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siNERSI Mobile's Knowledge, Attitude, and Practice and Its Correlation with Nursing Competency Examination Result among Nursing Profession Students in Indonesia

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Abstract

BACKGROUND: Nursing students take the national competency test at the end of their education process. siNERSI mobile is an application for nursing students that can help them in exercise tests before an actual competence examination. However, how students know and perceive this application and how they train themselves to use it to pass the competency test in the first attempt is still limited.

AIM: This study aimed to know SiNERSI mobile's knowledge, attitude, and practice and its correlation with nursing competency examination results among nursing profession students in Indonesia

METHOD: A quantitative survey using a cross-sectional approach was conducted on 107 graduated nurse profession students from two private universities in Yogyakarta, Indonesia, between May and July 2023. After passing the ethical clearance, a set of valid and reliable questionnaires was distributed through Google Forms to be self-administered. Students who passed the competency test and tried siNERSI mobile were chosen as a sample purposively. The data gathered was then analyzed using descriptive and Spearman rho tests to determine its description and relationship

RESULTS: Students' knowledge of siNERSI does not correlate with the attitude (pv:.687; r:.039), but it does with the practice (pv:.007; r: .258). However, the practice of siNERSI (pv:.108; r:.156) does not correlate with the competence examination result, but the number of tryouts (pv:.000; r:.364) they have joined does.

CONCLUSION: Since tryouts are still better in their role to increase student's chances to pass the competence examination. Implementation of student siNERSI mobile needs to be improved and made easier to use among students.

Introduction

Nursing students in Indonesia should take the national competency test at the end of their education process. The competency test per the Circular Letter of Higher Education No. 704/e.e3/dt/2013, issued on 24 July 2013, became the exit exam for every health student. Research reports on nursing students' perception of competency tests are still limited [1].

In Indonesia, competency testing measures students' knowledge, skills, and behavior in higher education in the health sector. The first nurse competency test was conducted in 2013 for new Diploma nurse and nursing profession graduates [2]. The basis for the implementation of competency tests includes Law Number 36 of 2014 concerning Health Workers, Law Number 38 of 2014 concerning Nursing, Law Number 4 of 2019 concerning Midwifery, and Minister of Education and Culture Regulation Number 2 of 2020 concerning Procedures for Implementing Student Competency Tests in the Health Sector. In addition, competency testing is an effort to guarantee the quality of graduates and curriculum implementation and as a basis for fostering the quality of health sector education for related ministries [2], [3].

The success of nursing students in nursing competency examinations is supported by learning media. Studies showed engaging in learning media could increase students' willingness and motivation to learn. Thus, students tend to understand and comprehend the learning material more efficiently. One of the reasons why students use smartphones massively is because they are affordable. The use of smartphones in learning media is also called mobile learning (m-learning). In this case, the Indonesian

Nurses Education Association (AIPNI) launched the siNERSI Mobile application to help increase the number of nursing student competency test passes. However, since siNERSI is a relatively new thing for nursing students and a paid application, the information or things related to it still needs to be dug deeper. This study aimed to determine siNERSI mobile's knowledge and its correlation with attitude and practice among nursing professional students.

Methods

Study Design

This study was a quasi-experimental quantitative with a post-test approach design that conducted between May and July 2023 in Yogyakarta, Indonesia.

Sample

The sample was nursing profession students who graduated from 2020 to 2023 from Jenderal Achmad Yani Yogyakarta University and STIKes Guna Bangsa, Indonesia. A total of 107 students who were chosen by convenience sampling were joined in this study. The inclusion criteria were nursing profession students who graduated after the launch of siNERSI mobile, achieved their degree in Yogyakarta, Indonesia, and passed the competency examination.

Data Collection and Tools

The study used a questionnaire to measure knowledge, attitude and practice-related siNERSI mobile implementation for their competency tests. Indicators for competency test results were given with 2 points for the first trial passed and 1 point for more than one trial.

A set questionnaire for knowledge, attitude, and practice related to siNERSI mobile was constructed by authors. A reliability test that resulted in a Cronbach alpha of 0.738 indicated the questionnaires have good reliability. A content validity index (CVI) was used for the validity test, resulting in an overall CVI of 0.93, which means the questionnaires were valid.

The questionnaire set was then distributed online through Google Forms to be self-filled by samples. The Knowledge questionnaire has 8 questions, including about what siNERSI is, how to use siNERSI, and the content of siNERSI. The attitude questionnaire has 15 questions about the effectiveness and efficiency of siNERSI and how siNERSI helps them pass the nursing competency test. The practice questionnaire has ten questions, including their practice in using siNERSI. Bloom's cutoff categorizes knowledge, attitude, and practice based on the total scores, with < 80% classified as poor/negative and 80-100% as good/positive.

Statistical Analysis

Descriptive statistics were used for univariate variables. Since it didn't meet the normality test result, Spearman's rho was used to determine the correlation between variables.

Ethics Consideration

This study has passed ethical clearance with number 482/KEPK/STIKES-WHY/VIII/2023. The sample must fill in informed consent before accessing the questionnaires.

Result

The characteristics of 107 students who joined the study are described in Table 1.

Table 1: Sample characteristics

Characteristic	F	%
Gender		
Male	30	28.0
Female	77	72.0
Year of Graduation		
2021	42	39.9
2022	30	28.0
2023	35	32.7
Try out participation		
Yes	106	99.1
No	1	9
Number of try out		
Once	50	46.7
More than one	57	53.3
Competency test passing		
More than one	14	13.1
First trial	93	86.9
Total	**107**	**100**

Most of the sample was female (72%) who graduated in 2021 (39.9%). They joined a tryout (99.1%) more than once (53.3%) before doing an actual competency test and passed the first trial test with 86.9%.

Students' knowledge, attitude, and practice toward siNERSI implementation are pictured in Table 2.

Table 2: Knowledge, Attitude, and Practice towards siNERSI

	F	%
Knowlegde		
Good	104	97.2
Poor	3	2.8
Attitude		
Negative	59	55.1
Positive	48	44.9
Practice		
Poor	15	14.0
Good	92	86.0
Total	**107**	**100**

Most of the samples have good knowledge (97.2%). Even though they have an unsupportive attitude toward siNERSI (55.1%), their practice using siNERSI when they had a chance to use it was good (86%).

Table 3 shows that even though knowledge

does not correlate with attitude (pv: 0.687; r: 0.039). However, knowledge (pv: 0.007; r: 0.258) correlates with practice toward siNERSI mobile implementation.

Table 3: Bivariate tests between Knowledge, Attitude, and Practice

towards siNERSI mobile implementation

		Knowledge	Attitude	Practice
Knowledge	Correlation Coefficient	1.000	.039	.258**
	Sig. (2-tailed)	.	.687	.007
	N	107	107	107
Attitude	Correlation Coefficient	.039	1.000	.310**
	Sig. (2-tailed)	.687	.	.001
	N	107	107	107
Practice	Correlation Coefficient	.258**	.310**	1.000
	Sig. (2-tailed)	.007	.001	.
	N	107	107	107

**, Correlation is significant at the 0.01 level (2-tailed).

Finally, Table 4 shows that the practice of siNERSI mobile does not correlate with how many tryouts they did and their first trial competency examination result. The variable positively correlated with the first trial competency result was the number of tryouts they joined (pv: 0.000; r: 0.364). This means the more tryouts they did, the higher the chance of passing the competency examination on the first attempt.

Table 4: Correlation between the practice of siNERSI, Number of Tryouts and Competence Test Results among nursing profession students

		Knowledge	Number of TO	Competence Test
Practice	Correlation Coefficient	1.000	0.24	0.156
	Sig. (2-tailed)	.	0.804	0.108
	N	107	107	107
Number of Try out	Correlation Coefficient	0.024	1.000	0.364**
	Sig. (2-tailed)	0.804	.	0.000
	N	107	107	107
Competence Test	Correlation Coefficient	0.156	0.364**	1.000
	Sig. (2-tailed)	0.108	0.000	.
	N	107	107	107

**, Correlation is significant at the 0.01 level (2-tailed).

Discussion

The relationship between knowledge and attitude towards siNERSI Mobile implementation

Data collection related to knowledge, attitudes, and practices (KAP) in a study aim to collect information about what a person knows, believes, and does related to a particular topic or knowledge. KAP-related surveys are also a frequently used study tool for researching health behavior. The context of knowledge in KAP is usually used to assess the extent of a person's or community's knowledge of a concept. In the context of KAP, attitude is defined as a learned tendency to think, feel, and act in a certain way towards particular objects and classes of objects so that attitude results from a complex interaction between feelings, beliefs, and values. As for practice in the KAP concept, it usually explores the use of knowledge and attitudes taken to perform a specific behavior [4].

The study analysis showed that students have a higher knowledge but an unsupportive attitude towards siNERSI mobile implementation. There is no relationship between SiNersi Mobile's expertise and its attitude (pv: 0.687; r: 0.039). However, this result is similar to that of studies that found that good knowledge will correlate with a good or supportive attitude or vice versa.

In line with Fuadi's results [5] that showed even people with less knowledge do not rule out the possibility of having a good attitude, his research stated that people in Tandang Village, Semarang, Indonesia, have a supportive attitude in preventing leptospirosis (92.5%) even though their knowledge is classified as poor (51.25%). These results can exist because an attitude can be formed under the influence of experience or other factors rather than knowledge only. Soeratinoyo's study [6] also showed that knowledge was not significantly associated with attitude in preventive measures taken by bottled water mineral factory employees. Some employees with good knowledge still lack precautions, and Some need more knowledge but have good precautions.

According to Notoadmojo's theory in Fitriyani [7], knowledge can influence the development of one's attitude and actions. However, not all individuals with good knowledge can always have a good attitude or behave well. It is because, in addition to behavior influenced by knowledge and internal individual factors, behavior can be influenced by external factors such as environment, family, socio-cultural, economy, and other factors.

The relationship between knowledge and practice towards siNERSI Mobile implementation

There is a correlation between the knowledge level of siNersi mobile and its practice. This result showed that students with good knowledge about SiNersi mobiles would behave well in practice using it. Knowledge is defined as the result of humans sensing through the senses they possess (ears, eyes, nose, taste, and touch). Providing information will increase a person's knowledge. Knowledge can make someone aware so that someone will behave according to the knowledge they have.

Behavioral changes based on knowledge, awareness, and positive attitudes are lasting because they are based on their awareness, not coercion [8]. The results of several experiences and observations that occur in the field (society) show that a person's behavior, including health behavior, begins with a person's experiences and the presence of external factors (physical and non-physical environment). These experiences and the environment are then known, perceived, or believed by someone, giving rise to motivation to act, ultimately manifesting in behavior, including healthy behavior. The three results of this

research are in line with Nadia Primita Dirgahayu's research entitled The Relationship Between Level of Knowledge and Clean and Healthy Living Behavior of Students at Madrasah Ibtidaiyah Muhammadiyah Gonilan Kartasura Sukoharjo, where the results of this research show that the level of knowledge is also related to clean and healthy living behavior [9].

Factors associated with competency examination results among nurse profession students

The study revealed that knowledge (pv: 0.007; r: 0.258) and attitude (pv: 0.001; r: 0.310) correlate with practice towards siNERSI mobile implementation. Most of the samples have good knowledge (97.2%) and good practice on siNERSI (86%); it could be because the university is already informed and socialized about what it is and how to use siNERSI. Since the source of the questions bank is limited, the siNERSI application is known as one source that can help students get exercise questions for competence examinations.

Two universities in the study bought a siNERSI account and gave it a free student 10 trial. The students get an account from the university and do several or many trials for their preparation. So, it is reasonable for them to have good knowledge and practice in siNERSI mobile.

The reason why the students have an unsupportive attitude could be because siNERSI could not buy in the name of personal use and is pricey. Universities have to buy it and use it for institutional use as well as for their students. Since not every university has funding to buy it, the continuity of siNERSI using it is uneven. The charge applied seems to be a bad solution since additional payment burdens some students.

Almost all of the universities in Yogyakarta provided guidance or internal tryouts to help students increase their score and their possibility of passing the exam in the first trial. The Association of Indonesian Nurse Education Center (AINEC) also provides tryouts on a national scale so students can exercise themselves in these events.

Based on statistical tests, the practice of siNERSI does not correlate with competence examination, but the number of tryouts does (pv: 0.000; r: 0.364). This result supports two previous studies that stated tryout participation [10] and the result of tryout [11] gave significant contributions to the passing competence test for nursing profession students.

Conclusion

Knowledge and attitude of siNERSI mobile implementation correlate with its practice even though practicing siNERSI does not correlate with their success in the first trial of competence test results. The number of tryout that students have joined has a significant relationship with the success of the competency examination.

Author Contributions

All of the authors have similar contributions and stated there is no conflict of interest.

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