

**Original Research****Improving Family Knowledge And Attitudes On Malnutrition Through Family Centered Nursing-Based Modules And Videos****Heryyanoor Heryyanoor<sup>1\*</sup>, Diana Hardiyanti<sup>2</sup>, Melinda Restu Pertiwi<sup>3</sup>**<sup>1,2,3</sup> Departement of Nursing, Stikes Intan Martapura, Banjar, Indonesia**ABSTRACT**

**Background:** Education through media modules and instructional videos can improve families' knowledge of and attitudes toward malnutrition.

**Methods:** This study uses a quasi-experimental research design, involving a pretest-posttest with a control group design. A sample of 74 families, divided into 37 families, were given education using learning modules and videos about malnutrition with family-centered nursing and 37 families as controls. The independent variables are learning modules and videos, while the dependent variables are knowledge and attitudes about malnutrition among families. The 30-question knowledge and attitude questionnaire about malnutrition that was given to families shows that it is valid and reliable. The Wilcoxon test was used to determine changes in the mean values before and after treatment.

**Results:** After receiving treatment, respondents demonstrated an increase in their knowledge and attitudes. The mean value of knowledge increased by more than 30%, while the mean value of attitude statements increased by less than 10%, both of which exceeded the control group. The Wilcoxon *p* (0.001) test results were obtained before and after treatment administration for both groups.

**Conclusion:** Providing education using joint learning modules and videos based on family-centered nursing is effective and can be carried out by nurses to increase family knowledge and attitudes about malnutrition.

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attitude, family-centered nursing, knowledge, learning modules and videos, malnutrition;

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**INTRODUCTION**

Malnutrition is still a problem in the world, especially in the Asia and Africa regions. Malnutrition refers to three major groups, namely *wasting* (low weight for height), *stunting* (low height for age), and *underweight* (low weight for age). Globally, (2020) the incidence of wasting in children under the age of 5 is around 6.7 percent (45.4 million), while the incidence of stunting among children is estimated at 5.7 percent, or 38.9 million children. Malnutrition can increase a child's risk of infection,

exacerbate infection, and delay recovery from illness (UNICEF, WHO, & WORLD BANK, 2021).

In general, cases of nutritional imbalance in children in Indonesia amounted to 17.7%, divided into 13.8% malnutrition and 3.9% undernutrition, which were spread across all regions, including in South Kalimantan, with a prevalence of undernutrition and malnutrition of 24.5% (Risikesdas, 2018). Based on data for 2020, Banjar Regency, which is a district in South Kalimantan, is in first place for undernutrition and severe malnutrition at 11.21% after being in second place in 2018 with 4.8% (Dinkes Prov. Kalsel, 2021).

Based on the results of a preliminary study conducted by researchers on 30 respondents who were randomized from 5 villages in Astambul District using the interview method, more than 75% said there was a problem of malnutrition; malnutrition, including stunting, is still a problem in their *area*. Also, more than 80% of the people who answered the survey said they didn't fully understand malnutrition and how to stop it. Factors causing malnutrition can be seen in various conditions and are often associated with economic problems Tette et al., (2015), such as inadequate household food security, insufficient energy, and protein intake (Wuyeh et al., 2019).

Other causes, such as education Abuya et al., (2012) and parental behavior Mahmood et al., (2021), are especially important in implementing family tasks (Adriani, 2016). Malnutrition has a negative impact on physical, mental, and cognitive growth as well as intelligence (IQ) (Coates et al., 2011). The worst-case scenario is death (Walson et al., 2018).

The Indonesian government continues to work to reduce cases of malnutrition and *stunting* by increasing Posyandu activities to monitor the nutritional status of toddlers. Activities are carried out in a programmed manner by the District or City Health Office through Puskesmas health workers by involving the entire community, assisted by village cadres. However, these efforts are still not optimal, so the role of nurses in empowering families must be increased.

Family empowerment carried out by nurses is an effort to apply the concept of *family-centered nursing* on the basis of the family being the basic unit in caring for family members Nursalam, (2017) so it needs to be involved in a real way. Health education using modules and videos, among other things, is used to help families learn more about health and change the way they think about it. The results of the research by Shapu et al., (2020) stated that health education influences a person's knowledge, attitudes, and behavior.

The media used, such as modules, are very relevant as health education material (Chen et al., 2015). Videos used in educational media can also help people learn more (Mochoni et al., 2020). The differentiating factor in this study was the implementation of the module on optimizing family understanding and attitudes about malnutrition based on the concept of *family-centered nursing*, which had previously been registered under the Benefits of Intellectual Property Rights, and learning videos about malnutrition. So this study aims to analyze the effectiveness of using the two media together with *family-centered nursing*.

## **MATERIALS AND METHOD**

The research design used was a quasi-experimental *pretest-posttest with a control group design*. A sample of 74 families was divided into 37 families, and the experimental group provided education using media modules and learning videos with a

*family-centered nursing* approach about malnutrition. While another group of 37 families as the control group given education by delivering material only through group presentations and or leaflets.

The samples were taken by a *random sampling* technique on the basis of sampling based on Charan et al., (2013) and adjustments to calculations using a G-powered computer. The sample participating in this study must meet the inclusion criteria, namely being able to communicate well using Indonesian or the Banjarese regional language and being willing to receive an education using learning media modules and videos, or only leaflet media for the control group. The independent variables are in the form of the Benefits of Intellectual Property Rights registered modules and learning videos, while the dependent variables are in the form of family knowledge and attitudes about malnutrition.

The instrument used is a questionnaire of family knowledge and attitudes about malnutrition with a family-centered nursing approach. A total of 30 questions or statements have been declared valid and reliable based on the results of the validity and reliability test. The process of initial measurement of knowledge and attitude variables about malnutrition was carried out after obtaining approval from the respondents to obtain the mean value, standard deviation, median, and other values before the intervention.

After three weeks of initial measurements, respondents were then given education about malnutrition using learning module media and learning videos with a family-centered nursing approach. In the control group, initial measurements were also taken after getting permission, but only group presentations and leaflets were used to educate people. Then the variables of knowledge and attitudes about malnutrition were re-measured to determine the change in the mean value that occurred after the intervention was given differently to the two groups of respondents.

The results of measurements taken before and after the intervention were analyzed using a computer program using the paired T-test or the Wilcoxon test as an alternative test. This research has received an ethical certificate from the ethics committee of the Stikes Intan Martapura with number 003/KE/YBIP-SI/VI/2022.

## RESULTS

Some of the things that make up a respondent are the child's gender, age, history of infectious diseases (like febrile seizures, diarrhea, and respiratory tract infections), and the child's health when they were first studied. The parental factors include the main respondents in the family: age, education level, occupation, monthly income, and experience in obtaining previous information about malnutrition. The following is the frequency based on Table 1:

**Table 1.** Characteristics of Respondents Based on Child Factors and Parental Factors who were treated and as controls (n=37)

Characteristics	Treatment (n=37)		Control (n=37)		
	Frequency	%	Frequency	%	
Child Factor					
	Gender				
	Male	16	43,2	19	51,4
	Female	21	56,8	18	48,6
Age	0-24 month	12	32,4	14	37,8
	25-59 month	25	67,6	23	62,2
History of Illness	Once	17	45,9	19	51,4

Characteristics		Treatment (n=37)		Control (n=37)		
Related to Infection						
Child's current condition	Never	20	54,1	18	48,6	
	Healthy	32	86,5	29	78,4	
	Sick	5	13,5	8	21,6	
<b>Parental Factor</b>						
Main Respondent	Father	0	0	0	0	
Family	Mother	37	100	37	100	
	Age	17-25 years	10	27	6	16,2
Level of education	26-45 years	27	73	31	83,8	
	Primary School (SD)	Primary School (SD)	6	16,2	11	29,7
Middle school (SMP)		14	37,8	12	32,4	
High school (SMA)		12	32,4	12	32,4	
University/college		5	13,5	2	5,4	
Work	Government employees	2	5,4	1	2,7	
	Housewife (Not Working)	35	94,6	36	97,3	
Monthly Family Income	≥Min wage (2,98 Million)	25	67,6	34	91,9	
	< Min Wage (2,98 Million)	12	32,4	3	8,1	
Getting Information	Previous	Once	15	40,5	7	18,9
		Never	22	59,5	30	81,1

Table 1 shows the characteristics of 37 respondents based on the child factor of the main respondent who was given the intervention. The majority had 21 daughters (56.8%), the age of the children was in the range of 25–59 months and 25 (67.6%) had experienced illness related to the disease. The number of infections was 17 (45.9%), and the initial condition at the time of the study was good health for as many as 32 (86.5%).

On the factor of parents who are the main respondents in this study are all mothers (100%), the majority aged in the range of 26-45 years are 27 (73%), the last education level is middle school (SMP) as many as 14 (37.8%), are housewives or do not work as many as 35 (94.6%), the family income in a month above the regional minimum wage of 2.98 million as many as 25 (67.6%), and 15 who have received information about malnutrition before (40.5%). The bivariate test was carried out with the Wilcoxon test to get the difference in the mean scores of knowledge and attitudes of respondents before and after being given an intervention in the form of providing education about

malnutrition by using learning module media and learning videos with a family-centered nursing approach. Respondents were given education by using presentation media and/or leaflets in groups. Test results based on table 2:

**Table 2.** Differences in Mean Scores of Knowledge and Attitudes of Respondents who Get Treatment and Control (n=37)

Variabel	Before		After		p*
	Median (min-max)	Mean=SD	Median (min-max)	Mean=SD	
<b>Treatment (n=37)</b>					
Knowledge	33 (30-38)	33,3 (2,1)	44 (39-48)	43,6=2,2	< 0,001
Attitude	14 (12-16)	13,7 (1,3)	23 (20-24)	22,6=0,9	< 0,001
<b>Control (n=37)</b>					
Knowledge	34 (30-39)	33,8 (2,1)	36 (32-41)	36,2=2,1	< 0,001
Attitude	13 (10-18)	13,5 (1,6)	14 (11-19)	14,9=1,7	< 0,001

In Table 2, it can be seen that there is almost no difference in the average score or mean, standard deviation, and median (minimum-maximum) of respondents' knowledge and attitudes before being given the treatment of providing education about malnutrition using learning media and learning videos with a family-centered nursing approach to control respondents. The difference in the mean knowledge score of treatment respondents was 33.3 = SD 2.1, median 33 (30–38), while control respondents were 33.8 = SD 2.1, median 34 (30–39), while the difference in attitudes of treatment respondents was 13.7 = SD 1.3, median 14 (12–16), and control respondents were 13.5 = SD 1.6, median 13 (10–18). The change in score occurred after the respondents were given treatment in the form of providing education using learning module media and learning videos as compared to the control group, who were only given education through presentation media using leaflets.

The difference in the average knowledge score of the respondents who were given treatment was 43.6 = SD 2.2; median 44 (39-48), while the control group was 36.2 = SD 2.1; median 36 (32-41). The difference in the mean attitude of the treatment respondents was 22.6 (0.9); median 23 (20-24), while the control group was 14.9 (1.7); median 14 (11–19). The results of the bivariate test with the Wilcoxon test resulted in a p value of (0.001) in all stages of the test before and after being given treatment in the treatment group and the control group.

## DISCUSSION

### Providing education using family-centered nursing-based learning modules and videos to increase family knowledge about malnutrition

The results of the study explain that the provision of education (39–48) and treatment by using media modules and learning videos is effective in increasing parents' knowledge about malnutrition in children and toddlers. In general, there was an increase in knowledge among all respondents regarding the meaning and causes of malnutrition, signs and symptoms of malnutrition, the impact of malnutrition, and prevention of malnutrition. The increase in the average value of knowledge is more than 30%, which is seen based on the percentage difference in the mean or median values before and after the intervention is given. In the control group, on the other hand, no one's general or specific knowledge about the same measurement indicators went up by more than 10%.

This research is in line with Chen's research Chen et al., (2015), which found that health education using modules can increase knowledge. In addition, the use of modules can increase motivation for people, especially mothers in this study, to learn about malnutrition in children and toddlers, which includes the meaning and causes of malnutrition, signs and symptoms of malnutrition, the impact of malnutrition, and the prevention of malnutrition. Studies by Hill et al., (2015) and Ruehter et al., (2012) have also shown that using the Internet to teach students improves their knowledge.

Learning using additional media such as learning modules in the present or digital era is very necessary and can even be combined with various other media such as learning videos that are connected to the *web*, Youtube, and social media to add more imagination and capture power for someone. In this study, researchers used modules in *hardcopy created* from the results of a *focus group* that had previously been registered under the Benefits of Intellectual Property Rights combined with learning videos by applying the concept of *family-centered nursing* home visits to provide health education about malnutrition. Another study from Brian Liszewski et al., (2014) concluded that *e-learning* helps in disseminating knowledge information effectively, while Trowbridge, et al., (2022) utilized computer-based learning modules in advanced nursing education in the United States.

The results of research by Febriana et al., (2020) prove the effectiveness of learning videos in increasing knowledge. The use of media in the form of learning modules and videos in providing education related to malnutrition in this study aims to facilitate individual differences in absorbing information according to each learning style, such as visual, audio, and kinesthetic, so that it is more optimal. Factors supporting the success of increasing knowledge are supported by parental factors, especially for the respondents in this study, who are all housewives in the family.

Mothers are people who directly take care of children, so they play a very important role in meeting needs and maintaining nutritional balance for children and toddlers. Almost 75% of mothers between the ages of 26 and 45, or those still in their productive years, are enthusiastic and aware of the importance of seeking and obtaining health information, including information about malnutrition. Also, more than half of families have a monthly income that is the same as the minimum wage, so that their nutritional needs can be met and they can get a balanced diet.

Health workers should use media modules and learning videos with a family-centered approach to provide the best health education possible. This is especially important when it comes to keeping and increasing family knowledge about malnutrition. The information can be about what malnutrition is and what causes it, the signs and symptoms of malnutrition, the effects of malnutrition, and how to prevent malnutrition by doing five things as a family.

Information related to the definition of malnutrition emphasizes that malnutrition is a condition of unbalanced nutrition, both lack of food intake (undernutrition) and unbalanced nutrition (unbalanced diet), and being overweight (overweight). This condition is caused by low food intake and excess food intake. It is important for us to know the signs and symptoms as well as the impact of malnutrition, such as lack of appetite, interest in eating and drinking, often feeling cold, depression, loss of fat, muscle mass, and body tissue, a high risk of high pain, and a long recovery time.

If the wound is large, then the healing time will be longer, and the risk of complications will be higher, especially after surgery and difficulty breathing due to

heart failure. If this isn't dealt with properly by everyone, it will be a long-term health problem for sure. ies.

### **Providing education using family-centered nursing-based learning modules and videos on changing family attitudes about malnutrition**

Providing education using media modules and learning videos is also effective in improving attitudes, especially in family statements, in an effort to prevent malnutrition. All of the people who answered the survey said they felt more positive about preventing malnutrition in the family aspect. They will always get different nutrients from different kinds of food, look for health problems related to malnutrition, decide what families should do to improve their health if there are malnutrition problems, and make sure that sick families get the nutrients they need.

Putting together a diet that meets the family's nutritional needs and using health services to keep the family's nutritional needs in balance. The increase in the mean value of the attitude statement is almost 75%, which is seen based on the percentage difference in the mean or median values before and after the intervention is given. On the other hand, in the control group, both the overall and specific changes in how people felt about the same measurement indicators were less than 10%.

The results of this study are in line with the research of Klop et al., (2010) and research by Handayani et al., (2019), which shows that learning modules can influence a person's attitude toward doing better things, including efforts to prevent malnutrition. Getuno et al., (2015) also found that giving a pretest to the people who took part in the research made them more likely to try their best when they went back to the test. Praharaj et al., (2021) conducted research on providing the SEA module (stigma, empathy, attitude) for increasing one's knowledge and attitudes about health issues, which has been made part of the learning curriculum. As for the research related to the use of learning videos by Julia et al. (2022), it can improve attitudes toward reflecting on lessons.

The use of learning modules and videos can each influence a person's attitude. In this study, the two media were given together to the intervention group so as to further improve attitudes and influence their behavior regarding malnutrition. Changes in attitude that occur due to increased family knowledge gained through education provided using media modules and learning videos in general about the importance of balanced nutrition in an effort to prevent malnutrition with a *family-centered approach*. Families already know the meaning, causes, signs, and symptoms of the impact that will occur in children under five, such as getting sick easily, decreasing concentration, and other adverse effects.

A change in attitude will change family behavior to meet the nutritional needs of children and toddlers by implementing family tasks effectively. Effective implementation of family tasks starts with the intention to meet the nutritional needs of toddlers, recognizing health problems, taking appropriate actions related to health problems, modifying the environment, and utilizing services at health facilities. Other supporting factors that influence changes in family attitudes about the importance of balanced nutritional needs include the experiences of parents when children under five have febrile seizures, diarrhea, intestinal worms, acute respiratory infections, *typhoid*, and others, which are types of infectious diseases and can occur repeatedly.

Infection is associated with increased metabolic needs and impaired food intake in sick children (Yang et al., 2021), so it is closely related to the incidence of malnutrition.

In addition, children who are still in the age range of 0–24 months related to immune factors are vulnerable to malnutrition because they are included in the critical growth period and growth failure *begins* to appear (Govender et al., 2021). Furthermore, access is very close to markets and health service facilities, so it influences parents to pay more attention to the nutritional needs of toddlers and families (Tariq et al., 2018).

Health workers, especially nurses, can optimize the provision of health education using media modules and learning videos with a family-centered nursing approach by maintaining and improving family attitudes toward promoting balanced nutrition and preventing malnutrition in children under five. The focus of strengthening with the family-centered nursing approach is intended to involve the family specifically, in accordance with Nursalam, (2017) that the family is the basic unit in caring for family members.

## CONCLUSION

Providing education using family-centered nursing-based learning modules and videos increases family knowledge and attitudes about malnutrition, including the understanding and causes of malnutrition, signs and symptoms of malnutrition, the impact of malnutrition, and the prevention of malnutrition. With a family-centered nursing approach, it is important for health workers, especially nurses, to use media like learning modules and videos to teach about malnutrition and other topics. Further research is suggested to analyze the effectiveness of health education through social media or the application of *supportive education*.

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## APPENDIX

### QUESTIONNAIRE

#### Improving Family Knowledge and Attitudes on Malnutrition through Family Centered Nursing-Based Modules and Videos

No Respondent (Filled in by Researcher):

Filling date :

Village/ RT :

Instruction :

1. Give honest answers because your honesty is very important in this study
2. Put a mark (√) on the available options according to your situation
3. Submit it to the researcher when you have finished filling it out

#### DEMOGRAPHIC DATA

Instructions: Put a tick (√) in the box provided or write clearly according to your answer!

#### CHILD FACTORS (IF YOU HAVE A BABY/TODDLER)

1. Gender of the Child
  - Male
  - Women
2. Children's Age, Write in Months .....
- 0-24 months
- 25-59 Months
3. History of infectious diseases such as febrile seizures, diarrhea, typhus, etc
  - Never
  - Never, Often
  - Never, Very Often
4. Current health condition of the child
  - Healthy
  - Fever
  - Diarrhoea
  - Acute Respiratory Tract Infection
  - Typhoid
  - Worms
  - Others : .....

#### PARENTS/ RESPONDENT FACTORS

1. Dominant/Main respondent in the family
  - Father/Husband
  - Mother/Wife
2. Age : Write down the number : .....
- 17-25 years
- 26-45 years
- 46-65 years
- > 65 years
3. Level of education
  - Did not graduate / did not graduate from school

- primary school
  - Middle school
  - High school
  - Universities
4. Work
- Not working/Housewife
  - Civil servants
  - Private
  - Other :.....
5. Monthly Family Income (UMR Rp. 2,98 Million)
- $\geq$  min wage 2,98 Million
  - $<$  min wage 2.98 Million
6. Getting Previous Information
- Ever
  - Never

**INSTRUMENT A**  
**UNDERSTANDING QUESTIONNAIRE IN THE CONTECT OF**  
**KNOWLEDGE ABOUT MALNUTRITION**  
**Modification of the questionnaire from WHO sources**

Charging instructions

Put a checklist ( $\surd$ ) on one of the choices that is appropriate to the situation regarding your leader with the choice "True" or "False".

**1. Malnutrition**

No.	Question	True	False
	<b>Definition and causes of malnutrition</b>		
1.	Malnutrition is a nutritional condition that refers only to a condition of lack of food intake (undernutrition).		
2.	Malnutrition is a nutritional condition that is balanced but not related to micronutrients vitamins and minerals		
3.	Overweight and obesity are not included in the scope of malnutrition		
4.	The cause of malnutrition is just because of excess food intake		
5.	The cause of malnutrition is due to a lack of food intake, such as vitamins, minerals and other important substances that the body needs		
	<b>Signs and symptoms of malnutrition</b>	<b>True</b>	<b>False</b>
6.	Appetite and interest in eating and drinking are good		
7.	Stable emotions, not easily angry / anxious and not easily tired		
8.	Very able to concentrate		
9.	Thin body		
10.	It's not easy to get sick		
11.	The development of behavior and intelligence will be slow,		

No.	Question	True	False
	resulting in learning difficulties		
12.	Overnutrition and Obesity (Forever)		
	<b>Effects of Malnutrition</b>		
13.	If there is pain or injury, healing will be slow		
14.	There is no risk of infection when injured or sick		
15.	Easily focus on studying, working activities or actively playing		
16.	Can cause children to experience problems in vision and other diseases		
17.	Can experience conditions of deficiency or even no protein intake		
18.	Can experience a lack of energy or calorie intake from food ingredients (carbohydrates, fats, and proteins)		
	<b>Malnutrition prevention</b>	<b>True</b>	<b>False</b>
19.	Consuming some nutrients from various types of food		
20.	There is no need to know about the health problems of malnutrition		
21.	Make the right decisions in health actions related to malnutrition conditions		
22.	Caring for sick families related to malnutrition		
23.	Adjusting the food menu with balanced nutritional needs		
24.	There is no need to utilize health services such as puskesmas and posyandu activities		

**INSTRUMENT B**  
**ATTITUDE QUESTIONNAIRE REGARDING THE PREVENTION OF**  
**MALNUTRITION WITH A FAMILY CENTER NURSING APPROACH**  
**Modification of the WHO source questionnaire**

Charging instructions :

1. Read and understand each of these statements before answering
2. Put a cross (√) on the one of the answer choices that best fits the situation of your leader:
  - 1 : If you strongly disagree (STS) with the statement presented
  - 2 : If you disagree (TS) with the statement presented
  - 3 : If you agree (S) with the statement presented
  - 4 : If you strongly agree (SS) with the statements presented

No	Malnutrition Prevention Statement	SS	S	KS	TS
1.	Always (almost every day) consume or eat a variety of nutrients from various types of food				
2.	Always (almost every day) observing and paying attention to health problems regarding malnutrition such as malnutrition (thin crew) or excess nutrition (overweight)				
3.	If there are families or people who experience				

No	Malnutrition Prevention Statement	SS	S	KS	TS
	malnutrition, they should immediately try to meet and balance their nutritional needs and bring them to a health facility				
4.	Always (almost every day) trying to meet nutritional intake for families who are sick related to malnutrition				
5.	Develop a diet pattern or food menu according to balanced nutritional needs				
6.	Always (whenever the family is sick) utilizes health services in an effort to maintain the family's nutritional balance				

**INSTRUMENT VALIDITY AND RELIABILITY TEST RESULTS  
KNOWLEDGE OF BASED MALNUTRITION  
FAMILY CENTERED NURSING**

**Reliability  
Scale: ALL VARIABLES  
R TAB = 0,3610**

**Case Processing Summary**

		N	%
Cases	Valid	30	100.0
	Excluded <sup>a</sup>	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.962	24

<b>Item-Total Statistics</b>				
	<b>Scale Mean if Item Deleted</b>	<b>Scale Variance if Item Deleted</b>	<b>Corrected Item-Total Correlation</b>	<b>Cronbach's Alpha if Item Deleted</b>
p1	38.90	54.300	.870	.958
p2	38.60	58.179	.515	.962
p3	38.90	54.507	.841	.958
p4	38.60	57.214	.704	.960
p5	38.90	54.300	.870	.958
p6	38.60	58.179	.515	.962
p7	38.90	54.576	.831	.959
p8	38.60	57.972	.555	.961
p9	38.93	54.547	.829	.959
p10	38.63	56.792	.714	.960
p11	38.97	54.999	.763	.959
p12	38.67	57.885	.479	.962
p13	38.97	55.068	.754	.959
p14	38.67	56.989	.629	.961
p15	38.93	55.030	.761	.959
p16	38.60	58.041	.542	.961
p17	38.93	55.030	.761	.959
p18	38.67	57.126	.606	.961
p19	38.93	54.823	.790	.959
p20	38.67	57.678	.513	.962
p21	38.93	54.892	.780	.959
p22	38.63	56.723	.727	.960
p23	38.93	55.030	.761	.959
p24	38.67	57.264	.582	.961

**Scale Statistics**

<b>Mean</b>	<b>Variance</b>	<b>Std. Deviation</b>	<b>N of Items</b>
40.47	61.016	7.811	24



**INSTRUMENT VALIDITY AND RELIABILITY TEST RESULTS  
ATTITUDE REGARDING BASED PREVENTION OF MALNUTRITION  
FAMILY CENTERED NURSING**

**Reliability  
Scale: ALL VARIABLES  
R TAB = 0,3610**

**Case Processing Summary**

		N	%
Cases	Valid	30	100.0
	Excluded <sup>a</sup>	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.959	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
s1	12.37	10.378	.779	.962
s2	12.40	10.317	.858	.952
s3	12.40	10.869	.872	.952
s4	12.33	10.437	.828	.956
s5	12.43	10.185	.977	.940
s6	12.40	10.317	.936	.944

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
14.87	14.878	3.857	6