RESEARCH ARTICLE

ENHANCING RESEARCH SELF-EFFICACY AMONG NURSING STUDENTS: FINDINGS FROM A SHORT EDUCATIONAL INTERVENTION

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ABSTRACT

***Introduction**: Research self-efficacy is the degree to which students believe they are capable of learning or accomplishing an undergraduate thesis within a specific area of research. The undergraduates who had a high sense of self-efficacy, can complete academic writing on time.*
***Methods:** This study designed was a quasy quasi-experimental study used a one-group pre-test and post-test design to examine the effect of a educational program on research self-efficacy among nursing students who are completing the undergradute thesis. The ninety students who were eligible was envolved in this program. The study consists of 2 stages, including stage 1: forming an intervention group and assessing the level of student self-efficacy, and stage 2 consist of 5 sessions. Research Self-Efficacy Scale (RSS) was used to examine the students self efficacy before and after the program, this scale consist of 18 items with 5 point likert scale. Wilcoxon signed rank was used to analyze the effectiveness of the program.*
***Results:** This study found that the experimental group had significantly higher research self-efficacy group after participating in this program (Z = -5.821; p< .05), and the mean research self-efficacy score after the intervension was higher (M = 71.03; SD = 7.48) than before the intervension (M = 66.17; SD = 6.99).*
***Conclusion:** the educational program in the current study significantly enhanced research self-efficacy among nursing students. Therefore, it was needed to conduct this program in another school in order to enhance the research self-efficacy among students.*

***Keyword:** Educational Program, Research Self-Efficacy, Nursing Students.*

INTRODUCTION

Undergraduate research projects allow students to carry out authentic investigations into issues within their discipline. These projects challenge students to use a variety of research and writing skills that must be appropriate to their discipline, develop research questions, design research, collect data, conduct secondary research, analyze data, and communicate research findings. Undergraduate research projects have been identified as high-impact educational practices that are not only beneficial for developing students' research and communication skills, but also encourage student persistence, engagement, and self-awareness (Kuh, 2008, p.13). This research project can provide an invaluable experience for undergraduate students.

Undegraduate thesis was a student research project at the undergraduate level. This paper was a research report by students with the guidance of a advisor. This paper was a scientific paper based on the results of research conducted by a student as a final project to obtain a bachelor's degree. Based on the lay definition, the thesis formulated contains the following understanding components, including written, scientific, research results, carried out by students, with undergraduate qualifications (Rahyono, 2010).

The results of the interview of the research team with the Coordinator of the Bachelor of Nursing Program, Faculty of Nursing Universitas Syiah Kuala in Aceh Province, it was found that there were still students who completed undergraduate thesis for more than 3 semesters, while the target of the study program for the completion of the thesis was one semester and a maximum of two semesters. It was reported that there were several problems causing the students' thesis completion time including personal problems, namely family problems, lack of motivation, poor student coping, lack of confidence in their ability to complete their thesis, and pandemic situations that made it difficult for students to conduct research. The delay in completing the thesis not only has a negative impact on students but also affects the Additional Performance Indicators (IKT 1.02) related to the average length of undergraduate study.

The low self-confidence in his ability to solve problems to complete their undergraduate thesis and his poor coping can affect the length of time for the completion of the thesis. Bandura (1997) mentions the need for self-efficacy or high belief in one's own ability to achieve certain results. The existence of efforts to increase student self-efficacy in completing their undergraduate thesis is very necessary. Bandura (1997) defines self-efficacy as "belief in one's ability to organize and carry out the actions necessary to produce a given achievement". Bandura identified four main sources of self-efficacy including mastery experience, vicarious experience, verbal persuasion and psychological and emotional states.

Study conducted by Sumarsono and Mbato (2021) showed that self-efficacy had the important role in order to make the students complete their academic writing. The student who had good self efficacy were more enthusiasm in academic writing. Hasan, Hossain, and Islam (2014), found that This study was found significant relation between self-efficacy and academic performance. Besides, the factors such as mastery experience, vicarious experience, verbal persuasion, and psychology arousal totally influenced self-efficacy. Therefore, the purpose of this study was to examine the effectiveness of educational program to increase the self-efficacy of undergraduate students in completing the undergraduate thesis.

METHODS

Study Design

This quasi-experimental study used a one-group pre-test and post-test design to examine the effect of a educational program on research self-efficacy among nursing students who are completing the undergradute thesis.

Population, Samples, and Sampling

All students who are completing a undergraduate thesis in the Faculty of Nursing at Universitas Syiah Kuala are involved in this study. 90 students who met the inclusion criteria were involved in this study. This study used a purposive sampling technique to recrute the respondents.

Instruments

The present study used the Research Self-Efficacy Scale (RSS) which consist of 18 items with 5 point likert scale originally developed by Büyüköztürk, Atalay, Sozgun, and Kebapçı (2011). This scale had reliability is 0,85, the values are above .70 which is accepted as the minimum threshold for high reliability in the literature.

Procedure

The implementation of the study used 4 sources of self-efficacy, such as: mastery experience, vicarious experience, physiological and affective states, and verbal persuasion. The study consists of 2 stages, including stage 1: forming an intervention group and assessing the level of student self-efficacy (pre-test). Further, stage 2 consist of 5 sessions including session 1 providing information related to "thesis guidance process" within 50 minutes, the second session providing information related to "research methodology" within 50 minutes, the 3rd session of health education on “stress management and time management” within 50 minutes, the 4th session inviting role models within 30 minutes, 5th session follow-up via WA group within 30 minutes. After conducting research training activities, the participants will be given a self-efficacy questionnaire to assess the level of student self-efficacy after the intervention (Post-test).

Data Analysis

The demographic data were described using frequencies and percentages (Table 1). All data were measured and treated as a continuous variable for normality when needed. The Normality was determined by dividing the skewness and kurtosis by their respective standard errors, and results less than 3 were considered an acceptable level of normality. The Kolmogorov-Smirnov test was also used to assess normality. This study used Wilcoxon signed rank test to analize the effect of the program.

Ethical Clearance

This study has been declared ethical by the ethics committee of the Faculty of Nursing, Universitas Syiah Kuala in Aceh, Indonesia, and the research code was 111137070621.

RESULT

Ninety nursing students were included in the study. More than half of the participants were 21 years old (62,2%). The majority of the participants were female (95,6%), most of them lived alone (53,3%). More than half of the participants has not disease (65,6%).

Table 1.Demographic data characteristics of the respondents (N=90)

No	Characteristics	n	%
1	Age (years)		
	19	2	2,2
	20	18	20,0
	21	56	62,2
	22	14	15,6
2	Gender		
	Man	4	4,4
	Female	86	95,6
3	Living arrangement		
	Alone	48	53,3
	Parents	23	25,6
	Family	19	21,1
4	Disease		
	No disease	59	65,6
	Gastritis	11	12,2
	Allergies	7	7,8
	Asthma	2	2,2
	Others	11	12,2

The effect of the educational program within group

Table 2 show that the participants in the experimental group had significantly higher research self-efficacy group after participating in this program (Z = -5.821; p< .05). Because the variable dit not meet the assumption of parametric statistics, the Wilcoxon sign rank test was used to compare the pre-test and pot-test research self-efficacy score within group. The mean pre-test research self efficacy score of the experimental group was 66.17 (SD = 6.99), and the mean post-test research self-efficacy score was 71.03 (SD = 7.48).

Table 2. Comparison of the pre-test and post-test research self-efficacy score within the experimental group (N=90)

Research self-efficacy score	Experimental group (n=90)			
	Mean	SD	Z	p
Pre-test	66.17	6.99	-5.821	.000
Post-test	71.03	7.48		

Z = wilcoxon signed rank test; df = 25

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DISCUSSION

The results of this study demonstating that participating in the educational program resulted significant improvemnet the student's research self-efficacy. Their self-efficacy significantly improved from the pre-test to the post-test (Table 2).

The present study evaluated the improvement the research self-efficacy after four week intervention program. There were some factor that contribute the effectivenes of the program because this study used four source of self efficacy (Bandura, 1997) such as mastery experience, vicarious experience, verbal persuasion and psychological and emotional states in developing the program. Previous study also found the significant effectiveness enhancing student's self-efficacy by using four source of self-efficacy in the educational program ($t_{(35)} = -5.02$, $p < .001$) ((juanita, jittanoon, boonyasopun, 2020).

In this study, the information that had been given to the participant was about the research methodology and discuss about undergraduate thesis guidance process. Meerah (2010) concluded that supplementary workshops and specific research training tailored to individual student needs can be beneficial. Payne and Israel (2010) stated that the students may also be encouraged to use all available resources, consult with peers, and complete additional study to encourage greater understanding of relevant material.

In the current study used the role model as the vicarious experience. The model was the students who successfully complete their thesis on time, the students can managed their barrier when completing the thesis. Medaille, Beisler, Tokarz, and Bucy (2022) found the students interaction with advisors and peer could suggest that vicarious experience, that is observational learning may play a significant role in the thesis writing experience. Jenson et al (2011) state that self-efficacy can also be enhanced through vicarious experience by sharing successful examples of work completed by previous students. Similarly with Juanita, Jittanoon, and Boonyasopun (2020) the study used role model to give motivation to the students to performing their task, the role model was a women who was successfull in performing the task and cope the barrier.

In order to resolve the psychological and emotional states of the students the current study give health education about stress and time management in terms of completing the undergraduate thesis and give reinforcement positif when the students can manage their stress. Panadero, Tapia, and Huertas (2012) stated detailed and constructive feedback that is delivered in a timely manner can reinforce learning and enhance self-efficacy. It is also important to identify when students experience negative emotions about their studies and share strategies to reduce these reactions (Schunk & Pajares, 2009).

Study conducted by Medaille, Beisler, Tokarz, and Bucy (2022) found that the student had both positive and negative emotional states related to their thesis. Negative emotions occured during periods of uncertainty, the student said "scary", "stressful" and "overwhelming". Positive emotions occured during moments when students sensed a breakthrough in their work. At these times, students reported feeling "excited," "relieved," and "confident." Most students expressed a sense of accomplishment as they neared completion of their thesis.

CONCLUSIONS

In conclusion, the educational program in the current study significantly enhanced research self-efficacy among nursing students. Most of the students satisfaction with the program, and felt more confident in writing their thesis. This indicated that the program implemented in this study was effective and appropriate in the Indonesian students. Therefore, it was needed to conduct this program in another school in order to enhance the research self-efficacy among students.

DECLARATION OF CONFLICTING INTEREST

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AUTHORS' CONTRIBUTIONS

All authors contributed equally to the conception, design, data collection, analysis, and writing of this manuscript.

CONFLICT OF INTEREST

The Authors declares that there is no conflict of interest

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