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Validation of Questionnaires and the Effect of Educational Videos on the Knowledge of Hyperlipidemia Patients at Banjarbaru Utara Primary Health Care

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Abstract: Hyperlipidemia patients have a high risk of cardiovascular disease and stroke. Low patient knowledge causes therapy failure. Education can be provided to overcome this problem. No questionnaire instrument can measure the level of knowledge of hyperlipidemia patients. The level of knowledge of hyperlipidemia patients at Banjarbaru Utara Primary Health Care has never been studied. The research aimed to validate the questionnaire and determine the effect of educational videos on patient knowledge at the Banjarbaru Utara Primary Health Care, Banjarbaru City, South Kalimantan. The research method used to validate the questionnaire was cross-sectional, while to determine the effect of educational videos on the patient's level of knowledge using a quasi-experimental method using One Group Pre – Post Design. The research was conducted in January – March 2024 at Banjarbaru Utara Primary Health Care. The study involved eight experts, 40 patients in questionnaire validation, and 100 patients to determine the effect of educational videos. The results of questionnaire content validation show that the Content Validity Ratio (CVR) value is in the range of 0.750 – 1.000, while the Content Validity Index (CVI) value is in the range of 0.875 – 1.000. The validity test with Person Correlation shows that ten out of 20 statements on the questionnaire are considered valid (>0.312). The Cronbach's Alpha value is 0.655, indicating the questionnaire is reliable. The patient's knowledge before being given the educational video had a score of 5.96 (scale 1 – 10), while after it, it had a score of 8.73. There was an increase in the level of knowledge, reaching 46.47%. The conclusion is that the Hyperlipidemia Knowledge Questionnaire (HKQ), which consists of 10 statements, is declared valid and reliable. Educational videos significantly influence (p-value 0.000) in increasing knowledge of hyperlipidemia patients.
Keywords: Educational videos; hyperlipidemia; knowledge; validation.

INTRODUCTION

Based on data from the Ministry of Health of the Republic of Indonesia, it is known that the presentation of patients visiting Primary Health Care with high cholesterol levels in Indonesia reaches 42%[1]. The proportion of hyperlipidemia in newly diagnosed type 2 diabetes mellitus patients reached 67.7%[2]. There is a strong relationship between hyperlipidemia and the incidence of cardiovascular disease and

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stroke. Untreated hyperlipidemia patients are at high risk of experiencing cardiovascular disease and stroke[3].

Problems often occur in hyperlipidemia patients are related to medication adherence[4]. Hyperlipidemia patients who do not adhere to taking medication cause the recovery rate to decrease. This is due to patients' concerns about the emergence of side effects from drugs, having experienced side effects, and using many drugs[5]. This problem can be overcome by providing education to patients[4,6]. Education can increase patient knowledge and understanding of disease and treatment[7]. Education can be carried out using audio-visual media, which makes it easier for patients to understand the information provided.

The level of knowledge of hyperlipidemia patients is related to adherence to taking medication. Patients with a low level of knowledge of hyperlipidemia have a more significant potential for non-adherence to treatment[8]. Knowledge can increase patient awareness in improving lifestyle, thereby supporting improved therapeutic outcomes[7]. Patients with good knowledge will make it easier to identify the problems they feel so that they can be resolved immediately[9]. Treatment problems identified early can make them easier to treat.

Evaluation in clinical practice is needed to determine the patient's level of knowledge. Increased patient knowledge can be measured using a questionnaire[10]. Questionnaires can be developed logically, structured, and based on relevant literature. Questionnaires must be validated through various assessments to be meaningful, reliable, and applicable[11]. The results obtained can be trusted if the measuring instrument has been validated[12]. Liang et al. measured the dietary knowledge of dyslipidemia patients[13]. Lim et al. studied cholesterol knowledge and management with a hospital patient population, not hyperlipidemia patients[14]. Hariadini et al. studied the knowledge of hyperlipidemia patients with a population of patients visiting the pharmacy. The questionnaire instrument does not measure knowledge of the lifestyle of hyperlipidemia patients[15].

Research on the hyperlipidemia patient population at Community Health Centers by exploring knowledge about the disease, treatment, lifestyle, complications, and the questionnaire validation process involving experts is still limited, so this research aims to validate the questionnaire and determine the effect of educational videos on patient knowledge at the Banjarbaru Utara Primary Health Care, Banjarbaru City, South Kalimantan, Indonesia.

MATERIALS AND METHODS

Research Design

This research was carried out in two stages: the first stage of creating and validating a questionnaire, and the second stage was to determine the effect of providing educational videos on the knowledge of hyperlipidemia patients. The questionnaire validation stage used a cross-sectional method, while the second stage used a quasi-experimental method using One Group Pre – Post Design.

Ethical Clearance

This research has received an ethical certificate. Submission of an ethical suitability certificate will be made to the Ethics Committee of the University of Muhammadiyah Banjarmasin with certificate number 672/UMB/KE/XII/2023.

Time and Place of Research

The research was conducted in January – March 2024. The research location was Banjarbaru Utara Primary Health Care, Banjarbaru City, South Kalimantan Province.

Population and Sample

The study population was hyperlipidemia patients seeking treatment at Banjarbaru Utara Primary Health Care. Sample selection used a purposive sampling technique according to the research objectives. Patients involved were asked to fill out informed consent. The research involved eight experts, three general practitioners, and five pharmacists to validate the questionnaire content. In the validation stage, the questionnaire involved 40 adult patients, and in the second stage, to determine the effect of providing educational videos, it involved 100 different patients. Inclusion criteria were patients aged over 18 years who were diagnosed with hyperlipidemia and visited Banjarbaru Utara Primary Health Care.

Making Questionnaires

The primary literature used by the Dyslipidemia Management Guide in Indonesia was created by the Indonesian Endocrinology Association[2] and the Dyslipidemia Management Guide was created by the Indonesian Association of Cardiovascular Specialist Doctors[16]. The questionnaire will be aimed at assessing the level of knowledge of hyperlipidemia patients so that the statements can be made to adapt to the patient's knowledge needs. Statements are made in four categories: disease, treatment, lifestyle, and complications. The total number of statements made was 20 statements.

Questionnaire Validity

Content validity was carried out by involving three general practitioners and five pharmacists to assess the suitability of the questionnaire created using the Content Validity Ratio (CVR) and Content Validity Index (CVI) parameters. Validation and reliability tests involved 40 adult hyperlipidemia patients seeking treatment at the North Banjarbaru Primary Health Care. The parameters used are difficulty level analysis, differentiating power analysis, discriminatory item test, and reliability test. A valid and reliable questionnaire is called the Hyperlipidemia Knowledge Questionnaire (HKQ)

Patient Knowledge Level

The valid questionnaire was then used to determine the effect of educational videos on the patient's level of knowledge. The stages of measuring the patient's level of knowledge are:

1. Pretest

The patient will fill out the Hyperlipidemia Knowledge Questionnaire (HKQ) sheet. For patients who have difficulty reading or writing, researchers assist in filling out the questionnaire.

2. Educational Video Intervention

The patient then watches an educational video for hyperlipidemia patients. The hyperlipidemia educational video consists of four parts: disease, treatment, lifestyle, and complications. Educational video in animated form with a duration of 4 minutes 46 seconds. The educational video can be accessed at https://bit.ly/Video-Hiperlipidemia or scan the barcode below.

Figure 1. Educational Video Display and Educational Video Access Barcode

3. Posttest

Patients who have watched the educational video are given a 5-minute break and then asked to fill out the Hyperlipidemia Knowledge Questionnaire (HKQ) sheet.

Data Analysis

Content validity includes validity testing using Lawshe's Content Validity Ratio (CVR) and Content Validity Index (CVI) analysis. Testing involved three general practitioners and five pharmacists. The CVR value is considered valid if it gets a minimum score of 0.750[17], while the acceptable CVI value is at least 0.830.

The difficulty level and differentiating power of the questionnaire was calculated based on research by Damayanti et al.[18]. Validity with Person Correlation was measured using SPSS 26. If the correlation coefficient value is more than 0.3, it is considered to have high discriminatory power. The reliability of the questionnaire was assessed using the Cronbach's Alpha coefficient parameter. This coefficient was obtained through a test using SPSS 26. The results are reliable if the Cronbach's Alpha coefficient is > 0.6.

The influence of knowledge level was analyzed statistically using SPSS by comparing the pretest and posttest results. The homogeneity test used Levene's Test, while the normality test used the Shapiro-Wilk Test. Next, the Mann-Whitney test was carried out on both data.

RESULTS AND DISCUSSION

Content Validity Test

The questionnaire, consisting of 20 statements, was then subjected to content validation. Content validation was carried out by eight experts composed of three general practitioners and five pharmacists to assess the questionnaire that had been created. The characteristics of experts are presented in the table below. The characteristics of experts are presented in the Table 1.

Experts assess the suitability of the content in each statement. Appropriate statements receive a score of 1, while inappropriate statements receive a score of 0. The results of content validation are presented in the form of CVR and CVI values according to the Table 2.

Based on content validation by eight experts, the CVR value was 0.750 – 1.000, while the CVI value was in the range of 0.875 – 1.000. Content validation provides an overview of the extent to which questions or statements are considered relevant to assess a target or objective[19]. The parameters used to assess content validation in this research are the CVR and CVI values. The CVR value shows the ability of an item to be accepted as part of a questionnaire. In contrast, the CVI value is the average number of

items that can be part of a questionnaire instrument[20]. If the CVR and CVI values from the questionnaire are below the required limits, then the statements in the questionnaire must be removed. The results of this study show that all statement items are above the CVR Critical Value of 0.750[17] and the CVI Critical Value of 0.830[21]. Content validation shows that all questionnaire statements are valid.

Table 1. Characteristics of Experts

No.	Characteristics		Total	Percentage
1.	**Profession**			
	General Practitioner		3	37.5%
	Pharmacist		5	62.5%
		Total	8	100%
2.	**Age**			
	21 – 30 Years		2	25.0%
	31 – 40 Years		3	37.5%
	41 – 50 Years		3	37.5%
		Total	8	100%
3.	**Gender**			
	Male		2	25.0%
	Female		6	75.0%
		Total	8	100%

Table 2. Content Validity Test Results

Items	CVR Critical Value	CVR Value	CVI Critical Value	CVI Value
Statement 1	0,750	1,000	0,830	1,000
Statement 2	0,750	0,750	0,830	0,875
Statement 3	0,750	1,000	0,830	1,000
Statement 4	0,750	0,750	0,830	0,875
Statement 5	0,750	0,750	0,830	0,875
Statement 6	0,750	1,000	0,830	1,000
Statement 7	0,750	1,000	0,830	1,000
Statement 8	0,750	0,750	0,830	0,875
Statement 9	0,750	1,000	0,830	1,000
Statement 10	0,750	0,750	0,830	0,875
Statement 11	0,750	0,750	0,830	0,875
Statement 12	0,750	1,000	0,830	1,000
Statement 13	0,750	0,750	0,830	0,875
Statement 14	0,750	1,000	0,830	1,000
Statement 15	0,750	0,750	0,830	0,875
Statement 16	0,750	1,000	0,830	1,000
Statement 17	0,750	0,750	0,830	0,875
Statement 18	0,750	0,750	0,830	0,875
Statement 19	0,750	0,750	0,830	0,875
Statement 20	0,750	0,750	0,830	0,875

Average	**0,750**	**0,850**	**0,830**	**0,925**

Validity and Reliability

The questionnaire that has been validated for content is then tested on respondents. Patients were selected randomly and according to the patient's consent to fill out the questionnaire. The characteristics of the respondents are presented in the Table 3.

Table 3. Characteristics of Respondents in the Questionnaire Validity Test

No.	Characteristics		Total	Percentage
1.	**Usia**			
	21 – 30 Years		6	15%
	31 – 40 Years		12	30%
	41 – 50 Years		10	25%
	51 – 60 Years		5	12,5%
	61 – 70 Years		7	17,5%
		Total	40	100%
2.	**Gender**			
	Male		9	22,5%
	Female		31	77,5%
		Total	40	100%
3	**Education**			
	Elementary school		3	7,5%
	Junior High School		5	12,5%
	Senior High School		7	17,5%
	Diploma		7	17,5%
	Undergraduate		15	37,5%
	Masters		2	5%
	Doctor		1	2,5%
		Total	40	100%
4.	**Employment**			
	Working		28	70%
	Not Working		12	30%
		Total	40	100%
5	**Distance**			
	$\leq$ 5 km		30	75%
	> 5 km		10	25%
		Total	40	100%

Respondents were dominated by patients aged 31-40 years (30%) and 41-50 years (25%), female gender (77.5%), undergraduate education level (37.5%), working (70%), and distance home to Primary Health Care less than 5 kilometers (75%). The research data is supported by references stating that the incidence of hyperlipidemia begins at the age of over 30 years, and the peak occurs at 50 years[22]. In other research, it states that females are the patients who experience the most hyperlipidemia compared to males[23].

Difficulty Level Analysis and Differentiating Power Analysis.

The level of difficulty of the questions is measured using the Difficulty Index. The results obtained are then categorized based on the level of difficulty. The analysis results are presented in the Table 4.

Table 4. Difficulty Index and Differentiating Power Analysis

Items	Difficulty Index		Differentiating Power Analysis	
	Score	Category	Score	Category
Statement 1	0,80	Easy	0,00	Poor
Statement 2	0,40	Intermediate	0,40	Good
Statement 3	0,80	Easy	0,30	Fair
Statement 4	0,80	Easy	0,30	Fair
Statement 5	0,25	Difficult	-0,10	Bad
Statement 6	1,00	Easy	0,10	Poor
Statement 7	0,15	Difficult	0,20	Fair
Statement 8	0,83	Easy	0,25	Fair
Statement 9	0,75	Easy	0,10	Poor
Statement 10	1,00	Easy	0,00	Poor
Statement 11	0,88	Easy	0,15	Poor
Statement 12	0,78	Easy	0,35	Fair
Statement 13	0,80	Easy	0,05	Poor
Statement 14	0,70	Easy	0,30	Fair
Statement 15	0,80	Easy	0,25	Fair
Statement 16	0,98	Easy	0,05	Poor
Statement 17	0,90	Easy	0,15	Poor
Statement 18	0,30	Intermediate	0,40	Good
Statement 19	0,75	Easy	0,30	Fair
Statement 20	0,53	Intermediate	0,25	Fair

Based on the Difficulty Index results, are 15 items in the easy category, three in the medium category, and two in the difficult category. Questions in the easy category dominate the 20 statement items. This is influenced by the characteristics of the respondents involved in this research, who were dominated by respondents with undergraduate education levels (37.%%). A high level of education correlates with the patient's knowledge level, making it easy for patients to answer statements correctly. Items on the questionnaire that have a difficulty index that is too low (<0.15) or too high (>0.85) are excluded from the questionnaire[24].

The differentiating power shows eight statements in the poor category, 7 in the fair category, 2 in the good category, and 1 in the bad category. Statements that fall into the poor category for differentiating power should not be included in the questionnaire. Fair and good category statements are highly recommended for use because they have differentiating power, which is considered to meet the requirements (18). Statements with a discrimination index value of less than 0.2 should be excluded from the questionnaire. One of the factors that influence the discrimination index is the respondent's knowledge[25].

Validity with Person Correlation

A total of 20 Statement items were tested using SPSS to determine the Person Correlation value. The Person Correlation results are compared with the r table to determine the validity of the Statement. The test results obtained ten valid statements with a Person Correlation value above 0.312 at Table 5.

Table 5. Validity Test Results with Person Correlation Parameters

Items	R Table (n = 40)	Person Correlation	Validity
Statement 1	0,312	0,251	No
Statement 2	0,312	0,490	Valid
Statement 3	0,312	0,308	No
Statement 4	0,312	0,405	Valid
Statement 5	0,312	-0,071	No
Statement 6	0,312	0,009	No
Statement 7	0,312	0,213	No
Statement 8	0,312	0,208	No
Statement 9	0,312	0,403	Valid
Statement 10	0,312	0,000	No
Statement 11	0,312	0,388	Valid
Statement 12	0,312	0,292	No
Statement 13	0,312	0,316	Valid
Statement 14	0,312	0,497	Valid
Statement 15	0,312	0,415	Valid
Statement 16	0,312	0,269	No
Statement 17	0,312	0,605	Valid
Statement 18	0,312	0,376	Valid
Statement 19	0,312	0,284	No
Statement 20	0,312	0,388	Valid

Discriminatory test results were obtained using the Person Correlation tes[18]. The Person Correlation value shows that there are 10 statement items that have a value of more than 0.312. Person Correlation value with r table for 40 respondents. A total of 10 statements are valid for use in the questionnaire. Invalid statements have a correlation with the difficulty index and differentiating index of the item.

Reliability Test

Statements that have been tested on respondents are analyzed to determine reliability. The results show a Cronbach's Alpha value of 0.655. Reliability testing is a description of the consistency of measurements carried out on several subjects in the same population. The minimum acceptable Cronbach's Alpha value is in the range of at least 0.5 – 0.7[13]. The higher the Cronbach's Alpha value, the more reliable the questionnaire.

Table 6. Questionnaire Instrument Hyperlipidemia Knowledge Questionnaire (HKQ)

No.	Statment	True	False
Disease			
1.	Hyperlipidemia is only assessed based on the increase in cholesterol levels "*Keadaan hiperlipidemia hanya dinilai berdasarkan kenaikan kadar kolesterol saja*"		V
2.	Hyperlipidemia caused by obesity is included in secondary hyperlipidemia "*Hiperlipidemia yang disebabkan obesitas termasuk dalam hiperlipidemia sekunder*"	V	
Treatment			
3.	Simvastatin should be taken during the day "*Simvastatin sebaiknya diminum pada siang hari*"		V
Lifestyle			
4.	Sports that hyperlipidemia patients can do include swimming, cycling, and brisk walking. "*Aktivitas olahraga yang dapat dilakukan pasien hiperlipidemia salah satunya berenang, bersepeda, dan jalan cepat*"	V	
5.	Salmon is good for consumption by hyperlipidemia patients "*Ikan salmon baik untuk dikonsumsi oleh pasien hiperlipidemia*"	V	
6.	Alcohol consumption is not related to the severity of hyperlipidemia "*Konsumsi alkohol tidak berhubungan dengan keparahan penyakit hiperlipidemia*"		V
7.	Smoking is not related to complications that can arise in hyperlipidemia patients "*Merokok tidak ada kaitannya dengan komplikasi yang dapat muncul pada pasien hiperlipidemia*"		V
Complications			
8.	Coronary heart disease can be caused by hyperlipidemia "*Penyakit jantung coroner dapat disebabkan penyakit hiperlipidemia*"	V	
9.	The maximum daily dose of simvastatin is 20 mg "*Dosis maksimum simvastatin setiap hari sebesar 20 mg*"		V
10.	Simvastatin, Fenofibrate, and Gemfibrozil have side effects of weakness or muscle pain. "*Simvastatin, Fenofibrat, dan Gemfibrozil memiliki efek samping lemah atau nyeri otot*"	V	

Valid and Reliable Questionnaire

The results of validity and reliability testing eliminated several statement items, finally there were 10 valid and reliable statements. Valid statements on the questionnaire are presented in the Table 6.

The questionnaire contains ten statements that the patient answers true or false. Each statement answered according to the answer key gets a score of 1; if it is inappropriate, it gets a 0. The total score is in the range 0 – 10. The results are classified based on the level of knowledge, namely 8 – 10 (very good), 6-7.99 (good), 4 – 5.99 (less), 2 – 3.99 (very poor), and 0 – 1.99 (very poor).

The Effect of Educational Videos on Patient Knowledge

A valid questionnaire was then used to determine the effect of educational videos on the knowledge of hyperlipidemia patients at the North Banjarbaru Primary Health Care. The characteristics of the respondents involved are presented in the Table 7.

Table 7. Characteristics of Respondents

No.	Characteristics		Total	Percentage
1.	**Age**			
	21 – 30 Years		14	14%
	31 – 40 Years		38	38%
	41 – 50 Years		32	32%
	51 – 60 Years		7	7%
	61 – 70 Years		9	9%
		Total	100	100%
2.	**Gender**			
	Man		26	26%
	Woman		74	74%
		Total	100	100%
3	**Education**			
	Elementary school		4	4%
	Junior High School		13	13%
	Senior High School		19	19%
	Diploma		22	22%
	Undergraduate		38	38%
	Masters		3	3%
	Doctor		1	1%
		Total	100	100%
4.	**Employment**			
	Working		65	65%
	Not Working		35	35%
		Total	100	100%
5	**Distance**			
	$\leq$ 5 km		78	78%
	> 5 km		22	22%
		Total	100	100%

The characteristics of the patients involved in assessing the influence of educational videos on knowledge mainly were aged 31-40 years (38%), female (74%), undergraduate education level (38%), working (65%), and distance from home to Primary Health Care. Less than 5 km (78%). North Banjarbaru Primary Health Care is

an urban Primary Health Care located in the capital of South Kalimantan Province. This causes the patients who visit dominated by patients of productive age with undergraduate education and work. Other research shows that the age of hyperlipidemia patients is in the final age range of 39 – 65 years, with the highest incidence in married women[26].

Patients were asked to answer questionnaires before the intervention (pretest) and after the intervention (posttest). A valid questionnaire consisting of 10 statements is used; each correct answer will receive a score of 1 point, while incorrect answers will receive 0 points. The intervention provided is an animated educational video equipped with information related to hyperlipidemia. The questionnaire results before and after the intervention based on the average score for each statement item are presented in the Table 8.

Table 8. Average Score for Each Statement

No.	Category	Statement	Average Score	
			Pretest	Posttest
1.	**Disease**	Hyperlipidemia is only assessed based on the increase in cholesterol levels	0.55	0.93
2.		Hyperlipidemia caused by obesity is included in secondary hyperlipidemia	0.70	0.92
3.	**Treatment**	Simvastatin should be taken during the day	0.61	0.93
4.	**Lifestyle**	Sports that hyperlipidemia patients can do include swimming, cycling, and brisk walking	0.59	0.86
5.		Salmon is good for consumption by hyperlipidemia patients	0.47	0.82
6.		Smoking is not related to complications that can arise in hyperlipidemia patients	0.54	0.84
7.		Smoking has nothing to do with complications that can arise in hyperlipidemia patients	0.59	0.84
8.	**Complications**	Coronary heart disease can be caused by hyperlipidemia	0.58	0.85
9.		The maximum daily dose of simvastatin is 20 mg	0.64	0.87
10.		Simvastatin, Fenofibrate, and Gemfibrozil have side effects of weakness or muscle pain..	0.69	0.88
		TOTAL	5.96	8.73

Based on the Table 8, the average score before intervention was 5.96, which is classified as poor (4 – 5.99). Regarding the score for each statement, statements 5 and 6 relating to knowledge of lifestyle have the lowest scores of 0.47 and 0.54 (scale 0 -1), followed by statement number 1 relating to knowledge about disease with a score of 0.55 (scale 0-1). Low knowledge about lifestyle is correlated with awareness of healthy

living. Bad lifestyles, such as low exercise activity and a lack of understanding about healthy lifestyles, influence high cholesterol levels[27]. Cardiovascular patients, such as hyperlipidemia, hypertension, and diabetes mellitus, are known to have a lifestyle as the worst aspect to control[28].

The intervention in the form of an educational video about hyperlipidemia is essential if it is seen from the patient's level of knowledge before the intervention. The results in the Table 8 show that the intervention impacts increasing patient knowledge. The average score on all statement items increased. The highest level of knowledge in the disease category with statement number 1 and the treatment category with statement number 3 have the same score, namely 0.93. Patients understand that the diagnosis of hyperlipidemia is assessed based on several parameters, not only based on total cholesterol levels. Patients also understand that simvastatin should be taken at night.

Table 9. Questionnaire Analysis Results Before - After Intervention

No.	Questionnaire	Average Score (n=100)	Percent Increase	P-Value
1.	Before Intervention	5.96	46.47%	0,000
2.	After Intervention	8.73		

Table 9 show the average questionnaire score before the intervention showed a value of 5.96, while after the intervention, the questionnaire score was 8.73 (scale 1 – 10). There was an increase in the level of knowledge after the intervention of 46.47%. The results of statistical tests using SPSS 26 with the Mann-Whitney Test showed that the P-value was 0.000, which indicated that there was a significant difference between the scores from the questionnaire results before and after the intervention. The research data is supported by references that state that there is a correlation between education and patient knowledge about drug use[29]. Other research states that patient education has a significant effect on increasing knowledge[30]. Research in Singapore involving 1000 respondents showed that public knowledge and awareness of hyperlipidemia and its treatment was very low. Efforts to increase knowledge by implementing health promotion through patient education[14]. Based on the results of this research, education via video has been proven to increase the knowledge of hyperlipidemia patients.

This study has limitations, namely that the population used was hyperlipidemia patients from an urban Primary Health Care background. This research was conducted in Indonesia, so the literature used as a reference for creating the questionnaire came from treatment guidelines in Indonesia. There may be slight differences with other countries. The questionnaire used is an Indonesian language questionnaire, so if it is applied in other countries, adjustments need to be made to the sentence structure. This research implies that the questionnaire in this study can be applied to determine the level of knowledge of hyperlipidemia patients in Primary Health Care. Patients with a low level of knowledge should receive education before undergoing treatment. Screening the patient's level of knowledge can also be carried out and is helpful in increasing medication adherence and the success of therapy. The educational videos used in this research can be used as material to educate patients.

CONCLUSION

Based on this research, the Hyperlipidemia Knowledge Questionnaire (HKQ), which consists of 10 statements, is declared valid. Test results on hyperlipidemia patients showed that educational videos significantly influenced (p-value 0.000) in increasing knowledge of hyperlipidemia patients. Research on the level of knowledge of hyperlipidemia patients should also be carried out in rural Primary Health Care. The level of knowledge of patients in urban and rural areas is very different. Education for hyperlipidemia patients through audiovisual media must be improved because it can increase patient knowledge.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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