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Nursing Students' Knowledge on Breast Cancer

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ARTICLE INFO	ABSTRACT
	Background: Breast cancer is the most common type of cancer in women and is one of the main causes of cancer death in women throughout the world. Around 9-8% of women have the potential to experience breast cancer. It is estimated that there are 100 new sufferers per 100,000 population every year in Indonesia. The prevalence of cancer in Indonesia is 1.4 per 1000 population and increases with age. Breast cancer contributes 30% and is the most common type of cancer in Indonesia. **Methods:** The research method employed was quasi-experimental with a pre-posttest without control group design. Total sampling was used to collect samples. The data was evaluated using the paired t test. **Results:** The study showed significant differences in nursing students' knowledge of breast cancer before and after they received the self-paced module (p value 0.000). **Conclusion:** The self-paced module can help students learn more about breast cancer. There is need for various approaches of educating nursing students about breast cancer as well as the students' ease of access to resources for breast cancer information.

Background.

One of the leading causes of cancer-related mortality for women worldwide, breast cancer is the most prevalent type of cancer in women (Khiyali, Aliyan, Kashfi, Mansourian & Jeihooni, 2017). According to WHO (2012), breast cancer may affect 9–8% of women. In Indonesia, the annual rate of new cases per 100,000 people is estimated to be 100. According to data from the Ministry of Health of the Republic of Indonesia (2015), the incidence of cancer in Indonesia is 1.4 per 1000 people and rises with age. As the most prevalent disease in Indonesia, breast cancer accounts for 30% of all cancer cases (Ministry of Health of the Republic of Indonesia, 2018).

Nonetheless, women continue to have a low awareness about breast cancer. Women's low awareness of breast cancer can be attributed to a number of factors, including low practice of breast self-examination and ignorance

of the dangers, symptoms, and signs (Tazhibi & Feizi, 2014). According to the findings of the study, women's knowledge about breast cancer is still lacking, including understanding of breasts, signs and symptoms, and risk factors (Alwan, Al-Attar, Eliessa, Madfaie, & Tawfeeq, 2012).

Breast cancer can be diagnosed early with screening techniques such as breast self-examination (BSE). The BSE examination is simple, and any woman can pass it on her own. This is significant since about 85% of breast abnormalities are detected by patients through adequate breast self-examination. In reality, breast self-examination (BSE) is still uncommon, with 89.1% of participants having never performed BSE (Oluwatosin & Oladepo, 2006). As a result, there is a need for a program to educate women about breast cancer.

Methods

The research design was quasi-experimental using a pre-posttest without a control group. The study's population comprised of all first-year female students who had not completed breast cancer-related subject at Program Studi DIII Keperawatan Purwokerto Poltekkes Kemenkes Semarang Indonesia. To obtain samples, total sampling was employed. A questionnaire was used in this study to assess the level of cancer knowledge and breast self-examination. Data was obtained before and after the participants completed a self-paced breast cancer module. The paired *t* test was used to analyze the data.

Result and Discussion

This study included a total of 151 female students with an average age of 20.5 years. The frequency distribution of participants' knowledge about breast cancer before and after

education may be observed in the table below:

Table 1. Distribution of participants' knowledge

Breast Cancer Knowledge	Pre (%)	Post (%)
Good	20	43.3
Sufficient	70	56.7
Poor	10	0
Total	**100**	**100**

According to table 1, the respondent's level of knowledge is "sufficient" both before and after educated with the self-paced module. However, after completing the self-paced module, there was an increase in the percentage of "good" and "sufficient" knowledge levels, with no "poor" knowledge level. Statistical tests demonstrate a substantial change in female students' knowledge about breast cancer before and after completing the self-paced program (*p*=0.000). Previous research results support the findings of this study.

Prior research findings reveal that self-learning module increase nurses knowledge and practice. A self-paced learning module is a well-organized set of instructions meant to help the learner master a body of knowledge or a practice. The findings of Mohamed and Ibrahim (2021) research reveal that there was a substantial beneficial association between nurses' knowledge and practice after using self-learning module. Another study found a substantial difference in clinical competence between the control and intervention groups after receiving a self-learning module (Tohidi, Moonaghi, Shayan & Ahmadinia, 2019). Bautista (2015) emphasize that self-paced learning improves student performance and is a great tool for improving classroom teaching.

Furthermore, Chen et al (2022) discovered self-management education online, and the learning module showed substantial impacts on pain relief and colon irritation improvement in quality of life syndrome at follow-up visits. According to Saad and Srour (2019), the independent learning module had a positive influence on nurses' knowledge and safety practices, and that there was a very statistically significant difference in the total average score of nurses' knowledge and practice before and after implementing the self-learning module. Based on the findings of the research, it is possible to conclude that the self-paced module provides participants with beneficial outcomes.

The ability for students to move through the content at their own speed is one of the primary benefits of self-paced learning. Since not all students learn at the same rate, this increases their chances of success (Digital Learning Institute, 2023). Additional advantages of self-paced learning module include enhancing students' self-control and time management, relieving student stress, enabling big group registration, and lowering institutional expenses (Digital Learning Institute, 2023).

In contrast, research conducted by Carcich and Rafti (2007) demonstrates that experienced nurses prefer traditional lecture or discussion teaching techniques versus self-learning module. Self-paced learning has advantages, but that doesn't always make it a good or appropriate method of training. There is a high level of class involvement in typical lecture or discussion programs. This is an example of active learning. Perhaps the participants consider that this is a more gratifying method to engage in active learning. Self-learning module cannot be used to exchange ideas and experiences. The shortcomings of self-paced learning modules include a lack of collaboration, less structure, fewer networking opportunities, and increasing difficulties in retaining student enthusiasm (Digital Learning Institute, 2023).

Conclusion and Suggestions

Based on the findings of this study, it is possible to conclude that the self-paced module had a good influence on the knowledge of female nursing students. This study could be repeated in a bigger sample size because of the short sample size. This study should also be tweaked such that each participant can select his or her preferred technique of learning. Therefore, more research is needed to determine the effectiveness of one learning strategy over another.

References

Alwan, Al-Attar, Eliessa, Madfaie, & Tawfeeq. (2012). Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population in Iraq. *Eastern Mediterranean Health Journal, 18* (4), 337-345. https://doi.org/10.26719/2012.18.4.337

Bautista, R.G. (2015). Optimizing classroom instruction through self-paced learning prototype. *Journal of Technology and Science Education*, *5*(3), 84. https://dx.doi.org/10.3926/jotse.162

Carcich, G.M & Rafti, K.R. (2007). Experienced Registered Nurses' Satisfaction With Using Self-Learning Modules Versus Traditional Lecture/ Discussion to Achieve Competency Goals During Hospital Orientation. *Journal for Nurses in Staff Development*, *23*(5), 214–220. https://nursing.ceconnection.com/

Chen, J, et al. (2022). The effect of self-management online modules plus nurse-led support on pain and quality of life among young adults with irritable bowel syndrome: A randomized controlled trial. *International Journal of Nursing Studies*, 132.

https://doi.org/10.1016/j.ijnurstu.2022.104278

Digital Learning Institute (2023). What is self-paced learning? Definition, benefits and tips'. Digital Learning Institute, view 1 October 2023. https://www.digitallearninginstitute.com

Khiyali, Z., Aliyan, F., Kashfi, S.H., Mansourian, M & Jeihooni, A.K. (2017). Educational intervention on breast self-examination behavior in women referred to Health Centers: Application of Health Belief Model. *Asian Pacific Journal of Cancer Prevention*, 18(10), 2833-2838. https://doi.org/10.22034/APJCP.2017.18.10.2833

Ministry of Health of the Republic of Indonesia. (2015). Data dan Information Center. Jakarta.

Ministry of Health of the Republic of Indonesia. (2018). Riskesdas 2018. Jakarta.

Mohamed, S.S & Ibrahim, R.A (2021). Effect of self -learning module on nurses' performance regarding care of patients with chest tube. *Egyptian journal of Nursing & Health Sciences*, 2(1). https://doi.org/10.21608/ejnhs.2021.196029

Oluwatosin O. A & Oladepo O. (2006). Knowledge of breast cancer and its early detection measures among rural women in Akinyele Local Government Area, Ibadan, Nigeria. *BMC Cancer,* 6(271). https://doi.org/10.1186/1471-2407-6-271

Saad, N.S.E & Srour, O.A.A. (2019). Effect of Self-learning Module on Nurses' Knowledge and Safety Practices Concerning Care of Patients Undergoing Upper Gastrointestinal Endoscopy. *Egyptian Journal of Health Care*, 10(3), 580-595. https://ejhc.journals.ekb.eg/

Tazhibi, M & Feizi, A. (2014). Awareness Levels about Breast Cancer Risk Factors, Early Warning Signs, and Screening and Therapeutic Approaches among Iranian Adult Women: A large Population Based Study Using Latent Class Analysis. *BioMed Research International*. http://dx.doi.org/10.1155/2014/306352

Tohidi, S, Moonaghi, H.K, Shayan, A & Ahmadinia, H (2019). The Effect of Self-learning Module on Nursing Students' Clinical Competency: A Pilot Study. *Iranian Journal of Nursing and Midwifery Research*, 24(2), 91-95. http://dx.doi.org/10.4103/ijnmr.IJNMR_46_17

WHO. (2012). Breast cancer: Prevention and control. Available at http://www.who.int/entity/cancer/detection/en/