

RESEARCH ARTICLE

Andragogy learning and the associated factors among nursing students in online palliative class during the COVID-19 pandemic

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Abstract

Objective: To investigate the andragogy learning and determine the related factors among nursing students in online palliative class during the coronavirus disease-2019 pandemic.

Methods: The descriptive cross-sectional online survey-based study was conducted from September 1 to December 31, 2021, after approval from the ethics review committee of the Institute of Technology and Health Bali, Indonesia, and comprised 2nd year nursing students enrolled in the online palliative class. Data was collected using a questionnaire to measure socio-demographic characteristics of the respondents, teacher characteristics, and learning media. Andragogy education movement questionnaire was used to measure students' self-concept, learning motivation, readiness to learn, orientation to learn, and learning experience. Data was analysed using SPSS 25.

Results: Of the 189 subjects, 161 (85.2%) were females, and 90 (47.6%) were aged 20 years, followed by 87 (46%) aged 21 years, 10 (5.3%) aged 22 years and 2 (1.1%) aged 23 years. Age was significantly correlated with self-concepts ($p=0.04$), while parents' occupation was significantly correlated with learning motivation ($p=0.04$). Professional ability, personal quality and interpersonal relationships of teachers and learning media, including class management and props, were correlated with andragogy learning ($p<0.001$).

Conclusions: High levels in all domains of andragogy learning were found. Maintaining the factors that influence andragogy learning through online platforms is an important goal in today's virtual learning era.

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Introduction

At the end of 2019, the world underwent drastic changes in various aspects of life without exception due to the coronavirus disease-2019 (COVID-19) pandemic which rapidly spread throughout the world,^{1,2} including Indonesia, and hit people's routine activities, and one of the critical areas was the education sector. All schools and universities in Indonesia immediately made a dramatic transformation by suspending face-to-face learning and quickly switching to the online mode³ in order to protect students' life and prevent the transmission and spread of COVID-19.

This change was a challenge for online learning at private universities, like the Institute of Technology and Health, Bali. When the pandemic emerged, nursing lecturers were required to quickly assess and decide on educational solutions for the students to continue their education; all these solutions involved rapid implementation of online learning to replace the traditional face-to-face learning.⁴ Online learning can complement face-to-face education, but does not replace it. However, due to the emergency

situation, online learning was one of the most rational solutions to sustain teaching and learning activities during the active phase of the pandemic when learning was not confined to the traditional classrooms.^{5,6}

The development of online learning was initially aimed at increasing access for students and compensating for deficiencies in the traditional face-to-face education⁷⁻⁹. Although online learning can ensure learning without walls, it comes with major challenges.^{1,10,11} In the field of palliative education, the educators implemented online palliative and end-of-life care learning modules using virtual learning environments and technological tools. However, the social isolation caused by the protracted COVID-19 phase raised concerns about how to compensate for didactic and practical lessons and missed clinical experiences that are course requirements for palliative care competencies.¹² In addition, online learning of palliative nursing and end-of-life care raised significant concerns, particularly about the quality of educational materials and resources, because the students lost two main learning modalities, namely face-to-face interactions with teachers and fellow students, and clinical practice with patients.³

Andragogy learning is a teaching practice for adult learners, and its role and application are appropriate to be applied in the context of online learning that emphasises

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independence in the learning environment. This concept was first developed in the late 1960s as the art and science of adult learning.¹³⁻¹⁶ Andragogy learning has been shown to be very effective in increasing the achievement of student competencies.¹⁷ However, in the palliative nursing course, the effectiveness of andragogy learning through online learning has not been evaluated. The current study was planned to fill the gap by determining the factors related to andragogy learning among nursing students in online palliative class during the pandemic.

Subjects and Methods

The descriptive cross-sectional online survey-based study was conducted from September 1 to December 31, 2021, after approval from the ethics review committee of the Institute of Technology and Health, Bali, Indonesia. The sample size was calculated using G*power 3.1¹⁸ based on power (1-β err prob) 0.80. The sample was raised using simple random sampling technique. Those included were 2nd year nursing students who had completed the online palliative class and were able to use a computer. Informed consent was obtained from all the subjects and those not willing to participate were excluded.

An electronic self-administered questionnaire using Google Doc was distributed among the subjects. It was a modified questionnaire of an earlier version.¹⁹ The component related to educators' characteristics had 34 items and 3 sub-dimensions that were scored on a 4-point Likert scale, with total score ranging 34-136. High scores indicated better characteristics of the educators. The learning media component had 14 items and 2 sub-dimensions that were scored on a 4-point Likert scale, with overall score ranging 14-56. High scores indicated better learning media used. Andragogy learning was measured using the Andragogy Education Movement Questionnaire (AEMQ)²⁰, which had 41 items and 5 sub-dimensions that were scored on a 4-point Likert scale, with overall score ranging 41-164. Higher score indicated higher level of andragogy learning.

Professional judgment was applied to assess the questionnaire's content with item content validity index (I-CVI) 1, and the Pearson Product Moment formula calculated the questionnaire's validity using the r-value. The calculation results were then matched with the two-tailed Product Moment r table (α=0.05). After removing certain items, the remaining items had a value of r count >0.361, Sig. 2-tailed (α=0.05), n=30, which together indicated validity. The reliability test used internal consistency reliability, with Cronbach's alpha value >0.7, indicating reliability.

Data was analysed using SPSS 25. Chi-square test and Spearman correlation coefficient analysis were used to

examine the association between the scores and the studied variables. P<0.05 was considered statistically significant.

Results

Of the 189 subjects approached, all of them (100%) responded, there were 161(85.2%) females. Overall, 90(47.6%) subjects were aged 20 years, followed by 87(46%) aged 21 years, 10(5.3%) aged 22 years and 2(1.1%) aged 23 years (Table 1).

Age was significantly correlated with self-concepts (p=0.04), while parents' occupation was significantly correlated with learning motivation (p=0.04). Professional ability, personal quality and interpersonal relationships of teachers and learning media, including class management and props, were correlated with andragogy learning (p<0.001) Correlation was explored under all the 5 sub-dimensions (Table 2).

Table 1: Socio-demographic characteristics of the subjects (n=189).

Variables	Categories	n (%)
Age	20	90 (47.6)
	21	87 (46.0)
	22	10 (5.3)
	23	2 (1.1)
Gender	Female	161 (85.2)
	Male	28 (14.8)
Ethnicity	Balinese	181 (95.8)
	Javanese	4 (2.1)
	Others	3 (1.6)
	Lombok	1 (.5)
Parents' occupation	Entrepreneur	75 (39.7)
	Private employee	44 (23.3)
	Government employee	33 (17.5)
	Farm workers	26 (13.8)
	Unemployment	6 (3.2)
	Retired	5 (2.5)

Table 2: Andragogy learning and its association with socio-demographic characteristics, teachers' characteristics and learning media.

Variables	Chi-Square	Spearman Correlation Coefficient	p-value
Self-concepts	15.52±1.81 (12-20)		
Age	3.97		0.04*
Gender	1.19		0.27
Parents occupation	2.41		0.12
Ethnic	1.70		0.19
Professional ability		0.42	0.00**
Personal quality		0.31	0.00**
Interpersonal relationship		0.44	0.00**
Class management		0.46	0.00**
Learning media		0.39	0.00**
Learning motivation	24.86±2.26(19-32)		

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Table 2: continued from previous page

Variables	Chi-Square	Spearman Correlation Coefficient	p-value
Age	2.03		0.15
Gender	0.25		0.61
Parents occupation	3.90		0.04*
-Ethnicity	2.00		0.15
Professional ability		0.37	0.00**
Personal quality		0.27	0.00**
Interpersonal relationship		0.34	0.00**
Class management		0.43	0.00**
Learning media		0.41	0.00**
Readiness to learn	25.62±2.81(20-32)		
Age	1.50		0.22
Gender	0.03		0.85
Parents' occupation	0.08		0.78
Ethnicity	0.26		0.60
Professional ability		0.43	0.00**
Personal quality		0.47	0.00**
Interpersonal relationship		0.43	0.00**
Class management		0.48	0.00**
Learning media		0.51	0.00**
Learning orientation	41.19±4.87 (29-52)		
Age	0.01		0.95
Gender	0.45		0.50
Parents' occupation	0.62		0.43
Ethnicity	0.01		0.93
Professional ability		0.47	0.00**
Personal quality		0.51	0.00**
Interpersonal relationship		0.48	0.00**
Class management		0.48	0.00**
Learning media		0.54	0.00**
Learning experience	22.09±2.58 (15-28)		
Age	0.15		0.70
Gender	1.46		0.22
Parents' occupation	0.01		0.94
Ethnicity	1.82		0.17
Professional ability		0.35	0.00**
Personal quality		0.48	0.00**
Interpersonal relationship		0.42	0.00**
Class management		0.51	0.00**
Learning media		0.50	0.00**

Discussion

The study showed high levels in all domains of the andragogy learning. The students agreed that the virtual classroom model tended to provide highly diverse experiences in their learning. The belief in the ability to master palliative nursing material, and to master the material provided through online learning lead to high learning motivation.^{20,21} The role of educators is very important in maintaining the level of learning in order to maintain students' motivation.

The level of readiness and orientation of undergraduate nursing students in learning activities through online

learning also had a high level. This may be because online learning, which is a new teaching and learning activity, has been well-prepared, adapted to the goals of palliative learning, and has been simulated.²² Furthermore, students are generally prepared to integrate their previous learning experiences into new ones through online learning. With this ability, students are expected to be able to find paths and learning opportunities to achieve the learning objectives.²¹

The good news was that more than 50% students in the current study obtained new or good experience during the virtual classes. This was proven by their expressions that online learning provided great flexibility in teaching methodology and encouraged student independency. Furthermore, it was found to be more flexible as the students could learn at a time of their choice, and everyone felt safe during the lectures. Earlier studies²³⁻²⁵ also reported high score in students' learning experience through virtual learning. Also, it can be expanded by paying attention to the learning process for better interaction between tutors and peers.²⁶

The current study represents the initial phase of exploring the phenomenon, and further in-depth research is recommended. Some of the findings, however, can be used as a reference by health educators for providing effective learning.

Conclusion

The students believed that online learning provided highly diverse experiences. Maintaining andragogy learning through online learning is an important goal in virtual learning.

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