat Statistik (BPS) noted that, in 2019, the dependency ratio of older people to the productive population was 15.01. Every 100 people of productive age in Indonesia must support 15 older people (Statistics Indonesia, 2019).

Many older people experienced anxiety, loneliness, and depression during the COVID-19 pandemic. In a study in China, it was found that 37.1% of older people experienced depression and anxiety during the pandemic (Meng et al., 2020). A study in Poland showed that older people experienced moderate and high levels of loneliness, at 58.83% (Dziedzic et al., 2021). Research in Turkey with 354 elderly found an increase of 51.1% in worry about COVID-19 (Guner et al., 2021). A study in Turkey on 556 elderly found that 51.5% of the effect of anxiety on depression was explained by older people, who reported psychological results such as hyperemotionality, longing for family, feelings of loneliness, tension, and being overwhelmed (Yildirim et al., 2021).

According to Erickson, the stages of psychosocial development in older people are self-integrity versus despair (Laurence & Romanoff, 2023). Older people who can achieve self-integrity will have satisfaction through positive concepts and attitudes toward life (Townsend, 2016). The decline in body condition and the reduction in physical abilities experienced by older people can cause them to feel that this is a disaster, because death can take their lives at any time. Older people may feel that they are not ready to face death, so they feel anxious and afraid of waiting for the end to come. Older people are one of the groups at high risk of experiencing severe illness if infected with COVID-19. Older people with comorbid diseases have an even higher risk of severe illness and death if exposed to COVID-19 (Perrotta et al., 2020). The COVID-19 pandemic increases anxiety in older people (Khademi et al., 2021; Meng et al., 2020; Yildirim et al., 2021). Spirituality influences a person's readiness to face death (Khanna & Greyson, 2014), and they can accept the reality of their life with less regret and despair. Spirituality in older people facing the end of life can provide positive emotional support.

Older people need social support to obtain optimal psychosocial health (Bruggencate et al., 2019). The older people group (> 60%) is still the group that contributes the most to deaths due to COVID-19 (50%), even though it only accounts for 11.3% of all positive cases. The case fatality ratio for the older people group is also the highest (12%) compared to other age groups, at four times the national rate. Accord-

ing to an analysis of deaths based on age and comorbidity history, older people have a 19.5 times higher risk than other age groups (Ministry of Health Republic of Indonesia, 2021). Social support refers to comfort, attention, and appreciation, qualities that are relied upon in times of difficulty (Bruggencate et al., 2019). The COVID-19 pandemic is a particularly difficult situation for older people, so they need social support from their family and environment. Older people can obtain social support by interacting with others, such as by making social contacts. Social support may come from various parties, but the most meaningful, concerning psychosocial problems in older people, is social support from those who are emotionally close, such as family members (Lee & Goldstein, 2016). Good social support for older people will increase their satisfaction with life (Şahin et al., 2019). Based on the description above, the researcher is interested in exploring the relationships between spirituality and anxiety, social support and anxiety, anxiety and depression, and loneliness and depression during the COVID-19 pandemic.

Methods

The design of this study was cross-sectional, with 142 samples. The study population amounted to 567 older people. The sample size is 25% of the population – 141,75 – rounded up to 142 elderly people. The sampling method used was convenience sampling. The inclusion criteria were good hearing, verbal understanding of information, willingness to become a respondent, and a minimum age of 60. Respondents with cognitive disorders (e.g., dementia, Alzheimer's disease) and severe mental illnesses could not participate in the study. The research location is a Sumberporong Village in Malang Regency, East Java, Indonesia.

Spirituality was measured using the Indonesian Daily Spiritual Experience Scale (IDSES) to retrieve spirituality data (Qomaruddin & Indawati, 2019). This is an adaptation of the Daily Spiritual Experience Scale (DSES) (Underwood, 2011). Social support data were collected using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988). The researchers tested the validity and reliability of the MSPSS with a value range of r = 0.478 – 0.820 (r > 0.361) and Cronbach's alpha value of 0.891. Depression data were collected using the 15 item Geriatric Depression Scale (short form) (GDS–15), which was tested for validity and reliability with a value range of r = 0.381-0.900 (r > 0.361) and Cronbach's alpha value of 0.765. A 25-item Geriatric Anxiety Scale (GAS-25) was used to collect anxiety data. GAS-25 was tested for validity and reliability with a value range of r = 0.386-0.824 (r > 0.361) and Cronbach's alpha value of 0.794. The revised University of California, Los Angeles Loneliness Scale (UCLA LS-R) was used to collect data on loneliness. The UCLA LS-R was tested for validity and reliability with a value range of r = 0.388 – 0.832 (r > 0.361) and Cronbach's alpha value of 0.748. The time needed to complete the questionnaire is approximately 45–60 minutes.

The univariate analysis used in this study calculates the average anxiety variable. In addition, the median value of spirituality, social support, depression, and loneliness variables is calculated. The Pearson and Spearman correlations provide the statistical analysis to test the relationship between several variables. This research has received ethical approval from the Ethics Committee of the Health Polytechnic of the Ministry of Health of Malang (No: 089/ KEPK-POLKESMA/2021).

Results

The characteristics of the respondents are shown in Table 1. The average age of the respondents was 64 years, with the lowest age being 60 years and the highest being 87 years. Seventy-eight participants (54.9%) had an elementary school education, and 125 participants (88%) did not work. Most participants, namely 98 people (69%) did not have income. The majority (71.1%) of the participants (101 people)

were women.

The results of the analysis of the distribution of data on spirituality, social support, depression, and loneliness, using the Kolmogorov–Smirnov parameter, showed that the data distribution was not expected ($p < 0.05$), while the distribution of anxiety data was normal ($p > 0.05$). The transformation of variables with an abnormal data distribution uses log10 with the results of abnormal data distribution.

Table 2 shows the results of the research data collection. The median spirituality score was 72, which is high, where the lowest score was 17, and the highest score is 81. Meanwhile, the median social support score was 58, which is high, with the lowest score being 30, and the high-

Table 1. Characteristics of Respondents

Variable	Mean (SD)	Min–Max
Age	64.45 (5.43)	60–87
	F	%
Gender		
Male	41	28.9
Female	101	71.7
Education		
Elementary school	78	54.9
Junior high school	25	17.6
Senior high school	34	23.9
College	5	3.5
Occupation		
Unemployed	125	88
Employed	17	12
Income		
No income	98	69
Below the regional minimum wage	23	16.2
Above the regional minimum wage	21	14.8
Religion		
Muslim	137	96,5
Christian	3	2,1
Catholic and other Christian	2	1,4
Denomination		
Living Status		
Living alone	140	98,6
Living with family	2	1,4
Chronic Disease		
Have a chronic disease	60	42.2
Do not have a chronic disease	82	57.8

Table 2. Scores for Spirituality, Social Support, Depression, Loneliness, and Anxiety

Variable	Median (Minimum–Maximum)		Interpretation
Spirituality	72 (17–81)		high spirituality
Social support	58 (30–82)		high social support
Depression	7 (3–13)		mild depression
Loneliness	43.5 (20–63)		mild loneliness
	Mean (SD)	CI (95%)	
Anxiety	17.72 (8.238)	16.35–19.08	normal anxiety

Table 3. Score Correlation Between Research Variables

Variable	Result	Statistics Test
Spirituality Score and Anxiety Score	r = -0.191	Pearson correlation.
	p = 0.023	Correlation is significant at the 0.05 level (2-tailed).
Social Support Score and Anxiety Score	r = -0.212	Pearson correlation.
	p = 0.011	Correlation is significant at the 0.05 level (2-tailed).
Anxiety Score and Depression Score	r = 0.349	Pearson correlation.
	p = 0.000	Correlation is significant at the 0.0 1 level (2-tailed).
Loneliness Score and Depression Score	r = -0.225	Spearman correlation.
	p = 0.007	Correlation is significant at the 0.0 1 level (2-tailed).

est score was 82. The depression score had a median of seven, which is mild; three was the lowest, and 13 was the highest. The median loneliness score was 43.5, which is mild; the lowest score was 20, and the highest was 63. The average anxiety score was 17.72, which is normal.

This study's variables were tested for correlation and met linearity ($p < 0.05$). This study found a relationship between spirituality and anxiety scores in older people ($p < 0.05$) with a weak relationship strength. The higher the spirituality score, the lower the anxiety score. There is a relationship between social support scores and anxiety scores in older people ($p < 0.05$), with a weak relationship strength, where the higher the social support score, the lower the anxiety score. There is a relationship between anxiety scores and depression scores in older people ($p < 0.01$), with a weak relationship strength, where the higher the anxiety score, the higher the depression score. There is a relationship between loneliness and depression scores in older people ($p < 0.01$). Table 3 shows the correlation test.

Discussion

The research results show that the spirituality of the elderly participants is relatively high. High spirituality is supported by the fact that all the participants have a religion, which can help improve spirituality. High spirituality can reduce anxiety in the elderly, as proven by the average elderly person's anxiety being in a normal condition. This study found a relationship between spirituality scores and anxiety scores in older people; the higher the spirituality score, the lower the anxiety score. The correlation results have a weak relationship because, although older adults have a high spirituality score, the COVID-19 pandemic still makes them anxious. Older people in the Sumberporong village had several routine and incidental activities to increase their spirituality, and they all have religious beliefs. Belief in a specific religion can determine the importance of spiritual needs and can always remind them of the existence of God. Religion and spirituality can help improve mental health (Lucchetti et al., 2018; Weber & Pargament, 2014). Older people in the research village carry out joint worship activities at the mosque while implementing health protocols. Older people who have difficulty coming to the mosque perform worship activities at home, including praying five times daily and performing dhikr.

Most older people are still living with their children, spouses, or relatives, so they can exchange information and life experiences with their families. The family plays a strategic role in meeting spiritual needs because they have strong emotional ties and interact daily. In addition, the village government where the older people live, in collaboration with other agencies, holds activities to improve their spirituality. One of the activities is counseling to encourage older people to live healthily. The village also has a school for parents, which provides education to help older people be healthy

in all ways – biologically, psychologically, socially, and spiritually. Activities carried out in the village help older people to improve their spirituality. Good spirituality helps reduce anxiety and several studies have proven that good spirituality can help overcome fear. A study in China of patients with gynecological cancer, who had low death anxiety, found that they had higher spiritual levels (Agorastos et al., 2014). Another study states a relationship between spiritual health and death anxiety in hemodialysis patients (Taghipour et al., 2017). Reflections on the pressure on health workers during the COVID-19 pandemic showed that health workers with higher spiritual levels showed lower anxiety (Prazeres et al., 2020). This suggests that mental health professionals should include spiritual or religious treatments to address mental health problems (Reutter, 2012).

The results of the current study showed that social support for the elderly was high, and their average anxiety level was normal. This study found a relationship between social support and anxiety scores in older people. The higher the social support score, the lower the anxiety score. Aged people get social support mostly from their families. More than 90% of the participants live with their spouse or family, who help the older people in meeting their daily needs. In addition to families and partners, there are activities to increase social support, such as the aforementioned counseling held by the local village government in collaboration with other agencies. There are also special sports activities for older people, namely the Ling Tien Kung therapeutic gymnastics group, to improve physical health and prevent complaints caused by degenerative diseases. Through socialization activities such as gymnastics, older people make friends who support each other with some of their problems. They can exchange ideas and provide solutions to issues at hand. Family and environmental concerns help older people overcome mental health problems, such as anxiety. Emotional support and social involvement help older people gain happiness (Shah et al., 2021). High satisfaction can help reduce anxiety (Crego et al., 2021). One study shows that higher levels of social support are associated with lower anxiety (Schug et al., 2021). Psychosocial resources, such as social support, have contributed to helping with mental health issues during the COVID-19 pandemic (Schug et al., 2021). Another study shows that, during the COVID-19 pandemic, social support has been negatively correlated with anxiety, whereas good social support will help reduce anxiety (Ao et al., 2020). Older adults with higher levels of social support use fewer mental health services for anxiety (Bretherton, 2017).

The research results of the current study show that the average older person's anxiety is normal, and depression is mild. Anxiety is closely related to depression. This study found a relationship between anxiety scores and depression scores, where the higher the anxiety score, the higher the depression score. COVID-19 is an infectious disease that can be transmitted through direct contact, through saliva and droplets, and in poorly ventilated settings. COVID-19 continues to mutate, and the morbidity rate fluctuates. People infected with the virus will experience mild, moderate, or severe respiratory problems or can recover without requiring special treatment. Older people with comorbid diseases such as diabetes, cardiovascular disease, cancer, and chronic respiratory disease are likelier to develop more severe infections. COVID-19 causes older people to experience increased anxiety (García-Fernández et al., 2020). Restrictions on social activities during the pandemic have also increased their anxiety (Ferreira et al., 2021). Older people who experienced depression in the village where the research was carried out lived alone without family and suffered from chronic physical illnesses. Older people who experience chronic physical pain are at risk of having mental problems. Those who live alone or have chronic diseases are prone to anxiety, which can cause a decrease in their quality of life (Ferreira et al., 2021). Quality of life is used to evaluate a per-

son's well-being. It is seen in wealth and work and can also be seen in mental health. Reducing anxiety levels is important. Often older people do not realize they are experiencing anxiety and do not know how to control it. Anxiety that is left untreated can trigger depression (Yildirim et al., 2021).

The results of the current study show that loneliness and depression were mild. The study found a link between loneliness and depression. Social activities are still allowed to be carried out during the COVID-19 pandemic, and health protocols must be consistently applied, even after the number of infected people has dropped. When the number of infected people increases, isolating older people becomes an option to reduce transmission and protect more seniors, who are a high-risk group. Self-isolation is unsuitable for older people who rely heavily on social contact outside the home, such as home care services, elderly communities, and places of worship. Those without close family or friends, who depend on volunteer services or social care support, may experience loneliness and isolation (Kasar & Karaman, 2021). Some older people have poor mental and physical health and often do not have access to health services, leading to other potential problems. Older people who experience separation from the outside world are often excluded and find health services inaccessible. Those who can move outside the home must continue to apply health protocols such as wearing masks, keeping a distance, and washing their hands. According to some of the participants in our study, these health protocols make activities less enjoyable and are not carried out optimally. This study also found that older people who experience depression are those who live alone and can no longer carry out certain activities because of their physical illnesses. Many of these aged people stay at home, or even in bed. These conditions can trigger an increase in loneliness in older people, which is a risk factor for depression (Dziedzic et al., 2021; Kutlu & Demir, 2016).

The global health emergency regarding the COVID-19 pandemic has improved and lockdowns have been lifted, but that does not mean that COVID-19 has disappeared (Ministry of Health Republic of Indonesia, 2023). Older people, who are a vulnerable group for COVID-19 with a higher risk of death compared to other groups, must continue to implement the steps they took during the pandemic, such as the habit of washing hands, continuing to wear masks when sick with symptoms like COVID-19, and continuing to eat nutritious food. They should keep doing good deeds to increase their spirituality. Good habits during the COVID-19 pandemic must still be carried out as an anticipatory step in case another health crisis or disaster occurs.

Conclusion

There is a correlation between several research variables. Good spirituality will help reduce anxiety. Social support from the family helps to prevent anxiety in older people. Older people who experience anxiety will be at risk for depression. Loneliness is linked to depression. Older people need spirituality and social help from those around them during the COVID-19 pandemic to prevent the emergence of psychosocial problems such as anxiety, depression, and loneliness. The good habits from the COVID-19 pandemic must still be carried out as an anticipatory step in case another health crisis or disaster occurs.

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"E-Matching Card" to Improve Cooperation and Cognitive Abilities Among Nursing Students

Elsye Maria Rosa[1*], Sri Sundari[2], Eny Retna Ambarwati[3], Galuh Suryandari[2], Erna Rochmawati[1], Farid Suryanto[4]

1. Master of Nursing Programme, Universitas Muhammadiyah Yogyakarta, Yogyakarta 55183, Indonesia
2. Medical Department, Universitas Muhammadiyah Yogyakarta, Yogyakarta 55183, Indonesia
3. Pregnancy Department, High School of Health Sciences Akbidyo, Bantul 55188, Indonesia
4. Department of Information System, Universitas Ahmad Dahlan, Yogyakarta 55166, Indonesia

*E-mail: elsye@umy.ac.id

Abstract

One of the learning models that can help students is the cooperative learning model (cooperative learning). Cooperative learning is a group learning method that makes students active in groups. They are expected to work together and discuss the tasks given by the lecturer. One type of cooperative learning model is making a match. Students make a matching learning model using learning cards can increase student activity so that this model is expected to be able to improve learning outcomes. The purpose of this research is to build a learning model using the student make a match approach's learning cards to enhance nursing and midwifery students' comprehension, interprofessional communication, and collaboration. The research method used was a pretest–posttest control group design. This research was conducted at one nursing education institution in Yogyakarta among fourth semester students totaling 60 within two months. The findings of this study are that learning using games creates an atmosphere that reduces student stress and facilitates student learning by increasing understanding, interprofessional communication, and collaboration among students (p-value = 0.000). The conclusion of this study is that learning card games can improve students' knowledge and teamwork/cooperation skills.

Keywords: cognitive, cooperation, learning card, matching card, nursing

Abstrak

"E-Matching Card" ***untuk Meningkatkan Kerjasama dan Kognitif Mahasiswa Keperawatan.*** *Salah satu model pembelajaran yang dapat mengaktifkan siswa adalah model pembelajaran kooperatif* (cooperative learning). *Pembelajaran kooperatif merupakan metode pembelajaran kelompok yang menjadikan siswa aktif, dalam kelompok diharapkan dapat bekerja sama dan berdiskusi menyelesaikan tugas-tugas yang diberikan oleh dosen. Salah satu jenis model pembelajaran kooperatif adalah membuat kecocokan. Model pembelajaran "*make a match" *menggunakan kartu pembelajaran dapat meningkatkan aktivitas siswa sehingga model ini diharapkan mampu meningkatkan hasil belajar siswa. Penelitian ini bertujuan untuk membangun model pembelajaran dengan pendekatan "*Make a Match Learning Cards" *untuk meningkatkan pemahaman, komunikasi* interprofessional*, dan kolaborasi mahasiswa keperawatan dan kebidanan. Metode penelitian yang digunakan adalah* Pretest-Posttest Control Group Design*. Penelitian ini dilaksanakan di salah satu institusi pendidikan keperawatan di Yogyakarta pada mahasiswa semester IV yang berjumlah 60 orang dalam waktu 2 bulan. Temuan penelitian ini adalah pembelajaran menggunakan* game *menciptakan suasana yang mengurangi stres siswa dan memfasilitasi pembelajaran siswa dengan meningkatkan pemahaman, komunikasi* interprofessional*, dan kolaborasi antar siswa (nilai p = 0,000). Hal ini dapat disimpulkan bahwa pengetahuan dan kerjasama tim dalam mempelajari model permainan kartu pembelajaran pada mahasiswa keperawatan lebih baik daripada mereka yang tidak mempelajari model permainan kartu pembelajaran. Kesimpulan dari penelitian ini adalah pembelajaran dengan permainan kartu dapat meningkatkan pengetahuan mahasiswa dan keterampilan kerjasama tim.*

Kata Kunci: *kartu belajar, kartu mencocokkan, keperawatan, kerjasama, kognitif*

Introduction

Nursing education has evolved with the incorporation of information technology and the recognition of the importance of scholarly communication and informatics (Miller & Neyer, 2016). These changes have led to the development of various tools that aid in teaching and learning processes in nursing education. Using standardized tools in nursing education can provide valuable insights into the teaching-learning experiences of nursing students (Hosseini et al., 2022). This can help nursing educators plan and implement effective teaching strategies, ultimately enhancing the overall quality of nursing education. The use of educational technologies, such as hypermedia and social media, in nursing education has also been shown to be beneficial (Edwards et al., 2021). Educational hypermedia, when supported by scientific evidence of its effectiveness, can be a valuable resource for teaching in nursing education (Frota et al., 2018). Social media, on the other hand, can be used as a tool for professional development and networking in the field of nursing (Sousa-Uva et al., 2018).

As nursing and midwifery is a practice-based discipline, the majority of learning in it occurs in a clinical setting in which the clinical learning environment contributes to socializing students not only for their future profession but also for their role as learners (Kennedy et al., 2019; Liljedahl et al., 2015). This culture generates a robust learning environment and has a substantial effect not only on learning but also on patient care (Irby, 2018).

Many branches of study have used educational games to impart knowledge to pupils (Barclay et al., 2011). Interprofessional education prepare a student to become professional health workers, enhancing interprofessional communication and collaboration among students in the health sector, and enhancing the competence and performance of future health workers among students. In the past decade, artificial intelligence has been responsible for several technical and scientific advancements, the majority of which are supported by viable deep learning approaches. Despite this quick advancement, there are still numerous unresolved issues on the ground, particularly concerning tasks that require more abstract thought (Vieira, 2019). Consequently, numerous learning programs have developed new techniques of learning that are engaging, applicable, and independent (Zisook et al., 2008).

Educational games are good for learning (Rastegarpour & Marashi, 2012). Many branches of study have used educational games to impart knowledge to students. Educational digital games provide players/learners with opportunities for more engaging, individualized, and immersive experiences as well as efficient learning (Epper et al., 2012). This game also allows health care to create real-life scenarios without real-life consequences that can reduce stress and as an alternative to student learning (Barclay et al., 2011).

Games using learning cards are growing rapidly, because a lot of students more interest with variety in process teaching learning (Bilstrup et al., 2020; Roy & Warren, 2019). Therefore, we provide the learning model game Modified Learning Card, which consists of a card holding phrases or images that are utilized to spark new thoughts during the learning process. Make a Match with Learning Cards is an example of a cooperative learning strategy. To promote student cognition and collaboration in the field of midwifery and nursing, one of the benefits of this strategy is that students search for matching pairs of learning cards while studying a concept or topic in a considered with the environment.

In this study, the game learning card was referred to as the E-Matching Card, students in the same profession and those in different professions, but with the same cases to solve. Students can learn while playing with their peers. A study demonstrated that learning that involves cooperation and solving cases increases learning motivation with feelings of satisfaction

and pride in oneself (Afifah & Syahreni, 2005; Fahrizal & Irmawan, 2023). In addition, students can learn in a gaming atmosphere. This multidisciplinary approach is the E-Matching Card's greatest strength. One of the players may select the case for a given card. The student chooses the case and starts to match the card, each team member can issue their card. If it matches the case, the outcome is "matching"; otherwise, the result is "failure." Based on the explanation above, the researcher is interested in studying more about the development of learning cards to improve the cooperation and cognitive skills of nursing students.

Methods

This research method uses an experimental research design: the pretest–posttest control group design. In this design, both groups were first given a pretest (pretest) with the same test. Then, the experimental group was given a special treatment, namely learning by using learning cards, while the control group was given the usual which involved learning through a cooperative approach. After being given treatment, both groups were tested with the same test as the final test (posttest), and the results of the two final tests were compared, as were the results of the initial test and the final test in each group.

The subjects of this study were 60 students from one nursing education institution in Yogyakarta. The criteria for inclusion were as follows: 1) nursing students in their fourth semester; 2) students who were willing to be respondents; and 3) students present at the time of the study. The exclusion criteria were as follows: 1) students who were absent from the study, and 2) students who did not complete the questionnaire.

Data analysis was carried out by collecting data on the results of the pretest and posttest questionnaires. Multiple choice questions from previous questionnaires went through validity and reliability tests. The validity test was declared valid with $r_{results} > r_{table}$ (0.361) for 20 cooperation variable statements (0.390 – 0.834) and 15 knowledge variable statements (0.368 – 0.730). The reliability test obtained an alpha Cronbach value of 0.891 (>0.6) for the cooperation variable, and an alpha Cronbach value of the knowledge variable of 0.805 (>0.6) was declared reliable. Furthermore, data analysis was carried out with the normality test, homogeneity test, and hypothesis test.

Based on the results of the normality test using the Shapiro–Wilk test, all data were normally distributed. The results of the homogeneity of variance test using Levene's test also showed that the control class and experimental class students came from populations that had the same variance or that the two classes were homogeneous.

Results

This research began by creating an application called the E-Matching Card. The design of the application is illustrated at Figure 1.

On the opening page of the E-Matching Card, two dashboard options are offered to consumers. Users are classified as either players or game producers. Players are students, while game designers are professors who create cases (questions and answers) in the form of JPG and PNG graphics.

After starting the game, the player matches the picture card (question) on the left side of the screen with one of the pictures (answer options) on the right side of the screen by dragging the picture that you believe is the correct response to the side of the picture card (question). If your response is correct, your score will increase and your questions will increase automatically. However, if your response is incorrect, the score will remain, and the question will automatically advance. Following the conclusion of the game, a list of scores and completion times will be displayed. The top score in this game is determined by combining the highest number of points and the quickest playing time.

Figure 1. The main page of the E-Matching Card

Table 1. Results of the Teamwork and Knowledge Hypothesis Test

Variable	T-test for equality of means		
	T	df	Sig
Teamwork Equal variances assumed	10.019	57	0,000
Teamwork Equal variances not assumed	10.056	55.213	0,000
Knowledge Equal variances assumed	5.951	58	0,000
Knowledge Equal variances not assumed	5.951	51.282	0,000

In table 1, because *p-value* = 0.000 < α = 0.05, then H0: μ1 = μ2 is rejected and Ha: μ1 > μ2 is accepted so that it can be concluded that having knowledge and using teamwork in learning the learning card game model by nursing students is better than not having knowledge or using teamwork in learning card game model.

Discussion

Nursing students access e-learning tools through various methods, including web- and computer-based programs, online tutorials, and virtual media. The shift to e-learning during the COVID-19 pandemic has led to an increased reliance on digital technology for study sessions in health courses, including nursing education. E-learning tools can be accessed through platforms such as Zoom, Google Classroom, or Google Meet for discussions and virtual media. Additionally, the use of e-learning requires the necessary infrastructure, equipment, and support systems to ensure effective implementation and student engagement. However, challenges such as unfamiliarity with e-learning platforms and lack of prior orientation to Information and Communications Technology (ICT) tools have been reported, emphasizing the need for preparedness and support for students transitioning to e-learning. Overall, e-learning has been shown to be effective in engaging learners and facilitating self-directed learning in nursing education, but it requires careful consideration and support from educators and institutions to ensure its success.

These e-learning tools offer a variety of methods to deliver knowledge, improve cognitive skills, and enhance the learning experience for nursing students. Digital Educational Techno-

logies (DET): DET, including online tutorials, quizzes, and simulations, are being increasingly applied in health courses, providing a cost-effective and convenient way to deliver knowledge and improve the learning experience for nursing students (Loureiro et al., 2021). Online Learning Platforms: E-learning platforms and resources, including online lectures, interactive activities, and multimedia presentations, are used to deliver nursing education and enhance students' understanding of various nursing concepts (Alshammari & Alanazi, 2023).

The E-Matching Card is utilized for the purpose of organizing and documenting the results obtained from trials. It assists individuals and teams in doing a thorough analysis of their tests and deriving definitive results for their learning. Capturing insights, synthesizing insights, identifying actions, and emphasizing actions include the learning card. The goal is to use these insights to improve future experiments. Learning using an electronic learning card or E-Marching Card tends to instill memories in students regarding collective knowledge and learning experiences and help in avoiding some social barriers to learning in conservative societies (Afzaal et al., 2022; Almohtadi et al., 2023; Smolen et al., 2016).

Learning strategies to improve teamwork and the cognitive abilities of nurses are challenges for lecturers of nursing students, given that nurses are required to be able to work in teams and have good cognitive skills in providing nursing care for patients in hospitals or other health services. To overcome these challenges, a tool is needed that can make it easier for teachers and students to carry out learning in accordance with the expected target. Active learning provides nurses with an active search for knowledge, which places the student as an active agent of knowledge itself and makes knowledge the center of the teaching–learning process, resulting in significant learning. The integration of theory with practice favors the student's self-confidence—making him/her empathic, safe, creative, and more prepared for the job market and the preparation for group work, which develops the capacity (Ghezzi et al., 2021).

The experimental class teamwork that was given the learning card treatment had a greater influence. This is seen by the increased average score on the final test, specifically when utilizing the learning card focused on teamwork, compared to the initial test. This means a significant increase in teamwork results. Team building can improve student learning in the following ways: 1) Builds teamwork, team-building activities teach students communication, collaboration, and problem solving; 2) Encourages active learning, team-building activities are often experiential and hands-on, which can help students engage in active learning; 3) Encourages active learning, team-building activities are often experiential and hands-on, which can help students engage in active learning (Marasi, 2019). Team building helps students identify their strengths and weaknesses and learn to work with others who have different strengths and weaknesses.

The significance of team building to foster collaboration and cohesion within a group. Initially, students are introduced to the team development process, which necessitates their participation in team-building training as a second step. Secondly, they get knowledge on constructing a unified class team and cultivating collaboration abilities. Thirdly, they showcase their ability to demonstrate teamwork. Furthermore, they are shown that training can be enjoyable. Furthermore, they get knowledge on how to mitigate any pressures and stress that may arise when presenting the learning project as a cohesive group (Marasi, 2019).

Control class teamwork that is not treated with learning cards has less effect. An electronic learning card or E-Matching Card is not a panacea for the learning ability or motivation of an uninterested student (Almohtadi et al., 2023). This is evidenced by the average score of the final test on teamwork, which was not treated

as lower than the initial test. This means that there is no insignificant increase in teamwork results. There is a difference in the effect of the experimental class and the control class on the development of learning cards to improve nursing students' teamwork.

Teamwork control refers to the comparison between the improvement in the quality of teamwork in the experimental class and the control class. The results indicate that the experimental class demonstrated superior teamwork compared to the control class. The presence of cooperation in both the experimental class and the control class yielded a favorable impact on the students' collaborative performance. The first dimension that can be observed when a teamwork task begins is communication or interaction between all team members. These interactions are present throughout the whole, albeit with different degrees of intensity. If all team members participate, communication occurs privately between the emitter and the receiver, confirming that if teamwork is taking place, a high level of interaction must occur. High levels of interaction are also associated with collaboration, as they encourage an increased number of member contributions to common tasks in co-working spaces. Electronic learning cards or the E-Matching Card are very useful in teamwork between students (El Mhouti & Erradi, 2018).

The knowledge of the experimental class receiving the E-Matching Card intervention showed a more significant effect. This is seen by the greater average value of the final exam scores when utilizing the E-Matching Card for knowledge, compared to the initial test. This indicates a substantial augmentation in knowledge outputs. The knowledge of the control class that was not given the E-Matching Card showed a diminished impact. This is evidenced by the fact that the average score on the final knowledge exam is lower than that of the initial test. This indicates that there is no substantial augmentation in the outcomes of knowledge acquisition. There are disparities in the impacts of the experimental class and control class on the E-Matching Card in terms of enhancing nursing knowledge. This is demonstrated by the larger average value of the difference in the findings between the knowledge experimental class and the knowledge control class. Consequently, the experimental class exhibits superior knowledge gains compared to the control class. Electronic learning cards or E-Matching Card improve the knowledge (Zhou, 2013).

Conclusion

Research conducted on E-Matching Cards as a learning tool through electronic learning card games has demonstrated that it enhances students' cooperative skills in comparison to those who do not utilize electronic learning card games for learning purposes. Nursing students who utilize the E-Matching Card have superior cognitive proficiency compared to those who do not employ this learning tool. Future researchers are encouraged to develop electronic learning cards or comparable tools that can facilitate nursing students' comprehension of lecture material in a more engaging manner.

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Factors Determining Commitment to Health-Promoting Behavior During COVID-19

Dheni Koerniawan*, Sanny Frisca

Nursing Science Study Program, Faculty of Health Science, Universitas Katolik Musi Charitas Palembang 30114, Indonesia

*E-mail: koerniawan314@gmail.com

Abstract

Forming new behaviors during the COVID-19 pandemic required individual commitment. Based on Pender's health promotion model (HPM), factors affecting commitment to new behaviors include benefit perception, barriers, self-efficacy, related activities, as well as interpersonal and situational influences. This study aims to determine the determinant factors that affected commitment to health-promoting behavior and habits during the COVID-19 pandemic. This study randomly assigned online questionnaires to 186 people in Palembang. The instruments used in this study were developed by the author based on Pender's HPM. Path analysis with the SEM-PLS approach was used to analyze determinant factors of community commitment. The results of the analysis showed that the following influenced commitment: benefit variables (β = 0.192; p = 0.011), previous activities (β = 0.134; p = 0.031), interpersonal influence (β = 0.214; p = 0.005) and situational influence (β = 0.326; p = 0.000), barriers (β = -0.068; p = 0.247), and self-efficacy (β = 0.079; p = 0.256). All the predictors contributed to a commitment value of 40.6%. It can be concluded that enhancing perceived benefits and focusing on previously completed activities, and external factors, interpersonal and situational influence, may strengthen commitment to developing healthy behavior. Moreover, good self-efficacy based on previous practice can lower perceived barriers, which hinder commitment. Therefore, nurses need to focus on identifying individual internal and external factors to bolster commitment while lowering barriers.

Keywords: commitment behavior, health promotion, health promotion model, new normal

Abstrak

Faktor-faktor Penentu Komitmen terhadap Perilaku Promosi Kesehatan selama COVID-19*. Membentuk perilaku baru di masa pandemi COVID-19 memerlukan komitmen individu. Berdasarkan* Pender's health promotion model (HPM), *faktor-faktor yang mempengaruhi komitmen terhadap perilaku baru meliputi persepsi manfaat, hambatan, efikasi diri, aktivitas terkait, serta pengaruh interpersonal dan situasional. Penelitian ini bertujuan untuk mengetahui faktor-faktor penentu yang mempengaruhi komitmen terhadap perilaku dan kebiasaan promosi kesehatan selama pandemi COVID-19. Penelitian ini menyebarkan kuesioner* online *secara acak kepada 186 orang di Palembang. Instrumen yang digunakan dalam penelitian ini dikembangkan penulis berdasarkan* Pender's HPM. Path analysis *dengan pendekatan* SEM-PLS *digunakan untuk menganalisis faktor-faktor penentu komitmen masyarakat. Hasil analisis menunjukkan bahwa komitmen dipengaruhi oleh hal-hal berikut: variabel manfaat (β = 0,192; p = 0,011), aktivitas sebelumnya (β = 0,134; p = 0,031), pengaruh interpersonal (β = 0,214; p = 0,005) dan pengaruh situasional (β = 0,326; p = 0,000), hambatan (β = -0,068; p = 0,247), dan efikasi diri (β = 0,079; p = 0,256). Seluruh prediktor menyumbang nilai komitmen sebesar 40,6% sehingga dapat disimpulkan bahwa meningkatkan manfaat yang dirasakan dan fokus pada aktivitas yang telah diselesaikan sebelumnya, dan faktor eksternal, pengaruh interpersonal dan situasional, dapat memperkuat komitmen untuk mengembangkan perilaku sehat. Selain itu, efikasi diri yang baik berdasarkan praktik sebelumnya dapat menurunkan hambatan yang dirasakan, yang menghambat komitmen. Oleh karena itu, perawat perlu fokus dalam mengidentifikasi faktor internal dan eksternal individu untuk meningkatkan komitmen sekaligus menurunkan hambatan.*

Kata Kunci: *model promosi kesehatan,* new normal*, perilaku komitmen, promosi kesehatan*

Introduction

COVID-19 first emerged in Wuhan in December 2019 and then spread throughout the world; the first case in Indonesia was recorded at the end of February 2020. The Indonesian government declared a pandemic in early March. By December 2020, the development of cases nationwide increased and the country had a prevalence rate of 56 out of 100 people. In South Sumatra, between November 15 and 16, the number of cases jumped from 44 to 46 (Satuan Tugas [Satgas] Penanganan COVID-19, 2020). Meanwhile, in Palembang, the Plaju subdistrict became the area with the highest number of people under monitoring, and the Ilir Barat Dua subdistrict became the area with the most patients under surveillance (Hallo Palembang, 2020).

The virus was initially identified as airborne, spreading through droplets of fluid produced when an infected individual coughs, sneezes, or speaks. However, it was later discovered that the virus can also bind to angiotensin-converting enzyme 2 (ACE-2) receptors in the walls of blood vessels (endothelial), allowing it to enter the body and made other organs besides lungs vulnerable through blood (Kumar et al., 2020; Li et al., 2003; Zou et al., 2020). After the virus enters the lower respiration tract, it can induce inflammation in the lungs. The virus has the potential to change the characteristics of the lungs, especially in the alveolus, which can lead to parenchymal pulmonary. This can cause damage to the alveolus membrane, disrupt the oxygen-carbon dioxide exchange process, and lead to respiratory failure because of decreasing oxygen levels in the blood. Based on the autopsies of several COVID-19 patients, pathologic findings were found that alveolar capillary micro thromboses were also associated as the cause of (Kommoss et al., 2020).

During the pandemic, efforts of health promotions through various media outlets in order to promote strategies to stay healthy, especially in terms of adopting new habits. Health promotion in the form of counseling and health education is an example of information dissemination (Lumbanrau, 2020). However, people often did not follow health protocols during the pandemic. Such non-compliance could have been caused by misinformation or lack of information as well as existing obstacles. SoleimanvandiAzar et al. (2021) found several factors explaining why people did not follow health protocols during the COVID-19 pandemic. There were individual factors, which included personality traits, lack of self-efficacy, little knowledge of the disease, and misconceptions about health. There were also structural factors, which included difficulty accessing health supplies, weak laws and supervision, and poor performance of national media. Other factors were economic factors (e.g., high costs of living and lack of government support) and sociocultural factors (e.g., cultural beliefs and social customs).

The Central Bureau of Statistics (Badan Pusat Statistik [BPS]) obtained data on the reasons why people did not comply with health protocols. These included the necessity to work and no sanctions for violating individuals (Safitri, 2020). Another study found that 4 factors significantly ($p < 0.001$) correlated with following health protocols: people's intentions, attitudes, perceived behavior, and subjective norms (Noorrizki et al., 2021).

Exploring people's understanding and experience in following health protocols can be examined from healthy behaviors conducted daily during the pandemic. Therefore, this study explores health-promotion behavior in the pandemic through Pender's health promotion model (HPM) because it can explain how individuals behave to prevent a disease from spreading based on the concept of self-efficacy as a motivating factor (Pakpahan et al., 2020). HPM broadly explains that the variables of external factor affecting health behaviors are determined by how individuals understand and feel about certain health behaviors advocated by others. The understanding and feelings of individuals process-

ed through self-efficacy can influence how they perceive the benefits and constraints of implementing healthy behavior. Few studies have examined what factors determine the individual commitment to carry out the behavior as well as those factors hindering it. Therefore, this study aims to uncover the determinant factors that result in committing to health-promoting behavior.

Methods

This study applied a cross-sectional design. IT collected data through online questionnaires, which were randomly distributed during April-May 2021 to all people who lived Palembang. The sample criteria included people aged 13 to >60 years and able to or have family members who can use Google Forms. This study included 186 participants; it was approved by DRCS University of Catholic Musi Charitas, with approval number 11.2/II/B1-PN10.01/2/21. The data were then analyzed using a structural equation model (SEM) with a partial least square (PLS) approach using SmartPLS v.3.2.9 (Ringle et al., 2015). SEM-PLS analyzed the data through two approaches: a measurement model to ensure the validity and reliability of the instrument construct and a structural model to test the hypotheses (Ghozali & Latan, 2020; Klemelä, 2018; Ringle et al., 2020; Wong, 2013).

The questionnaire was developed by the author from Pender's HPM framework (Alligood, 2014), which includes behavior-specific cognition and affect (BSCA) as the direct variable affecting commitment and individual characteristics and experiences as the indirect variables. As in the framework, the BSCA consists of two cluster variables: internal factors (e.g., perceived benefits of action, perceived barriers to action, perceived self-efficacy, and activity-related affect) and external factors (e.g., interpersonal influences and situational influences). The validity and reliability of the instruments explained in this study are part of SEM analysis.

Results

Table 1 shows that participants were aged between 17 and 63, with a middle score of 22 years. Most were female and most had the equivalent level of high school education (90 [48.4%]) and were student (96 [51.6%]) during data collection. In addition, the middle value and score range for the independent variables are as follows: benefit 13 (5–15), barrier 7 (3–12), self-efficacy 9 (5–10), previous activities performed during the pandemic 11 (3–15), interpersonal influence 17 (6–20), and situational influence 10 (5–10). Meanwhile, the commitment dependent variable is 10 (7–10).

The data were then processed in SEM-PLS through two stages: the measurement model to assess the validity and reliability of the construct and the structural model for hypotheses

Table 1. Descriptive of Participants' Characteristics

Variables		f	%	Variables	Median	Min-Max
Gender	Male	38	20.4	Age	22	17 – 63
	Female	148	79.6	Perceived benefit	13	5 – 15
Education	High school	90	48.4	Perceived barrier	7	3 – 12
	Bachelor	57	30.6	Self-efficacy	9	5 – 10
	Master	38	20.4	Activity-related	11	3 – 15
	Doctoral	1	0.5	Interpersonal influence	17	6 – 20
Occupation	Unemployed	8	4.3	Situational influence	10	5 – 10
	Housewife	5	2.7	Commitment	10	7 – 10
	Student	96	51.6			
	Government employee	7	3.8			
	Private employee	67	36			
	Entrepreneur	3	1.6			

Table 2. Variable Validity and Reliability

Variables	Composite Reliability	Average Variance Extracted (AVE)
Perceived benefit	0.793	0.666
Perceived barrier	0.771	0.628
Self-efficacy	0.843	0.729
Activity-related	0.820	0.605
Interpersonal influence	0.748	0.503
Situational influence	0.755	0.622
Commitment	0.786	0.649

Table 3. Cross Loading Fornell-Larcker

Variables	Perceived benefit	Perceived barrier	Self-efficacy	Activity-related	Interpersonal influence	Situational influence	Commitment
Perceived benefit	**0.816**						
Perceived barrier	-0.145	**0.792**					
Self-efficacy	0.183	-0.162	**0.854**				
Activity-related	0.293	-0.122	0.209	**0.778**			
Interpersonal influence	0.292	-0.180	0.157	0.277	**0.709**		
Situational influence	0.252	-0.224	0.144	0.147	0.312	**0.789**	
Commitment	0.400	-0.236	0.234	0.322	0.433	0.488	**0.806**

testing. The fit model was reviewed based on the validity, composite reliability, and average variance extracted (AVE) values (Table 2), as well as the Fornel-Larker cross-loading value (Table 3), to analyze correlations between variables (Ghozali & Latan, 2020; Haryono, 2017; Mustafa & Wijaya, 2012).

Convergent validity analysis of this study's instrument shows good validity for all AVE values of the variable construct, which are above 0.5 Based on the Fornell-Larcker criterion, each variable has the highest correlation value to themselves other than to another construct. Statistically, the instrument well represents the underlying construct and has established its distinctiveness. The results show that the instrument also has good composite reliability, with a value above 0.6. Overall, the instrument well represents the underlying construct and has established its distinctiveness. This model has good measurement model parameters and can be analyzed forward to structural model.

The structural model is presented in the form of a diagram (Figure 1), showing the value of the coefficient of effect (β), significance (p-value) and contribution of effect (R^2). Even though this study includes participant characteristics, they are not analyzed in a multivariate test because they are not direct variables to commitment, as mentioned in the research methodology section. The SEM result (Figure 1) shows several things, namely the contribution of all independent variables to dependent variable in this study by 40.6%, while the rest of covariance value (100% - 40.6% = 59.4%) were influenced by other factors not examined in this research. In addition, the most dominant determinant of an individual's commitment is situational influence (i.e., the arrow with the thickest line in the figure) ($\beta = 0.326$; $p < 0.001$), followed by interpersonal influence ($\beta = 0.214$; $p = 0.005$), perceived benefits ($\beta = 0.192$; $p = 0.011$), and previous activities ($\beta = 0.134$; $p = 0.031$). However, barrier ($\beta = -0.068$; $p = 0.247$) and self-efficacy ($\beta = 0.079$; $p = 0.256$) have an insignificant influence on individual commitment.

The coefficient of negative influence on the barrier to individual commitment indicates that

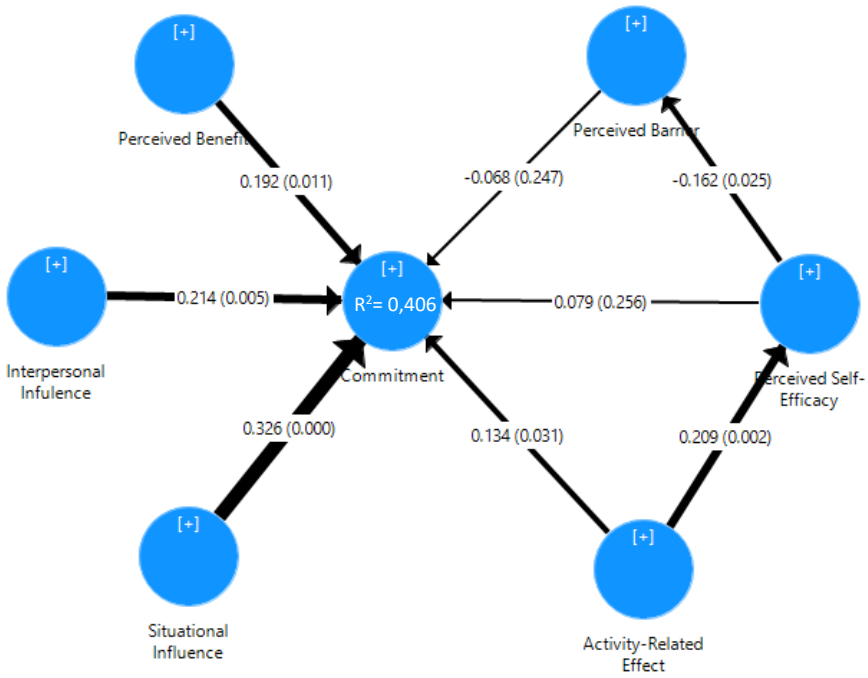

Figure 1. SEM Diagram for Determinant Factors of Health-Promoting Behavior Commitment

the greater the barrier or perceived constraints experienced by individuals will reduce the commitment to implement health promotion behavior. In addition, previous activities had a significant influence on individual self-efficacy (β = 0.209; p = 0.002); individual efficacy had a significant negative influence on barriers (β = -0.162; p = 0.025). Based on the negative values in the coefficient of self-efficacy against barriers, it can be concluded that the more self-efficacy an individual has will decrease the perception of the perceived barrier or experience that individual had.

Discussion

Health-related positive activity during the pandemic was affected by participant characteristics. Most of the participants were adults, had finished high school, and were university students or employees. These factors imply that the participants could gather information about the importance of reducing the spread of infection. This study's results follow those of Pratiwi et al. (2020) study in Bali, whose participants' ages were 20.72±6.25 (13–56), women (52.5%), high school (49%) to higher education (50%), and students (72.5%), as similar as Riyadi and Larasaty (2020).

This study showed that most of the participants displayed a good activity-related to health behavior. The median score was 11 of 15 which indicate high score. The items in the instrument show that participants practiced healthy behavior such as consuming health food or beverages remedy (42%), exercising (40%), and getting enough sleep (36%). Junias and Toy (2021) found that most of the participants fol-lowed the health protocols. Individuals were able to create healthy living conditions for themselves. They had the capacity for self-reflection, including examining their competen-ce or potencies to establish a good health behav-ior. Additionally, they attempt to strike balance between change and stability while regulating their behavior.

Participants in this study perceived a mild barrier to commitment (median score 7 to maximum 12) and not giving significant negative effect to commitment. Moreover, they seldom re-

moved their mask because they felt suffocated (44%) and third of them never felt bothered washing their hands (28%). Afro et al. (2020) found that 19% of their participants had to at times remove their masks due to difficulties breathing, also they showed barrier perception affected the variable of compliance with health protocols by 10.2% ($p = 0.001$). Silvano et al. (2021) showed that 39.3% of participants did not use their masks when exercising.

World Health Organization (WHO) (2022) advised people to wash their hands and use their masks to reduce the risk of COVID-19 infection. However, the low motivation of people in implementing these health protocols can be affected by others' behavior, the absence of law enforcement, and an unsupportive environment (Saehana et al., 2021).

More than 47% of participants in this study felt they easily got through the pandemic, and 69% felt they endured the pandemic, as the overall median score is high. Another study showed that 95.3% of the participants had positive efficacy in dealing with the pandemic (Afro et al., 2020). Their pre-existing behaviors and characteristics enabled them to have good knowledge and helped them to form health-promoting behaviors (Kamran et al., 2015). There is a need and a desire for an enhanced health promotion practice, as it can act as an important driving force for change (Johansson et al., 2010). Personally, an individual has to find ways to reorient themselves to focus more on possibilities than on existing barriers. One possible way is to think about health promotion as an empowering, holistic, and individualized approach applicable to any interaction instead of a new added-on task (Johansson et al., 2010). Individuals' confidence in their own abilities can determine how they behave, think, and react to any situation that befalls them, which shows that self-efficacy shows positive results.

In this study, the perception of the benefit of the majority of respondents is positive. Almost all of the individuals were aware of the benefits they would gain if they implemented health protocols, such as washing hands (58%) and keeping their mask on while communicating with others (46%). Benefit perception induced the level of compliance, as it helps carry out health protocol adherence. The other research found the same results ($p = 0.03$) and people with low compliance have low perceived benefits (Fikriana et al., 2021), which means that perceived benefits have a positive correlation with compliance. If the perceived benefits of a preventive measure against a disease are low, then the chances of measures to be taken for prevention will be lower. Recognizing the benefit of action is useful for suppressing the spread of the virus (Saehana et al., 2021). Enhancing the activities that can be done and still maintain the activity-related health should be the most frequently performed activity (Ashgar, 2021).

More than half of the participants chose to feel uncomfortable breathing with a mask rather than removing it and risking COVID-19 infection (70%) or infecting others (79%). Still, some respondents in other studies admitted that sometimes they found it difficult to keep their distance and follow other health protocols due to their housing situation (Kuntardjo & Sebong, 2020). In Supriyati et al. (2021), research respondents said that during their work in the market, it was difficult to interact with buyers or customers. The respondents also mentioned having a lack of reliable information about COVID-19 and experiencing many economic-related problems.

The participants in our study experienced a range of organizational and working conditions that negatively influenced their efforts to practice health promotion. The perceived gap between the desire to work more with health promotion and prevention and the perceived possibilities resulted in a sense of frustration and resignation accompanied by a feeling of disempowerment within the system (Johansson et al., 2010).

This study found that the interpersonal influence aspects significantly affected commitment, as some respondents still needed to remind by family and friends, 36% and 65% respectively. Therefore, they kept enough pandemic-related materials around the home (e.g., masks, hand sanitizers, hand soap, and disinfectant) (77%). Another study found that social norms and social models significantly affect commitment ($p < 0.001$) (Sanaeinasab et al., 2012). Sari and Fawzi (2021)'s study in Indonesia about adherence to health protocols showed that knowledge was significantly related to people adherence ($p = 0.000$). Also, the community felt the support of good community leaders (64.2%) (Wiranti et al., 2020). Corpuz (2021) rightly pointed out the involvement of a supportive government, a creative church and an adaptive public can help a community in adapting to the 'new normal', so an adaptive public can help a community to adapt to a crisis.

In this study, 79% of the participants committed to obeying protocols during the pandemic, and 84% followed regulations not only to prevent getting infected but also to protect their families; the median scores for commitment were high Some factors inhibited commitment, such as ignorance toward health protocols, and other factors supported it, such as those people who followed them. Dehdari et al. (2014) and Khodaveisi et al. (2017) indicated that health education seems to improve commitment to action significantly by enhancing perceived benefits and self-efficacy. Health education also decreases perceived barriers in the experimental group when compared to the control group. Adapting to new ways and habits provides an opportunity to move freely (Akbar et al., 2021) without increasing the risk of exposure to COVID-19.

Biopsychosocial complexity of a person interact with the environment and progressively transform the environment and are transformed by the environment over time. The health profession forms a part of an individual's interpersonal environment that influences their lives. Self-initiative to reconfigure individual-environmental interactions is essential to change behavior. The greater the commitment to specific action planning, the easier it will be for healthy behavior to be maintained. Committing to planned action is less likely to be successful when an individual has more attractive competing demands. Individuals can change their thinking, behavior, and interpersonal and physical environments to help promote healthy behavior.

Conclusion

This study concludes that perceived benefits and previous health activities, as internal factors, and interpersonal and situational influences, as external factors, can positively affect commitment to promoting healthy behavior. A perceived barrier negatively affects commitment; it can minimize self-efficacy. It is recommended that nurses emphasize benefit perception and previous healthy behavior to enhance health commitment and to encourage others (such as family members, significant others, peers, and health workers) to establish a support system promoting healthy behavior. Meanwhile, other variables related to health behavior need further research.

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Family Caregivers' Preparedness with Death and Dying: An Ethnographic Study

Erna Rochmawati[1*], Rick Wiechula[2]

1. School of Nursing, Universitas Muhammadiyah Yogyakarta, Yogyakarta 55183, Indonesia
2. Adelaide Nursing School, University of Adelaide, Adelaide 5005, Australia

*E-mail: erna.rochmawati@umy.ac.id

Abstract

Death and dying is a complex process and influenced by belief and culture. Understanding the cultural practice is therefore important to enable providing quality end-of-life care. This paper focus in reporting how family caregivers prepare and deal with death and dying within palliative care context. This study was a contemporary ethnographic study that deriving data from observations and informal interviews. Field observation and informal interviews were conducted over three months with 21 patients' relatives. Data was analyzed using ethnographic data analysis framework. Dealing with death and dying relates to how this was experienced and managed by the patient's relatives. Three subthemes emerged: secret, ritual practices at end- of-life, and respect. Ritual practices at end-of-life demonstrate how religious and cultural influence during the event. The findings of the current research have identified the practice during death and dying of family caregivers that include fulfilment of patient's wishes. An understanding of integral cultural element to death and dying is important to enable providing quality palliative care and end-of life care.

Keywords: death and dying, end-of-life, ethnography, family caregiver, ritual practice, religion/spirituality

Abstrak

Kesiapan Keluarga dalam Kematian dan Akhir Hayat: Penelitian Etnografi. *Kematian dan akhir kehidupan adalah proses yang kompleks, dan dipengaruhi oleh kepercayaan dan budaya. Oleh karena itu, memahami praktik budaya penting untuk dapat memberikan perawatan akhir kehidupan yang berkualitas. Penelitian ini berfokus dalam melaporkan bagaimana keluarga mempersiapkan dan menangani kematian dan kematian dalam konteks perawatan paliatif. Penelitian ini merupakan penelitian etnografi kontemporer yang mengambil data dari observasi dan wawancara informal. Observasi lapangan dan wawancara informal dilakukan selama tiga bulan dengan 21 kerabat pasien. Analisis data menggunakan kerangka analisis data etnografi. Berurusan dengan kematian dan sekarat berkaitan dengan bagaimana hal ini dialami dan dikelola oleh kerabat pasien. Tiga subtema muncul; rahasia, praktik ritual di akhir kehidupan dan rasa hormat. Praktik ritual di akhir hayat menunjukkan bagaimana pengaruh agama dan budaya selama acara berlangsung. Temuan penelitian saat ini telah mengidentifikasi bagaimana praktik selama kematian dan sekarat pengasuh keluarga. Pemahaman tentang elemen budaya integral kematian dan sekarat penting untuk memungkinkan memberikan perawatan paliatif berkualitas dan perawatan akhir hidup.*

Kata kunci: *agama/spiritualitas, akhir kehidupan, etnografi, keluarga yang merawat, kematian dan akhir hayat, praktik ritual*

Introduction

Dying and death is a complex process, although it is an inevitable point in the palliative care service and could happen at any time during the care provision. During this period of time, palliative care focuses by providing treatment to relieve the suffering of the patients and the relatives (Rome et al., 2011). Death and dying is influenced by culture (Mah et al., 2019). This includes patients' and relatives' belief and the practice of care during end-of-life. Understand-

ing the cultural practice of death and dying in palliative care service therefore is essential to enable providing quality palliative care and end-of-life care. However, available studies particularly in Asian countries have focused on death and prognosis discussion (Eng et al., 2022; Huang et al., 2018; Sudhakar et al., 2020) and rituals associated with such events (Cheng et al., 2015).

In Indonesia, the development of formal palliative care commenced in the 1990s as part of the National Cancer Control program (Al-Shahri, 2002). During its development, the provision of palliative care has been extended to other life-limiting illness, but most available palliative care facilities are designated for patients with cancer. A review at palliative care research found that most studies focus on describing the development of palliative care, but none explored the provision of palliative care services or cultural aspects associated with palliative care provision (Rochmawati et al., 2016). However, to date, in relation to belief and practice to death and dying, particularly in the palliative care context, a literature search that was conducted find none related published papers.

Understanding and honouring patients' preference of treatment and wishes at their end-of-life is crucial for quality palliative and end-of-life care. While such discussions are encouraged, a number of studies have shown that discussions about prognosis and death were often not conducted. This was associated with health care professionals' factors, patients' factors, caregivers' views and culture (Sutar et al., 2021). In their study, Sutar et al. (2021) found that prevalence of collusion are still unnoticed in cancer care due to some difficulties. The difficulties in prognostic communication due to lacked training in conducting open conversations with patients, cultural wishes. In addition, the nurses were reluctant to disclose such information due to concerns about possible negative impacts on patients (Newman, 2016). Walczak et al. (2015) found that many family caregivers preferred to discuss about clear treatment preferences rather than having a discussion on life expectancy and unknown treatment outcomes. Prognosis and end-of- life discussions between patient/relatives and health care professionals are influenced by culture. In Western countries such discussions are more often being conducted. However, many studies from Asian cultures, show that patients or relatives are more reluctant to have such discussions Tang (Long et al., 2018; Tang et al., 2014).

When recognising that patients are approaching their end of life, health care professionals need to provide appropriate and effective support. Several studies identified interventions that had beneficial outcomes for the patients, such as forgiveness therapy and discussions of life completion. Two experimental studies indicated that forgiveness therapy improved terminally ill patients' health outcomes at their end-of-life (Renz et al., 2020; Silva et al., 2020). Discussion of life completion which included discussion of patient's values and completions was associated with treatment adherence and better patient's health outcomes at their end-of-life (Huang et al., 2020; Kleijn et al., 2018). Other practices are also conducted by family caregivers. Existing evidence shows several activities and rituals associated with such events including inviting attendance by a clergy or a religious person, asking for forgiveness (Levy et al., 2021; Maungtoug et al., 2021; Okan et al., 2019), and cremation among Hindus and immediate burial and mourning burial in Jews (Gupta, 2011; Silverman, 2021). To date in relation to belief and practice to death and dying, particularly in the palliative care context, a literature search that was conducted find none related published papers. In this paper, the study revealed the findings in relation to the practice of death and dying aspects of palliative care provision. This aspect in one of findings from an ethnographic study that aimed to explore how is the provision of palliative care and cultural elements that influence the provision of care. The study was conducted in two palliative care services in Indonesia over a period of three months.

Methods

The use of contemporary ethnography for this study enabled the exploration of the cultural elements in the provision of palliative care in Indonesia. Contemporary ethnography is char-acteristically concerned on settings or culture that close the researcher (Draper, 2015). while the classical ethnography has focused on described culture that is nearer to home. Jones and Smith (2017) highlights the advantage of an ethnographic approach when exploring new and unknown phenomena, in this case, where there is limited knowledge and information in this area. Based on the tenets of contemporary ethnography, the data in this study was gathered from field observations of that include informal discussions, and semi structured interviews.

Fieldwork for non-participant observations was conducted every day on weekdays from 8am to 4pm with the average of 35 hours of fieldwork per week for the periods of three months. The fieldwork was conducted in public hospital that has palliative care unit which service included home visit and outpatient clinic. We observed healthcare professionals and family caregivers. During the observations, we focused on all situations in the daily routines of care provision including communication and interaction within palliative care staff, between staff and patients and their relatives and interventions in care delivery. Field notes were systematically transcribed immediately after each fieldwork episode for analysis. The field notes include details of the researcher's observations together with a reflexive account.

Participants. Participant recruitment was opportunistic and purposive due to their involvement in the culture and their specific knowledge or experience related to the cultural setting (Bonisteel et al., 2021). Total participants were 16 including: family caregivers (n = 10), while the palliative care team (n = 6).

Trustworthiness of this study. The trustworthiness and rigor of qualitative study was assessed using credibility, dependability and confirmability (Korstjens & Moser, 2018). To enhance the rigor, we conducted prolonged observations We also independently recorded and transcribed data. In addition, reflexivity was implemented to improve the credibility for the study by keeping a reflexive journal that include personal reflection related to the study and all events that happened during the fieldwork. A recursive process of reflexivity on analysis, reviews and validation of methods was also undertaken in this study. To ensure the dependability for the present study immediate recording of date after each observation was conducted. Comparing and contrasting existing data when sorting and coding data into categories was also (Fetterman, 2010), and decision trails were also conducted. Decision trails that included making comprehensive and explicit notes in NVivo were used in data analysis in the present study (Bergin, 2011; Houghton et al., 2012).

Data analysis. The analysis was recursive and cyclic using a framework from LeCompte and Schensul (2013). The framework assists the researchers to analysis the data at item, pattern, and structural levels. At item level of analysis, we selected and analysed the data by giving meaning to all the basic items and examine for possible terms for related items. After that, in the pattern-level analysis, we organized the identified terms and searched for any relationship. In this process, we compared, integrated, associated and linked identified and related terms for a higher order of patterns (LeCompte & Schensul, 2013). At the structural level of analysis, items and patterns were repeatedly reviewed to understand how they correlated and addressed to the research questions (Barusch et al., 2011).

Ethical consideration. The protocol, information sheets, consent forms, and data collection materials were reviewed and approved by the Ethics Committee of the university and the hospital where the study took place. Ethics approvals were obtained from the Human Research Ethics Committee of the University (No. H2013-

05) and the hospital's Ethic Committee (No.004 /KEPK/1).

Results

There were 16 participants involved in the study (Table 1). Dealing with death and dying relates to how this was experi-enced and managed by the palliative care team and the patient's relatives. Two themes were emerged: "preparing with death and dying", and "dealing with "death and dying" (Table 2). The sub themes are: 'secret between palliative care team and relatives', 'ritual practices during death and dying', and 'respect'.

Preparing with death and dying. The theme preparing with death and dying consists of two sub themes: secret between palliative care teams and relatives, and ritual practices during death and dying. There were frequent discussions about prognosis and death between the palliative care team and the patient's relatives conducted overtly where the palliative care team provided honest information about the patient's condition. In such discussions, however, the patient was almost always excluded. From their years of experience, the palliative care team were able to recognize the approaching signs of death. On recognizing this, the palliative care team would have discussions with the family about the patient's condition to prepare them for their loved one's death and suggest they finalize plans for the patient's funeral.

The discussions about death and dying between the palliative care team and the patient's relatives were overt. It was demonstrated in an observation below,

> *After exiting the patient's room, the palliative care team sit with the patient's wife and sister in the living room while the patient was still in his rom. The palliative doctor began talking about the patient's condition and the prognosis to the patient's wife, then the doctor assessed the relatives' responses. The wife looked sad and then cried, blaming the previous doctor of not treating well her husband and not referring to the palliative care unit earlier (field notes, page 11).*

In addition to discussions about funeral planning, it was common for the palliative care team to suggest the family caregivers ask forgiveness from the patients for his/her previous mistakes and that they also forgave the patient's mistakes. The palliative care team also suggested the relative to give thanks for what the patient had done. It seems this request was influenced by the religious belief that forgiving the patient will smooth his/her way to return to their God. It was also apparent that the funeral discussions were also held among the family caregivers. For example, when the palliative doctors asked about funeral planning, the relatives responded that they had already discussed the funeral and reached agreement with each of the involved relatives. The funeral planning usually accommodated the patient's wishes (e.g., place of burial sites, funeral rites).

Findings from reviewing related documents show that the majority of patient's goal of care were for terminal care. In preparing and assisting the patient's relatives with death and dying, the palliative care team would encourage families to draw on their religion at this time. In circumstances where the patients were unconscious, the palliative care team would suggest the family guide the patient during their end-of-life with religion. The family caregivers also considered that spiritual support was important for the patients at their end of life. They employed strategies to provide spiritual support such as: reciting the Holy Quran, helping the patients to perform prayers and inviting a chaplain to lead prayers at home. The family caregivers also tried to accommodate the patient's wishes regarding to the funeral. This is evident in some observations:

> *A patent's wife said that she always recited the Holy Quran near her husband (patient) who was unconscious and had experienced seizures twice a day. The patient's son added*

that after the patient's condition had deteriorated, in addition to the Holy Quran recital, they guided the patient by reciting Islamic words (Shahadah/declaration of faith, istighfar/asking forgiveness). The family caregivers said these rituals would ease the patient in his dying and death process (field notes, page 7).

Ritual during funerals were practiced encompassed a variety of direct elements (e.g., place and time of funeral mass, type of burial plot, wardrobe worn by the mourning family and supports) and indirect elements (e.g. the patient's wishes). It was observed that religion and ethnicity group influenced how elements of a funeral were practiced. In a Muslim family, the funeral mass and burial were conducted immediately. This rite follows the Islamic law (shariah) that states the body should be buried as soon as possible after the time of death. In other religions and ethnic groups, the process of funeral and burial could be conducted several days after the death. For example:

In a Catholic family with a Chinese background, the funeral mass and burial were conducted several days after the death because the family followed the date determined by the monk. There were Chinese attributes (e.g., Chinese writing, artefacts in red colour and a Chinese boat), candles, some food, and the patient's photograph in front of the coffin. The patient's wife and children wore white blouses. They stood near the patient's coffin. Several relatives sat on chairs. When the palliative care team arrived, they shook hands with the wife and the children and expressed their condolences (field notes page. 78: l.20–34; page 79).

In Indonesian culture most families turn to their extended families, friends, and neighbours for practical and emotional support during the period of grief and bereavement, although the primary support came from their immediate nuclear clear family. This is demonstrated in the below field notes:

The patient's wife said that many of relative from both her side and her husband side travelled from other city to attend the funeral (field notes, page 86).

Table 1. Participants' Characteristics

Demographic	No (%)
Family caregiver	
Gender	
Female	7 (70%)
Male	3 (30%)
Age (years), range (min-max)	33–67
Relationship with patients	
Spouse	3 (30%)
Children	6 (60%)
Other	1 (10%)
Palliative care team	
Gender	5 (83.3%)
Female	1 (17,7%)
Male	
Profession	2 (33.33%)
Physician	3 (50%)
Nurses	1 (16.67%)
Clerical	

Table 2. Summary of Item, Pattern, and Structural Level of Analysis

Cultural themes emerged during structural level of analysis	Pattern	Item	Exemplar of quotations and fieldnotes
Preparing and dealing with death and dying	Secret between palliative care team and relatives	Overt discussion between relatives and healthcare professionals	In the living room where the patient is absent the palliative doctor began talking about the patient's condition and the prognosis to the patient's wife, then the doctor assessed the relatives' responses (field notes, page 11).
	Rituals practices at end-of-life and death	• spiritual support • role of religion and ethnic • support from extended family	'A patient's wife said that she always recited the Holy Quran near her husband (patient) who was unconscious (family caregiver, field notes page 7). 'In a Catholic family with a Chinese background, the funeral mass and burial were conducted several days after the death because the family followed the date determined by the monk (field notes, page 78: line 20–34; page 79). The patient's wife said that many of relative from both her side and her husband side travelled from other city to attend the funeral (field notes, page 86).
Dealing with death and dying	Respect	• the use of term passed away • attending funeral	The nurse explains that there are two patients passed away this morning (informal discussion, field notes page 38). After visiting other patients, the palliative team went to the patient's home as the funeral ceremony was conducted at the patient's home. It looked that the funeral ceremony was finished as there were only empty chairs. The palliative team came into the patient's and met with the patient's wife and expressed their condolences. The palliative team stayed about thirty minutes talking about the patient and how the wife's response (field notes, page 112; page 113).

> *The palliative team arrived at a patient's home to attend the funeral ceremony. There are neighbours and friends visiting the patient's relative (field notes, page 113).*

Dealing with death and dying. Apparently, the palliative care team respect their patients that was expressed in using term of passed away and attending the patient's funeral if possible. The term 'passed away' was used by the palliative care team instead of saying that a patient had died. The term 'pass away' is not only used during conversation. The document review (nursing chart and administrative notes, the term is also used. This term represents the respect of palliative care team to the patient where in Indonesian culture the use of 'passed away' was considered more polite. In addition, it seems that the palliative care team also thought that using the term of 'passed away' was softer language so the message made was more palatable.

The palliative care team tried where possible to attend the patient's funeral and considered that attending the patient's funeral was a feature of the palliative care service. If they could not attend, they came before or after the funeral cere-

mony. At the funerals, the palliative care team expressed their condolences to the family and prayers for the deceased patients. In addition, it was common for the palliative care team to hug offered up mourning spouses, but care was taken to ensure this was appropriate in terms of gender and told them to memorise their best moments with the deceased. For example:

> *In the morning, the palliative nurse got a phone call informing that a patient passed away and then the palliative team told the other team member. They plan to attend the funeral. After visiting other patients, the palliative team went to the patient's home as the funeral ceremony was conducted at the patient's home. It looked that the funeral ceremony was finished as there were only empty chairs. The palliative team came into the patient's and met with the patient's wife and expressed their condolences. The palliative team stayed about thirty minutes talking about the patient and how the wife's response (field notes, page 112–113).*

The palliative care team also offered grief and bereavement services to the family caregivers. The palliative care team considered that this final act of caring was an important part of their practice. They believed that what they did were ways for the palliative care team to respect the patients and their relatives and also gave support and comfort for the relatives.

Discussion

In relation to end-of-life discussion, the palliative care team informing the patient about their diagnosis, prognosis, and discussions about preparing for death were, at best, indirect. These conversations with relatives were, however, far more direct and detailed. Communication on patient's diagnoses and prognosis are greatly influenced by country and culture. Disclosure of diagnosis to the patient in some cultures does not occur, although in the last few years both in developed and developing countries it is becoming more common (Abdel-hafeez et al., 2021). This is reflected in the current study in which most of the patients and the relatives have understood the patient's diagnosis. The understanding of the patient's diagnosis in this study was likely due to previous diagnosis discussions between the oncology doctors and the patients prior to the referral to the palliative unit.

Discussions about prognosis and end-of-life were mostly conducted between the practitioners and the patient's relatives, but these discussions with patients were far less overt. This matches with the literature where in some cultures clinicians prefer to disclose such information to the patient's next of kin (Davis et al., 2012; Fenton et al., 2021). It was observed that the relatives in this present study were willing to participate in the end-of-life discussions. This finding is in contrast to the situation in Taiwan, in which the relatives were reluctant to have end-of-life discussions as this was considered a taboo (Cheng et al., 2015). Although end-of-life discussions were conducted, in this study it was noticeable, however that the overt and detail discussions were only between the practitioners and the patient's relatives as the patient was being largely excluded from such discussion. This matches with other studies which have found physicians are reluctant to discuss prognosis and end-of-life still with patients in a number of Asian countries (Tang et al., 2014; Wen et al., 2013). Such situations are thought to be an effort to protect the patients. Fenton et al. (2021) stated that such disclosure was associated with attitude and uncertainty sensitivity. In their review, Harrison and Walling (2010) concluded that communicating prognosis was a way to assist patients with life-limiting disease to make informed choices and openly discuss their impending death and wishes related to care at the end of life. Nonetheless, it is undeniable that special considerations (i.e., culture, belief) need to be considered when conducting discussions about prognosis and about death with patients.

The end-of-life discussions generally commen-

ced when the palliative care staff understood that the patient's condition was deteriorating. Previous studies from Asian countries have consistently shown a lack of discussion surrounding death due to family's difficulties in accepting impending death and such discussions being taboo (Cheng et al., 2015; Tang et al., 2014; Wen et al., 2013). In this study these discussions varied and were particularly difficult for participants with an ethnic Chinese background. Previous studies stated that tailoring information is important to prepare family caregivers for death and bereavement (Aoun et al., 2017; O'Sullivan et al., 2021) stated that tailoring information is important to prepare family caregivers for death and bereavement. During the discussions about end-of-life, some of the family caregivers preferred to discuss possible treatment to prolong the patient's life. The palliative care team, when presented with this situation, gently brought the discussion back to considering that the death was imminent. They often repeated explanations about the patient's condition in plain language and use direct language so that the relatives understood the situation. These strategies reflected the need of caregivers' during end-of-life discussion needed (Collins et al., 2018). In their study Collins et al. (2018) found that the caregivers of people with advanced in a hospital in Australia wanted the clear information from the health professionals when the patient's death is close. In addition to applying the communication strategies, the palliative care team then asked the patient's relatives to fulfil the patient's requests if any, and to provide support in religious belief. Moir et al. (2015) have found that the length of and working in oncology units had significant effects on the nurses' ways of discussing end-of-life care with a patient's relatives. Such a situation was also demonstrated in this study where the majority of the palliative care staff had experience in oncology and had been working for more than 10 years in this area.

Because of their previous experiences, some relatives knew when the patient's time of death was approaching. Knowing what dying looks like is one of important attributes in death preparedness for family caregivers as this will enable in preparing appropriate care for the dying (Durepos et al., 2019). It has been shown that patient's relatives managed the patients' needs that include organizing patients' affairs and asking a local chaplain or religious person to visit the patients and lead prayers. This is similar to an earlier study that explored common beliefs and practices when death is approaching in East-Asian countries (Cheng et al., 2015). When the death is imminent, encouragement of religious practices by the family caregivers occurred; for example, the relatives played religious music and recited the Quran for the patient. In Islam, reciting chapters of the Noble Quran or playing Quranic audiocassettes is considered as a way to ease the patient's dying and death process and facilitating a peaceful death. In this study, it has shown that the majority of the patients' relatives preferred to focus on religious faith and conduct religious practices instead if medical futility. Focusing on this may serve as a coping strategy for them, as reflected in a study that found religious faith as coping strategy among culturally and linguistically diverse patients with cancer and had palliative care needs and their caregivers in two Australian hospitals (Kirby et al., 2018).

As the journey reaches its end point and death is close, in Indonesian culture it is common to seek and provide forgiveness. Such practices were also encouraged by the palliative care team that reflect their awareness and sensitivity to the patients' culture and religiosity. Pentaris and Thomsen (2018) stated that such awareness and sensitivity is an important aspect in providing quality palliative care. In this study the palliative care staff, the patients and their relatives were all involved in this process. In most cases there was no specific act for which forgiveness was sought. The purpose is to ensure that all are at peace with each other. van Laarhoven et al. (2012) have concluded that religious characteristics were significantly associated with the notion of forgiveness. A number of studies have also concluded that forgiveness therapy that in-

clude seek and provide forgiveness could improve patients' quality of life of patients with life-limiting illness (Renz et al., 2020; Silva et al., 2020) . Such a finding could be important because it suggests that forgiveness therapy could be integrated in the provision of palliative care. When a patient died, religion and ethnicity influenced how elements of a funeral were practiced. Gatrad and Sheikh (2002) stress that a burial should be conducted immediately in Islam, while Gould et al. (2018) identify that Buddhist families may prefer to have certain time and place for the funeral. In this study, there were examples of this influence of religion and ethnicity in funeral practices.

The provision of palliative care still continued after the patient's death that the palliative care team managed to attend the patient's funeral to show respect and provided support to the family caregivers. In addition to these, participating in the patient's funeral is found as one of strategies to improve of nurses' self-care after caring for dying patients (Huang et al., 2016). The palliative care team also provided bereavement follow-up for the family caregivers. The bereavement service was conducted in the form of counselling, either for individuals or as a family. These findings parallel with the guidelines from the World Health Organization that suggest supports from bereaved family members (Radbruch et al., 2020).

The findings of the current research have identified how is the practice during death and dying. A future study could investigate other factors that influence around death-dying discussion. In addition, as culture appears to strongly influence such discussion, this factor should be taken into account in such related interventions. Our analysis is limited to the views and experiences of patients, family caregivers and small number of professionals cannot be generalized. Because the study was conducted at one hospital-based and a non-profit organization-based palliative care service, the organizational culture could limit the transferability of the results.

Conclusion

We found discussions about prognosis is between healthcare professionals and family caregivers, where during the overt discussions about prognosis and the end of life, the patients were mostly excluded as the discussions were only between the palliative care team and the family caregivers. This is not to suggest that this practice is inherently incorrect, but it is something that should be considered and debated. The participants particularly family caregivers generally recognise the signs during end-of-life that leads them to conduct ritual practices. Additionally, the healthcare professional demonstrates the act of caring for patients and their relatives was an important part of their practice by attending funeral ceremony and giving support and comfort for the relatives.

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Parents' Attitudes and Stress Levels Associated with Assisting Children's Distance Learning in Western Indonesia

Dina Musila, Florensia Dewi Rahayu Wulan Prasetya, Maria Arnetta Friesca Indriani, Lia Kartika*, Agustin Lamtiur

Faculty of Nursing, Universitas Pelita Harapan, Banten 15811, Indonesia

*E-mail: sarah.kartika@uph.edu

Abstract

The Indonesian government implemented distance learning to reduce the viral spread during the coronavirus disease (COVID-19) pandemic. A preliminary study based on interviews with 10 parents found that some parents had problems accessing the internet during their children's online classes and that they used an excessive amount of data. Parents also had difficulty dividing their time between working and assisting their children with their online learning. This study aimed to determine parents' attitudes and stress levels associated with assisting their children's distance learning in western Indonesia. A descriptive research method was utilized, and the research population consisted of parents with school-age children undergoing distance learning in western Indonesia. The accidental sampling technique was used, and 384 respondents were involved. The research instrument was a questionnaire. Univariate analysis was used to analyze the data. The results showed that 1.6% of the respondents had a low stress level, 49.7% had a medium stress level, and 48.7% had a high stress level. The results also revealed that more than half of the respondents (51.3%; n=197) had a positive attitude toward assisting their school-age children during distance learning. Given that this study involved a substantial sample of parents, the findings have implications for academic institutions and community leaders in western Indonesia and similar region. The findings indicate that efforts could be made to educate parents about their stress and attitudes associated with distance learning and the effects these have on their children's learning.

Keywords: attitude, distance learning, parents, stress

Abstrak

Perilaku dan Stres Orang Tua dalam Mendampingi Anak yang Menjalani Pembelajaran Jarak Jauh. *Pemerintah menetapkan pembelajaran jarak jauh untuk memutus mata rantai penyebaran* COVID-19*. Sebuah studi pendahuluan yang melibatkan sepuluh orang tua, ditemukan bahwa beberapa orang tua memiliki masalah dalam mengakses jaringan selama kelas* online *dengan penggunaan kuota yang berlebihan. Orang tua juga kesulitan membagi waktu untuk bekerja dan mendampingi anak dalam pembelajaran daring. Penelitian ini bertujuan untuk mendeskripsikan sikap dan tingkat stres orang tua dalam mendampingi pembelajaran jarak jauh anak di Indonesia bagian barat. Penelitian ini menggunakan metode penelitian deskriptif, dengan populasi penelitian orang tua dengan anak usia sekolah yang menjalani pembelajaran jarak jauh di Indonesia Barat. Teknik pengambilan sampel yang digunakan dalam penelitian ini adalah* accidental sampling *sebanyak 384 responden. Instrumen penelitian menggunakan kuesioner. Teknik analisis data yang digunakan dalam analisis univariat. Hasil penelitian ini menunjukkan tingkat stres rendah (1,6%), stres sedang (49,7%), dan stres tinggi (48,7%). Penelitian ini juga mengungkapkan bahwa lebih dari separuh responden memiliki sikap positif terhadap pendampingan anak usia sekolah selama pembelajaran jarak jauh, yaitu sebanyak 197 responden (51,3%). Penelitian ini melibatkan sampel orang tua yang cukup besar, sehingga temuan-temuan yang ada memiliki implikasi bagi institusi akademis dan tokoh masyarakat di Indonesia bagian barat dan wilayah serupa. Upaya-upaya dapat dilakukan untuk mengedukasi orang tua mengenai stres dan sikap mereka terkait pembelajaran jarak jauh dan dampaknya terhadap pembelajaran anak-anak mereka.*

Kata Kunci: *orang tua, pembelajaran jarak jauh, perilaku, stres*

Introduction

In response to the global coronavirus disease (COVID-19) pandemic, numerous countries implemented measures such as school closures and the adoption of learning-from-home (LFH) to mitigate the spread of the virus. In Indonesia, LFH was implemented countrywide in the first quarter of 2020 for K–12 education, with the ministerial order signed on March 24, 2020 (The Ministry of Education and Culture, 2020). Distance learning was the fundamental aspect of the LFH policy, particularly online learning. However, in Indonesia, a considerable number of educational institutions, educators, pupils, and guardians were ill-equipped to expeditiously and substantially adapt to the pedagogical and instructional modifications necessitated by the LFH policy (Putri et al., 2020).

Distance learning typically relies on synchronous and asynchronous communication that is facilitated by the use of digital tools, such as email, instant messaging applications, online forums, video conference or teleconference programs, collaborative tools, and education administration systems. Ideally, it should involve regular online interactions between teachers and their students.

It has been shown that distance learning students may encounter various challenges; for example, they may struggle to adjust to the academic requirements set by instructors and have insufficient resources, such as mobile devices and computers (Chusna & Utami, 2020). Aji (2020) outlined that the implementation of distance learning may result in the loss of the student assessment process, and other significant consequences of closing schools include the postponement of exams, inadequate achievement of students' skill targets, and the inability to carry out assessments, all of which have implications for the learning outcomes in the subsequent academic year. Furthermore, Addimando et al. (2021) explained that implementing remote teaching necessitates both educators and students having access to essential technological devices and being proficient in their operation.

When distance learning was implemented, it was common for parents and children to share electronic devices due to their simultaneous engagement in remote activities, including work and study. This had a notable impact on classroom instruction, particularly regarding scheduling and the manner in which said resources were employed.

In addition, to mitigate potential hazards associated with prolonged usage, it is imperative to limit the amount of screen time allotted to children, particularly when utilizing devices such as smartphones. It is also worth mentioning that parental involvement is frequently required for primary school children when accessing electronic devices, as they may require assistance navigating and utilizing technology securely and appropriately.

According to a recent study conducted in China, which involved 3,275 respondents, parents hold negative beliefs regarding the worth and advantages of online learning (Dong et al., 2020). Most individuals decline to engage in online learning due to unforeseen modifications in the educational framework, inadequate self-management skills among students, and insufficient time and expertise to facilitate online learning (Dong et al., 2020). In addition, Garbe et al. (2020) applied a descriptive research approach to investigate the experiences of parents and children in distance learning amid the COVID-19 pandemic. They collected data via an online survey administered to parents or guardians, and their findings revealed that there was a consensus among the parents regarding school closure policies. However, the challenge of reconciling multiple responsibilities also serves as a driving force for children to pursue academic excellence.

An initial study conducted with ten parents of school-age children in Surakarta recorded parental grievances about the challenges they fa-

ced in accessing the internet during periods of remote learning and the issue of excessive data use. In that study, the parents reported that they were confused about how to allocate their time between meeting their professional obligations and supporting their children in the context of remote education. Six of the parents stated that they became stressed due to their children experiencing learning difficulties and preferring play over academic pursuits. The same six parents contended that parental stress could lead to anger toward their children. Five parents reported an inability to provide their children with learning equipment, expressed indifference toward their children's academic achievements, and neglected their children's learning due to the challenges of balancing their parental responsibilities and work obligations. As a result of this phenomenon, our team was motivated to examine the attitudes and stress levels of parents who assist their children with distance learning in western Indonesia.

Methods

For this study, a quantitative descriptive inquiry was conducted from February to March 2022. The accidental sampling technique was used to recruit the participants. The study participants were individuals residing in the western region of Indonesia who had school-age children who were engaged in distance learning due to the COVID 19 pandemic. The study population was accessible and amenable to research.

The data were obtained through a questionnaire comprising three distinct sections. The items in Part A were used to assess the parents' demographic information, with a focus on their place of residence. The items in Part B were used to assess attitudes among parents in western Indonesia toward supporting their children's distance learning. The researcher developed this part of the questionnaire on parental attitudes, and it has been subjected to validity and reliability testing using 30 respondents who were different from the study's respondents. A total of 27 questions were deemed valid and subsequently utilized in Part 2, resulting in a Cronbach's alpha value of 0.908. The items in Part 3 were used to assess the stress experienced by individuals who assist children during distance learning. The perceived stress scale, initially proposed by Cohen in 1983, was utilized in this investigation. Susilowati and Azzasyofia (2020) translated and developed the scale into 14 questions and administered it to 236 participants. The instrument consisting of 14 valid questions was found to be reliable, with a Cronbach's alpha value of 0.731.

The data collection was performed during the COVID-19 pandemic; therefore, the survey was made available through digital platforms, such as social media and WhatsApp. The collected data were analyzed using descriptive analysis techniques. This study is part of Project No. 117/RCTC-EC/R/I/2021, which has been reviewed and approved by the ethical board of the Faculty of Nursing at Universitas Pelita Harapan to safeguard the rights of the respondents.

Results

The data presented in Table 1 show that most (26.6%, n = 102) of the respondents were from Central Java. The majority of the respondents were female (66.9%, n = 257), and almost half of the respondents had a senior high school education (44.3%, n = 170).

As shown in Table 2, 51.3% (n = 197) of the respondents had a positive attitude toward assisting their school-age children with their distance learning. The data presented in Table 3 show that almost half of the respondents (49.7%, n = 191) had a moderate level of stress.

Discussion

The majority of this study's respondents were from Central Java (n = 102, 26.6%). This result aligns with the work of Simanjuntak and Kismartini (2020), who reported that 99.4% of the schools in Central Java implemented distance learning and that all parents (100%) agreed to

implement distance learning and were actively involved in assisting their children's learning.

The sex distribution of the respondents indicates that a significant proportion of the sample (66.9%) identified as female. This finding is consistent with Rakhmah (2020) which reported that mothers provided 66.7% of the support for children's distance learning. This is because mothers tend to spend more time with their

Table 1. The Respondents' Characteristics

Characteristic	n	%
Province		
Aceh	5	1.3
North Sumatera	27	7.0
West Sumatera	14	3.9
Riau	5	1.3
Riau Island	4	1.0
Bangka Belitung	7	1.8
Lampung	64	16.7
Jambi	8	2.1
Bengkulu	15	3.9
South Sumatera	9	2.3
East Java	20	5.2
Banten	10	2.6
Yogyakarta	26	6.8
Jakarta	36	8.3
West Java	15	3.9
Central Java	102	26.6
West Kalimantan	7	1.8
Central Kalimantan	13	3.4
Sex		
Female	257	66.9
Male	127	33.1
Age (Years)		
<20	12	3.1
21–30	96	25.0
31–40	122	31.8
41–50	127	33.1
>50	27	7.0
Educational Background		
Primary school	19	5.0
Junior high school	13	3.4
Senior high school	170	44.3
Diploma	58	15.1
Bachelor's degree	110	28.6
Higher degree	14	3.6
Working Status		
Employed	352	91.67
Not employed	32	8.3

Table 2. Parents' Attitudes Toward Assisting Their Children's Distance Learning in Western Indonesia

Parents' Attitude	n	%
Negative	187	48.7
Positive	197	51.3
Total	384	100

Table 3. Parents' Stress Levels Associated with Assisting Their Children's Distance Learning in Western Indonesia

Parents' Stress Level	n	%
Low	6	1.6
Moderate	191	49.7
High	187	48.7
Total	384	100

children than fathers, who are often absent from home due to work commitments (Rakhmah, 2020).

In terms of age, most of the respondents (33.1%) were 41–50 years old. In general, individuals aged between 41 and 50 years possess a level of emotional maturity and stability that allows them to regulate their emotions effectively and adjust to challenges. In contrast, the majority of respondents in Palupi's (2021) study was aged 20–39 years (70.78%, n = 63). During the transition period from adolescence to young adulthood, individuals may experience increased susceptibility to stress.

According to the data shown in Table 2, most of the participants (51.3%) had positive attitudes toward supporting their school-age children in their distance learning. A recent study that investigated the extent of parental involvement in the implementation of distance learning during the COVID-19 pandemic revealed that 32.38% of the participants reported consistent involvement, 34.4% reported frequent involvement, 29.32% reported rare participation, and 3.81% reported no involvement (Bastian et al., 2020). In addition, Putro et al. (2020) noted the significant of parents' positive attitudes had on how they facilitated their children's distance learning, as evidenced by the presence of constructive interaction patterns between parents and their children. The parents provided consistent motivation and support to their children to prevent disinterest and foster engagement in distance learning, promoting sustained focus during the learning process.

In contrast, Lase et al. (2020) discovered that most of the parents in their study—58.7%—exhibited negative attitudes toward managing their time between accompanying their children in primary tasks and fulfilling their daily work responsibilities. A separate study from Utami (2020) demonstrated that parents who could not provide complete support to their children during their distance learning had adverse dispositions. Parents are often occupied with other responsibilities, which may limit their ability to provide comprehensive instruction to their children. Additionally, parents may face challenges in fully comprehending the educational material teachers present, hindering their ability to effectively convey the information to their children (Utami, 2020). Moreover, Abuhammad (2020) found that parents face personal obstacles in remote learning, including inadequate training in distance learning techniques and materials, lack of trained personnel, and difficulties managing technological demands. Parents with lower educational attainment perceive themselves as inadequate in providing academic support, particularly in subject-specific learning and technological proficiency. These factors impact the quality and excellence of their children's remote learning experiences.

Parents' positive attitudes toward facilitating their children's distance learning can be demonstrated by the provision of time, space, and resources that bolster their children's learning and motivation. Furthermore, the level of success children achieve in their learning endeavours can be influenced by the nature of their interactions with their parents. According to Putro et al. (2020), it is imperative for parents to monitor their children's study habits at home to prevent them from becoming lethargic and hindering

their academic progress. Furthermore, parents have the opportunity to provide support by accompanying their children during the learning process, assuming the role of an educator in instances where the child may struggle to comprehend the material, fostering a sense of motivation to prevent disinterest during the learning experience, and ensuring that the child's learning is authentic (Dina, 2020). According to Pratama and Firmansyah (2021), possessing a personal computer at home was a significant indicator of parental support for LFH, even after accounting for demographic variables.

Interestingly, Balenzano et al. (2020) recently demonstrated that there were numerous positive effects associated with spending an extended period of time at home, commonly called "suspended" time, during the lockdowns that occurred during the COVID-19 pandemic. More than two-thirds of the sample reported that social isolation positively impacted their parenting practices. Specifically, they noted improved listening skills, relational abilities, and educational strategies. Additionally, the quality of their family dialogue and the time spent with their children was enhanced, as evidenced by increased monitoring of schoolwork and entertainment activities. These effects were observed to be moderately significant.

In our study, almost half of the respondents (49.7%) reported having a moderate level of stress. This finding aligns with that of a previous study that examined parents' stress levels when they accompanied their children in their distance learning activities during the COVID-19 pandemic in Indonesia and found that 75.34% of the respondents had moderate stress levels (Susilowati & Azzasyofia, 2020). Another study found that due to the COVID-19 pandemic, as many as 308 parents of healthy children in the United States had an average score of 16.41 or were classified as moderately stressed on the Perceived Stress Scale. The COVID-19 epidemic has brought about unparalleled levels of stress for parents. Anticipated long-term repercussions on mental well-being necessitate proactive measures to address the rising need for mental health services (van Tilburg et al., 2020). The results of that study indicate that there is a significant positive relationship between increased levels of parental stress ($\beta = .095$, $p = .018$) and the amount of time children spend using screens. Seguin et al. (2021) reported that the duration of screen time exhibited an upward trend among children whose guardians reported elevated stress levels. Parents accompanying their children during their distance learning activities tend to encounter stress due to various factors.

A recent study revealed that among a group of mothers who assisted their elementary school-age children during home learning, 51.69% ($n = 46$) exhibited low stress levels, 30.34% ($n = 27$) displayed moderate stress levels, and 39.33% ($n = 35$) reported high stress levels (Palupi, 2021). Lee et al. (2021) found that 40% of parents matched the Personal Health Questionnaire (PHQ)-8 criteria for major or severe depression and the Generalized Anxiety Disorder (GAD)-7 criteria for moderate or severe anxiety (39.9%). Parents with moderate or severe anxiety reported higher child anxiety scores than those with minimum or mild anxiety ($\beta = 0.17$; 95% CI = 0.06, 0.28; $p = .005$). Parental stress also increased child anxiety ($\beta=0.40$; 95% CI = 0.32, 0.48; $p = .001$). Based on the findings of content analyses conducted on open-ended questions, it was determined that the most disruptive factor was the closure of schools, followed by insufficient physical activity and social isolation. The study's findings indicate that parental mental health may significantly correlate with home-schooling and children's well-being amid pandemics (Lee et al., 2021).

Pablo & Dy (2018) found that 62% of their study's participants exhibited low stress levels for different reasons. They examined the correlation between parental stress levels and the cognitive functioning of second-grade students in the Philippines. Rubilar et al. (2022) mentioned that parenting dimensions, as perceived

by individuals, influenced children's behavior. Mothers who exhibited higher levels of positive parenting tended to report more significant changes in their children's behavior. Furthermore, mothers who experienced higher stress levels exhibited increased perception of issues in nearly all assessed behaviors than mothers with lower stress levels. Mothers who reported providing more significant school support to their children perceived that their children could better adapt to online classes. Cusinato et al. (2020) found that mothers, who constituted the majority of their study's respondents, exhibited reduced levels of well-being and perceived self-control and elevated anxiety levels compared to the general population. Notably, the well-being of children serves as an additional adverse predictor of stress experienced by parents.

Consequently, the well-being of children could safeguard against parental distress, whereby parents of offspring exhibiting superior psychological adaptation encounter fewer challenges in fulfilling their parental responsibilities. From this perspective, the adjustment of each family member is mutually influenced by others within the family unit. Consequently, promoting positive adaptation during challenging periods can facilitate the development of novel resources.

The fact that the data used in this study was collected via an online survey constitutes a limitation of the study. Hence, parents who do not have access to a reliable internet connection or a certain level of digital literacy were unable to participate in the study. Second, although all 18 western Indonesian provinces were included in this study, the number of respondents from each province differed. The conclusions of this research will be strengthened when a statistically significant volume of data from each province has been obtained and analyzed.

Conclusion

In this study, more than half of the respondents exhibited a positive attitude toward assisting their children with their distance learning, and nearly half of the respondents exhibited moderate stress in terms of supporting their children with their distance learning in western Indonesia. Based on these findings, it is recommended that educational institutions impart knowledge about parental support for school-age children during distance learning. Educators could teach students about the signs, impact, and management of parental stress and attitudes. Students could use this information to educate their parents about stress management techniques. In turn, parents and guardians should work to develop positive attitudes toward supporting their children's distance learning. We plan to conduct further research in this area to ascertain the variables associated with parents' attitudes and stress levels as they aid their children with their distance learning activities.

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The Impact of Stress on The Work Performance of COVID-19 Isolation Room Nurses at Hospitals in Timor

Antonius Rino Vanchapo[1*], Anggorowati Anggorowati[2], Ni Made Merlin[3]

1. Nursing Study Program, STIKes Faathir Husada Tangerang, Banten 15610, Indonesia
2. Nursing Department Medical Faculty, Universitas Diponegoro, Jawa Tengah 50275, Indonesia
3. Nursing Profession Study Program, STIKes Maranatha Kupang, Nusa Tenggara Timur 12345, Indonesia

*E-mail: van_chapo@yahoo.com

Abstract

The incidence of Corona Virus Disease (COVID-19) in East Nusa Tenggara has increased tremendously since April 2020. This has caused nurses to experience anxiety and stress due to fears of a shortage of special COVID-19 inpatient rooms. This study aimed to analyze the correlation between stress and the work performance of the COVID-19 isolation room nurses in mainland Timor. This cross-sectional study involved 278 nurses who worked in the COVID-19 isolation rooms of three hospitals on Timor Island. The Depression Anxiety Stress Scales (DASS-42) and the Nurse Work Performance Sheet were applied to obtain the data. The results demonstrated that 64 respondents exhibited severe stress which 53 showed poor performance and 11 displayed adequate performance. There was a relationship between work stress and the work performance of the COVID-19 isolation room nurses (p-value = 0.001). This study did not measure other variables that are most likely correlated with work performance, but the result indicates the need for treatments for the nurses who work in such rooms to prevent worse conditions.

Keywords: COVID-19, stress, work performance

Abstrak

Dampak Stres terhadap Performa Kerja Perawat di Ruang Isolasi COVID-19 di Rumah Sakit di Timor. *Kejadian* Corona Virus Disease *(COVID-19) di Nusa Tenggara Timur telah meningkat pesat sejak April 2020. Hal ini menyebabkan perawat mengalami kecemasan dan stres akibat kekhawatiran akan kekurangan ruang rawat inap khusus COVID-19. Penelitian ini bertujuan untuk menganalisis hubungan antara stres dan performa kerja perawat ruang isolasi COVID-19 di daratan Timor. Penelitian cross-sectional ini melibatkan 278 perawat yang bekerja di ruang isolasi COVID-19 pada tiga rumah sakit yang berada di Pulau Timor. Skala* Depression Anxiety Stress Scales (DASS-42) *dan Lembar Performa Kerja Perawat digunakan untuk memperoleh data. Hasil penelitian menunjukkan bahwa 64 responden mengalami stres berat. Sebanyak 53 responden menunjukkan performa kerja yang buruk dan 11 responden menunjukkan performa kerja yang memadai. Terdapat hubungan antara stres kerja dengan performa kerja perawat ruang isolasi COVID-19 (p = 0,001). Penelitian ini tidak mengukur variabel lain yang kemungkinan besar berkorelasi dengan performa kerja, tetapi hasil penelitian ini mengindikasikan perlunya penanganan bagi perawat yang bekerja di ruang isolasi untuk mencegah kondisi yang lebih buruk terjadi.*

Kata Kunci: COVID-19*, performa kerja, stress*

Introduction

The world is currently experiencing a COVID-19 pandemic, namely severe acute respiratory syndrome (SARS-CoV-2), a virus that was originally detected in Wuhan. The virus has spread to nearly 210 countries, causing the highest number of deaths induced by any pandemic since the Spanish flu. This virus has also killed nearly 600,000 thousand people (Woods et al., 2020). As of September 6, 2022, 605 million COVID-19 cases have been identified worldwide (WorldOMeter, 2022).

The first case appeared in Indonesia in mid-March 2020, and the first case in the Province

of East Nusa Tenggara was identified in April 2020 (United Nations International Children's Emergency Fund [UNICEF], 2020). East Nusa Tenggara is one of the provinces of Indonesia and is geographically separated from other provinces or different islands. Nusa Tenggara Province is also one of the archipelago provinces that encompasses 1,192 islands, including several large islands such as Timor, Sumba, Timor, Lembata, Alor, Sabu, and Rote and a thousand uninhabited islands. Most of the jobs are related to agriculture, livestock, sales, and fishing. The frequency of community interactions among the population is also exceptionally high due to trading activities related to agriculture, livestock, mining, gardens, etc. (Gugus Tugas Per-cepatan Penanganan [GTPP] COVID-19, 2021).

The first COVID-19 case that occurred in East Nusa Tenggara was due to a history of traveling from an infected area (Java Island). After the first case, a lengthy period transpired before there was a local transmission incident involving one of the traders in a traditional market. The government also imposed the Pembatasan Sosial Berskala Besar (PSBB) or a social restriction ban to reduce local transmission rates (Gugus Tugas Percepatan Penanganan [GTPP] COVID-19, 2021). The increase in the incidence rate was very low in this province; however, in mid-September 2020, more cases arose. This dramatic increase was due to tourism and travel to the contaminated area. East Nusa Tenggara had more than 60 cases at the time, but the wards for COVID-19 patients were fully occupied.

The hospital even closed regular wards to transform them into wards for COVID-19 patients. This very high increase in the incidence rate even caused referral hospitals to experience a shortage of personal protective equipment (PPE) in the early days of the pandemic.

The increase in the number of patients made the nurses anxious, specifically at the related wards, which created stress for nurses in the COVID-19 isolation room (Merlin et al., 2022). Additionally, problems related to the fullness of the COVID-19 ward, extensive work hours, independent isolation away from family, and the prolonged use of Level 1 personal protective equipment (PPE) caused discomfort, anxiety, and stress for nurses (McCreary & Pogue, 2020; Nienhaus & Hod, 2020).

The nurse on duty in the COVID-19 room also complained about the increasing workload and deteriorating working conditions (Kuo et al., 2020). Meanwhile, one element that is necessary during a pandemic is the proper management of human resources of healthcare workers, including nurses (Al-Shamsi et al., 2020; Kontoangelos et al., 2020). In interviews with several nurses, they stated that they often experienced the fear of being infected with COVID-19. Some of them had very minimal interactions with patients and only observed clients through surveillance cameras that were above the patients' rooms. This research was conducted to analyze the relationship between job stress and the work performance of nurses in COVID-19 isolation rooms.

Methods

The aim of the study was to determine the stress conditions experienced by nurses while on duty rather than after duty in order to avoid bias. This cross-sectional study analyzed the relationship between two variables, namely work stress and the work performance of nurses in COVID-19 rooms at referral hospitals in Timor Island, East Nusa Tenggara Province, Indonesia.

This research was conducted from October 2020 to December 2020. The sample in this study consisted of 278 nurses who were on duty in the COVID-19 wards at three hospitals on Timor Island. The inclusion criteria called for nurses who work at the COVID-19 wards, as opposed to nurses who were in a state of independent isolation after serving in COVID-19 rooms. This inclusion criterion was created according to the roll-out schedule to guard the

COVID-19 room, namely 14 days of service following 14 days of self-isolation.

This study used two questionnaires. The DASS-42 was used to measure the stress levels, as it is a valid questionnaire to measure depression, stress, and anxiety and has been internationally tested for its validity or discriminant validity (Kashani et al., 2015). The results of the reliability test yielded a Cronbach alpha of 0.933 for stress. The Indonesian version of this instrument had been broadly used in many studies, which have been published in open access journals. The stress scale measures symptoms including tension, irritability, and a tendency to overreact to stressful events through 14 questions. The scoring on the DASS-42 questionnaire uses a Likert scale from 0 to 3 (never, sometimes, often, very often), and the stress category ranges from normal to very severe. The categorization used for measuring DASS-42 is normal (0–14), mild (15–18), medium (19–25), severe (26–33), and very severe (> 34).

Second, the Nurse Performance questionnaire was used to measure the nurses' work performance. The questionnaire yielded an r value of <0.678 for the validity test and a Cronbach's alpha value of 0.863. This questionnaire measures the responsibilities and duties of the nurses, namely informed consent, assessment, nursing diagnosis, nursing action or implementation, and nursing evaluation (Nurhayati, 2016). The questionnaire consists of 15 statements, and the scores used are as follows: done (1), sometimes (2), and not (3). The performance is only divided into three categories, namely good (15–25), adequate (26–35), and poor (36–45).

All questionnaires were administered using the Google Form and then sent via WhatsApp. Both questionnaires were sent together. The data was analyzed using the SPSS software.

This study was approved by the Singaraja Community Welfare Foundation – Commission for Health Research Ethics, Buleleng Institute of Health Sciences with the following ethical clearance number: No. 120/EC-KEPK-SB/X/2020.

Results

Based on Table 1, the average age of the respondents was 26 years old, with the youngest being 21 years old and the oldest being 26 years old. The average respondent had worked for two years, and the longest had been working for five years.

Based on Table 2, most of the nurses in the COVID-19 ward majority were female (65.8%), had received a Nursing Diploma III as their highest level of education (74.1%), and reported moderate stress, with a frequency of 139 (50%) respondents. As many as 11 respondents reported to have normal stress level (4%), mild stress (15.1%), severe stress (23.1%), and very severe stress (7.9%). And for the work performance, a total of 182 respondents (65.5%) answered "adequate" performance and 96 respondents (34.5%) answered "poor" performance.

Based on Table 3, most of the nurses exhibited poorer performance due to stress, with a p-value of 0.001. The stress experienced by these nurses affected their work performance.

Discussion

Most of the nurses in the COVID-19 rooms experienced moderate stress. The results of interviews with several nurses also indicated that the

Table 1. Respondents' Characteristics by Age and Length of Work

Characteristics	Mean	Min	Max
Age	26	21	52
Length of Work	2	1	5

Table 2. Respondents' Characteristics by Gender, Level of Education, Work Stress, and Work Performance

Characteristics	Frequency (N)	Percentage (%)
Gender		
Female	183	65.8
Male	95	34.2
Level of Education		
D-III Nursing	206	74.1
S1-Ners	72	25.9
Work Stress		
Normal	11	4
Mild	42	15.1
Moderate	139	50
Severe	64	23.1
Very Severe	22	7.9
Work Performance		
Poor	96	34.5
Adequate	182	65.5
Good	0	0

Table 3. The Relationship of Work Stress with the Work Performance of the COVID-19 Room Nurses in Kupang in 2020

Variables		Poor Performance	Adequate Performance	Total	p
Stress	Normal	11	0	11	0.001
	Mild	0	42	42	
	Moderate	32	107	139	
	Severe	53	11	64	
	Very Severe	0	22	22	
	Total	96	182	278	

high levels of stress resulted from the high risk of being exposed to the COVID-19 virus due to limited personal protective equipment. In addition to these factors, they were also required to live apart from their families because of concerns about transmitting the virus to their families. The stress experienced by nurses in the room largely resulted from anxiety about being exposed to the virus as well as PPE, which limited their range of motion. The results of this study are consistent with previous research from Zhu et al. (2020), who stated that in this COVID-19 pandemic, 35% of nurses experienced moderate to severe stress because of rising numbers of cases and deaths; in addition, the unprecedented lockdown of the city might have created and spread public fear, panic, and distress (Zhu et al., 2020).

The stress experienced by nurses in the COVID-19 isolation room was apparent when they first became nurses in the isolation room. Some of their basic human needs, such as eating and drinking, and use of the bathroom, had to be neglected for hours when wearing personal protective equipment. Furthermore, a condition such as a very significant increase in the incidence of COVID-19 can also frighten nurses, thereby causing stress. Even some of their colleagues were infected with COVID-19 and required tre-

atment in the COVID-19 isolation rooms with intensive care (Mossa-Basha et al., 2020).

The availability of the special COVID-19 room, which began to be very limited in terms of capacity, induced fear among the nurses. Nurses on duty in the COVID-19 room were more prone to experiencing stress (Mo et al., 2020) for this reason and due to several other conditions, including minimal personal protective equipment, the challenge of meeting the basic needs of nurses who were limited during hazmat use, news about COVID-19 conditions outside the area and even abroad (which increased sharply), and an increase in the death rate due to COVID-19. Some of these are factors that trigger stress for nurses. The stress experienced by the nurses exerted an impact on their disturbed sleep patterns; some were overly anxious, and many of them lost their appetites due to the conditions they were experiencing (Mo et al., 2020).

Strong work performance is necessary during the COVID-19 pandemic. The nurses stated that they executed their duties, namely providing nursing care to patients, but that they focused on curative efforts and functions that involved collaboration with physicians. The nurses indicated that the frequency of meetings with patients simply to provide emotional support was very limited. Most of the nurses stated that they did not spend a long time with patients to teach them about personal hygiene, nutritional needs, or the need for comfort or relaxation to reduce anxiety or stress experienced by these patients. However, all nurses stated that they always provide reinforcement to patients who experience positive changes, even if only momentarily (Allam et al., 2020). COVID-19 is a highly infectious disease that emerged as the result of the outbreak of a new virus. There was a sudden need to implement new standards and procedures under significant duress as a result of a lack of resources and information about a novel virus. Nurses working in COVID-19 isolation rooms have lamented issues related to insufficient supplies of PPE and discomfort due to long use, fear of infection, and various other hardships and stressors (Merlin et al., 2022).

The results of this study are also the same as those yielded by previous research, which reported that the very rapid spread of the COVID-19 disease was burdening medical personnel. Additionally, the requirements for quarantines, school closings, etc. heavily affected the levels of stress among healthcare providers (Al-Shamsi et al., 2020). Other studies also reported that nurses experienced stress, fatigue, and boredom due to not seeing their families as well as the stigmatization they experienced because of working in the COVID-19 wards (Nienhaus & Hod, 2020).

The stress experienced by these nurses affects their work performance as nurses. When stressed, the nurse will feel fatigued more quickly, frequently inducing excessive anxiety when interacting with patients. The stress experienced by nurses can affect their performance as nurses who provide holistic nursing care. Holistic care means treating patients in a manner that accounts for their biological, psychological, social, spiritual, and cultural contexts (Ying et al., 2020).

Nurse work performance is regarded as adept if a nurse offers nursing care to patients from assessment to evaluation. Executing the nurse's functions entails working independently, collaborating, and delegating. However, during the COVID-19 pandemic, various independent actions performed by nurses were hindered as a result of limits to the frequency of meetings with patients (Tomlin et al., 2020).

The results of the previous study in Germany and Malaysia demonstrated that stress strongly affects nurses' performance. Nurses in Malaysia reported feeling stress, burnout, fatigue, anxiety, and sadness because some of them had not seen their families for months. They also reported experiencing discrimination from the public, as nurses working in COVID-19 isolation rooms are perceived as "infected COVID-19 persons" (Nienhaus & Hod, 2020). Stress

can affect their performance as nurses. Lengthy service times can make them tired and suboptimal in providing care to patients (Raudenská et al., 2020). Their performance can also be limited by personal protective equipment that makes it difficult to move (Ying et al., 2020).

The stress experienced by nurses can also affect their families, or families can have the same impacts as a result of COVID-19. One of the impacts is afraid that their family members who are health workers will be exposed and become infected (Ying et al., 2020). Nurses and their families were asked to meet via the internet using video calls or voice calls to reduce perceived anxiety (Ying et al., 2020).

The nurse on duty in the COVID-19 isolation ward could not return home for rest or to meet their family. They were given their own place to stay in the hotel while on duty in the COVID-19 isolation room. This was intended to suppress the spread of COVID-19 from nurses in the COVID-19 isolation room to family members at home. All of the activities of nurses working in the COVID-19 isolation room were also highly restricted, resembling quarantine conditions (Nienhaus & Hod, 2020).

Apart from some of the factors above, the location of East Nusa Tenggara Province, which is far from the capital city, is also a drawback if the limited medical equipment due to the immense increase in number of cases will cause a hospital to collapse due to delayed supply. The fastest medium of transportation is air, and, even in that case, transportation takes 3 to 4 hours from the capital city of Jakarta.

Conclusion

The current COVID-19 pandemic has exerted an impact on nurses, their families, and even patients. Most of the nurses experience high stress due to their fear of exposure and the personal protective equipment they use. In addition, there was a significant increase in the number of patients infected with COVID-19. Several family members and nurses were infected with COVID-19. Above, we have delineated some of the factors that trigger stress for nurses in the COVID-19 isolation room. The perceived stress impacts their performance in providing optimal nursing care.

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Results

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Due to the ongoing process, the women experiencing moderate to severe pain in the knees, ankles, legs, back, shoulders, elbows, and/or their fingers, and they are struggling to eliminate the pain. To alleviate pain, they look for the cause of the pain. One participant stated that, "... I decided to visit a doctor to determine the cause of the pain is. Now I'm taking medication from the doctor in an attempt to reduce this pain" (participant 3)
Here is an excerpt example of using block quotations if the sentences are 40 or more. Use indentation 0.3"

As discussed earlier, once the participants had recovered from the shock of the diagnosis of the disease, all participants decided to fight for their life. For most of them, the motivation for life is a function of their love for their children; namely child welfare, which being characteristic the pressure in their world. Here is an example of an expression of one of the participants:

I tried to suicide, but when I think of my children, I cannot do that [crying]. I thought, if I die, no one will take care of my children. Therefore, I decided to fight for my life and my future. They (children) were the hope of my life (participant 2).

Discussion

Describe the discussion by comparing the data obtained at this time with the data obtained in the previous study. No more statistical or other mathematical symbols in the discussion. The discussion is directed at an answer to the research hypothesis. Emphasis was placed on similarities, differences, or the uniqueness of the findings obtained. It is need to discuss the reason of the findings. The implications of the results are written to clarify the impact of the results the advancement of science are studied. The discussion ended with the various limitations of the study.

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Acknowledgement (if any)

Acknowledgement is given to the funding sources of study (donor agency, the contract number, the year of accepting) and those who support that funding. The names of those who support or assist the study are written clearly. Names that have been mentioned as the authors of the manuscripts are not allowed here.

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Book chapter

Author, A.A. (Year). Chapter title*:* Capital letter in the beginning of the subtitle. In Initial, Surname (Author's name/book editor) (eds), *Book title*. Publisher.

Hybron, D.M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R.J. Larsen (Eds.), *The science of subjective well-being* (pp.17–43). Guilford Press.

Translated book

Ganong, W.F. (2008). *Fisiologi kedokteran* (Ed ke-22). (Petrus A., trans). McGraw Hill Medical. (Original book published 2005).

Thesis/Dissertation

If available in the database

Rockey, R. (2008). An observational study of pre-service teachers' classroom management strategies (Publication No. 3303545) [Doctoral dissertation, Indiana University of Pennsylvania]. ProQuest Dissertations and Theses Global.

Gerena, C. (2015). Positive thinking in dance: The benefits of positive self-talk practice in conjunction with somatic exercises for collegiate dancers [Master's thesis, University of California Irvine]. University of California, Scholarship. https://escholarship.org/uc/item/1t39b6g3

If not published

Last-name, A.A. (year). *Dissertation/thesis title.* (Unpublished doctoral dissertation/master thesis). Institution Name, Location.

Considine, M. (1986). *Australian insurance politics in the 1970s: Two case studies*. (Unpublished doctoral dissertation). University of Melbourne, Melbourne, Australia.

Database Article

Author, A.A., Author, B.B., & Author, C.C. (Year pub). Title of article. *Title of Journal*, Volume (Issue), pp–pp. doi: xx.xxxxxxxx [OR] Retrieved from URL of publication's home page

Borman, W.C., Hanson, M.A., Oppler, S.H., Pulakos, E.D., & White, L.A. (1993). Role of early supervisory experience in supervisor performance. *Journal of Applied Psychology, 78* (8), 443–449. Retrieved from http://www.eric.com/jdlsiejls/ supervisor/early937d

Database article with DOI (Digital Object Identifier)

Brownlie, D. (2007). Toward effective poster presentations: An annotated bibliography. *European Journal of Marketing, 41* (11/12), 1245–1283. doi: 10.1108/03090560710821161.

Other online source

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Article from website

Exploring Linguistics. (1999, August 9). Retrieved from http://logos.uoregon.edu/explore/orthography/ chinese.html#tsang

Online article

Becker, E. (2001, August 27). Prairie farmers reap conservation's rewards. *The New York Times*, pp. 12–90. Retrieved from http://www.nytimes.com

Appendices

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Here is an example of a table

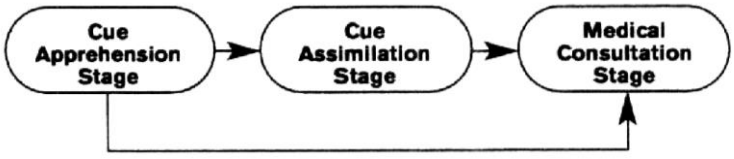
Table 1. The Characteristics of the Respondents (capital letters at the beginning of the word 11 pt, left justify)

(One blank single space line, 10 pt)

Client's Initial	Age	Major Problem
Mr. BN	56	Aggressiveness
Mr. MA	40	Withdrawal
Mr. AS	45	Swing Mood

*table footnotes (if necessary)

Here is an example of an image



(One blank single space line, 10 pt)

Figure 1. The Process of Cardiac Sensitivity Cues (Capital Letters in the Beginning of the Words, 11pt)

AUTHOR GUIDELINES: CASE REPORT

ARTICLE TITLE (all caps, 14-point font, boldface, centered, Maximum 16 words)
(One blank single space line, 14 pt)

Abstract (10-pt, bold, italics)
(One blank single space line, 10 pt)

Article Title. Abstract should be written using Times New Roman font, size 10pt, not-italics, right justify, and one paragraph-unstructured with single spacing, completed with English title written in bold at the beginning of the English abstract. The Abstract should be "short and sweet". It should be around 100–250 words. Abbreviations or references within the Abstract should not be used. The Abstract should include background, case illustration, and conclusion. Background includes an introduction about why this case is important and needs to be reported. Please include information on whether this is the first report of this kind in the literature. Case illustration includes brief details of what the patient(s) presented with, including the patient's age, sex and ethnic background. Conclusions is a brief conclusion of what the reader should learn from the case report and what the clinical impact will be. Is it an original case report of interest to a particular clinical specialty of nursing or will it have a broader clinical impact across nursing? Are any teaching points identified? If manuscripts are not from Indonesia, the Indonesian abstract will be assisted by the editor.

(One blank single space line, 10 pt)

Keywords: This section consists of three to six keywords/phrases representing the main content of the article. It is important for indexing the manuscript and easy online retrieval. It is written in English, alphabetical order (10-point font), and gives commas between words/phrases.

(One blank single space line, 12-point font)

Abstrak *(10 pt, bold, senter)*

(One blank single space line, 10 pt)

Judul Artikel. Abstrak harus ditulis menggunakan huruf Times New Roman, ukuran 10pt, huruf miring, rata kanan, dan satu paragraf-tidak terstruktur dengan spasi tunggal. Abstrak harus "pendek dan manis". Seharusnya sekitar 100–250 kata. Singkatan atau referensi dalam Abstrak tidak boleh digunakan. Abstrak harus mencakup latar belakang, ilustrasi kasus, dan kesimpulan. Latar belakang mencakup pengantar tentang mengapa kasus ini penting dan perlu dilaporkan. Harap sertakan informasi tentang apakah ini adalah laporan pertama dari jenis ini dalam literatur. Ilustrasi kasus mencakup rincian singkat tentang apa yang pasien sajikan, termasuk usia pasien, jenis kelamin dan latar belakang etnis. Kesimpulan merupakan kesimpulan singkat dari apa yang pembaca harus pelajari dari laporan kasus dan dampak klinisnya. Apakah laporan kasus asli yang menarik bagi area spesialis keperawatan tertentu atau apakah itu berdampak klinis yang lebih luas?

(One blank single space line, 10 pt)

Kata Kunci*: Bagian ini terdiri dari tiga sampai enam kata kunci/frase yang mewakili konten utama artikel. Kata kunci ini penting untuk indeksasi manuskrip dan pencarian daring dengan mudah. Itu ditulis dalam bahasa Inggris, diurutkan berdasarkan abjad (font 10 huruf, huruf miring), memberikan koma di antara kata-kata/frasa.*

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Introduction (14-point font, boldface, cap in the first letter of headings)

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The manuscript is written with Times New Roman font size 12pt, single-spaced, left and right justified, on one-sided pages, paper in one column and on A4 paper (210 mm x 297 mm) with the upper margin of 3.5 cm, lower 2.5 cm, left and right each 2 cm. The manuscript including the graphic contents and tables should be around 3500–4500 words (exclude references). If it far exceeds the prescribed length, it is recommended to break it into two separate manuscripts. Standard English grammar must be observed. The title of the article should be brief and informative and it should not exceed 16 words. The keywords are written after the abstract.

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The title should contain the main keyword and do not use abbreviations, numbering around 16 words. Authors need to write a short title is also desirable to be written as a page header on each journal page. Authors should not just write words such as study/ relationship/ influence in the title because the title should indicate the results of the study, for example, "Reduction of blood sugar through exercises diabetes in the elderly".

AUTHOR GUIDELINES: CASE REPORT

The information about the author(s) such as full name (without academic title), affiliates, and address are wrote on the separate file (tittle page). Affiliates and address of the authors. Give the number according to the name of the author, for example 1. Department of Maternal and Women's Health Nursing, Faculty of Nursing, Universitas Indonesia, Prof. Dr. Bahder Djohan Street, Depok, West Java – 16424. Correspondence address is email address of the one of the author, for example anandita12@ui.ac.id.

The use of abbreviations is permitted, but the abbreviation must be written in full and complete when it is mentioned for the first time and it should be written between parentheses. Terms/Foreign words or regional words should be written in italics. Notations should be brief and clear and written according to the standardized writing style. Symbols/signs should be clear and distinguishable, such as the use of number 1 and letter l (also number 0 and letter O). Avoid using parentheses to clarify or explain a definition. The organization of the manuscript includes **Introduction, Case Illustration, Discussion, Conclusions,** and **References**. **Acknowledgement** (if any) is written after **Conclusion** and before **References** and narratively, not numbered. The use of subheadings is discouraged. Between paragraphs, the distance is one space. Footnote is avoided.

This manuscript uses *American Psychological Association (APA*) manual style as citation. When using APA format, follow the author-date method of in-text citation. This means that the author's last name and the year of publication for the source should appear in the text, for example, (Jones, 1998), and a complete reference should appear in the reference list at the end of the paper. Citation can be put at the beginning of the sentence, for example Johnson (2005) states that … or the source put at the end of a sentence for examples … (Purwanto, 2004). See the complete format on this link https://owl.english.purdue.edu/owl/resource/560/02/

The Introduction or Background section should explain the background of the case, including the disorder or nursing problems, usual presentation and progression, and an explanation of the presentation if it is a new disease or disorder. If it is a case discussing an adverse intervention the Introduction should give details of intervention's common use and any previously reported side effects. It should also include a brief literature review. This should introduce to the case report from the stand point of those without specialist knowledge in the area, clearly explaining the background of the topic. It should end with a very brief statement of what is being reported in the article.

The Introduction should be in brief, stating the purpose of the study. Provide background that puts the manuscript into context and allows readers outside the field to understand the significance of the study. Define the problem addressed and why it is important and include a brief review of the key literature. Note any relevant controversies or disagreements in the field. Conclude with a statement of the aim of the work and a comment stating whether that aim was achieved.
(One blank single space line, 12-point font)

Case Illustration (14-point font, boldface, cap in the first letter of headings)

(One blank single space line, 10-point font)

This should present all relevant details concerning the case. This section can be divided into separate sections presented with appropriate subheading, such as history and presenting conditions, intervention, outcome, etc. This should provide concerned details of the case with relevant demographic information of the patient concealing their identification (without adding any details that could lead to the identification of the patient), medical history, observed symptoms and describe any tests or treatments done on the patient. If it is a case series, then details must be included for all patients. Discuss the significance and rarity of findings with referencing to the previous studies.

If it is need to present table(s) and or image(s), some rules should be followed. Table only uses 3 (three) row lines (do not use a column line), the line heading, and the end of the table (see example). Table is written with Times New Roman size 10-pt and placed within a single space below the title table. Table titles is written with font size 9-point bold, capital letters at the beginning of the word and placed on the table with the format as shown in the examples that do not use the column lines.

Numbering tables are using Arabic numerals. The distance between table and the paragraph is a single space. The table framework is using lines size 1 pt. If the table has many columns, it can use one column format at half or full page. If the title in each table column is long and complex, the columns are numbered and its description given at the bottom of the table. The table is placed in the highest or the very bottom of each page and do not flanked by sentence. Avoid interrupted the table by page.

Images are using a single space of a paragraph. If the size of the image passes through the column width then the image can be placed with a single column format. Pictures are numbered and sorted by Arabic numerals. Captions placed below the image and within one single space of the image. Captions are written by using 10pt font size, bold, capital letters at the beginning of the word, and placed as in the example. The distance between the captions and paragraphs are two single spaced.

Images which have been published by other authors should obtain written permission from the author and publisher. Include a printed image with good quality in a full page or scanned with a good resolution in the format {file name}.jpeg or {file name}. tiff. When the images are in the photograph format, include the original photographs. The image will be printed in black and white, unless it needs to be shown in color. The author will be charged extra for color print if more than one page. The font used in the picture or graphic should be commonly owned by each word processor and the operating system such as Symbol, Times New Roman, and Arial with size not less than 9-pt. Image files which are from applications such as Corel Draw, Adobe Illustrator and Aldus Freehand can give better results and can be reduced without changing the resolution.

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Discussion

The discussion section should contain major interpretations from the findings and results in comparison to past studies. The significance of the findings and case presentation should be emphasized in this section against previous findings in the subject area.

This section should evaluate the patient case for accuracy, validity, and uniqueness and compare or contrast the case report with the published literature. The authors should briefly summarize the published literature with contemporary references.

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Conclusions section is written in narrative form. This section should conclude the Case reports and how it adds value to the available information. Explain the relevance and significance of their findings to the respective field in a summary briefly. This section is not allowed to write other authors work, as well as information or new terms in the previous section did not exist. Recommendation for further study can be written in this section.

Acknowledgements

Acknowledgement is given to the funding sources of study (donor agency, the contract number, the year of accepting) and those who support that funding. The names of those who support or assist the study are written clearly. Names that have been mentioned as the authors of the manuscripts are not allowed here.

References (14pt, boldface, Capital letter in the beginning of the Word)

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Examples:

Journal

Author, A.A., Author, B.B., & Author, C.C. (year). Article title: Sub-title. *Journal Title*, *volume* (issue number), page numbers.

Wu, S.F.V., Courtney, M., Edward, H., McDowell, J., Shortridge-Baggett, L.M., & Chang, P.J. (2007). Self-efficacy, outcome expectation, and self-care behavior in people with type diabetes in Taiwan. *Journal of Clinical Nursing, 16* (11), 250–257.

References with two or more authors (up to 20 authors) write all author's names. If an article has 21 authors or more, list the first 19 authors, then insert an ellipsis (…) and then the last name and first initials of the last author. Example:

Wolchik, S.A., West, S.G., Sandler, I.N., Tein, J., Coatsworth, D., Lengua, L., Johnson, A., Ito, H., Ramirez, J., Jones, H., Anderson, P., Winkle, S., Short, A., Bergen, W., Wentworth, J., Ramos, P., Woo, L., Martin, B., Josephs, M., … Brown, Z. (2005). *Study of the brain. Psychology Journal, 32* (1), 1–15. doi: 10.1037/1061-4087.45.1.11.

Conference Proceeding

Schnase, J.L., & Cunnius, E.L. (Eds.). (1995). Proceedings from CSCL '95: *The First International Conference on Computer Support for Collaborative Learning*. Erlbaum.

Newspaper (no author's name)

Generic Prozac debuts. (2001, August 3). The Washington Post, pp. E1, E4.

It's subpoena time. (2007, June 8). New York Times. https://www.nytimes.com/2007/06/08/opinion/08fri1.html

Book

Author, A.A. (Year). *Source title: Capital letter in the beginning of the subtitle*. Publisher.

Peterson, S.J., & Bredow, T.S. (2004). *Middle range theories: Application to nursing research*. Lippincott Williams & Wilkins.

Book chapter

Author, A.A. (Year). Chapter title*:* Capital letter in the beginning of the subtitle. In Initial, Surname (Author's name/book editor) (eds), *Book title*. Publisher.

Hybron, D.M. (2008). Philosophy and the science of subjective well-being. In M. Eid & R.J. Larsen (Eds.), *The science of subjective well-being* (pp.17–43). Guilford Press.

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Author, A.A., Author, B.B., & Author, C.C. (Year pub). Title of article. *Title of Journal*, Volume (Issue), pp–pp. doi: xx.xxxxxxxx [OR] Retrieved from URL of publication's home page

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Article from website

Exploring Linguistics. (1999, August 9). Retrieved from http://logos.uoregon.edu/explore/orthography/ chinese.html#tsang

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Becker, E. (2001, August 27). Prairie farmers reap conservation's rewards. *The New York Times*, pp. 12–90. Retrieved from http://www.nytimes.com

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(One blank single space line, 10 pt)

Client's Initial	Age	Major Problem
Mr. BN	56	Aggressiveness
Mr. MA	40	Withdrawal
Mr. AS	45	Swing Mood

*table footnotes (if necessary)

Here is an example of an image

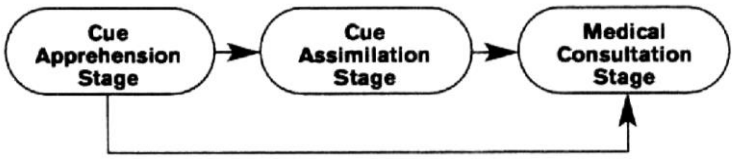

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Figure 1. The Process of Cardiac Sensitivity Cues (Capital Letters in the Beginning of the Words, 11pt)

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