Tadulako Science and Technology Journal
Vol. 5, No. 1, May 2024, pp. 60-70, E-ISSN : 2776-4893 || P-ISSN : 2776-4907

Effect of Food Safety Education on Knowledge, Attitude, and Behavior of School Community and Retail Community in Ampibabo Sub-district

Jamaluddin[a,1,*] , Nur Muthiawati[a,2] , Samaal Mallisa[a,3]

[a]Department of pharmacy, Mathematics and Natural Scince of Faculty, Tadulako University
[1] jamal_farmasi02@yahoo.co.id
*corresponding author

ARTICLE INFO

Article history
Received
Revised
Accepted

Keywords
Influence of Education
Food Safety
Knowledge
Attitude
Community Behavior

ABSTRACT

Food safety is a condition to prevent food from possible biological, chemical, and other contaminants that can harm and endanger human health. This study was conducted to determine the effect of food safety education on the knowledge, attitudes, and behavior of the school community and retail community before and after the intervention. This type of research is an experimental study with a total sample of 60 people from the school community and 54 people from the retail community. This research began in March-October 2021. The analysis used in this study was the Wilcoxon analysis with the SPSS application. The results of the effect of food safety education on the school community in aspects of knowledge, attitudes, and behavior with the value of Sig. (2 tailed) < 0.05 consecutively 0.030 < 0.05; 0.000 < 0.05 and 0.000 < 0.05. H0 is rejected so that there is an effect of food safety education on food safety knowledge, attitudes, and behavior. The effect of food safety education on the retail community on the knowledge aspect with a value of 0.000 < 0.05, which means that there is an effect of food safety education on the knowledge aspect of the retail community. While on the aspect of attitude and behavior aspect with the value of Sig. (2-tailed) < 0.05 0.106 > 0.05 and 0.363 > 0.05, which means that H0 is accepted, so there is no effect of food safety education on aspects of attitude and behavior in the retail community. The conclusion obtained is that there is an effect of food safety education on the knowledge of attitudes and behavior of the school community, there is an influence towards a better direction after food safety education is carried out on aspects of knowledge of the retail community and there is no effect of conducting food safety education on aspects of attitudes and behavior of the retail community.

1. Introduction

Foodborne disease (FBD) is a disease caused by the consumption of contaminated food or drink. [1]. Hazardous materials or natural toxins contained in food will cause extraordinary events (outbreaks) of food poisoning (Ministry of Health, 2015). [2]. In Central Sulawesi, the increase in food poisoning cases in 2019 was 170 cases without death. The highest spread of food poisoning occurred in Parigi Moutong with 72 cases. [3]. Ampibabo sub-district is one of the areas that need food safety improvements related to the outbreak of poisoning due to consuming fish contaminated with Potassium Cyanide and the incidence of stunting cases (Rislan, 2019). Based on age, the most cases of food poisoning in Central Sulawesi Province were at the age of 10-14 years, 22 cases, and the lowest at the age of 55-69 years, 3 cases. [4].

Food safety is a condition and effort that can be made to prevent food from biological, chemical, and foreign contamination that can disturb, harm, and endanger human health and does not conflict with the religion, beliefs, and culture of the community so that it is safe for consumption (Law of the Republic of Indonesia Number, 2012). Food safety has become an issue that has captured the world's attention, concern for food is triggered by the need for food that is whole, safe, healthy, and nutritious, thus increasing public awareness about the quality of food consumed. Another problem that becomes a food problem from a health safety session is the low level of sanitation that makes it difficult to provide hygienic food products. [5]. This occurs due to a lack of information and knowledge about the food that is safe to consume and the impact that can occur if consuming unsafe food [6]. [6].

To reduce morbidity and mortality associated with food-borne disease (FBD), strict guidelines and regulations for proper food processing and handling are needed. [1]. Badan POM initiated the Village Food Safety Movement Program (GKPD), which is a food safety intervention program that involves village communities playing an active role in handling food safety in the village. [7]. One of the target components of the GKPD program is the school community and retail community. The food safety of school communities is very important to pay attention to because more than 99% of school children snack at school to fulfill their energy needs while at school [8]. [8]. In addition to the school community, it turns out that food safety is also needed for the retail community, which is the last food chain that will be in direct contact with consumers, so it must be ensured that the products to be consumed by food are truly safe [9]. [9]. The effect of food safety education according to the study "The Effect of Providing Food Safety Education on Changes in Knowledge and Attitudes of Penyetan Traders in the Tembang Region" conducted by [10] tends to increase after being given knowledge education.

2. Method

Before you begin to format your paper, first write and save the content as a separate text file. Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit the use of hard returns to only one return at the end of a paragraph. Do not add any kind of pagination anywhere in the paper. Do not number text the template will do that for you.

Finally, complete content and organizational editing before formatting. Please take note of the following items when proofreading spelling and grammar:

2.1 Research Design

The research conducted is quantitative research using experimental methods using a *one-group pre-post test* design. *The* measurement scale instrument is a Likert scale and the questionnaire is distributed via *hardcopy*.

2.2 Time and Place of Research

This research was conducted in 6 villages (Sidole, Paranggi, Burangga, Tanampedagi, North Ampibabo, and North Lemo) of Ampibabo sub-district, Parigi Moutong District, Central Sulawesi Province in March-October 2021.

2.3 Population and Sample

The population and samples in this study were 60 school communities and 54 retail communities located in 6 villages (Sidole, Paranggi, Tanampedagi, North Ampibabo, and North Lemo) in Ampibabo District. Data Collection Technique. Data collection is a way for researchers to collect research data. Data collection was carried out using a list of questions in the form of a modified questionnaire from the Food and Drug Administration in Palu on handling food safety.

2.4 Data Collection Technique

Data analysis techniques in this research process include:

- Normality Test.

  The test uses the sample Kolmogorov-Smirnov test. This test aims to determine whether the data distribution is normally distributed or not. It is said to be normally distributed if the significance value (p)> 0.05, otherwise if the significance (p) <0.05 then the data is not normally distributed. [11].

- Wilcoxon test.

  According to [11] Calculation of the effect of food safety education on knowledge, attitudes, and behavior using the Wilcoxon test. The Wilcoxon test is used to determine whether there is a difference in the average of two interrelated samples and is used when the data is not normally distributed With the following decision-making criteria, if Sig> 0.05 then H0 is accepted if Sig <0.05 then H0 is rejected.

- Calculation of Knowledge Level.

  Calculation of the effect of food safety education on knowledge using the formula [12].

  $$\text{Percentage} = \frac{Jumlah\ nilai\ benar}{jumlah\ soal} \times 100\%$$

  Score Interpretation Criteria [13].

  - Good category (76%-100%)
  - Fair category (56%-75%)
  - Category less (<56%)

- Attitude Calculation.

  Calculation of the attitude of the school community and the retail community toward the effect of food safety education, namely the interval or ratio obtained from filling out the questionnaire using a Likert scale can be categorized as good, sufficient, and poor levels. Score Interpretation Criteria [14].

  - Good Category (X>55)
  - Fair category (45 < X < 54)
  - Poor Category (X<44)

- Behavior Calculation

Calculation of the behavior of the school community and retail community towards the influence of food safety education can be categorized as good, fair, and poor.

$$\text{Percentage} = \frac{Jumlah\ nilai\ benar}{jumlah\ soal} \times 100\%$$

Score Interpretation Criteria [15].

- Good category (76%-100%)
- Fair category (56%-75%)
- Category less (<56%)
-

3. Results and Discussion

3.1 Respondent Characteristics

Table 1. Frequency Characteristics of School Community and Retail Community

School Community			
Respondent Characteristics		**Total**	**Percentage**
Gender	Male	2	3.33
	Female	58	96.77
Total		60	100
Age	17-25 years old	4	7
	26-35 years old	10	17
	36-45 years old	20	33
	46-55 years	22	37
	56-65 years	4	7
Total		60	100
Retail Community			
Respondent Characteristics		**Number (n)**	**Percentage %**
Gender	Male	48	88.89
	Female	6	11.11
Age	17-25 years old	4	7
	26-35 years old	14	26
	36-45 years old	19	35
	46-55 years	11	20
	56-65 years	4	7
	>65 Years	2	4
Total		54	100
Junior high school education	SD	18	33
		9	17
	HIGH SCHOOL	20	37
Academy/PT	Graduate of	7	13
Total		54	100

3.2 Normality Test

Table 2. Tests of Normality

School Community	**Kolmogorov-Smirnov[a]**		
	Statistic	**Df**	**Sig.**
School Community Knowledge Pretest	.108	60	.078
School Community Knowledge Posttest	.169	60	.000
School Community Attitude Pretest	.157	60	.001
School Community Attitude Posttest	.140	60	.005
School Community Behavior Pretest	.264	60	.000
School Community Behavior Posttest	.257	60	.000
Retail Community	**Kolmogorov-Smirnov[a]**		
	Statistic	**Df**	**Sig.**

School Community	Kolmogorov-Smirnov[a]		
	Statistic	Df	Sig.
Retail Community Knowledge Pretest	.128	54	.027
Retail Community Knowledge Posttest	.129	54	.025
Retail Community Attitude Pretest	.089	54	.200*
Retail Community Attitude Posttest	.206	54	.000
Retail Community Behavior Pretest	.151	54	.004
Posttest Retail Community Behavior	.171	54	.000

3.3 Wilcoxon Test of Knowledge of School Community and Retail Community

Table 3 Wilcoxon test

		N	*Mean Rank*	*Sum of Rank*	*Sig. (2-tailed)<0.05*
Posttest - Pretest School Community Knowledge	Negative Ranks	23[a]	21.37	491.50	(0.030 < 0.05)*
	Positive Ranks	31[b]	32.05	993.50	
	Ties	6[c]			
	Total	60			
		N	*Mean Rank*	*Sum of Rank*	*Sig. (2-tailed)<0.05*
Posttest - Pretest Retail Community Knowledge	Negative Ranks	12[a]	17.33	208.00	(0.000 < 0.05)**
	Positive Ranks	39[b]	28.67	1118.00	
	Ties	3[c]			
	Total	54			

a. Posttest Knowledge < Pretest Knowledge

b. Posttest Knowledge > Pretest Knowledge

c. Knowledge Posttest = Knowledge Pretest

*. Sig.(2-tailed) Significant at Sig.(2-tailed)<0.05

**. Sig.(2-tailed) value is not significant at Sig.(2-tailed) >0.05

3.4 Wilcoxon Test of School Community and Retail Community Attitudes

Table 4 Wilcoxon Test of School - Retail Community Attitudes

		N	*Mean Rank*	*Sum of Rank*	*Sig. (2-tailed)<0.05*
Posttest - Pretest School Community Attitude	Negative Ranks	13[a]	23.54	306.00	(0.000 < 0.05)*
	Positive Ranks	44[b]	30.61	1347.00	
	Ties	3[c]			
	Total	60			
		N	*Mean Rank*	*Sum of Rank*	*Sig. (2-tailed)<0.05*
Posttest - Pretest Retail Community Attitude	Negative Ranks	18[a]	23.92	430.50	(0.106 < 0.05)**
	Positive Ranks	30[b]	24.85	745.50	
	Ties	6[c]			
	Total	54			

a. Posttest Knowledge < Pretest Knowledge

b. Posttest Knowledge > Pretest Knowledge

c. Knowledge Posttest = Knowledge Pretest

*Sig.(2-tailed) Significant at Sig.(2-tailed)<0.05

**Sig.(2-tailed) value Not Significant at Sig.(2-tailed) >0.05

3.5 Wilcoxon Test of School Community and Retail Community Behavior

Table 5 Wilcoxon Test of School - Retail Community Behavior

		N	*Mean Rank*	*Sum of Rank*	*Sig. (2-tailed)<0.05*
Postest - Pretest School Community Behavior	Negative Ranks	12[a]	26.46	317.50	(0.000 < 0.05)*
	Positive Ranks	44[b]	29.06	1278.50	
	Ties	4[c]			
	Total	60			
		N	*Mean Rank*	*Sum of Rank*	*Sig. (2-tailed)<0.05*
Postest - Pretest Retail Community Behavior	Negative Ranks	18[a]	20.08	361.50	(0.363 < 0.05)**
	Positive Ranks	23[b]	21.72	499.50	
	Ties	13[c]			
	Total	54			

a. Posttest Knowledge < Pretest Knowledge

b. Posttest Knowledge > Pretest Knowledge

c. Knowledge Posttest = Knowledge Pretest

*. Sig.(2-tailed) Significant at Sig.(2-tailed)<0.05

**. Sig.(2-tailed) value is not significant at Sig.(2-tailed) >0.05

3.6 Knowledge Calculation

Table 6 Calculation of Knowledge Level of School Community - Retail

School Community Knowledge Level	**Before Education**		**After Education**	
	F	***%***	***F***	***%***
Good (76% - 100%)	7	12	10	17
Fair (56 - 75%)	32	53	37	62
Less (<56%)	21	35	13	22
Total	60	100	60	100
Retail Community Knowledge Level	**Before Education**		**After Education**	
	F	***%***	***F***	***%***
Good (76% - 100%)	0	0	9	17
Fair (56 - 75%)	10	19	21	39
Less (<56%)	44	81	24	44
Total	54	100	54	100

3.7 Attitude Calculation

Table 7 Calculation of Attitude Aspect of School Community - Retail

School Community Attitude Aspect	Before Education		After Education	
	F	***%***	***F***	***%***
Good (x > 55%)	47	78	57	95
Fair (45 < x < 54)	13	22	3	5
Poor (x < 44)	0	0	0	0
Total	60	100	60	100
Attitudinal Aspects of the Retail Community	**Before Education**		**After Education**	
	F	***%***	***F***	***%***
Good (x > 55)	41	76	49	91
Fair (45 < x < 54)	13	24	5	9
Poor (x < 44)	0	0	0	0
Total	54	100	54	100

3.8 Behavior Calculation

Table 8 Calculation of Behavioral Aspects of School Community - Retail

Behavioral Aspects of the School Community	Before Education		After Education	
	F	***%***	***F***	***%***
Good (76% - 100%)	47	78	57	95
Fair (56%-75%)	13	22	3	5
Poor (<56%)	0	0	0	0
Total	60	100	60	100
Behavioral Aspects of the Retail Community	**Before Education**		**After Education**	
	F	***%***	***F***	***%***
Good (76% - 100%)	41	76	49	91
Fair (56%-75%)	13	24	5	9
Poor (<56%)	0	0	0	0
Total	54	100	54	100

Food safety is of paramount importance to the school community. Schoolchildren need nutritious and safe food for growth, health, and learning activities. Food safety requirements must be prioritized, if food is not safe to consume, the high nutritional content and quality will no longer be of value. In order to ensure the safety of snacks in schools, it is necessary to raise awareness about the safety of snacks for school children. To realize this, it is necessary to foster joint efforts with school snack providers and traders.

In addition to shopping for snacks at school, the school community also buys food at retail. Retail or grocery stores are the main centers where people obtain food before consumption, so the risk of food spoilage must be minimized as much as possible. To avoid negative impacts on consumers, such as food-borne disease transmission (food poisoning), it is necessary for the retail community to be aware of food safety in maintaining food quality throughout the chain until it is ready for consumption. Therefore, as the last food chain is directly related to consumers, the provision of safe food for the community must be considered, so it is necessary to increase food safety awareness of the knowledge, attitudes, and behavior of the retail community.

Measurement of the level of knowledge, attitudes, and behavior of school community and retail community respondents before and after the provision of education in this study using the Wilcoxon Signed Ranks Tests, this test is used because the data obtained is not normally distributed. This is known through the Test of Normality for school community Post-test data, Pretest and Post-test of school community attitudes, Pretest and Post-test of school behavior, Pretest and Post-test of retail community knowledge, Post-test of school community attitudes, Pretest and post-test data of retail community behavior, Pretest of school community knowledge, Post-test of school knowledge, Pretest of school attitudes, Post-test have a Sig value. less than the value of $\alpha = 0.05$, so it can be concluded that the hypothesis is rejected $H0$ which means that the sample does not follow a normal distribution so it uses nonparametric analysis, which will be used in this data analysis is the Wilcoxon test.

In this study, education was provided by the Central Sulawesi Provincial Health Office, the Food and Drug Monitoring Agency (Bpom), and assisted by Village Food Safety Cadres (KKPD). Pretest data collection was carried out in March 2021 in conjunction with the Village Food Safety Cadre training. The training of village food safety cadres (KKPD) was held for 2 days, the first day providing food safety material and the second day micro-teaching (teaching practice). In June, technical guidance for school communities and retail communities was carried out for 2 days, after which intervention was carried out in the form of technical guidance to school communities and retail communities in the form of providing food safety education in the form of direct counseling, providing modules, billboards, flipcharts and mentoring carried out by village food safety cadres (KKPD). For approximately 4 months before the post-test, the Village Food Safety Cadre (KKPD) assisted in implementing food safety in school community facilities and retail communities to see the development of attitudes and behaviors of each respondent in each community. In November 2021, the post-test was taken for each school community and retail community respondent. This study was divided into 2 groups of respondents, namely school community respondents and retail communities because the materials and Village Food Safety Cadres (KKPD) who assisted were different. This research was conducted in 6 villages (Sidole, Paranggi, Burangga, Tanampedagi, Ampibabo Utara, and Lemo Utara) Ampibabo sub-district, because the 6 villages were included in the village selection criteria by BPOM for the target of the Village Food Safety Movement (GKPD), namely the local government is able to implement food safety programs in a sustainable manner, requires assistance in improving food safety related to stunting cases, food-related diseases, including food poisoning outbreaks, and villages that have the same program as the village food safety program. The instrument used, namely the questionnaire given to respondents, is a standard questionnaire owned by the Central Sulawesi Province Food and Drug Monitoring Agency and has been used for the last 4 years and will be used again for the next 4 years as an instrument in supervising food safety, this questionnaire is valid nationally and is used by 34 provinces in Indonesia as an instrument in the Village Food Safety Movement (GKPD) so it can be concluded that this questionnaire has accurate validity.

The results of the analysis on Sig. (2-tailed) < 0.05 = 0.030 ($P < 0.05$) for the school community and Sig. (2-tailed) < 0.05 = 0.000 (P < 0.05) for the retail community, it is concluded that Ho is rejected, so there is a difference in the knowledge of the school community and the retail community before and after the provision of education.

In the good, sufficient, and insufficient categories from the pretest and post-test, respondents experienced an increase after education. It can be seen that the number of respondents who experienced an increase or Positive Ranks from pretest to post-test scores for knowledge aspects was more than those who experienced a decrease or Negative Ranks, so it can be concluded that the difference that occurred between the results of the pretest and posttest knowledge aspects led to better results in the school community and retail community. This means that there is an effect of providing food safety education in the form of counseling, banner media, and distribution of modules, flipcharts, and assistance on the level of respondents' knowledge about food safety. To improve respondents' knowledge, an educational process in the form of counseling was carried out. Counseling is considered effective because there is a two-way interaction so that if there is information that is not known by respondents, they can be asked again. One of the factors that influence knowledge is the five human senses, the more senses involved the easier it is for someone to learn something. The reason why the

knowledge of respondents in the school community and retail community increased was that they used their five senses of hearing during counseling and their five senses of sight to read modules and banners around the village. Increased knowledge in the school community and retail community is also influenced by the gender characteristics of respondents, it can be seen in the number of female respondents as many as 64 people (56%) are more dominant than men. According to Syachroni, (2012) in general, women are more sensitive and willing to accept constructive input and suggestions, especially on health issues, so as to generate motivation to maintain better hygiene and health than men. There is an effect of food safety education on aspects of knowledge of the school community and retail community after education, this is in line with the research of Ratnasari D et al (2018) which states that there is an increase in respondents' knowledge after education in the form of counseling for penyetan traders. And also supported by research by Rafoqa M et al, (2016) which states that the food safety knowledge of the retail community is quite good after education in the form of counseling for retail businesses in Makassar City.

The results of the analysis of differences in the attitudes of school community respondents, before and after the provision of education obtained Sig. (2-tailed) < 0.05 = .000 ($P < 0.05$). This means that it can be concluded that HO is rejected, so there is a difference in the attitude of the school community before and after education on food safety. In the good, sufficient, and insufficient categories of the pretest and post-test respondents experienced an increase after education. The number of respondents who experienced an increase or Positive Rank pretest to post-test values for the attitude aspect was more than those who experienced a decrease or Negative Ranks, so it can be concluded that the difference that occurred between the results of the pretest and post-test aspects of attitude led to better results, there was an effect of counseling, billboards distribution of modules, flipcharts and assistance regarding food safety in improving the attitude aspects of the school community. The effect of education on the attitudinal aspects of school community respondents which is quite significant after being given education is influenced by the knowledge of respondents which also increases. So the respondent's understanding increases and the attitude pattern also changes and a person's positive attitude is also influenced by positive knowledge. [16]. According to Notoadmojo (2007), knowledge has the most important role for a person in determining attitude. In addition, respondents' knowledge also increased due to the distribution of modules it allowed respondents to re-read the material regarding food safety attitudes so that respondents would not easily forget about the material that had been delivered (Ratnasari D et al, 2018). There is an effect of food safety education on the attitude of the school community after being given education, this is in line with the research of Ratnasari et al (2018) which states that there is a significant increase in the attitude of respondents after education in the form of counseling for penyetan traders.

The results of the analysis of differences in the attitude of the retail community before and after education were obtained Sig. (2-tailed) <0.05 = 0.106>0.05, it can be concluded that $H0$ is accepted, so it can be concluded that there is no effect of conducting counseling on food safety in improving the attitudinal aspects of the retail community. In the retail community, it was found that there was no significant difference between food safety attitudes before and after education. Before the intervention, there were 40 respondents who had a good attitude towards food safety, then after the intervention, there were only 9 additional respondents who had a good attitude towards food safety. It can be seen that the number of respondents who experienced an increase in Positive Ranks from pretest to post-test scores for the attitude aspect was not much different from those who experienced a decrease in Negative Ranks, so it can be concluded that there was no significant difference between the results of the pretest and post-test aspects of the attitude of the school community after being given education. In addition, there are several factors that can influence a person's attitude that is difficult to change, one of which is personal experience. The theory of attitude change (attitude change theory) states that a person will experience discomfort in himself when faced with something new that conflicts with his beliefs, so it takes time to change beliefs in accordance with his personal experience (Melik, 2016), thus making respondents consciously or unconsciously to limit or reduce discomfort through an interconnected selective process to receive selective information which is a process where respondents will only accept information that is in accordance with pre-existing attitudes [17]. [17]. In the research conducted, it was found that there was no effect of food safety education on the attitudinal aspects of the school community after being given education, this is inversely proportional to the research of Tegegne H and Phyo H (2017) on food safety knowledge, attitudes and behaviors of retail meat sellers in Jigjiga Ethiopia which said that some respondents had a good attitude about

food safety attitudes, for example, all respondents washed their hands before and after preparing food, respondents also understood the subscription to the use of cutting boards and knives must be properly sanitized so that cross-contamination does not occur.

The results of the analysis of the effect of the behavioral aspects of respondents before and after being given education obtained Sig. (2-tailed) <0.05 = 0.000 <0.05, it can be concluded that *H*0 is rejected, which means that there is a difference between the results of the School Community Behavior Pretest and the results of the School Community Behavior Posttest. In the good category before education, there were 36 people (60%), and after education, it increased to 49 people (82%). It can be seen that the number of respondents who experienced an increase or Positive Ranks of pretest to post-test scores for behavioral aspects was more than those who experienced a decrease or Negative Ranks, so it can be concluded that the difference that occurred between the results of the pretest and post-test aspects of behavior led to better results, so it can be concluded that there is an effect of conducting counseling on food safety in improving behavioral aspects in the school community. One strategy that can be used to change the behavior of others is to provide information that can increase respondents' knowledge so that it will raise respondents' awareness to behave according to their knowledge (Nasution & Arifin, 2021). There is an effect of education on the behavioral aspects of the school community after education, this is in line with the research of Adha Sarah Nur Dkk (2018) which states that education on hygiene behavior before and after education is given to respondents can affect behavioral aspects.

The results of data analysis on the behavioral aspects of the retail community obtained by Sig. (2-tailed) <0.05 = 0.363>0.05, it can be concluded that *H*0 failed to be rejected, which means that there is no difference between the results of the Retail Community Behavior Pretest and the results of the Retail Community Behavior Posttest, so it can be concluded that there is no effect of conducting counseling on food safety in improving behavioral aspects of the retail community. In accordance with the Wilcoxon Sign Rank Test attachment, the behavior of the retail community did not change after education because respondents who experienced positive changes were not much different from respondents who experienced negative changes with a frequency of 23 people (43%) and 18 people (33%) respectively, besides that there were 13 people (24%) respondents who had the same pretest and posttest scores before and after education. In the good, sufficient, and insufficient categories, the behavior of respondents did not experience a significant increase before and after the intervention. The unchanged behavior of the retail community is also influenced by the unchanged attitude of the community after education. Attitude is a form of evaluation or reaction to an aspect of the surrounding environment and will underlie a person in the formation of behavior (Azwar, 2011). Based on the research conducted, there is no effect of education on the behavioral aspects of the retail community, this compares with the research of Tegegne H and Phyo H 2017 research on food safety knowledge, attitudes, and behaviors of retail meat sellers in Jigjiga Ethiopia which said that almost no respondents maintained food safety behavior such as no retail community respondents using aprons. Improper food handling will be a major factor in food contamination that leads to foodborne illness.

Attitudes can affect food safety, when a person's attitude is difficult to change, it will also affect a person's behavior. This is because attitude has a very important role in terms of influence on behavior. There are several theories of behavior change at the community level, namely social norm theory which is an unwritten value in a community that expects community members to behave in a certain way, this social norm theory seeks to utilize existing norms in society to behave, the second theory is social awareness where members of a community act for their community because of the encouragement from the surrounding environment and the third theory is community organizations that can solve problems appropriately and quickly, as well as a conducive and critical environment. [18].

4. Conclusion

From the results of the research that has been carried out, it can be concluded that:

1. The effect of food safety education on the school community in the aspects of knowledge, attitudes, and behavior with *Sig* values. *(2-tailed) < 0.05* respectively 0.030 < 0.05; 0.000 < 0.05 and 0.000 < 0.05 which means H0 is rejected so it can be concluded that there is an effect of food safety education on knowledge, attitudes, and behavior of food safety.
2. The effect of food safety education on the retail community on the knowledge aspect with a value of 0.000 <0.05, which means that there is an effect of food safety education on the knowledge aspect of the retail community. While in the aspect of attitude and behavioral aspects with a value of Sig. (2-tailed) <0.05 respectively 0.106>0.05 and 0.363>0.05 which means H0 is accepted so it can be concluded that there is no effect of food safety education on the attitudinal and behavioral aspects of the retail community.

References

[1] V. G. Chellaiyan, J., L. Fasna, . L., and S. V. Mallika, "Food safety awareness and food handling practices among the rural population of Tamil Nadu," *Int. J. Community Med. Public Heal.*, vol. 5, no. 4, p. 1441, 2018, doi: 10.18203/2394-6040.ijcmph20181214.

[2] Ministry of Health, "Food Security in Indonesia," *Food Security in Indonesia*, 2015.

[3] D. K. P. S. Southeast, "Health Profile of Southeast Sulawesi Province in 2019," *Kendari*, vol. 1, no. 1, pp. 11-21, 2020.

[4] Central Sulawesi Health Office, "Health Profile of Central Sulawesi 2016," Central Sulawesi Health Office *2016*, pp. 70-71, 2016.

[5] Pudjirahaju Astutik, *Food Quality Control*. 2017.

[6] D. L. Hura, R. Njatrijani, and S. Mahmudah, "Legal Protection for Consumers Against Processed Foods Containing Hazardous Ingredients in Central Java," *Diponegoro Law J.*, vol. 5, no. 3, pp. 1-13, 2016, [Online]. Available: http://www.ejournal-s1.undip.ac.id/index.php/dlr/%0APERLINDUNGAN

[7] BPOM, *Processed Food Labeling*. 2020.

[8] H. Oktafa, R. Nurul, and N. Retnowati, "Production Improvement and Food Safety Education of School Children Snacks (PJAS) in SDN Sumbersari District, Jember Regency," *Semin. Nas. Has. Research. and Pengabdi. Masyarakat. 2018*, pp. 112-116, 2018.

[9] Z. Farah, M., & Ramadan, "The Rise of the Impulsive Shopper: The Case of the Amazon Dash Button," *ACR North Am. Adv.*, 2017.

[10] E. a. Dwi Kurnia and D. R. study et. a. M. Zen Rahfiludin, "The Effect of Providing Food Safety Education on Changes in Knowledge and Attitudes of Penyetan Vendors in the Tembalang Area," *J. Kesehat. Masy.*, vol. 6, no. 4, pp. 189-197, 2018.

[11] Sujarweni Wiratna, *SPSS for Research*. New Library Press, 2015.

[12] M. P. Dra. Zulmiyetri, M.Pd., Safaruddin, M.Pd., Dr. Nurhastuti, *Writing Scientific Work*. Kencana, 2019.

[13] Nursalam, *Nursing Science Research Methodology: A Practical Approach*, 4th ed. Salemba Medika, 2016.

[14] Jaya, *Application of Statistics for Educational Research*. Prenadamedia Group, 2019.

[15] Arikunto, *Research Procedures A Practical Approach*. Rineka Cipta, 2013.

[16] S. Notoatmojo, *Health Research Methodology*. Rineka Cipta, 2012.

[17] F. L. Prihandini, "The Level of Social Media Utilization for Central Java Tourism Branding by the Central Java Provincial Culture and Tourism Office," *J. Chem. Inf. Model*, pp. 1-15, 2015.

[18] M. Conner, *Predicting and Changing Health Behavior*. University Press, 2015.