

Waste Management Practices Among Trading Type of Business in Selected Municipalities of Davao Occidental

ABSTRACT

Aims: To know the waste management practices among the trading type of business in selected municipalities of Davao Occidental province in line with the primary objective of the provincial government unit for the 100% compliance from the business sector of correct waste management practices.

Study design: Descriptive. It is a research design that aims to obtain information to systematically describe a phenomenon, situation, or population.

Place and Duration of Study: Malita, Davao Occidental, Philippines in the year 2020.

Methodology: This study has fifteen respondents from three selected municipalities of Davao Occidental which were chosen through random sampling. Personal interview was conducted to the respondents and all of them had actively participated and supported the study. Data gathered were checked as to its completeness, tabulated, analyzed and interpreted. An adapted survey questionnaire was used on the basis of validity and reliability considering that it has been utilized in the past surveys successfully. To check respondents' background, the researchers had coordinated with local authorities at the barangay level to make sure that they are the right persons to be interviewed.

Results: Data shows that majority of the respondents were male, they belong to the age bracket 43-52 years old. All of them were aware about solid waste management as they heard it from their respective municipal and barangay councils. These councils aforementioned, have educated them on the proper waste disposal by putting all the wastes to the garbage truck during the schedule of collection. Public bins were provided by local authorities in población areas. Respondents have high level of awareness on the segregation of waste between bio-degradable and non-biodegradable as a result of their attendance to the trainings and seminars on proper waste management and practices conducted by the local authorities.

Keywords: Waste management practices among trading type of business in selected municipalities of Davao Occidental province.

1.INTRODUCTION

Garbage management has become a massive issue due to haphazard waste management, a lack of dedication, too much freedom, and a lack of self-discipline were seen as factors (San Jose, 2021). On the other hand, Yukalang et al. (2017) mentioned that unorganized collection system, lack of knowledge of the impact of solid waste, non-fixed collection schedule or route, and lack of shareholder integration impact the collection and segregation of garbage. Moreover, considering that the study involves a localized waste management practices at the municipal level, Cucchiella F. D'Adamo I, Gastaldi M. (2017) stated that the management of Municipal Solid Waste (MSW) has been identified as one of the global challenges that must be carefully faced in order to achieve sustainability goals.

The main objective of the study is to assess the waste management among trading businesses in selected municipalities of Davao Occidental. This province was chosen as the pilot area for this study because it is the primary objective of Davao Occidental local government unit to ensure 100% compliance from the business sector on the correct waste management practices. The concept of garbage recycling was common among the respondents as a result of their active participation on the campaign for a healthy and clean environment. Fan et al. (2019) suggested that in order to ensure the long-term sustainability of solid waste management, a recycling habit be formed. This has been proven successful in some provinces in China.

Management of municipal solid waste includes recycling, incineration, waste-to-energy conversion, composting or landfilling. Landfilling for solid waste disposal is preferred in many municipalities globally. Landfill sites act as ecological reactors where wastes undergo physical, chemical and biological transformations Nanda S, Berruti F. (2021). On the other hand Torrente-Velásquez JM et.al. (2021) mentioned that the absence of sound sampling procedures and statistical analyses to estimate solid waste generation in many developing countries has resulted in incomplete historical records of waste quantity and composition.

In a research study on Green Economy: Waste Management and Recycling methods, Tulebayeva N. et.al. (2020) clearly stated that with population growth, huge waste is generated every day. Widely used plastics, advanced technology and other things have led to different characteristics of the waste, which has become a difficult problem for the management and disposal of household waste.

1.2 Statement of the Problem

This study was conducted in order to find out the waste management practices among trading type of business in selected municipalities of Davao Occidental province. Specifically, it sought answers to the following :

1. What is the socio-demographic profile of the trading type of businesses?
2. What are the wastes generated by trading type of businesses?
3. What are the waste management practices employed by trading type of businesses?
4. What are the different problems encountered related to waste management?

1.3 Significance of the study

This study will determine the proper waste management of trading type of business in selected municipalities of Davao Occidental. Moreover, results of this study will serve as reference for local government units in the area for future policy-making. This will also serve as guide for future researchers in this particular field.

1.4 Scope and Limitation of the Study

This study was limited to the waste management practices among fifteen respondents from the municipalities of Sta. Maria, Malita and Don Marcelino, Davao Occidental who were engaged in trading type of business.

2. MATERIAL AND METHODS

2.1 Research Locale

The study was conducted in the municipalities of Sta. Maria, Malita and Don Marcelino, Davao Occidental province. These three out of five towns were the densely populated areas in the province where the trading type of businesses operated.

2.2 Research Design

Descriptive method was used in this study in order to obtain information from the respondents to systematically describe a situation, population and phenomenon. Data were gathered through interview using an adapted survey questionnaire because this instrument had been successfully used previously.

2.3 Sampling Design

Random sampling technique was used in determining the respondents of the study.

2.4 Respondents of the Study

Table 1 shows the distribution of respondents into three different areas of Davao Occidental province. This province originally belong to Davao Del Sur. On July 23, 2013 by virtue of legislation under Republic Act 10360, it created the province with five municipalities such as Sta. Maria, Jose Abad Santos, Don Marcelino, Sarangani and Malita as the capital and most populous town in the province. The respondents of this study were chosen from the three biggest municipalities with five respondents each which covers the entire trading type of business in their areas. Respondents were local businessmen engaged in trading type of business.

Table 1. Distribution of respondents of the study

Municipality	Sample Size
Sta Maria	5
Malita	5

Don Marcelino	5
Total	15

2.5 Research Instrument

The study used an adapted survey questionnaire with the following parts: the socio-demographic profile; waste generated; waste management practices; and problems encountered.

2.6 Data Gathering Procedure

Permission from the respective barangay captains to conduct the study was requested. Objectives and mechanics of the study were also explained to the respondents and each was given a survey questionnaire. Thereafter, these instruments were all retrieved from the respondents where entries were checked properly to ensure completeness and data reliability. All responses were properly tabulated, analyzed and interpreted.

2.7 Data Analysis

All data were tallied, tabulated, analyzed and interpreted manually by the researcher with the various problems identified in this study. The following tables were provided to clearly depict results of the study.

3. RESULTS AND DISCUSSION

Table 2 depicts the socio-demographic profile of the selected trading type of businesses. It was found out that most of the respondents were 43-52 years old, majority of them or 87% were female while only 13% were male, religion is dominated by the Roman Catholic with 87%. In terms of educational attainment, 60% were college undergraduate and 47% had a monthly income between P20,000-25,000.

Table 2. Socio-demographic Profile of the owners of selected trading type of business.

Particulars	F	%
Age		
43-52 years old	13	87.00
53-62 years old	2	13.33
Gender		
Male	13	87.00
Female	2	13.33
Religion		
Roman Catholic	13	87.00
Seventh Day	1	6.60
Jehova Witnesses	1	6.60
Educational Attainment		
College under-Graduate	9	60.00
College Graduate	6	40.00
Monthly Income		
P20,000-25,000	7	47.00
26,000-50,000	6	40.00
51,000-70,000	2	13.33

Table 3. Waste generated from trading type of business. It was found out that most of the wastes generated were sacks, cartons, and plastics with 73%. While the type of container used for garbage collection were sacks with 80%. In terms of frequency of garbage collection, the result shows that once a week was overwhelming with 86.66%.

Table 3. Waste Generated from trading type of business

Particulars	F	%
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Type of Waste Generated		
Sacks, cartoons, and plastics	11	73.33
Bottles	3	20.00
Cans	1	6.67
Type of Container Used for Garbage Collection		
Sacks	12	80.00
Cartoons	2	13.33
Plastic Bag	1	6.67
Frequency of Collection		
One a week	13	86.66
Every Other Day	1	6.67
Every Three Days	1	6.67

Table 4. Waste management practices among trading type of business. Data shows that 100% of the respondents were aware about solid waste management. More than majority or 80% heard it from their respective municipal and barangay councils. These councils aforementioned, have educated them (86.67%) on the proper waste disposal. More than one half (60%) said they put all the wastes to the garbage truck during the schedule of collection. Respondents (73.33%) said that public bins were provided by local authorities in población areas where they live. Respondents have high level of awareness on the segregation of waste between bio-degradable and non-biodegradable as a result of their attendance to the trainings and seminars on proper waste management and practices conducted by the local authorities. Garbage recycling was highly adapted by all (100%).

Table 4. Waste Management Practices among trading type of business

Particulars	F	%
Have you heard about solid waste management?		
Yes	15	100.00
Where have you heard about solid waste management?		
a. Municipal/ barangay Councils	12	80.00
b. Local radio station	2	13.33
c. School	1	6.67
Have you been educated by the barangay council on proper waste disposal?		
Yes	13	86.67
No	2	13.33
Where do you usually dispose your garbage?		
Garbage Truck	9	60.00
Roadside	5	33.33
Garbage hole at home	1	6.67
Are garbage bins provided within your community by local authorities?		
Yes	11	73.33
No	4	26.67
Do you practice segregation of wastes from bio-degradable to non-biodegradable?		
Yes	15	100.00
Have you attended a training or seminar on waste management?		

Yes	13	86.67
No	2	13.33
Have you heard about the importance of recycling?		
Yes	15	100.00
Will you agree in practicing solid waste management at home?		
Yes	15	100.00

Table 5. Problems experienced by trading type of businesses. Results show that all (100%) respondents have not experienced problems particularly on compliance to government environmental policies, employee and customer health hazard, lack of knowledge on proper waste disposal, irregular garbage collection, and improper waste management practices.

Particulars	F	%
Compliance to government environmental policies		
No	15	100.00
Employee and customer health hazard problems		
No	15	100.00
Lack of knowledge on proper waste disposal		
No	15	100.00
Irregular garbage collection		
No.	15	100.00
Improper waste management practices		
No	15	100.00

4. CONCLUSION

Based on the findings of the study the following conclusion was drawn:

That majority of the respondents were male, they belong to the age bracket of 43-52. Most of them were Roman Catholics with college undergraduate educational attainment and having an average range monthly income of P26,000-50,000. All of them were aware about solid waste management as they heard it from their respective municipal and barangay councils. These councils have provided them better education on the proper waste management. Public bins were provided by local authorities in población areas. Respondents have high level of awareness on the segregation of waste between bio-degradable and non-biodegradable materials as a result of their attendance to the trainings and seminars on proper waste management and practices conducted by the local authorities. All (100%) of the respondents have not experienced problems on the compliance to the government environmental policies, employee and customer health hazard issues, lack of knowledge or proper waste disposal, irregular garbage collection and improper waste management practices. Garbage recycling was highly adapted by all.

Further, the above conclusion shows a very strong viability with the given results which indicates that local authorities are very firm in educating their constituents on the correct waste management to ensure safe and healthy environment.

5. RECOMMENDATIONS

Based on the results of the study, it is strongly recommended that local authorities should continue educating the people on correct waste management practices, more garbage bins should be provided around the community and garbage collection should be frequently implemented in the three areas of concern.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

AUTHORS' CONTRIBUTIONS

Author FBP designed the proposal, managed the literature searches, and collection of data.
Author EA performed the statistical analysis, and had managed the analysis of the study.

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