

ANALYSIS OF FACTORS THAT INFLUENCE CONSUMER BEHAVIOR OF DRINKING WATER IN KUPANG CITY

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ABSTRACT

Kupang City is one of the largest cities in East Nusa Tenggara. The increase in the number of residents in the city of Kupang has greatly impacted the increasing need for drinking water, while water quality has declined due to the large amount of pollution. Therefore, drinking water treatment technology (DAM) is needed to meet the needs of the community. Drinking Water Depot (DAM) has an important role in processing clean water into drinking water, besides that DAM is also very popular with the community, the presence of DAM also poses a risk to public health if it is not managed according to health requirements. Therefore, to find out the degree of public health, good or not, one of them is by looking at people's behavior in choosing drinking water depots that are suitable for consumption. The research design used was cross sectional. The research sample was 96 consumers drinking water depots. The sampling technique used in this study is accidental sampling. Data retrieval is done by distributing questionnaires to be filled in by respondents. Statistical analysis uses simple linear regression test and multiple linear regression. The results showed that the variables of product quality, price, promotion, distribution, Eligibility for Hygiene Hygiene certificates and family support influenced the behavior of consumers of drinking water depots with a significance value of $p = 0.000$; $p = 0,000$; $p = 0.015$; $p = 0,000$; $p = 0,000$; $p = 0.010$. While the education level variable does not affect the consumer behavior of drinking water depots with a significance value of $p = 0.427$. Multiple linear regression test showed that the price variable is the variable that has a dominant influence on consumer behavior of drinking water depots with a significance value of $p = 0,000$. The conclusion is that Price variable is the most dominant variable influencing consumer behavior of drinking water depots.

Keywords: *consumer behavior, product quality, drinking water depots*

INTRODUCTION

Kupang City is one of the largest cities in East Nusa Tenggara (NTT) with a population of 423,800 inhabitants in 2017. The increase in population has a significant impact on the increasing need for drinking water. while water quality is decreasing due to the amount of pollution. For this reason, drinking water treatment technology (DAM) is needed. The role of the Drinking Water Depot (DAM) in this case is to treat clean water into drinking water. DAM's fast-growing business today has an important meaning in the provision of affordable drinking water by the community. But from another aspect the existence of DAM has a risk to public health if it is not managed in accordance with health requirements. DAM is currently in great demand by the public because it is cheaper, practical and easy to obtain.

Drinking water depots have increased quantitatively but qualitatively are still low. This is evident from the results of research conducted in the District of Maulafa on testing samples in the laboratory that of 51 Drinking Water Depots examined, DAM contaminated by microbes by 51% and 33, 33% DAM has been contaminated by E. Coli bacteria. Consumer behavior that is more selective in choosing a product will provide input for businesses to pay more attention to the results of the products produced. Consumers must be smart consumers in choosing a product such as DAM products so that health problems arising from the consumption of DAM water products that do not meet the requirements do not occur.

Drinking water of poor quality will greatly affect health. Water can be a medium for transmitting certain diseases such as diarrhea. Water contaminated by stool will be contaminated by E. Coli bacteria which can cause diarrhea. This is in line with research conducted in Pandeglang District, the working areas of Cibaliung, Labuan and Pegelaran puskesmas with diarrhea cases respectively 244,1,440 and 686. (Indriani. 2013). Data from the Health Office of Kupang City the number of diarrhea sufferers is still quite high at 39.69% in 2016. This is possible due to one of them due to the poor quality of drinking water consumed by the community. Efforts to prevent, control and eradicate infectious diseases such as diarrheal diseases are carried out to protect the community from contracting diseases, reduce the number of sick, disabled and / or die, and to reduce social and economic impacts due to infectious diseases.

DAM Sanitation Hygiene is a health effort to reduce or eliminate the factors that cause pollution of drinking water and the facilities used for the processing, storage and distribution of drinking water. The purpose of sanitation hygiene is to protect the community from potential adverse effects due to consumption of drinking water from DAM. Thus the community will avoid the possibility of being exposed to the risk of waterborne illness. One

effort that must be done to prevent pollution is to wash hands before doing work. Washing hands with soap and rinsing will remove microbes found in the hands. And the use of masks to avoid work contamination with refill drinking water products (Sulistiyandari, 2009) The city of Kupang as a city of study destinations for higher education, DAM is developing quite rapidly and can be found especially in densely populated areas or campus areas. There are also many DAM consumers, especially students who live in boarding houses. Although there have been many problems related to DAM products, it turns out that many students use water from DAM products. This study focuses on examining the factors that influence the behavior of consumers of drinking water depots in Kupang City.

METHOD

This research is a quantitative research with cross sectional approach. The population in this study are all drinking water depots and the respondents will be all consumers who use drinking water depots. The population in this study included in the population is not limited (infinite) because the number and identity of the population is not known with certainty. The sample in this study was consumers of drinking water depots who were filling / buying water. Accidental sampling technique, because the number of respondents or samples is not known with certainty.

RESULTS AND DISCUSSION

Table 1. Distribution of Respondents by Age

Age of Respondents	amount	Percentage (%)
21 - 30 Year	63	65,6
31 - 40 Year	19	19,8
> 40 Year	14	14,6
Total	96	100

Table 1. above shows that the largest group of respondents is 21-30 years old, as many as 62 people or 65.6%, while those aged 31-40 years are as many as 19 people or 19.8%, and age over > 40 years, namely 14 people or 14.6%.

Table 2. Distribution of Respondents by Gender

Gender	amount	Percentage (%)
Male	86	89,6
Girl	10	10,4
Total	96	100

Table 2 shows that the number of male respondents was 86 people (89.6%), more than female respondents, namely 10 people (10.4%)

Table 3. Distribution of Frequency of Water Purchases per week

Frequency of Water Purchases per week	amount	Percentage (%)
1 time	14	14,6
2 time	41	42,7
3 time	27	28,1
4 time	11	11,5
5 time	1	1
6 time	2	2
Total	96	100

Table 3 shows that the majority of respondents bought refill water twice a week as many as 41 people (42.7%), followed by respondents who bought refill water 3 times as many as 27 people (28.1%), once as many as 14 people (14.6%), 4 times as many as 11 people (11.5%), and at least 5 and 6 times as many as 3 people (3%).

1. Descriptive Analysis

Table 4. Descriptive Analysis

Consumer behavior	amount	Percentage (%)
Less : 10-20	0	0
Enough : 21-30	38	39,6
Well: 31-40	58	60,4
Product quality		
Less : 12-24	0	0
Enough : 25-36	41	42,7
Well: 37-48	55	57,3
Product Prices		
Less affordable: 6-12	0	0
Quite Affordable: 13-18	42	43,8
Very Affordable: 19-24	54	56,3
Promotion		
Not Informative: 11-22	0	0
Quite Informative: 23-33	42	43,8
Very Informative: 19-24	54	56,3
Distribution / Location / place		
Less affordable: 8-16	0	0
Quite affordable: 17-24	60	62,5
affordable : 25-32	36	37,5
Sanitation Hygiene Eligibility Certificate		
Less : 7-14	0	0
Enough : 15-21	27	28,1
Well : 22-28	69	71,9
Level of education		
Basic education (elementary & junior high)	18	18,8
High school	60	62,5
Higher education (D1-S1)	18	18,8
Family support		
Less : 6-12	0	0
Enough :13-18	88	91,7
Well : 19-27	8	8,3

Based on table 4. Above shows that the majority of respondents in consumer behavior are in the good category of 58 people (60.4%), product quality in the good category of 55 people (57.3%), the price of the product is very affordable as many as 54 respondents (56.3%), product promotion was very informative as many as 54 respondents (56.3%), quite affordable as many as 60 respondents (62.5%), 69 people (71.9) felt good with the Eligible Hygiene sanitation certificates, high school educated as many as 60 people (62.5%), enough support from families as many as 88 people (91.7%).

2. Influence Analysis

Table 5. Effect of Product Quality Variables on Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	198,380	1	198,380	30,597	,000 ^b
	Residual	609,453	94	6,484		
	Total	807,833	95			

a Dependent Variable: Consumer Behavior (Y)

b. Predictors: (Constant), Product Quality (X1)

Statistical test results show that there is an effect of product quality on consumer behavior with a p-value = 0,000. Product quality has an influence on consumer behavior, because the quality of a product will determine a person's actions to make the decision to choose DAM as a place to buy drinking water. Kotler & Armstong (2008) explain that product quality is a determining factor in increasing product marketing while maintaining consumers to continue to choose to use DAM in meeting drinking water needs. This study is in line with research from Nurhidayah (2016), which states that product quality factors significantly influence the consumer behavior of refill drinking water depots. Research from Ardiansyah (2014) also explains that there is an effect of product quality on consumer behavior.

. Table 6. Effect of Product Price Variables on Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	391,608	1	391,608	88,441	,000 ^b
	Residual	416,225	94	4,428		
	Total	807,833	95			

a Dependent Variable: Consumer Behavior (Y)

bPredictors: (Constant), Price (X2)

Statistical test results show that there is an effect of product prices on consumer behavior with a p-value = 0,000. Product prices affect consumer behavior because prices have a major role in the decision making process of buyers. An affordable price and supported by good quality will increase the interest of customers or consumers to choose water products in DAM.

This study is in line with research from Lamandasa (2011) which states that there is an effect of product prices on consumer behavior refill drinking water. The results of other studies Siagian (2012) which also states that there is a significant influence on product prices on consumer behavior refill drinking water. This is because each DAM entrepreneur has considered competitors in the market. DAM business operators always provide lower prices than similar product prices or nearby DAM prices to be attractive consumer. But on the other hand consumers can also make choices that if the price offered by a business actor does not match the quality provided, then the consumer will not choose or come a second time

Table 7. Effect of Product Promotion Variables on Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49,751	1	49,751	6,169	,015 ^b
	Residual	758,083	94	8,065		
	Total	807,833	95			

a. Dependent Variable: Consumer Behavior (Y)

b. Predictors: (Constant), Promotion (X3)

Statistical test results show that there is an influence of product promotion on consumer behavior with a p-value = 0,000. This means that the clearer information DAM products received by these consumers will further increase the demand for DAM water products.

This study is in line with research from Irawan (2014) which states that there is an effect of product promotion on consumer behavior refill drinking water. The results of another study Nugraha (2008) which also states that there is an influence of promotion on the behavior of consumers refill drinking water. This is also in accordance with the responses of respondents that promotion of price discounts on each purchase of water and the provision of brochures will greatly affect the behavior of DAM consumers.

Table 8. Effect of Distribution Variables on Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	258,241	1	258,241	44,168	,000 ^b
	Residual	549,592	94	5,847		
	Total	807,833	95			

a. Dependent Variable: Consumer Behavior (Y)

b. Predictors: (Constant), Distribution (X4)

Statistical test results indicate there is an influence of distribution / location / place of products on consumer behavior with a value of p = 0,000. This means that the easier the product can be reached, the higher the desire of consumers to buy the product. The distribution factor is related to the ease of distribution of goods so that the product can reach consumers. Today's society is more interested in products that are easy to reach and provide benefits.

This study is in line with research from Martin (2017) which states that there is an effect of distribution on the behavior of refill drinking water consumers. The results of another study from Tedjakusuma (2001) which also states that there is an effect of distribution on consumer behavior refill drinking water.

Table 9. Effect of Educational Level Variables on Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,444	1	5,444	,638	,427 ^b
	Residual	802,389	94	8,536		
	Total	807,833	95			

a. Dependent Variable: Consumer Behavior (Y)

b. Predictors: (Constant), Education Level (X6)

Statistical test results showed there was no influence of education level on consumer behavior with p-value = 0.427. This means that low and high education levels do not affect consumer behavior in choosing refill drinking water. Education has no effect on consumer behavior because each individual has a different level of satisfaction. Customer satisfaction depends on the perception of what is felt, which is not influenced by the strata of education (Ardiansyah, 2016). According to Mamonto (2013) higher or lower education does not have a large influence on consumer behavior, this is because there are other factors that can influence consumer behavior, namely the price factor.

This study is in line with research from Ardiansyah (2016) which states that there is no influence of the level of education on consumer behavior refill drinking water.

Table 10. Effect of Family Support Variables on Consumer

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55,571	1	55,571	6,944	,010 ^b
	Residual	752,262	94	8,003		
	Total	807,833	95			

a. Dependent Variable: Perilaku Konsumen (Y)

b. Predictors: (Constant), Family Support (X7)

Statistical test results indicate there is an influence of family support on consumer behavior with a p-value = 0.010. This means that the better the support of the family will influence consumers' decisions in choosing and consuming refill drinking water products. Family members are the most influential primary reference group. Family members can have a strong influence on consumer behavior early on. According to Laksana (2008) the authority

to decide on a purchase is dominated by the head of the family but other family members also influence the decision to choose a drinking water product.

This study is in line with research from Towoliu (2017) which states that family support influences consumer behavior. The results of other studies from Tumbuan (2017) also explain the influence of family support factors on DAM consumer behavior

3. Analysis of Dominant Factors That Affect Consumer Behavior of Drinking Water Depots (DAM) in Kupang City.

Table 11. Results of Multiple Linear Regression Tests

Coefficients^a

Model		Unstandardized		Standardized		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,546	3,590		,988	,326
	Product Quality (X1)	,164	,071	,195	2,301	,024
	Price (X2)	,852*	,159	,502	5,340	,000*
	Promotion (X3)	-,025	,089	-,024	-,285	,776
	Distribution (X4)	,237	,100	,214	2,386	,019
	Sanitation Hygiene Certificate (X5)	,016	,127	,012	,128	,898
	Education Level (X6)	,126	,290	,031	,434	,666
	Family Support (X7)	-,002	,137	-,001	-,017	,987

* Dominant Regression coefficient B (close to number 1)

*Signifikan <0,05

The results of the multiple linear regression test indicate that not all independent variables studied together affect consumer behavior. The test results are known to only 1 variable, namely the price of the dominant product influencing DAM consumer behavior with a regression coefficient value of B 0.852 and a Significance value = 0,000. Thus the research hypothesis was rejected.

Price has a dominant effect on consumer behavior because cheap product prices are very attractive to the public. The price of an easily accessible product will increase consumer demand for drinking water products. Low prices and supported by good product quality will

increase customer loyalty so it is not easy for customers to move to other products. Determination of low prices with good quality can provide convenience for the community, so that all people from various walks of life can benefit from refill drinking water products. The results of this study are in line with research from Tedjakusuma (2014) which states that product prices have a dominant effect on consumer behavior.

CONCLUSIONS

1. There is an influence of product quality factors on DAM consumer behavior where the better the quality of the product the more it encourages consumers to choose water in the DAM
2. There is an effect of price factors on DAM consumer behavior where the more affordable the price offered is increasingly encouraging consumers to choose water in the DAM
3. There is an influence of promotion factors on DAM consumer behavior where the better the promotion the more consumers encourage to choose water in the DAM
4. There is an influence of distribution / place / location factors on DAM consumer behavior where the more affordable distribution / place / location increasingly encourages consumers to choose water in DAM
5. There is no influence of education level factors on DAM consumer behavior
6. There is an influence of health-worthy certificate factors on DAM consumer behavior where DAM has a sanitation-worthy hygiene certificate increasingly encouraging consumers to choose water in the DAM
7. There is an influence of family support factors on DAM consumer behavior where the better the support of surrounding families will increasingly influence DAM consumers to choose the DAM.
8. Product price factors have a dominant effect on DAM consumer behavior

RECOMMENDATION

Based on the conclusions obtained from the results of the study, the recommendations that can be given by researchers are the Office of health making guidelines, preparing budgets and coordinating with puskesmas staff in increasing DAM supervision, Drinking Water Depot business actors to always take care of sanitation hygiene certificates continuously, Puskesmas must carry out continuous checks of DAMs in their respective regions and the results must be reported to the health department.

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