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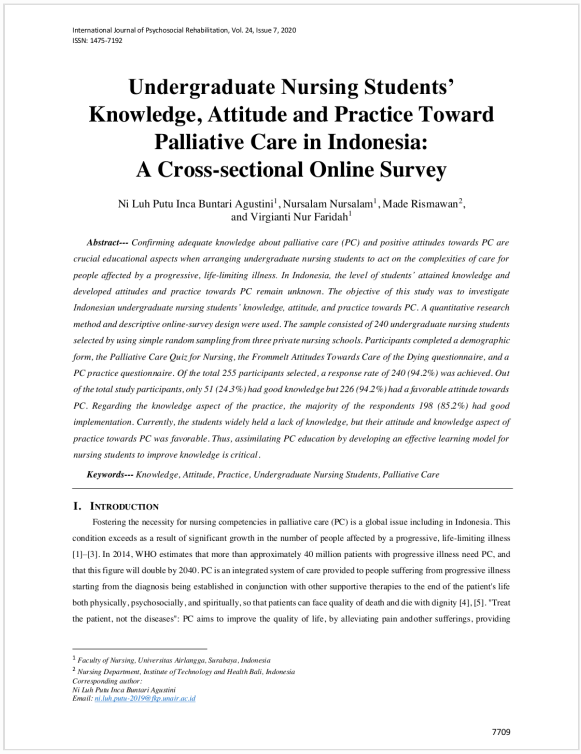

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Undergraduate Nursing Students' Knowledge, Attitude and Practice Toward Palliative Care in Indonesia: A Cross-sectional Online Survey

Ni Luh Putu Inca Buntari Agustini[1], Nursalam Nursalam[1], Made Rismawan[2], and Virgianti Nur Faridah[1]

Abstract--- *Confirming adequate knowledge about palliative care (PC) and positive attitudes towards PC are crucial educational aspects when arranging undergraduate nursing students to act on the complexities of care for people affected by a progressive, life-limiting illness. In Indonesia, the level of students' attained knowledge and developed attitudes and practice towards PC remain unknown. The objective of this study was to investigate Indonesian undergraduate nursing students' knowledge, attitude, and practice towards PC. A quantitative research method and descriptive online-survey design were used. The sample consisted of 240 undergraduate nursing students selected by using simple random sampling from three private nursing schools. Participants completed a demographic form, the Palliative Care Quiz for Nursing, the Frommelt Attitudes Towards Care of the Dying questionnaire, and a PC practice questionnaire. Of the total 255 participants selected, a response rate of 240 (94.2%) was achieved. Out of the total study participants, only 51 (24.3%) had good knowledge but 226 (94.2%) had a favorable attitude towards PC. Regarding the knowledge aspect of the practice, the majority of the respondents 198 (85.2%) had good implementation. Currently, the students widely held a lack of knowledge, but their attitude and knowledge aspect of practice towards PC was favorable. Thus, assimilating PC education by developing an effective learning model for nursing students to improve knowledge is critical.*

Keywords--- *Knowledge, Attitude, Practice, Undergraduate Nursing Students, Palliative Care*

I. Introduction

Fostering the necessity for nursing competencies in palliative care (PC) is a global issue including in Indonesia. This condition exceeds as a result of significant growth in the number of people affected by a progressive, life-limiting illness [1]–[3]. In 2014, WHO estimates that more than approximately 40 million patients with progressive illness need PC, and that this figure will double by 2040. PC is an integrated system of care provided to people suffering from progressive illness starting from the diagnosis being established in conjunction with other supportive therapies to the end of the patient's life both physically, psychosocially, and spiritually, so that patients can face quality of death and die with dignity [4], [5]. "Treat the patient, not the diseases": PC aims to improve the quality of life, by alleviating pain andother sufferings, providing

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I. INTRODUCTION

Fostering the necessity for nursing competencies in palliative care (PC) is a global issue including in Indonesia. This condition exceeds as a result of significant growth in the number of people affected by a progressive, life-limiting illness [1]–[3]. In 2014, WHO estimates that more than approximately 40 million patients with progressive illness need PC, and that this figure will double by 2040. PC is an integrated system of care provided to people suffering from progressive illness starting from the diagnosis being established in conjunction with other supportive therapies to the end of the patient's life both physically, psychosocially, and spiritually, so that patients can face quality of death and die with dignity [4], [5]. "Treat the patient, not the diseases": PC aims to improve the quality of life, by alleviating pain andother sufferings, providing

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spiritual support and psychosocial support from the time the diagnosis until the end of life and support for families in their loss and grieving.

There is worldwide apprehension over education in PC and end of life care for all health care workers including nurses [6]–[8]. To lighten these needs, undergraduate nursing education curricula must adapt and emphasize this important topic. Innovative elements using adaptive technology from education enable the active involvement of students in the learning environment [9]. Nursing students as future health professionals will often be actively involved in treating patients and families with chronic or terminal illness until the end of life in various health care settings [10], [11]. As a core strength for the development of sustainable nursing, students' knowledge, attitudes, and practice towards PC will directly affect the quality of care for patients who need PC in the future [3]. To effectively deliver quality of care at the end of life or for patients suffering from chronic pain, nursing students must have a combination of good knowledge, skills, and positive attitudes in PC in equal measure in a way that is sensitive, meaningful, and dynamic [12], [13]. Nevertheless, the problem is that nursing students often lack confidence and skills in providing quality of care for the complex care needs of patients requiring PC. Furthermore, improving education about PC both in conceptual understanding and implementation can help nursing students become accustomed to special care for dying patients as a way to support bereaved families [11], [14], [15].

However, much preceding evidence has shown that nurses' knowledge and skills are still lacking and ill-equipped in delivering PC [4], [16]–[19]. One of the main problems with this condition was acknowledged in the education sector [11]. This is in line with the previous integrative review which noted that the lack of nurses' knowledge about PC is due to a lack of education while in school [20]. Seeing this need, the Association of Indonesian Nurse Education Institutions, which previously only made palliative nursing courses elective courses, finally included palliative nursing courses in the core curriculum of Indonesian Nurse Education. Nevertheless, data on the level of knowledge, attitudes, and skills of students towards PC in Indonesia either remain unknown or are still limited; indeed, the extent of the studies was with nurses. Thus far, no formal evaluation of undergraduate nursing students' palliative care competencies (knowledge, attitude, practice) has been enacted. Therefore, this study aimed to examine the knowledge, attitude, and practice of Indonesian undergraduate nursing students towards PC, and analyze the factors affecting these.

II. Methods

A quantitative research method and descriptive cross-sectional online-survey design were used because there was no intention to examine any cause-and-effect relationship [21]. Based on sample size estimation to obtain an effect size of 0.9, a minimum of 240 participants would be required (using G* power 3.1) for analyses [22]. A two-tailed p-value was set at 0.05, considered at 90% response and completion rate of the questionnaire. All eligible participants were selected by using simple random sampling from three private nursing schools who met the inclusion criteria such as being enrolled at the end of the 4th or 5th year of an undergraduate nursing course, able to use a computer, and willing and able to participate in this study. Students were invited to participate in an online survey in March 2020. In agreement with course tutors, the researcher provided a general overview of the objective and methods to a participant in the survey and informed the students that participation was entirely voluntary and anonymous, and that non-participation would not incur any penalty whatsoever. Participants spent around 25-30 minutes filling out the online survey. However, they were able to discontinue the survey and withdraw from the study at any time. Students did not receive any form of compensation.

A self-administered questionnaire was used for demographic data collection. Measurement of the level of student knowledge about PC used PCQN that has been used worldwide [16], [19]. The PCQN questionnaire contains 20 questions

with three alternative answer choices (true/false/don't know the answer). Every correct answer is given a value of 1 and every wrong answer or don't know is given a value of 0. The total score range is 0-20. The PCQN had three categories: philosophy and principles of PC; pain and symptom management; aspects of psychosocial and spiritual care [3]. The questionnaire has high internal consistency with KR-20 = 0.78 [23].

The student attitudes toward PC were measured using the FATCOD questionnaire [19], [24], [25]. This questionnaire contains 30 items. Alternative answers use a 5-point Likert Scale (1 = Strongly Disagree, 2 = Disagree, 3 = Doubtful, 4 = Agree, 5 = Strongly Agree). The range of scores is 30-150. A higher total score shows a positive attitude, whereas a lower total score indicates a negative attitude towards PC. The Cronbach's alpha of FATCOD in a previous study was 0.81 [19]. Another study revealed the results of the Scale Content Validity Index (SCVI) and the interrater agreement was 0.98 [25].

The student skills assessment for PC was measured by using a questionnaire from previous research [12], [16]. The questionnaire consisted of 11 questions. A total score of more than 75% shows good skills in PC, whereas a total score of less than 75% indicates a lack of skills in PC. SPSS version 20 software was used for data analysis [26]. Descriptive statistics including frequencies, percentages, and central tendency were used to describe the sample characteristics and students' responses on the PCQN, FATCOD, and practice towards PC. The scores for all negatively worded reports were transformed before analyzing the data.

Ethical clearance was obtained from the Ethics Commission of the Institute of Technology and Health Bali, which also facilitated an official letter written to the selected university to get their permission for the study. Verbal approval was also obtained from participating universities.

III. RESULTS

The 240 undergraduate nursing students completed the questionnaire (response rate = 94.2%), all of which were included in the final analysis. Respondents had a mean age of 22.3, SD 0.9, and most of the students were female 216 (90%). The majority of participants 175 (72.9%) were Hindu and of Bali ethnicity. Of all participants, 212 (88.3%) had experienced grief in the past, 216 (90%) having experienced the death of patients during clinical placement. Over 30% had experienced the death of family members in the past. Most participants, 212 (88.3%), reported having received seminars/lectures in the past, with 147 (61.3%) reporting using lecture methods during the learning process and stating that teaching aids used during PC lectures 138 (57.5%) were completed. Table 1 presents other detailed demographics.

Table 1. Demographics and characteristics of undergraduate nursing students in Indonesia, and summaries of PCQN, FATOD, and Practice toward PC (n = 240)

Variable	Mean (SD); Median	Min-Max
Age (years)	22.3 (0.9); 23	20-24
PCQN total score (0-20)	9.5 (1.3); 10	5-12
PCQN 1: philosophy and principles (0-4)	1.5 (0.9); 1	0-3
PCQN 2: control of pain and other symptoms (0-13)	7.07 (1.2); 7	4-10
PCQN 3: psychosocial aspects (0-4)	0.32 (0); 0	0-1
FATCOD total score (30-150)	105 (7.5); 105	89-127
Practice towards PC	33.1 (4.2)	16-39
Variable	**N**	**%**
Gender		
Male	24	10
Female	216	90
Religious belief		
Hindu	175	72.9
Muslim	51	21.3
Cristian	14	5.8

Ethnicity		
Bali	175	72.9
Java	51	21.3
Batak	9	3.8
Others	5	2.1
Experienced		
Loss	193	80.4
Grief	212	88.3
Bereavement	203	84.6
Experienced seminars/lectures on PC in the past	212	88.3
Experienced death of a family member in the past	74	30.8
Experienced death of a friend in the past	23	9.6
Experienced death of a patient during clinical placement	216	90
Learning methods		
Lecturer	147	61.3
Q&A	88	36.7
Case Study	5	2.1
Completeness of teaching aids used during PC lectures	138	57.5
PCQN		
Good Knowledge	51	24.3
FATCOD		
Favorable Attitude	226	94.2
Practice towards PC		
Good Practice	198	85.2

The total mean score for PCQN was low, at 9.53 (SD: 1.38) ranging from 5-12, with 51 (24.3%) demonstrating good knowledge. Three PCQN categories are shown in Table 1. Questions 4, 6, 8, 18 had the highest accuracy (95.8%, 88.3%, 88.3%, 87.1%) and five questions (4, 5, 9, 15, 19) were poorly answered (9.6%, 0%, 3.8%, 11.7%, 4.2%). Detailed descriptive results of students' answers for the PCQN are shown in Table 2.

Table 2. Descriptive results of undergraduate nursing students' answers for the PCQN in Indonesia (n = 240)

	Item	ItemNursing Students' Answer	
		Correct Frequency (%)	Wrong Frequency (%)
1.	Palliative care is only appropriate in situations where there is evidence of a downward trajectory or deterioration.	41 (17.1)	199 (82.9)
2.	Morphine is the standard used to compare the analgesic effect of other opioids.	161 (67.1)	79 (32.9)
3.	The extent of the disease determines the method of pain treatment.	23 (9.6)	217 (90.4)
4.	Adjuvant therapies are important in managing pain.	230 (95.8)	10 (4.2)
5.	Family members must remain at the bedside until death occurs.	0 (0)	240 (100)
6.	During the last days of life, drowsiness associated with electrolyte imbalance may decrease the need for sedation.	212 (88.3)	28 (11.7)
7.	Drug addiction is a major problem when morphine is used on a long-term basis for the management of pain.	45 (18.8)	195 (81.3)
8.	Individuals who are taking opioids should also follow a bowel regime (laxative treatment).	212 (88.3)	28 (11.7)
9.	The provision of palliative care requires emotional detachment.	9 (3.8)	231 (96.3)
10.	During the terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of severe dyspnea.	198 (82.5)	42 (17.5)
11.	Men generally reconcile their grief more quickly than women.	67 (27.9)	173 (72.1)
12.	The philosophy of palliative care is compatible with that of aggressive treatment.	166 (69.2)	74 (30.8)
13.	The use of placebos is appropriate in the treatment of some types of pain.	42 (17.5)	198 (82.5)
14.	High dose codeine causes more nausea and vomiting than morphine.	189 (78.8)	51 (21.3)
15.	Suffering and physical pain are identical.	28 (11.7)	212 (88.3)
16.	Demerol is not an effective analgesic for the control of chronic pain.	191 (79.6)	49 (20.4)
17.	The accumulation of losses makes burnout inevitable for those who work in palliative care.	88 (36.7)	152 (63.3)
18.	Manifestations of chronic pain are different from those of acute pain.	209 (87.1)	31 (12.9)
19.	The loss of a distant relationship is easier to resolve than the loss of one that is close or intimate.	10 (4.2)	230 (95.8)
20.	Pain threshold is lowered by fatigue or anxiety.	165 (68.8)	75 (31.3)

Abbreviation: T: True, F: False

The total mean score was 105 (SD: 7.52) with 226 (94.2%) revealing a favorable attitude towards PC. From this survey, 152 (63.3%) undergraduate nursing students strongly agreed that giving care to the dying person is a worthwhile experience. One hundred and seventy-four (72.5%) participants agreed that families need emotional support to accept the behavior changes of the dying person, and 188 (78.3%) agreed families should maintain as normal an environment as possible for their dying members. In contrast, 143 (59.6%) and 37 (15.4%) of respondents felt uncomfortable talking about impending death with the dying person and they usually refused to be assigned to give care for a dying person, respectively. Detailed descriptive results of students' answers on the FATCOD are shown in Table 3.

Table 3. Descriptive results for undergraduate nursing students answering the FATCOD in Indonesia (n = 240)

No.	Item	SD (%)	D (%)	U (%)	A (%)	SA (%)
1.	Giving care to the dying person is a worthwhile experience.	5 (2.1)	0 (0)	0 (0)	83 (34.6)	152 (63.3)
2.	Death is not the worst thing that can happen to a person.	39 (16.3)	61 (25.4)	23 (9.6)	99 (41.3)	18 (7.5)
3.	I would be uncomfortable talking about impending death with the dying person.	0 (0)	27 (11.3)	41 (17.1)	143 (59.6)	29 (12.1)
4.	Caring for the patient's family should continue throughout the period of grief and bereavement.	9 (3.8)	46 (19.2)	52 (21.7)	114 (47.5)	19 (7.9)
5.	I would not want to care for a dying person.	34 (14.2)	155 (64.6)	14 (5.8)	37 (15.4)	0 (0)
6.	The non-family caregivers should not be the one to talk about death with the dying person.	0 (0)	45 (18.8)	62 (25.8)	128 (53.3)	5 (2.1)
7.	The length of time required to give care to a dying person would frustrate me.	10 (4.2)	163 (67.9)	34 (14.2)	33 (13.8)	0 (0)
8.	I would be upset when the dying person I was caring for gave up hope of getting better.	9 (3.8)	111 (46.3)	40 (16.7)	66 (27.5)	14 (5.8)
9.	It is difficult to form a close relationship with the dying person.	0 (0)	74 (30.8)	37 (15.4)	129 (53.8)	0 (0)
10.	There are times when death is welcomed by the dying person.	0 (0)	23 (9.6)	68 (25.8)	138 (57.5)	17 (7.1)
11.	When a patient asks, "Am I dying?" I think it is best to change the subject to something cheerful.	0 (0)	41 (17.1)	28 (11.7)	161 (67.1)	10 (4.2)
12.	The family should be involved in physical care (feeding, personal hygiene) of the dying person.	9 (3.8)	0 (0)	0 (0)	127 (52.9)	104 (43.3)
13.	I would hope the person I'm caring for dies when I am not present.	19 (7.9)	97 (40.4)	87 (36.3)	23 (9.6)	14 (5.8.)
14.	I am afraid to become friends with a dying person.	43 (17.9)	183 (7.3)	0 (0)	9 (3.8)	5 (2.1)
15.	I would feel like running away when the person died.	83 (34.6)	128 (53.3)	15 (6.3)	9 (3.8)	5 (2.1)
16.	Families need emotional support to accept the behavior changes of the dying person.	0 (0)	0 (0)	0 (0)	174 (72.5)	66 (27.5)
17.	If a patient nears death, the non-family caregiver should withdraw from his or her involvement with the patient.	18 (7.5)	112 (46.7)	33 (13.8)	72 (30)	5 (2.1)
18.	Families should be concerned about helping their dying member make the best of his or her remaining life.	0 (0)	0 (0)	0 (0)	136 (56.7)	104 (43.3)
19.	The dying person should not be allowed to make decisions about his or her physical care.	23 (9.6)	68 (28.3)	51 (21.3)	83 (34.6)	15 (6.3)
20.	Families should maintain as normal an environment as possible for their dying member.	9 (3.8)	0 (0)	0 (0)	188 (78.3)	43 (17.9)
21.	It is beneficial for the dying person to verbalize his or her feelings.	0 (0)	9 (3.8)	23 (9.6)	157 (65.4)	51 (21.3)
22.	Care should extend to the family of the dying person.	0 (0)	0 (0)	14 (5.8)	164 (68.3)	62 (25.8)
23.	Caregivers should permit dying persons to have flexible visiting schedules.	0 (0)	0 (0)	55 (22.9)	138 (57.5)	7 (19.6)
24.	The dying person and his or her family should be the in-charge decision makers.	0 (0)	0 (0)	5 (2.1)	160 (66.7)	75 (31.3)
25.	Addiction to pain-relieving medication should not be a concern when dealing with a dying person.	10 (4.2)	36 (15)	93 (38.8)	92 (38.3)	9 (3.8)
26.	I would be uncomfortable if I entered the room of a terminally ill person and found him/her crying.	10 (4.2)	47 (19.6.)	47 (19.6)	122 (50.8)	14 (5.8)
27.	Dying persons should be given honest answers about their condition.	0 (0)	18 (7.5)	46 (19.2)	161 (67.1)	15 (6.3)
28.	Educating families about death and dying is not a non-family caregiver's responsibility.	19 (7.9)	84 (35)	55 (22.9)	68 (28.3)	14 (5.8)
29.	Family members who stay close to a dying person often interfere with the professional's job with the patient.	5 (2.1)	86 (35.8)	85 (35.4)	59 (24.6)	5 (2.1)
30.	It is possible for non-family caregivers to help patients prepare for death.	0 (0)	18 (7.5)	66 (27.5)	142 (59.2)	14 (5.8)

Abbreviation: SD: strongly disagree, D: disagree, U: uncertain, A: agree, SA: strongly agree

The majority of the respondents, 198 (85.2%) demonstrated appropriate practice of PC. The majority of the respondents 161 (67.1%), 176 (73.3%), 214 (89.2%) had to initiate a PC discussion with patients during diagnosis, while the disease progressed, and at the end of life, respectively. Regarding decision making, 212 (88.3%) of the respondents reported obtaining patients' opinions, 240 (100%) and 215 (89.6%) involved the family and other health professionals in the decision making, respectively. Furthermore, all of the participants assessed the pain.

IV. Discussion

This study recruited final year students because they had experienced lectures in the past and had more clinical exposure. Several previous studies also recruited students in their final year [14], [25], [27]. The overall findings from this survey demonstrated that PC knowledge of undergraduate nursing students was insufficient, with less than 30% correct answers about the extent of the disease determining the method of pain treatment, the provision of PC requiring emotional detachment, suffering, and physical pain being identical, and the loss of a distant relationship being easier to resolve than the loss of one that is close or intimate, which is somewhat encouraging. An earlier study reported a similar result with a similar instrument to measure students' knowledge of PC [4]. Remarkably, 100% of the participants answered that family members must remain at the bedside until death occurs. This is possibly due to the culture in Indonesia which mostly believes that the family is the best support for patients who are facing death. Their knowledge was severely compromised, as evidenced by the low average PCQN score (mean 9.5, SD 1.3). This finding was consistent with several previous studies [3], [12], [16], [18], [19]. A possible reason for such a low score might be either the quality of the PC content in undergraduate nursing programs or the learning model in teaching PC. In this study, the precise content was not evaluated. However, this was in line with the result that the majority of the participants (61%) mentioned that the common teaching methods used during the PC course were lectures, questions, and answers. For us, particularly in light of the integration of dedicated undergraduate courses and clinical placement, the fact that student knowledge about PC remains low is troubling, which may highlight the need for creating an innovative learning model to enhance students' knowledge of PC.

Although the overall knowledge was low in this present study, the majority of respondents reported a favorable attitude, which was also in line with previous studies [12], [16], [24] and good practice toward the PC but contrasted with a previous study that showed a low level of practice in PC [16]. Meanwhile, Jafari et al. (2015), in their study, found a negative to neutral attitude toward care of the dying. Similarly, another previous study conducted by Yaqoob et al. (2018) also showed a low attitude with a mean FATCOD score. Numerous randomly chosen factors were looked into that could help in evolving a favorable attitude such as giving care to the dying person, involvement in the care of dying, in terms of either a patient or a family member, whether care should extend to the family of the dying person, and whether a dying person should be given honest answers about their condition. Furthermore, the majority of students in our present study reported having experienced the death of family members and friends in the past, and patient death during clinical placement. Previous studies revealed that the end of life education was associated with a positive attitude towards caring or dying patients. Nursing students who received end of life education and theoretical experience in a hospice or palliative care unit were associated with positive attitudes towards caring or dying patients

[11], [14], [27]. A mixed-method approach is recommended to explore the lived experiences when caring for dying patients and their family members. According to the knowledge aspect of the practice of the nurses in PC, the majority of the respondents showed good practice in PC. To the best of our knowledge, this may due to the cultural background of students in Indonesia, which is in line with the students' responses from the questionnaire. The majority of students answered "Yes" to all the items in the questionnaire. This result is similar to those of a previous study conducted [12].

V. Conclusion

The study revealed that the majority of undergraduate nursing students in Indonesia are relatively knowledgeable about PC, have a favorable attitude and good practice in PC. Integrating PC education is required as the pillar to improve students' knowledge and therefore attitudes and practice in PC. Also, this education needs to be comprehensive in covering the basic principle of PC and it should be distributed throughout the different methods and theories. Our findings suggest that structured courses followed by an integrative learning model in PC could be a core part of undergraduate nursing education. Furthermore, future efforts to provide PC education by using innovative learning models are warranted.

VI. Limitations

Several limitations should be considered. First, this study was conducted in three nursing universities in Indonesia without additional data or other provinces. Hence, the results cannot be generalized to all Indonesian undergraduate nursing students. Second, this was a cross-sectional online survey study without longitudinal observation of the participants, and did not involve an intervention. Consequently, future research should improve on these aspects.

Conflic Of Interest

The authors declared that there were no potential conflicts of interest concerning the research, authorship, and/or publication of this research.

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