



Factors Related to the Behavior of Using Styrofoam Container on Seblak Traders in Yogyakarta

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Abstract

Styrofoam is a material of polystyrene, still included in the plastic group and a styrene monomer. The danger of styrene monomers to health after long-term exposure is to cause headaches, fatigue, depression and anemia besides Styrofoam waste is a waste that is very difficult to decompose by nature. The purpose of this study was to determine the factors associated with the behavior of the use of Styrofoam containers in seblak traders in Umbulharjo and Gondokusuman Districts, Yogyakarta. This study used a cross sectional study. The research subjects were seblak trader which numbered 50 traders, the object of the research was the use of 50 samples of styrofoam containers. The research instrument is a questionnaire and checklist. Data analysis with univariate and bivariate analysis. The results showed that there was no relationship between age and the behavior of using Styrofoam containers in seblak traders ($p = 0.543 > 0.05$), there was no relationship between gender and the behavior of using Styrofoam containers in seblak traders ($p = 0.252 > 0.05$), there is no relationship of knowledge with the behavior of the use of Styrofoam containers in seblak traders ($p = 0.123 > 0.05$), and there is an attitude relationship with the behavior of the use of Styrofoam containers in seblak traders ($p = 0,001 < 0.05$). There is no relationship between age, gender, knowledge, and behavior of using styrofoam containers. There is a relationship between attitude and behavior of using styrofoam containers.

Keywords; age; attitude; knowledge; seblak trader; styrofoam

BACKGROUND

Food is a basic need for every human being to fulfill human rights so that it must be available in sufficient, safe, quality, nutritious and diverse quantities at prices that are affordable by the people's purchasing power (Tung et al., 2022). The availability of safe and quality food and beverages must be based on a standard so that it does not endanger the health of consumers and guarantees the implementation of honest and responsible trade (Hermawan, 2020).

The food currently circulating is practically inseparable from the use of packaging for various purposes, in addition to protecting food quality as well as a form of promotion (Sattlegger, 2021). Plastic packaging is widely used because of several advantages and advantages (Beghetto et al., 2021). The plastic packaging is made of several types of polymers, namely polyethylene terephthalate (PET), polyvinylchloride (PVC), polyethylene (PE), polypropylene (PP), polystyrene (PS), polycarbonate (PC) and melamine (Hsissou et al., 2021). Among the plastic packaging, one type that is quite popular among the producers and consumers is the type of polystyrene, especially polystyrene foam (Guazzotti et al., 2022). Polystyrene foam is widely known as styrofoam which is often used

inappropriately by the public because styrofoam is actually a trademarked trade name (Behera, 2022). Styrofoam is used as an insulator in building construction materials, not for food packaging, but in fact it is widely used as a food packaging wrapper (Semple et al., 2022).

Polystyrene foam packaging was chosen because it is able to maintain hot or cold food, remains comfortable to hold, maintains the freshness and integrity of packaged food, is light, and does not react chemically to other substances on the acidity of the food (Abhijith et al., 2018). Polystyrene foam packaging is used to package ready-to-eat, fresh, or food that requires further processing. Many fast food restaurants serve their dishes using this package, as well as food products such as instant noodles, chicken porridge, meatballs, coffee, and yogurt (Schumann & Schmid, 2018).

The basic material of Styrofoam is polystyrene foam, a type of plastic that is very light, stiff, translucent and cheap but brittle quickly (Purwanto et al., 2020). Polystyrene foam is produced from a mixture of 90-95% polystyrene and 5-10% gas such as n-butane or n-pentane. Polystyrene foam is made from styrene monomer through a suspension polymerization process at a certain pressure and temperature, then heated to soften the resin and evaporate the remaining blowing agent (Fikri & Veronica, 2018). Polystyrene is rigid, transparent, brittle, chemically inert, and is a good insulator (Nasution et al., 2018). While polystyrene foam is a plastic material that has special properties with a structure composed of granules with low density, has a light weight, and there is a space between the granules filled with air (Abu-Jdayil et al., 2019).

Styrofoam becomes dangerous because it is made from styrene grains, which are processed using benzene. Whereas benzene is a substance that can cause various dangerous diseases if it enters the body and the symptoms can only be known in the long term. Based on the results of a preliminary study conducted by researchers on March 26, 2019 in Umbulharjo and Gondokusuman Districts, Yogyakarta, there are 10 seblak traders who use styrofoam as food packaging for seblak, and there are 3 seblak traders who do not know the dangers of styrofoam as food packaging that is dangerous for humans. consumer health. Even though the seblak food should not be packaged with styrofoam because the packaging is done when the seblak has a high temperature, and is supported by a high fat content.

METHOD

This study used an analytic observational design with a cross-sectional study design. The subjects in this study were 50 traders of seblak in Umbuharjo and Gondokusuman Districts, Yogyakarta. The total sampling techniques was used in this study. The object of the study was the use of 50 samples of styrofoam containers. The research instrument is by using a questionnaire and a checklist and data collection was carried out in June 2019.

The behavior of using styrofoam is every trader who uses styrofoam material to wrap the food being sold. Meanwhile, age is divided into two categories, namely adolescent and teenager which is meant to be the age of the seller. Education is the last formal education completed by obtaining a letter of completion of study, attitude is the reaction or process of a person who is still closed to a stimulus or object such as low; Elementary and Middle School and High School and University. Knowledge is the level of knowledge of the seller about the dangers of Styrofoam which is summarized in 10 questions which are then categorized as poor and good. While the last is the attitude which consists of 5 questions that show the attitude of the seller towards the use of styrofoam. Descriptive statistical analysis and different proportion tests were carried out on

two variables that were thought to be related or correlated. In this study, the analysis of the different proportions test was used to see the relationship between the independent variables, namely education, knowledge, and attitudes with the dependent variable. The results of the chi square test calculation, if the p value is smaller than the alpha value (0.05), then there is a significant relationship between the variables. Data were analysed by univariate and bivariate analysis.

RESULT

Table 1. Characteristic Respondent of the Study

Variables	Frequency	%
Aged		
Adolescent	16	32
Teenager	34	68
Sex		
Male	23	46
Female	27	54
Education		
Low	16	32
High	34	68
Selling time		
≥ 2 years	34	68
< 2 year	16	32

Based on the results of the study (Table 1), it is known that many seblak traders who have an age in the category of teenagers (12-25 years) work as sellers of seblak. Meanwhile, only a few of the adults in the 26-45-year-old category worked as seblak traders. The majority of seller are female (56%) and have a good level of education (high school and university) and most of them have been selling for more than two years at the research site.

Table 2. Univariate Analysis of the Study

Variables	Frequency	%
Knowledge		
Poor	35	70
Good	15	30
Attitude		
Poor	23	46
Good	27	54
Behavior		
Poor	29	58
Good	21	42

Table 3. Bivariate Analysis of the Study

Variables	Styrofoam Usage Behavior		PR	CI, 95%	P-Value
	Poor	Good			
Aged					
Adolescent	8	8	0.81	0.464 - 1.413	0.543
Teenager	21	13			
Sex					
Male	11	12	0.717	0.434 - 1.187	0.252
Female	18	9			
Knowledge					
Poor	23	12	0.643	0.845 - 3.193	0.123
Good	6	9			
Attitude					
Poor	20	3	2.609	1.495 - 4.551	< 0.001
Good	9	18			

Bivariate analysis is an analysis that is carried out on each variable to determine the variable relationship between the independent variable and the dependent variable based on the distribution of existing cells. The statistical test used is the Chi Square test and the alternative is the Fisher test. The confidence interval (CI) used is 95% with a significance level of $p < 0.05$ to determine the relationship, the Prevalence Ratio (PR) is used. Based on Table 3 above, it shows that there is no relationship between age and the behavior of using styrofoam containers in seblak traders, the value of $p = 0.543$, there is no relationship between gender and the behavior of using styrofoam containers in seblak traders, the value of $p = 0.252$, there is no relationship between knowledge and behavior in the use of Styrofoam containers in seblak traders, p value = 0.123, and there is a relationship between age and behavior in using styrofoam containers in seblak traders, p value = < 0.001).

Discussion

Based on the results of the univariate analysis of the age of seblak traders on the use of styrofoam containers in Umbulharjo and Gondokusuman Districts, Yogyakarta, it was found that most of the seblak traders had an age in the adolescent category with a total of 34 respondents (68%), while the seblak traders who had an age in the adult category amounted to 16 respondents (32%). So that the behavior of a person with age can influence, with teenagers the information obtained is more while adults usually do not know the information, but that does not mean that teenagers and adults are all well behaved, some are not well behaved, some already know the dangers but ignore it or not apply it. This condition is generally associated with a better level of productivity in the adolescent age group than in the adult age group (Crystandy et al., 2022).

Based on the statistical significance in this study, the p value = 0.543 > 0.05 , which means that it can be stated that there is no relationship between age and the behavior of using styrofoam containers in seblak traders in Umbulharjo and Gondokusuman sub-districts Yogyakarta. The results of the Chi-Square test, the expected count value does not meet, namely more than 5 and more than 20%. While the results of the value of $RP = 0.810$ less than one means a protective factor and (95% CI: 0.464-1.413), this value includes the number 1 meaning that the age variable is not necessarily a risk factor for the behavior of using styrofoam containers in seblak traders and statistically not significant. Another study showed that there was no relationship between age

and the use of styrofoam as a food packaging container. The majority of respondents were 18-28 years old and (62.5%), 29-39 years old (27.5%). The difference in age factors can affect behavior in the use of styrofoam containers, with younger respondents having good actions/behaviors (Gelbke et al., 2019).

In this study, from a total of 50 respondents, it showed that of 23 respondents with male gender, there were 11 respondents who behaved badly in the use of styrofoam containers and 12 respondents who behaved well in the use of styrofoam containers. While 27 respondents are female, there are 18 respondents who behave badly in using styrofoam containers and 9 respondents who behave well in using styrofoam containers.

The labor participation rate of men is always higher than the labor participation rate of women because men are considered breadwinners. However, in this study, most of them are women who are seblak traders and who behave well in knowing the use of good and correct styrofoam containers. Most of them have not been able to apply good behavior, seblak traders also coat food with plastic before placing it in a styrofoam container (Utami et al., 2020).

Based on the statistical significance in this study, the p value = $0.123 > 0.05$, which means that it can be stated that there is no relationship between the level of knowledge and the behavior of using styrofoam containers in seblak traders. The results of the Chi-Square test, the expected count value does not meet, namely more than 5 and more than 20%. While the results of the value of $RP = 1.643$ more than one means a risk factor and (95% CI: 0.843 - 3.193), this value includes the number 1 meaning that the knowledge variable is not necessarily a risk factor for the behavior of using styrofoam containers in seblak traders and statistically not significant. The results of this study are not in line with research conducted by other researchers with the results showing that there is a relationship between respondents' knowledge and the use of Styrofoam as a food container, which was tested with Fisher's Exact Test showing a significant number (p) 0.004 and other studies show p value $0.036 < p$ value 0.05, which means there is a relationship between knowledge of online food sellers and the use of styrofoam as a food container (Abidin, 2018).

Based on the calculation results, it was obtained that $p = <0.001$ with <0.05 , which means that there is a relationship between attitude and behavior in using styrofoam containers in seblak traders. This is in line with other studies which state that there is a relationship between attitudes towards instant noodle products packaged in styrofoam with knowledge of the use of styrofoam materials in food packaging (Azwar, 2015).

Based on the results of the Chi-Square test, the expected count value is less than 5 and not more than 20%. While the results of the value of $RP = 2.609$ (95% CI: 1.492-4.551), this value does not include number 1, meaning that traders with bad attitudes are 2.609 times more likely to have bad behavior in using styrofoam containers compared to traders who have bad attitudes good, and statistically significant. The results of this study are not in line with the results of other studies, with the results of the research showing that there is no relationship between respondents' attitudes and the use of styrofoam as a food container, showing a significant p value of 0.118 (Barnes et al., 2011). Another study with research results that H_0 is accepted and H_a is rejected with p value = $0.727 > 0.05$ which means there is no relationship between the attitude of online food sellers and the use of styrofoam as a food container (Abidin, 2018).

Conclusion

Based on the results of the research that has been done, it can be concluded that the age of the seblak traders in the use of styrofoam containers in Umbulharjo and Gondokusuman sub-districts who have an age in the category

of teenagers amounting to 34 people (68%). The sex of seblak traders on the use of styrofoam containers in Umbulharjo and Gondokusuman sub-districts with a female sex of 27 people (54%). The level of knowledge that is not good in the use of styrofoam containers at seblak traders is more, namely 35 people (70%). Good attitude in the use of styrofoam containers in seblak traders is more than 27 people (54%). Bad behavior in the use of styrofoam containers at seblak traders is more than 29 people (58%). There is no relationship between age, gender and knowledge with the behavior of using styrofoam containers in seblak traders and there is a relationship between attitudes and behavior in using styrofoam containers in seblak traders.

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