Original Articles

Reliability of Modification Questionnaire of Knowledge Level about Anemia in Adolescent

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Abstract
Background: The problem that is often experienced by young women is anemia. This anemia condition causes them to feel lethargic, dizzy, and a pale face. This situation causes them to be less eager to carry out activities and interfere with their learning concentration.
Objective: This study aimed to determine the reliability test results of the questionnaire on the level of knowledge about anemia in adolescents.
Methods: This study used a cross-sectional study method. This research was conducted on February 28, 2021. The study population was all adolescents in the Islamic Boarding School of Tahfizh Putri Alfirdaus Hidayatullah, Sekardangan, Sidoarjo. The sampling technique used was total sampling. The sample size of the study was 24 adolescents. This study used a modified questionnaire for adolescent knowledge about anemia. The questionnaire used in this study only used 8 items from the original questionnaire. The data analysis carried out was Mean, Standard Deviation, and Cronbach's Alpha.
Results: Based on the results of the reliability test on the adolescent knowledge level questionnaire, it was found that Cronbach's Alpha was .594. This illustrates that the questionnaire is good enough to be used as an instrument in research.
Conclusion: A modified questionnaire about the level of adolescent knowledge about anemia can be used in a study.

INTRODUCTION

Adolescents are a period of transition to adulthood. During this period there were many changes in adolescents, physically, psychologically, and psychosocial (Laura, 2012; Sofia & Adiyanti, 2014; Firdaus et al., 2018). In this transitional period, young women are often faced with the risk of developing anemia. This is because they have menstruation every month. Menstrual conditions can increase the risk of anemia (Basith et al., 2017). Young women will experience lethargy, dizziness, and pale faces when they are anemic. This resulted in a decrease in their concentration and motivation to learn (Indartanti & Kartini,

2014). Based on this, a young woman is expected to have a level of knowledge that is more related to the incidence of anemia. To determine the level of knowledge of young women, a questionnaire on the level of adolescent knowledge about anemia is needed. On the basis of this situation, the researcher wanted to test the reliability of a questionnaire with existing knowledge of anemia, so that it was in line with the targets in this study, namely young women.

METHODS

Study Design

The research design used was a cross-sectional study.

Settings

The research was conducted on February 28, 2021 at the Islamic Boarding School of Tahfizh Putri Alfirdaus Hidayatullah, Sekardangan, Sidoarjo.

Research Subject

The population of this study were all young women in the Islamic Boarding School of Tahfizh Putri Alfirdaus Hidayatullah, Sekardangan, Sidoarjo. This study used total sampling, so the population of this study was used as the research sample. The sample size in this study were 24 young women. The variable in this study is the level of knowledge of adolescents about anemia.

Instruments

The instrument used in this study was a modification of the knowledge level questionnaire about anemia that had been used by Zulaekah (2007). The questionnaire in this study amounted to 8 items, where the domains in the questionnaire were the definition, signs and symptoms, and how to prevent anemia. The questionnaire is in the form of multiple choice, where the wrong answer will be given a value of 0 and correct answers will be given a value of 1. After that, the data collected is categorized into a good level of knowledge with the number of correct answers as much as 6-8, the level of knowledge is sufficient with the number of correct answers as many as 4-5, and the level of knowledge is less with the number of correct answers ≤ 3.

Data Collection

Data collection was carried out by distributing questionnaires to respondents directly. In the data collection process, researchers still pay attention to health protocols. Researchers continue to use masks, maintain distance, and use latex gloves in data collection.

Data analysis

The data analysis carried out in this study were Mean, Standard Deviation, and Cronbach's Alpha using the SPSS version 21 application.

Ethical Consideration

This research has received approval from the Institute for Research and Community Service of Health Polytechnic Kerta Cendekia, Sidoarjo with the assignment number: 032/SPPD/D/II/2021. In addition, this research has also received approval from the Islamic Boarding School with letter number: 007/BMH/024/02/2021.

RESULTS

Characteristics of Respondents

Table 1. Description of Adolescents in the Islamic Boarding School of Tahfizh Putri Alfirdaus Hidayatullah, Sekardangan, Sidoarjo on February 28, 2021.

Characteristic of Respondents	Number (n)	Percentage (%)
Age (M = 13.25, SD = 1.073, Min = 12, Max = 16)		
12 years old	5	20.8
13 years old	13	54.2
14 years old	2	8.3
15 years old	3	12.5
16 years old	1	4.2
Getting Information Before (M = .71, SD = .464)		
Never	7	29.2
Ever	17	70.8
Source of Information (M = 3.50, SD = 3.107)		
Never	7	29.2
Teacher	3	12.5
Friends	1	4.2
Media Online	2	8.3
Magazine	2	8.3
Health Workers	0	0.0
Others	9	37.5

Sources: Primary Data of Questionnaire, 2021

Based on the data in table 1, it is found that most of the respondents were 13 years old as many as 13 respondents (54.2%) and the majority of respondents had previous information related to anemia as many as 17 respondents (70.8%). Respondents who had received information about anemia were not at all exposed to information from health workers.

Description of Items of Modification of Knowledge Level Questionnaire about Anemia in Adolescent

Table 2. Description of Items of Modification of Knowledge Level Questionnaire about Anemia in Adolescent at the Islamic Boarding School of Tahfizh Putri Alfirdaus Hidayatullah, Sekardangan, Sidoarjo on February 28, 2021.

Items		Mean	SD
1.	Anemia is a disease caused by….	.96	.204
2.	Vegetables that contain lots of iron….	.50	.511
3.	One sign of anemia….	.96	.204
4.	Complaints that often arise in children who suffer from anemia….	.96	.204
5.	The consequence of anemia is….	.96	.204
6.	Nutrients used to treat anemia….	.75	.442
7.	The way to prevent anemia is….	.96	.204
8.	Healthy and nutritious eating habits for….	.42	.504

Sources: Primary Data of Questionnaire, 2021

Based on table 2, it obtained the lowest Mean value of .42 and the highest Mean value of .96.

Analysis of Reliability of Modification of Knowledge Level Questionnaire about Anemia in Adolescent

Table 3. Analysis of Reliability of Modification of Knowledge Level Questionnaire about Anemia in Adolescent at the Islamic Boarding School of Tahfizh Putri Alfirdaus Hidayatullah, Sekardangan, Sidoarjo on February 28, 2021.

Variable	Min	Max	Mean	SD	Cronbach's Alpha	r-table	Level
Knowledge Level about Anemia in Adolescents	3	8	6.46	1.382	.594	.432	Good Knowledge

Based on table 3, it is found that Cronbach's Alpha from the Modification of Knowledge Level Questionnaire about Anemia in Adolescents is .594. The data in table 3 also shows that the respondent's level of knowledge has a good level of knowledge about anemia (M = 6.46; SD 1.382; Min = 3; Max = 8).

DISCUSSION

The description of items obtained the highest Mean value of .96 and the lowest Mean value of .42. The highest mean value (M = .96) is obtained on several questions, including questions about the understanding of anemia, signs, symptoms, and consequences when suffering from anemia, as well as ways to prevent anemia from becoming severe. Meanwhile, the lowest Mean value (M = .42) was obtained on questions about healthy and nutritious eating habits to prevent anemia.

Respondents in this study had a good level of knowledge about anemia (M = 6.46; SD 1.382; Min = 3; Max = 8) because the majority of respondents as many as 17 respondents (70.8%) had previously received information about anemia. The reliability value of the questionnaire used in this study was Cronbach's Alpha .594. Based on the value of r table (DF = n-2) with a probability level of 5%, the figure is .432 (Sugiyono, 2010). Based on this, the Cronbach's Alpha value .594 > r table value .432, it can be concluded that the modification of the questionnaire on the level of adolescent knowledge about anemia can be used in a research.

CONCLUSION

The results of the reliability test that have been carried out have shown that the modified questionnaire for the level of adolescent knowledge about anemia can be used in research in the community.

LIMITATION

This study has limitations related to the number of samples. This limitation is because the existing population is divided into 2, namely part of the population is used for the implementation of the reliability test of the questionnaire and partly used to determine the effect of the treatment given. In addition, the research is only limited to one Islamic boarding school. In the future, it is hoped that further research will be carried out to test the reliability of the questionnaire with a larger number of samples and spread from various schools.

CONCLUSION

The results of the reliability test that have been carried out have shown that the modified questionnaire for the level of adolescent knowledge about anemia can be used in research in the community.

AUTHOR CONTRIBUTION

Kusuma Wijaya Ridi Putra: Collected literature, searched for questionnaires, compiled manuscripts, and conducted data analysis

Riesmiyatiningdyah: Collected data, tabulated the data dan coding, and compiled manuscripts

Agus Sulistyowati: Collected the data and compiled manuscripts

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CONFLICT OF INTEREST

There is no conflict of interest in this research.

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