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THE EFFECT OF EDUCATION ON THE LEVEL OF ELDERLY INDEPENDENCE ON THE SKILLS OF HEALTH CADRES IN THE PUSKESMAS BERBAH

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ABSTRACT

Background: One indicator in the Minimum Service Standards (SPM) for the elderly is an assessment of the level of independence of the elderly, which can be performed by health cadres. Unfortunately, the knowledge of the cadres is not optimal, requiring the role of community nurses to educate them.
Purpose: To determine the effect of education on the level of independence of the elderly concerning the skills of health cadres in the Puskesmas Berbah.
Methods: Quantitative study using a quasi-experimental one-group pretest and posttest design. A proportionate stratified random sampling technique was used, and data were analyzed using the Wilcoxon test.
Results: The average age of the cadres was between 41 and 60 years, and all were female. The sample size was 32 cadres. The instrument was valid with a α value of 0.9. The analysis of the effect of education on the skills to measure the level of independence of the elderly yielded a p-value of 0.000 ($\alpha < 0.05$).
Conclusion: Cadres' knowledge and skills significantly improved after SKILAS education and the level of independence of the elderly.
Keywords: *Education; Independence; Elderly; Nurses*

INTRODUCTION

By 2030, it is estimated that at least 1 in 6 people in the world will be 60 years of age or older (WHO 2024). Based on the Minister of Health Regulation No. 6 of 2024, every citizen aged 60 years and over has the right to receive standard elderly health services. In this case, the district/city government has an obligation to provide health services for the elderly in the form of education and regular health screening, at least once a year, to all elderly residents in its work area (Indonesia 2024). In Sleman, several sub-districts have not been able to meet the target coverage of elderly health services according to the Minimum Service Standards (SPM). One of the indicators in this SPM is an examination of the level of independence of the elderly. Therefore, the role of community nurses is needed to provide education to health cadres. Based on the background described, the formulation of the problem in this study is: "Is there an influence of education on the level of independence of the elderly on the skills of health cadres?"

MATERIALS AND METHODS

This research is included in quantitative research using categorical data with a quasi-experimental research design with one group pretest and posttest design. The technique used was proportionate stratified random sampling and statistical data analysis using the Wilcoxon test. The sample size was 32 cadres. The measurement distance between the pretest and posttest was 90 minutes with a questionnaire and observation sheet. The research location was conducted in the hall of Puskesmas Berbah on June 2 and 3, 2025, by taking secondary data from the Puskesmas Berbah profile in 2024.

The population in this study were health cadres who were responsible for examining the elderly at 16 integrated health posts (posyandu) in Tegaltirto village, a total of 86 cadres. The sample size was 32 cadres. Validity and reliability tests using expert judgment, the results of the expert instrument test are 0.9, which means it is valid and reliable so it is suitable for use in research.

RESULTS

The research was carried out on June 2–3, 2025, at the Puskesmas Berbah hall.

1. Respondent Characteristics Data

a. Age

Table 1. Frequency Distribution of Cadre Ages in the Puskesmas Berbah, June 2025

Age	frequency (n)	%
Early Adulthood (18 - 40 years)	4	13
Middle Adulthood (41 - 59 years)	28	88
Total	32	100

Source: Processed research results, 2025

Table 1 shows that the majority of respondents were middle adults, with 28 respondents (88%), while the lowest number of respondents were early adults, with 4 respondents (13%).

b. Gender

Table 2. Frequency Distribution of Gender of Cadres in the Puskesmas Berbah, June 2025

Gender	frequency (n)	%
Perempuan	32	100
Total	32	100

Source: Processed research results, 2025

Table 2 shows that all respondents were female, totaling 32 (100%).

c. Highest level of education

Table 3. Profile Data of Cadres in the Puskesmas Berbah, June 2025, Based on highest level of education

Respondent Education	frequency (n)	%
Junior High School	4	13
Senior High School	23	72
University	5	16
Total	32	100

Source: Processed research results, 2025

Table 3 illustrates the characteristics of the study respondents' profiles based on their most recent education. Of the 32 respondents who were the research sample, the results of this study showed that 4 (13%) respondents had completed junior high school education, 23 (72%) respondents had completed high school education, and 5 (16%) respondents had completed tertiary education. These results show that most respondents had a high school education.

d. Profile of Health Cadres in the Puskesmas Berbah, June 2025, by Length of Service

Table 4. Profile of Health Cadres in the Puskesmas Berbah, June 2025, by Length of Service

Length of Service	frequency (n)	%
0.5-4 years	11	34
5-10 years	7	22
11-30 years	14	44
Total	32	100

Source: Processed research results, 2025

Table 4 shows that the highest length of service as a cadre was 11-30 years, with 14 cadres (44%), while the lowest number was 5-10 years, with 7 cadres (22%).

e. Data on the Skills for Assessing the Level of Independence

Table 4.8. Pretest-Posttest Scores and the Influence of Skills for Examination of Independence Levels on Elderly Cadres in the Puskesmas Berbah

Skill lever	Nilai				Wilcoxon (p value)
	Pretest	%	*Posttest*	%	
High	0	0	32	100	0.000
Moderate	0	0	0	0	
Poor	32	100	0	0	
Total	32	100	32	100	

Source: Processed research results, 2025

Table 4.8 shows that 0 respondents (0%) had high skill levels in the pretest, and 32 respondents (100%) had low skill levels in the pretest. Meanwhile, the high skill level score in the post test was 32 respondents (100%) and the low skill level score was 0 respondents (0%). The results of the analysis using the Wilcoxon Test obtained a p-value = 0.000 ($\alpha<0.05$), so there was a difference in the independence examination skills carried out by respondents before and after the intervention was given.

DISCUSSION

1. Respondent Characteristics
   a. Respondent Age

      Based on the research data, the characteristics of respondents by age group indicate that the largest number of respondents were middle adults (41-59 years old), representing 28 respondents (88%), while the lowest number of respondents were early adults, representing 4 respondents (13%). Age affects a person's comprehension and thought patterns, the more developed the comprehension and thought patterns, the better the knowledge obtained (Notoatmodjo 2014). In middle adulthood, individuals independently adjust to life and social expectations. This age is also the age of adulthood where cadres have better rational thinking abilities compared to young cadres so that it is easy for them to understand information (Rahyanti and Sriasih 2022).

   b. Gender

      Data collection results indicate that all respondents were female, totaling 32 (100%). Women as Posyandu cadres have a strategic role in the community. The strategic role of women in this context is not only as recipients of information but also as disseminators of knowledge and skills to society (Juanto et al. 2024). Women are also more diligent in seeking information related to their own health, so this influences their involvement in

integrated health post activities (Islamarida, Dewi, and Feriyamti 2022).

c. Highest Level of Education
Data collected from the 32 respondents in this study showed that the majority of respondents (72%) had a high school education. A person who is highly educated will be better able to understand any information. A person's high level of education will influence their understanding of knowledge about elderly health screening (Notoatmodjo 2014).

d. Length of Service as a Cadre
Data collection results indicate that the most frequent length of service as a cadre was ≥ 10 years, with 16 respondents (50%). Long working periods also provide experience so that it will be seen that when carrying out tasks, you have more mastery and do not need much guidance. Meanwhile, those who do not have much experience or are new must be guided in doing their work (Suparyanto dan Rosad 2020).

e. The Effect of Skills for Measuring the Level of Independence of Elderly People Before and After Intervention
This study aims to determine the effect of skills for assessing the level of independence of elderly people before and after education is provided to health cadres in Tegaltirto village. Before providing educational intervention, pre-intervention observations were carried out on the skills aspect using an observation sheet regarding the examination of the level of independence of the elderly. The results before the intervention were given showed that 32 respondents (100%) had inadequate skills. After the intervention was given, there were changes with the result that 32 respondents (100%) had high skills. The results of the analysis using the Wilcoxon Test obtained a p-value = 0.000 ($\alpha<0.05$), so there was a difference in the level of independence skills of the elderly before and after the intervention was given.
In the dedication of Yulie Anditha, Permana Dimas Putra, Cahyaningsih, & Sihabul Fudhula (2021), it was stated that the empowerment and coaching activities for elderly Posyandu cadres carried out provided benefits in increasing cadre understanding and increasing cadre participation in early detection of risks and symptoms of disease and disease prevention in the elderly. Through empowerment activities, it can be shown that the quality of life of the elderly is improving, therefore these empowerment activities have reaped many benefits from several related parties, especially at the elderly posyandu itself. (Yulie Anditha et al. 2021). Seeing these results, a health cadre must continue their role in further screening all elderly people in their respective areas, so that it is hoped that they will be able to achieve well-being for the elderly in the future (Page and Erviana 2023).

CONCLUSIONS

1. The majority of health cadres who have attended the education are in the age range of 41-59 years, with a high school education level, and have been a cadre for more than 10 years.
2. There was an increase in skills from 0% to 100% high skills regarding the examination of the level of independence of the elderly before and after education was carried out on health cadres in Tegaltirto Village.
3. The results of this study can be the basis for developing policies or programs for empowering cadres at the community level, particularly in terms of elderly health screening training. It is necessary to develop training modules that are simple, easy to understand, and appropriate to local conditions.

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