

Food Safety Practices Among Homemakers During Covid-19 Pandemic in Kuncen Helmet, Banjarnegara District

Dyah Suryani¹, Herlina Aryunaningsih¹, Arihni Arihatal Jannah² and Carrisa Araminta³

¹Department of Public health, Faculty of Public Health, Ahmad Dahlan University, Yogyakarta, Indonesia

²Magister of Public Health Program, Faculty of Public Health, Ahmad Dahlan University, Yogyakarta, Indonesia

³Department of Nutrition, Faculty of Public Health, Ahmad Dahlan University, Yogyakarta, Indonesia

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Abstract: Introduction: Foodborne diseases are a public health problem often found in both developing and developed countries. The cause is food contaminated with bacteria, parasites, or harmful chemicals. Homemakers are expected to understand food safety practices so that the food served to their families is safe for consumption. This study aimed to determine the factors related to the food safety practices of homemakers during the COVID-19 pandemic in Kuncen Hamlet, Banjarnegara. Methods: This study constitutes a quantitative investigation using a cross-sectional design. The population and sample in this study consisted of 48 homemakers. The sampling technique used in this research was total sampling, and the research instrument employed was a questionnaire. Data assessment used univariate and bivariate analysis with the Chi-Square statistical test. Results: The results of this study indicate that respondents have more good knowledge level, positive attitudes, sources of information, low economic status, and good food safety practices. Relationships were noted between knowledge level, attitudes, information sources, economic status, and food safety practices. Conclusion: In sum, a correlation was found between homemakers' knowledge level, attitudes, sources of information, economic status, and food safety practices.

1 INTRODUCTION

Billions of people around the world are at risk from unsafe food. Millions of people become sick and hundreds of thousands die every year because they consume unsafe food (Fung et al., 2018). It has been estimated that around 600 million people (nearly 1 in 10) globally have contracted disease after consuming contaminated food, and 420,000 die each year. The report from the Food and Drug Monitoring Agency (BPOM) in 2019 stated that in Indonesia 474 cases involved food poisoning, and 265 were caused by food poisoning from household preparations (BPOM, 2019).

Apart from poisoning cases, diarrhea is the most common disease caused by consuming contaminated food. Based on the 2019 Indonesia Health Profile, 270 cases of diarrhea were reported per 100 people (Kemenkes RI, 2020b). Additionally, according to the Banjarnegara Regency's health profile for 2020, 9,048 (31.8%) diarrhea cases were treated of 28,468 patients with diarrhea visiting the region's health facilities and health cadres (Dinas

Kesehatan Kabupaten Banjarnegara, 2020). The small number of patients served are closely related to the conditions of the COVID-19 pandemic so that visits by people with diarrhea to health facilities and visits to the field remain limited by rules limiting community activities during the pandemic.

Lawrence Green's theory states that one's practice is influenced by three main factors, namely predisposing factors (knowledge level, attitudes, economic status), and enabling factors or supporting factors (information sources) and reinforcing factors (Notoatmodjo, 2014a). Related research also supports that the food safety practices of homemakers are influenced by knowledge level where homemakers with a good addition, a literature study concluded that economic status and education as a source of information are level of knowledge tend to behave in good food safety as well (Septiyani et al., 2021). Related research stated that educational status, economic status, food safety training, food safety attitudes, and knowledge about foodborne disease were strongly related to food safety practices at home (Yemane & Tamene, 2022). In important

determinants of food safety practices and the incidence of household food insecurity (Esfarjani et al., 2019).

Apart from causing poisoning and diarrhea, poor food safety during the COVID-19 pandemic made it possible for people who consumed the food to contract the COVID-19 virus. Coronavirus Disease 2019 (COVID-19) is an infectious disease affecting the respiratory system directly and is easily transmitted through droplets when a positive person coughs or sneezes (Kemenkes RI, 2020a). This virus is indeed not transmitted through food that is cooked properly, but can be transmitted through food products where the virus can survive on the surface of the packaging. Poor hygiene and sanitation will be the cause of transmission of the virus through indirect contact (Haryanti & Suryaningsih, 2021). Although food-borne transmission of the virus has not been established, ensuring proper and consistent personal hygiene, including hand washing, food safety practices and safe waste management practices, may be the best way to prevent potential transmission of COVID-19 from food to humans (Alikord & Molae-aghaee, 2021).

The COVID-19 pandemic situation requires stricter food safety practices, including by homemakers. Homemakers are expected to understand food safety practices so that the food served to their family members is safe for consumption. However, it is known that Kuncen Hamlet is one of the hamlets located in Banjarmangu Village, Banjarmangu District, Banjarnegara Regency, Central Java. The location of this hamlet is far from the center of the city, about 6 kilometers from Banjarnegara Regency, and far from access to health services, so rarely does any health socialization occur from the government, resulting in a lack of information received and knowledge possessed by the community members. This can affect people's behaviors, including behaviors regarding implementing food safety for homemakers, even during the COVID-19 pandemic. Based on these problems, the research aims to examine factors related to the food safety practices of homemakers during the COVID-19 pandemic.

2 METHOD

This type of research is quantitative, involving observational analytic methods and cross-sectional study designs. This study intended to determine the factors related to the food safety practices of homemakers during the COVID-19 pandemic. The

research was conducted in Kuncen Hamlet, Banjarmangu District, and Banjarnegara Regency in July to March 2022. The population in this study totaled 48 homemakers in the Kuncen Hamlet area, while the research sample was taken using a total sampling technique. Data collection used an instrument in the form of a questionnaire adapted to the Regulation of the Minister of Health of the Republic of Indonesia Number 1096/MENKES/PER/VI/2011 (Kemenkes RI, 2011). Jasaboga Sanitation Hygiene is related to the principles of food processing. Before use, the questionnaire was tested for validity and reliability on 36 homemakers, with the results of the Cronbach alpha value of the information sources questionnaire at 0.740, the knowledge questionnaire at 0.702, the attitude questionnaire at 0.652 and the food safety practice questionnaire at 0.649. The data were assessed using univariate and bivariate analysis with the Chi-squared statistical test.

3 RESULTS AND DISCUSSION

Table 1: Distribution of respondents regarding food safety practices.

Variable	Frequency	Percent
Knowledge		
Good	26	54.2
Poor	22	45.8
Attitude		
Good	27	56.3
Poor	21	43.8
Source of information		
Yes	26	54.2
No	22	45.8
Economic status		
Low	29	60.4
High	19	39.6
Food Safety Practice		
Good	28	58.3
Poor	20	41.7

Based on Table 1, the knowledge level of homemakers about food safety is mostly good, namely, 26 people (54.2%). Most attitudes of homemakers concerning food safety are positive, namely, 27 people (56.3%). As for the source of information, the majority of homemakers received many sources of information about food safety, as many as 26 people (54.2%). Notably, the economic

status of most homemakers is classified as low, namely 29 people (60.4%). Moreover, most food safety practices of homemakers were in the good category, totaling 28 people (58.3%).

Table 2: Bivariate test results of independent variables concerning food safety practices.

Variable	Food Safety Practice				Total		p-value
	Good		Poor		n	%	
	n	%	n	%	n	%	
Knowledge							
Good	21	43.8	5	10.4	26	54.2	0.002
Poor	7	14.6	15	31.3	22	45.8	
Attitude							
Good	21	43.8	6	12.5	27	56.3	0.005
Poor	7	14.6	14	29.2	21	43.8	
Source of information							
Yes	20	41.7	6	12.5	26	54.2	0.011
No	8	16.7	14	29.2	22	45.8	
Economic status							
Low	13	27.1	16	33.3	29	60.4	0.041
High	15	31.3	4	8.3	19	39.6	

Based on Table 2, the results of the analysis using the Chi square test found that a relationship exists between knowledge level (p value = 0.002), attitudes (p value = 0.005), sources of information (p value = 0.011), economic status (p value = 0.041) and practicing food safety.

Based on the results of the Chi square test, it was determined that the p value was 0.002 (p value<0.05), so a relationship exists between knowledge and food safety practices. Therefore, knowledge can shape a person's behavior, as Lawrence Green's theory states that knowledge is a predisposing factor to behavior(Notoatmodjo, 2014b). According to the study's findings and observations made in the field, the majority of homemakers had good knowledge and good food safety practices. On the other hand, homemakersexhibiting poor knowledge levels also followed bad food safety practices. This is because somehomemakersstill do not know about food safety practices, and homemakers who cannot read or write, so they are less able to receive food safety knowledge, which impacts on bad food safety practices.

The results of this study are in line with related research, which stated that knowledge is a factor that has a significantly stronger relationship with the food safety practices of mothers in Debarq City, Ethiopia. Mothers with a good knowledge level score showed better food safety practices(Dagne et al., 2019).

Related research conducted in Gondar City (one of the densely populated cities in northwest Ethiopia), based on the results of multivariable logistic regression analysis, revealed that the knowledge variable was related to food safety practices. Food handlers possessing a good knowledge level indicated a higher chance of adopting good food handling practices(Azanaw et al., 2019).

Based on the results of the Chi square test, the p value is 0.005 (p value<0.05), a relationship was observed between attitudes and food safety practices of homemakers during the COVID-19 pandemic in Kuncen Hamlet, Banjarmangu and Banjarnegara. The research findings also revealed that the majority of homemakerspossessed positive attitudes followed by good food safety practices. This is similar to the theory put forward by Lawrence Green that attitude is a predisposing factor, which is one of the factors in the occurrence of behavior(Notoatmodjo, 2014b). This is supported by the possibility that the respondent is female because women prioritize feelings and pay more attention to small matters compared with men (Patra & Nurtama, 2020). In related research, one's attitude has been linked to preventing optimal diseases,managing treatment as well as the promoting personal health. On the other hand, low attitudes have been linked to poor health and ineffective disease prevention(Al-Makhroumi et al., 2022). Therefore, the attitudes of homemakers can influence their practice in food safety.

A person's attitude can indicate the extent to which perceptions and beliefs influence their willingness to change their behavior. The condition of the COVID-19 pandemic caused anxiety and psychological pressure in society. Attitudes result from psychological construction. When attitudes towards food safety during the COVID-19 pandemic were positive, they also had a positive effect on food safety behavior and food consumption(Liu et al., 2021).

This research is in line with related studies that stating that there was a significant relationship exists between the attitudes of food handlers and the applying of food sanitation hygiene(Brutu, 2021). Likewise, other studies state that a relationship exists between the attitude of food handlers and food sanitation hygiene(Herdianti et al., 2019). However, this study is not in line with related studies whose results state that no relationship exists between attitudes towards food safety practices(Pujilestari & Amelia, 2021).

Based on the results of the Chi square test, the p value was 0.011 (p value<0.05), so a relationship was observed between sources of information and security

practices. The results of the study found that very few homemakers received food safety information from health workers. In addition, there has never been any food safety education by health workers for homemakers there. Therefore, many homemakers have few sources of information regarding food safety, followed by bad safety practices. However, most homemakers possessing much food safety information, claim to obtain this information through self-searching on the internet and watching YouTube videos.

On the other hand, a literature study found that information related to knowledge obtained from training interventions had the most significant influence on increasing knowledge of food safety and hygiene, including among homemakers. Knowledge is assumed as a basis in guiding the formation of one's behaviors (Insfran-Rivarola et al., 2020). In addition, information from social media, especially during the COVID-19 pandemic, is the most doubtful source of information because everyone is free to share information regardless of whether the news is true or false. While social media is not a very trusted source of food safety information, it can be useful for spreading information. Due to the continuous increase in the use of the Internet, the use of social media has become a budget-friendly way of spreading information about health and food safety. (Thomas & Feng, 2021).

In line with related research, stating that during the COVID-19 pandemic, sources of information from various media, including television, newspapers, and the internet, strongly influenced food safety behavior (MIN et al., 2020).

Based on the results of the Chi square test, a p value of 0.041 ($p < 0.05$) was obtained, so a relationship was noted between economic status and the food safety practices. Economic status is often associated with a person's occupation and income. The higher a person's position, the easier it would be to obtain the facilities needed and desired (Sulistiyowati & Soekamto, 2017). Research finds that those with low economic status cannot afford cooking utensils affecting food sanitation and hygiene, such as aprons, knives, and cutting boards. This is influenced by financial allocations that prioritize the fulfillment of children's school fees as well as the fulfillment of daily food and clothing.

The COVID-19 pandemic has caused food insecurity to increase due to the economic crisis. Where food security requirements exist, this can be achieved when everyone has unlimited access to food, especially from an economic standpoint allowing them to meet their basic needs (Han et al.,

2021). For this reason, the economic status of a family influences the food safety practices of homemakers. Respondents who have low economic status are associated with bad security practices because they cannot afford cooking utensils affecting food sanitation and hygiene, such as aprons, knives, and cutting boards. From the results of interviews, respondents having low economic status reported that they cannot support safety practices, kitchen utensils and food due to family needs that they must meet, such as children's school fees as well as the fulfillment of daily food and clothing.

The results of this study are in line with related research, stating a significant relationship exists between economic level and personal hygiene behavior of food handlers with a p value of 0.000 ($p < 0.05$) (Setyaningrum, 2011). Other research also confirms a similar finding: economic factors ($p < 0.01$) influence a person's food safety behaviors (Alimi et al., 2016). Safe food handling practices are more likely in high-income homes. Households in the upper socio-economic class are more likely than those in lower socio-economic classes to observe safer food handling practices (Yemane & Tamene, 2022).

4 CONCLUSIONS

A relationship exists between knowledge, attitudes, sources of information and economic status and the food safety practices of homemakers during the COVID-19 pandemic in Kuncen Hamlet, Banjarnegara, and Banjarnegara. Future research can examine other factors contributing to food safety practices, such as education level, age, and the availability of household sanitation equipment. Going forward, a need has been identified to provide additional training to health promotion staff at local puskesmas (community health clinics) to improve their ability to encourage community members in all households to handle food safely as well as provide social support to achieve this behavior.

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