



Dominant Factors Affecting the Level of Awareness of Sanitation Hygiene Implementation in Micro, Small and Medium Enterprises (MSMEs)

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ABSTRACT

The level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area is still low at around 80%. The purpose of this study was to analyze what factors influence the level of awareness of the application of sanitation hygiene. This research method uses quantitative research, analytical observational cross-sectional in nature. The population was all MSMEs in the Tuban Regency area that entered the Indonesian Electronic Business Licensing System on May 11, 2022, totaling 154 businesses. The sample size of 112 respondents was taken by simple random sampling. The independent variables included education level, knowledge, and attitude, while the level of awareness of sanitation hygiene implementation was the dependent variable. The instrument used a questionnaire sheet about the level of education, knowledge, and attitude, and a checklist sheet about the level of awareness of the application of sanitary hygiene. Analysis using Chi-Square test and Logistic Regression. The results showed that the level of education was almost half of elementary and junior high school graduates, and high school / vocational high school, 38.4% each, knowledge about the application of sanitation hygiene was mostly lacking, namely 67.0%, attitudes mostly had a negative response, namely 69.6%, the level of awareness of the application of sanitation hygiene was mostly low, namely 69.6%. Chi-Square test results, education level p value = 0.000, knowledge p value = 0.000, attitude p value = 0.000, and the results of the logistic regression test attitude has an OR value of 99.226 the highest. Thus, it can be concluded that there is a relationship between the level of education, knowledge, and attitude with the level of awareness in implementing sanitation and hygiene, where attitude is the most dominant factor. Therefore, it is necessary to increase knowledge about sanitation and hygiene for MSME actors, especially through food safety counseling for the home industry.

Keywords: Education Level, Knowledge, Attitude, Awareness of Sanitation Hygiene Implementation, MSMEs.

ABSTRAK

Tingkat kesadaran penerapan sanitasi higiene pada UMKM di wilayah Kabupaten Tuban masih rendah sekitar 80%. Tujuan penelitian ini adalah untuk menganalisis faktor apa sajakah yang mempengaruhi tingkat kesadaran penerapan sanitasi higiene. Metode penelitian ini menggunakan penelitian kuantitatif, observasional analitik bersifat cross sectional. Populasi adalah seluruh UMKM di wilayah Kabupaten Tuban yang masuk Sistem Perizinan Berusaha Elektronik Indonesia pada 11 Mei 2022 sejumlah 154 usaha. Jumlah sampel sebanyak 112 responden diambil dengan simple random sampling. Instrumen menggunakan lembar kuesioner tentang tingkat pendidikan, pengetahuan, sikap, dan lembar ceklist tentang tingkat kesadaran penerapan sanitasi higiene. Analisis menggunakan uji Chi-Square dan Regresi Logistik. Hasil penelitian menunjukkan tingkat pendidikan hampir setengahnya lulusan SD dan SMP, dan SMA/SMK, masing-masing 38,4%, pengetahuan tentang penerapan sanitasi higiene sebagian besar kurang yaitu 67,0%, sikap sebagian besar memiliki respon negatif yaitu 69,6%, tingkat kesadaran penerapan sanitasi higiene sebagian besar rendah yaitu 69,6%. Hasil uji Chi-Square, tingkat pendidikan nilai $p=0,000$, pengetahuan nilai $p=0,000$, sikap nilai $p=0,000$, dan hasil uji regresi logistik sikap memiliki nilai OR sebesar 99,226 paling tinggi. Dengan demikian, dapat disimpulkan bahwa terdapat hubungan antara tingkat pendidikan, pengetahuan, dan sikap dengan tingkat kesadaran dalam menerapkan sanitasi dan higiene, dimana sikap merupakan faktor yang paling dominan. Oleh karena itu, diperlukan peningkatan pengetahuan tentang sanitasi dan higiene bagi pelaku UMKM, khususnya melalui penyuluhan keamanan pangan bagi industri rumah tangga.

Kata Kunci: Tingkat Pendidikan, Pengetahuan, Sikap, Kesadaran Penerapan Sanitasi Higiene, UMKM.

INTRODUCTION

MSMEs (Micro, Small, and Medium Enterprises), according to data reported by the Ministry of Cooperatives and Small and Medium Enterprises (Kemenkop UKM) in 2022 in Indonesia, recorded 8.71 million business units, West Java has the most MSMEs with 1.49 million business units, in second place is Central Java reaching 1.45 million units, and third place is East Java with 1.15 million units (Kementerian Koperasi dan UKM, 2022). Meanwhile, Tuban Regency is the only Regency in East Java to receive the Namukti Cup award from the International Council for Small Business (ICSB) Indonesia and the Ministry of Cooperatives and Small and Medium Enterprises (KUKM) in 2020, because it is considered successful in developing Micro, Small and Medium Enterprises (MSMEs). The Namukti Award is an award given by ICSB to regions that are capable of implementing trusted, leading, and organized MSMEs development. So it can be said that Tuban Regency is a Regency that can empower MSEs (Fadhillah et al., 2022).

The Office of Cooperatives, Industry, and Trade (Diskoperindag) explained that in 2019 the number of MSMEs in Tuban Regency reached 75,536, consisting of 48,436 agricultural business actors, 11,404 trade business actors, 1,587 processed product actors, 2,120 service actors, and 11,989 various business actors, and at the end of 2019 the number of MSMEs in Tuban Regency increased further, totalling 93,112 units, which were spread across 328 villages/sub-districts and in 20 sub-districts of Bumi Wali Tuban (Kementerian Koperasi dan UKM, 2022). According to Silvana, & Sestiono, (2021), the data obtained in 2021 that did not meet the requirements was 58.8% of the total sampling of 51 PIRT facilities. The awareness of MSMEs players in Tuban Regency to apply food safety standards to the products they sell is still low, only 10.97% have implemented the Good Processed Food Production Method (CPPOB). CPPOB is a guideline that explains how to produce food so that it is of good quality, safe and suitable for consumption. CPPOB is also a basic requirement for granting the SPP-IRTP distribution permit certificate.

FHI or Food Household Industry is a Micro, Small, and Medium Enterprise or MSMEs (Silvana, & Sestiono, 2021). Regulation of the Minister of Health of the Republic of Indonesia No. 14 of 2021 on Business Activity and Product Standards in the Implementation of Risk-Based Business Licensing in the Health Sector, explains that the Health Standard for Household Industry Food Processing (SKPP-IRT) is a food safety assurance requirement that includes fulfillment of hygiene, sanitation, and documentation aspects. Regulation of the Food and Drug Supervisory Agency No. 22/2018 on Guidelines for Granting Home Industry Food Production Certificates, states that a Home Industry Food Production Certificate, hereinafter abbreviated as SPP-IRT, is a written guarantee given by the Regent/Mayor to the Food Production of IRT in his/her working area that has fulfilled the requirements for granting SPP-IRT to circulate the Food Production (Badan Pengawas Obat dan Makanan, 2019).

Sanitation and hygiene are ways to maintain personal health and the environment in the food or beverage processing process such as the use of good tools and materials (Usman, 2022). Food sanitation hygiene behaviour in MSMEs is influenced by three factors, namely, predisposing factors manifested in knowledge, attitudes and so on; supporting factors manifested in the physical environment, the availability or unavailability of health facilities or facilities, such as clean water, landfills, equipment racks and so on; and push factors are factors that come from the attitudes and behaviour of community leaders (toma), religious leaders (toga), attitudes and behaviour of officials including health workers such as the existence of laws needed to strengthen community behaviour, the involvement of local governments in supporting facilities and infrastructure for clean water sanitation and sanitation of solid and liquid waste for MSMEs activities (Permatasari et al., 2021). Sajdah, et al., (2022) The results showed that there was a significant relationship between the level of knowledge and attitude towards the hygiene practices of food handlers in restaurants in the Wonorejo Puskesmas working area with a p-value = 0.000.

Based on the results of the researcher's initial observations in March 2023, it was found that the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area was still low, around 80%. The education level of business actors is heterogeneous with basic education graduates dominating (elementary and junior high school)

at 60%. Knowledge related to it is also still low and attitudes are indifferent to agreed commitments.

Septiyani et al., (2021) in his research concluded that the level of knowledge and age had a significant influence, while the attitude and education level of respondents did not significantly affect the food safety behaviour of housewives, therefore, intervention from the Puskesmas to provide counseling related to food safety behaviour by applying the principles of food sanitation hygiene and the dangers of food-borne diseases for the body. According to Permatasari et al., (2021), the impact of the behaviour of MSMEs that ignore food sanitation hygiene is that it triggers many incidents of food-borne diseases. Pathogenic microbes that contaminate food can cause diseases such as cholera, dysentery, gastroenteritis, diarrhea, and various other digestive tract diseases or even death if consumed by humans. Furthermore, efforts to improve sanitary hygiene behaviour are by supervising, empowering, and conducting counseling and training on food safety so that the quality of human resources continues to be optimized and over time it can become a good habit for MSMEs actors.

Poor food processing and inappropriate storage, as well as microbial contamination (such as *Staphylococcus aureus* and *Bacillus cereus*) and, caused by chemicals (such as Histamine and Tetrodotoxin), occur due to the low awareness of MSMEs actors in Tuban Regency to implement sanitary hygiene. Hygiene activities include conditions, lifestyle practices, place conditions, and others related to the food production/processing process, while sanitation is an effort to prevent disease or other potential hazards that occur during food processing, which focuses on environmental health efforts or environmental factors around humans (Nussy, 2021).

The impact of a lack of sanitary hygiene during the production, processing, and distribution processes will trigger many incidents of disease or health problems (such as diarrhea, and poisoning) or can even cause death if it has been consumed. The purpose of this study was to determine the dominant factors that influence the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency Region in 2023.

METHODS

The research design used is a survey, which is an approach to studying the correlation between risk factors and effects through observation or data collection at one specific time (Notoatmodjo, 2017). This study used a cross-sectional research design with the aim of analysing the factors that influence the level of awareness of sanitation hygiene implementation in MSMEs in the Tuban Regency area in 2023.

The population of this study was all MSMEs in the Tuban Regency area registered in the OSS or the Indonesian Electronic Business Licensing System on 11 May 2022, with a total of 154 businesses. The sample of this research is MSMEs registered in OSS in the region. The number of samples required is 112 respondents. The sampling technique used is probability sampling with simple random sampling, where each MSMEs has the same opportunity to be selected as a sample (Sugiyono, 2020).

The inclusion criteria in this study are MSMEs that are still actively operating and willing to become research respondents while the Exclusion Criteria, namely: MSMEs that are not willing or unable to answer the questionnaire completely.

The instruments used in this study were questionnaire sheets on the level of education, knowledge, and attitudes, as well as a checklist sheet on the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area in 2023.

This research was conducted in July 2023 and has obtained a Certificate of Ethics from the Research Ethics Commission of the Faculty of Health, University of Muhammadiyah Gresik with Number: 232/KET/II.3.UMG/KEP/A/2023 to ensure the protection of human rights and welfare of research subjects.

Data will be analyzed using descriptive analysis, which includes tables and narratives to identify the level of education, knowledge, attitude, and level of awareness of sanitation hygiene implementation in MSMEs in the Tuban district area in 2023. In addition, inferential analysis will be conducted using a Logistic Regression test at 95% confidence level ($p < 0.05$) to evaluate the relationship between education level, knowledge, and attitude with the level of awareness of sanitation hygiene implementation in MSMEs in Tuban district in 2023.

RESULTS

Table 1. The Frequency Distribution by Age, Gender, Education Level, Knowledge, Attitudes, and Awareness Level of MSMEs Actors on the Implementation of Sanitation Hygiene among MSMEs in Tuban Regency in 2023.

MSMEs Age	Frequency (n)	Percentage (%)
19 to 29 years	13	11,6
30 to 40 years	69	61,6
> 40 years	30	26,8
Total	112	100
Gender of MSMEs		
Male	30	26,8
Female	82	73,2
Total	112	100
Education level of MSMEs actors		
Basic education (elementary and junior high school)	43	38,4
Secondary education (SMA / SMK)	43	38,4
Higher education (D3, S1, S2 and S3)	26	23,2
Total	112	100
Knowledge of MSMEs Players on the Implementation of Sanitation Hygiene		
Less	75	67,0
Enough	11	9,8
Good	26	23,2
Total	112	100
Attitudes of MSMEs Actors towards the Implementation of Sanitation Hygiene		
Negative	78	69,6
Positive	34	30,4
Total	112	100
Awareness Level of Sanitation Hygiene Implementation of MSMEs Actors		
Low	78	69,6
High	34	30,4
Total	112	100

Table 1 shows that of the 112 MSMEs in the Tuban Regency area that entered the OSS or the Indonesian Electronic Business Licensing System in 2023, most were between 30 and 40 years old, accounting for 61.6%. Additionally, 73.2% of the 112 MSMEs in the Tuban Regency area that entered the OSS or the Indonesian Electronic Business Licensing System in 2023 were women. Furthermore, the education level of MSME players in the Tuban Regency area who entered the OSS or the Indonesian Electronic Business Licensing System in 2023 indicates that almost half of them graduated from primary education (elementary and junior high school), and secondary education (high school/vocational school), each comprising 38.4%. Moreover, the knowledge of MSMEs actors regarding the application of sanitation hygiene in the Tuban Regency area in 2023 is mostly lacking, with a rate of 67.0%. Similarly, the attitude of MSMEs actors towards the implementation of sanitation hygiene in the Tuban Regency area in 2023 mostly has a negative response, at 69.6%. Lastly, the level of awareness of sanitation hygiene implementation among MSMEs in Tuban Regency in 2023 is predominantly low, at 69.6%.

Table 2. Cross-tabulation of education level with the level of awareness of sanitation hygiene implementation in MSMEs in Tuban Regency in 2023.

Education level of MSME actors	Awareness Level of Sanitation Hygiene Implementation				Total	<i>p-Value</i>
	Low		High			
	f	%	f	%		
Primary Education	36	46,2	7	20,6	43	38,4
Secondary education	35	44,9	8	23,5	43	38,4
Higher education	7	9,0	19	55,9	26	23,2
Total	78	100	34	100	112	100

N=112; Wald=4,590; $\alpha=0,05$ (5%)

Table 2 shows that the primary education level (elementary and junior high school) had the highest level of awareness of sanitation hygiene implementation, 46.2%, compared to a high level of awareness, 20.6%. The level of secondary education (SMA/SMK) has the highest level of awareness of the application of low sanitation hygiene, namely 44.9% compared to a high level of awareness, namely 23.5%. The level of higher education (D3, S1, S2, and S3) has the highest level of awareness of the application of sanitation hygiene, namely 55.9% compared to a low level of awareness, namely 9.0%. The results of inferential testing in Table 2 using Logistic Regression analysis show a p-value of 0.032 <0.05. This means that there is a relationship between the level of education and the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area in 2023.

Table 3. Cross-tabulation of Knowledge with Level of Awareness of Sanitation Hygiene Implementation in MSMEs in Tuban Regency Area in 2023

Knowledge of MSME Actors	Awareness Level of Sanitation Hygiene Implementation				Total	<i>p-Value</i>
	Low		High			
	f	%	f	%		
Less	74	94,9	1	2,9	75	67,0
Enough	3	3,8	8	23,5	11	9,8
Good	1	1,3	25	73,5	26	23,2
Total	78	100	34	100	112	100

N=112; Wald=5,289; $\alpha=0,05$ (5%)

Table 3 shows that lack of knowledge has the highest level of awareness of the application of sanitation hygiene which is low at 94.9% compared to a high level of awareness which is 2.9%. Sufficient knowledge has the highest level of awareness of the application of sanitary hygiene, namely 23.5% compared to a low level of awareness, namely 3.8%. Good knowledge has the highest level of awareness of the application of sanitation hygiene, namely 73.5% compared to a low level of awareness, namely 1.3%. The results of inferential testing in Table 3 using Logistic Regression analysis show a p-value of 0.021 <0.05. This means that there is a relationship between knowledge and the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area in 2023.

Table 4. Cross Tabulation of Attitude with Level of Awareness of Sanitation Hygiene Implementation in MSMEs in Tuban Regency Area in 2023.

Attitudes of MSME Actors	Awareness Level of Sanitation Hygiene Implementation				Total	<i>p-Value</i>
	Low		High			
	f	%	f	%		
Negative	76	97,4	2	5,9	78	69,6
Positive	2	2,6	32	94,1	34	30,4
Total	78	100	34	100	112	100

N=112; Wald=5,925; $\alpha=0,05$ (5%)

Table 4 shows that negative attitudes have the highest level of awareness of the application of low hygiene sanitation, namely 97.4% compared to a high level of awareness, namely 5.9%. The most positive attitude is a high level of awareness of the application of sanitation hygiene, namely 94.1% compared to a low level of awareness, namely 2.6%. The results of inferential testing in Table 4 using Logistic Regression analysis show a p-value of 0.015 <0.05. This means that there is an attitude relationship with the level of awareness of sanitation hygiene implementation in MSMEs in the Tuban Regency area in 2023.

Table 5. Dominant Factors Affecting the Level of Awareness of Hygiene Sanitation Implementation in MSMEs in Tuban Regency Area in 2023.

Independent Variable	Beta Value	Wald Value	p-Value
Education Level	2,236	4,590	0,032
Knowledge	2,565	5,289	0,021
Attitude	4,597	5,925	0,015

The results of inferential testing in Table 5 using Logistic Regression analysis show that the attitude variable has a wald value (5.925) and beta value (4.597) which is also called the highest OR (Odd Ratio) value compared to other variables. This means that attitude is the most dominant factor influencing the level of awareness of sanitation hygiene implementation in MSMEs in the Tuban Regency Region in 2023.

DISCUSSION

Education Level of MSMEs Actors in the Tuban Regency Region in 2023

The results showed that the education level of MSMEs actors in the Tuban Regency area who entered the OSS or the Indonesian Electronic Business Licensing System in 2023 graduated from higher education (D3, S1, S2, and S3) only 26 people or 23.2%, and almost half of them graduated from primary education (SD and SMP), and secondary education (SMA/SMK), each of which was 43 people or 38.4% so that someone with a low level of education has low knowledge which then has an impact on actions in maintaining personal and environmental hygiene and health. According to (Permatasari et al., 2021), the higher the educational status, the higher the perception of cleanliness.

Education is needed to obtain information such as things that support health so as to improve the quality of life. Education can influence a person, including a person's behaviour on lifestyle, especially in motivating an attitude to participate in development. In general, the higher a person's education, the easier it is to receive information (Wawan, & Dewi, 2019). Through education, the information obtained is broader, and knowledge increases. A person who has a high level of education can have healthy living behaviour compared to those with low education (Septiyani et al., 2021).

Based on the results of this study, the researcher concludes that a person tries to take education to a higher level, the reason is so that his knowledge and abilities can be more directed, resulting in better attitudes, behaviour, and performance. The education referred to here can be formal or non-formal education. After going through the education process, individuals will generally implement their knowledge to advance their business.

Knowledge of MSMEs actors regarding the implementation of sanitation hygiene in the Tuban Regency area in 2023

The results showed that the knowledge of MSMEs actors regarding the application of sanitation hygiene in the Tuban Regency area in 2023 was in the sufficient category, only 11 people or 9.8%, and most of the categories were lacking, namely 75 people or 67.0% so that the knowledge of MSMEs actors who tend to be lacking in understanding the application of sanitation hygiene can result in low action in maintaining personal and environmental hygiene and health. The knowledge of MSME actors about the application of sanitation hygiene in the Tuban Regency area is known through a questionnaire consisting of 10 questions with 2 answer responses, namely 0 = "False", and 1 = "True". Knowledge questions about the application of sanitation hygiene include understanding, principles, and risks.

Knowledge or cognition is a domain that is very important for the formation of a person's action or behaviour (Hayati, & Sestiono, 2021). Knowledge about sanitation hygiene is important because it will affect the practice of implementing personal hygiene and the environment (Hulu et al., 2020). Knowledge is a factor that affects sanitation hygiene, because good knowledge related to the application of sanitation hygiene can improve good food safety as well (Septiyani et al., 2021). Harnani et al., (2019) stated that through education, the information obtained is more extensive and knowledge is increasing.

Based on the results of this study, the researcher concluded that in this study more respondents had insufficient knowledge followed by the existence of a basic education level (elementary and junior high school), so education can affect a person, including a person's behaviour towards a lifestyle, especially in motivating to behave, as well as the ease of receiving information.

Attitudes of MSMEs actors regarding the implementation of sanitation hygiene in the Tuban Regency area in 2023

The results showed that the attitude of MSMEs actors towards the implementation of sanitation hygiene in the Tuban Regency area in 2023 was in a positive category, with only 34 people or 30.4% and most of them were in the negative category, namely 78 people or 69.6%, so that the negative response of MSMEs actors in terms of implementing sanitation hygiene led to low action in maintaining personal and environmental hygiene and health. The attitude of MSME actors regarding the application of sanitation hygiene in the Tuban Regency area is known through a questionnaire consisting of 8 statement questions with 4 response answers, namely 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Agree", and 4 = "Strongly Agree". Attitude statements about the application of sanitation hygiene include cognitive, affective, and conative aspects.

Attitude can be defined as a collection of feelings, beliefs, and behavioural tendencies towards certain people, ideas, objects, or groups (Septiyani et al., 2021). Attitude according to (Adventus et al., 2020) is a reaction or response that is still closed from a person to a stimulus or object. The manifestation of attitude cannot be seen immediately, but can only be interpreted first from closed behaviour. Attitude clearly shows the connotation of the suitability of reactions to certain stimuli which in everyday life are emotional reactions to social stimuli. Attitude is not yet an action or activity, but a predisposition to behaviour. Attitude is still a closed reaction, not an open reaction or open behaviour. Attitude is a readiness to react to objects in a certain environment as an appreciation of the object, furthermore (Wawan & Dewi, 2019) explain that attitude is a predisposition to do or not do a certain behaviour, so that attitude is not only a purely psychological internal condition of the individual, but attitude is more of an individual consciousness process.

Based on the results of this study, the researcher concludes that experience, level of education, and knowledge can shape and influence a person's response to an object, and then this response is the basis for forming a person's attitude, if the attitude of MSMEs actors is negative, the application of sanitation hygiene carried out is not good, and in the end, the food is less clean, unhealthy and unsafe for consumption, which can lead to the spread of disease or health problems.

Level of Awareness of the Application of Sanitary Hygiene in MSMEs in the Tuban Regency Region in 2023

The results showed that the level of awareness of the application of sanitation hygiene in MSME actors in the Tuban Regency area in 2023 in the high category was only 34 people or 30.4% and most of them were in the low category, namely 78 people or 69.6%, so that the level of understanding of MSMEs actors for actions in maintaining personal hygiene and health and this low environment cannot be a SPP- IRTP distribution permit certificate, because it must meet the requirements in the context of circulation of IRTP Production Food. The level of awareness of the application of sanitation and hygiene among MSMEs operators in the district is known through a checklist form for visits to IRTP facilities by officers consisting of 37 elements that are checked with the category of non-conformity, namely Minor (MI), Major (MA),

Serious (SE), or Critical (KR) found in the inspection, and OK if the reality in the field is done correctly opposite to the negative statement in the column of the assessed aspects.

According to (Permatasari et al., 2021), the impact of the behaviour of MSMEs that ignore food sanitation hygiene is that it triggers many incidents of food-borne diseases. Pathogenic microbes that contaminate food can cause diseases such as cholera, dysentery, gastroenteritis, diarrhea, and various other digestive tract diseases or even death if consumed by humans. Furthermore, efforts to improve sanitary hygiene behaviour are by supervising, empowering, and conducting counseling and training on food safety so that the quality of human resources continues to be optimized and over time it can become a good habit for MSME actors. The impact of a lack of sanitary hygiene during the production, processing, and distribution processes will trigger many incidents of disease or health problems (such as diarrhea, poisoning) or can even cause death if it has been consumed by humans.

Based on the results of this study, the researchers concluded that one of the things that can be done so that MSMEs actors can be aware of the importance of implementing sanitary hygiene is to change their mindset and habits, namely by frequently attending training and counseling on sanitary hygiene practices related to food sanitation. The application of good sanitation hygiene will be formed if the habit is also accompanied by awareness for action in maintaining personal hygiene and health and the environment, food safety will be guaranteed.

Relationship between Education Level and Awareness Level of Sanitation Hygiene Implementation in MSMEs in Tuban Regency Area in 2023

The results of the bivariate analysis with the Logistic Regression test obtained a significant number or probability value (0.032) is smaller than the significant standard of 0.05 or ($p < 0.05$), so there is a relationship between the level of education and the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area in 2023. This is in line with the results of research (Permatasari et al., 2021) that the factors that influence the level of awareness of the application of sanitation hygiene are formed from three factors and one of them is the level of education.

Education is a learning process toward a better change in a person, group, or community, through education, the information obtained is wider, and knowledge increases (Hartini, 2022). According to Sajdah et al., (2022) human resources affect the state of sanitation hygiene, in carrying out sanitation hygiene practices influenced by factors such as education, age, and experience that lead to knowledge and attitudes regarding the application of personal hygiene and the environment.

Based on the results of this study, the researcher concluded that respondents who have a low level of education can take action to maintain personal and environmental hygiene and health consciously. This can be proven based on the results of this study that the level of basic education (elementary and junior high school) with a high level of awareness is 20.6%. Although the level of education of respondents is low, access to information is easily obtained through the internet, so that someone who has a low level of education does not necessarily have low knowledge which then has an impact on his behavior.

Relationship between Knowledge and Awareness Level of Sanitation Hygiene Implementation in MSMEs in Tuban Regency Area in 2023

The results of the bivariate analysis with the Logistic Regression test obtained a significant number or probability value (0.021) is smaller than the significant standard of 0.05 or ($p < 0.05$), so there is a relationship between knowledge and the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area in 2023. This is in line with the results of research (Sajdah et al., 2022) that, there is a significant relationship between the level of knowledge and the hygiene practices of food handlers in restaurants in the Wonorejo Health Center working area with a p-value < 0.05 . The results of the study (Septiyani et al., 2021) concluded that the level of knowledge and age have a significant influence on the food safety behavior of housewives.

Human resources, such as educational factors, and age affect the state of hygiene which leads to knowledge and attitudes regarding personal hygiene and the environment (Ane et al., 2022). According to (Permatasari et al., 2021), efforts to improve sanitary hygiene behavior are

by supervising, empowering, and conducting counseling and training on food safety so that the quality of human resources continues to be optimized and over time it can become good habit for MSME actors.

Based on the results of this study, the researcher concludes that knowledge can shape a person's behavior, knowledge is the basis for the occurrence of a behavior, so the better the knowledge of MSME actors regarding the application of sanitary hygiene can improve good food safety as well.

Relationship between Attitude and Awareness Level of Sanitation Hygiene Implementation in MSMEs in Tuban Regency Area in 2023

The results of the bivariate analysis with the Logistic Regression test obtained a significant number or probability value (0.015) is smaller than the significant standard of 0.05 or ($p < 0.05$), so there is a relationship between attitude and the level of awareness of the application of sanitation hygiene in MSMEs in the Tuban Regency area in 2023. This is in line with the results of research (Permatasari et al., 2021) that food sanitation hygiene behavior in MSMEs is influenced by three factors, one of which is, predisposing factors manifested in knowledge, and attitudes. (Sajdah et al., 2022) the results of his research show that there is a significant relationship between attitudes towards the hygiene practices of food handlers in restaurants in the Wonorejo Puskesmas working area, while (Septiyani et al., 2021) the results of his research found that attitudes do not significantly affect the food safety behavior of housewives.

Attitude is an evaluative statement towards objects, people or events, it reflects a person's feelings towards something. Attitudes may result from behavior but attitudes are not the same as behavior (Ali, 2015). (Wawan & Dewi, 2019) mention the factors that influence attitudes including: 1) Personal experience; 2) The influence of other people who are considered important; 3) Cultural influences; 4) Mass media; 5) Educational institutions and religious institutions; and 6) Emotional factors. The attitude of implementing sanitation hygiene is an individual who already knows how to apply good and correct sanitation hygiene and do it (Hartini, 2022).

The results in this study, MSME actors who have a negative attitude do not necessarily always have bad food safety behavior, this can be seen in the results of the cross-tabulation that a negative attitude with a high level of awareness of the application of sanitary hygiene is 5.9%, and a positive attitude with a low level of awareness of the application of sanitary hygiene is 2.6%. This can be caused by the habits of respondents who think their behavior is good and does not cause harm so they are accustomed to doing it continuously.

Dominant Factors Affecting the Level of Awareness of Hygiene Sanitation Implementation in MSMEs in the Tuban Regency Region in 2023

The results of the Logistic Regression analysis show that the attitude variable has the highest wald value (5.925) and beta value (4.597) compared to other variables, so attitude is the most dominant factor influencing the level of awareness of sanitation hygiene implementation in MSMEs in the Tuban Regency Region in 2023. These results are in line with the results of research by Herdianti et al., (2019) that attitude is a determinant of food sanitation hygiene, but not in line with (Permatasari et al., 2021), where the results of their research are in line with the results of their research, (2021), where the results of their research concluded that food sanitation hygiene behavior in MSMEs is influenced by three factors, namely, predisposing factors manifested in knowledge, attitudes and so on; supporting factors manifested in the physical environment, available or unavailable health facilities or facilities, for example clean water, landfills, equipment racks and so on and push factors are factors that come from the attitudes and behavior of community leaders (toma), religious leaders (toga), attitudes and behavior of officials including health workers such as the existence of laws needed to strengthen community behavior, the involvement of local governments in supporting facilities and infrastructure for clean water sanitation and sanitation of solid and liquid waste for activities, and the attitude of MSMEs has the strongest influence.

The attitude of implementing hygiene sanitation is an individual who already knows how to apply good and correct hygiene sanitation and do it. The attitude of food handlers is also an

important factor that can influence food safety practices, which can reduce the occurrence of foodborne diseases and other health hazards caused by cross-contamination of bacteria in poor sanitary hygiene practices (Hartini, 2022). Wawan & Dewi, (2019) states that there are factors that influence attitudes such as personal experience, the influence of others who are considered important, culture, media, educational institutions, and emotional factors.

Based on the results of this study, the researcher concludes that attitude will determine a person's behavior. If a person's attitude is positive towards something then he will have good behavior, otherwise, if a person's attitude is negative towards something then he will have bad behavior too.

CONCLUSION

The conclusion is there is a relationship between the level of education, knowledge, and attitude with the level of awareness in implementing sanitation and hygiene, where attitude is the most dominant factor. Therefore, it is necessary to increase knowledge about sanitation and hygiene for MSMEs actors, especially through food safety counseling for the home industry.

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