

Public Awareness Campaign and the Reduction of Illegal Refining of Crude Oil in Degema Local Government Area, of Rivers State, Nigeria

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Abstract: *Illegal refining of crude oil, also known as artisanal or illegal oil bunkering, poses significant environmental, social, and economic challenges in oil-producing regions, including Degema Local Government Area in Rivers State, Nigeria. This study aims to investigate the potential impact of a public awareness campaign on reducing illegal refining activities in the area. A descriptive research design is employed to examine the current level of awareness, factors influencing engagement in illegal refining, the effectiveness of past awareness efforts, and propose strategies for improving public awareness campaigns. The study population comprises individuals living in the communities within Degema Local Government Area which according to the 2006 Census figure was 138,941 inhabitants. Using the Taro Yamen formula, a sample of 399 was generated. Data collection involves a survey research approach, including a literature review, to gather information on the research objectives. The quantitative data collected through the structured questionnaires were analyzed using descriptive statistics such as frequencies, percentages, and mean scores. The findings of the study indicate that while a majority of the respondents were familiar with the concept of illegal refining of crude oil, there was a lack of awareness about the associated dangers. Based on the findings of the study, it was concluded that there is a need for more effective public awareness campaigns to reduce the activities of illegal refiners in the Degema Local Government Area. The study recommends that government and relevant organizations should implement effective public awareness campaigns to reduce illegal crude oil refining by educating about the dangers, providing alternative livelihoods, emphasizing legal consequences, and utilizing various communication channels.*

Keywords: *illegal refining of crude oil, public awareness campaign, reduction of illegal refining of crude oil.*

1.1 Introduction

The act of illegal refining of crude oil, also known as artisanal or illegal oil bunkering, is a significant environmental, social, and economic challenge in several oil-producing regions around the world, including Nigeria. Degema Local Government Area, which is located in Rivers State, Nigeria, has as well been grappling with this issue of illegal refining of crude for years. This activity often involves the extraction of crude oil from pipelines or other sources without proper authorization, and then refining the stolen crude oil in makeshift refineries, which causes environmental pollution, health hazards, and economic losses to the government and legitimate oil industry. Emodi et al. (2022) assert that the illegal refinery process involves heating crude oil in metal containers to make petroleum products while ignoring all environmental, health, and safety procedures and can have catastrophic consequences.

The detrimental effects of illegal refining of crude oil are well-documented in the literature. Studies have highlighted the environmental pollution caused by the release of toxic chemicals and hazardous waste into the air, water, and soil during the crude oil refining process (Kadafa, 2012; Efenakpo et al., 2022). The economic losses incurred by the government and the legitimate oil industry due to revenue losses, pipeline vandalization, and disruption of oil production and transportation have also been extensively studied (Etekpe & Etekpe, 2018; Enyio, 2015).

Efforts have been made by the government, oil companies, and other stakeholders to curb the illegal refining of crude oil in the Degema Local Government Area and other affected regions in Nigeria. These efforts have mainly focused on law enforcement, surveillance, and crack down on illegal refining operations. However, these approaches alone have not been entirely successful in addressing the root causes of the problem. Hence this study tried to investigate the impact public awareness campaign will have on the reduction of illegal refining of crude oil in the Degema Local Government Area.

1.2 Statement of the Problem

Despite the various measures put in place to combat the illegal refining of crude oil in the Degema Local Government Area, the problem persists. The existing approaches have primarily focused on law enforcement, which has often resulted in clashes between law enforcement agencies and illegal refiners, leading to loss of lives and property, and sometimes exacerbating the problem. Additionally, there has been a lack of comprehensive public awareness campaigns to educate the local communities about the dangers of illegal refining of crude oil and the need for sustainable alternatives. This study tried to address these issues by investigating the impact public awareness campaign will have on the reduction of illegal refining of crude oil in the Degema Local Government Area.

1.3 Aim and Objectives of the Study

This study aims to explore the potential of a public awareness strategy in reducing the illegal refining of crude oil in the Degema Local Government Area. The specific objectives of the study include:

1. To examine the current level of awareness among local communities about the dangers of illegal refining of crude oil in the Degema Local Government Area.

1. To investigate the factors influencing the engagement in illegal refining of crude oil in the study area.
1. To assess the effectiveness of past public awareness efforts in addressing the problem of illegal refining of crude oil.
1. To propose strategies for improving public awareness campaigns to reduce illegal refining of crude oil in the Degema Local Government Area.

1.4 Research Questions

To guide the study, the following research questions are formulated:

1. What is the current level of awareness among local communities about the dangers of illegal refining of crude oil in the Degema Local Government Area?
1. What are the factors that influence engagement in the illegal refining of crude oil in the study area?
1. How effective have past public awareness efforts been in addressing the problem of illegal refining of crude oil?
1. What strategies can be proposed to improve public awareness campaigns to reduce the illegal refining of crude oil in the Degema Local Government Area?

1.5 Significance of the Study

This study has significant implications for policymakers, government agencies, oil companies, local communities, and other stakeholders involved in addressing the issue of illegal refining of crude oil in the Degema Local Government Area and similar regions. The findings of this study provide insights into the effectiveness of public awareness strategies in reducing illegal refining activities and offer recommendations for improving current approaches.

The study contributes to the existing literature on the topic by providing empirical evidence on the impact of public awareness campaigns in combating the illegal refining of crude oil. It also serves as a valuable resource for researchers, academics, and scholars interested in the field of environmental management, energy policy, and sustainable development.

1.6 Scope of the Study

The scope of the study refers to the extent and boundaries of the research or investigation being conducted. It defines the specific aspects, variables, and parameters that will be considered within the study. This study focuses on Degema Local Government Area in Rivers State, Nigeria, which is known for its significant oil production and illegal refining activities. The study involves local communities, government agencies, and other stakeholders involved in addressing the issue of illegal refining of crude oil in the area.

The study utilized a survey research approach, including a literature review to gather data on the current level of awareness, factors influencing engagement in illegal refining, the effectiveness of past public awareness efforts, and proposed strategies for improving public awareness campaigns.

1.7 Definition of Terms

The definition of terms refers to the process of providing clear and precise explanations for the specific words, phrases, or terms used within a particular context or domain. For this study, the following terms are defined as follows:

Illegal refining of crude oil: The unauthorized extraction of crude oil from pipelines or other sources, and the refining of the stolen crude oil in makeshift refineries.

Public awareness campaign: A coordinated effort to inform, educate, and engage the public about the dangers and impacts of illegal refining of crude oil, and promote sustainable alternatives.

Degema Local Government Area: A local government area located in Rivers State, Nigeria, known for its significant oil production and illegal refining activities.

2.0 LITERATURE REVIEW

2.1 Theoretical Framework

The theoretical framework for this study is based on the Health Belief Model (HBM) and the Theory of Planned Behaviour (TPB). The HBM posits that an individual's health-related behavior is determined by the individual's perceptions and beliefs about the health threat and the perceived benefits and barriers to taking action (Rosenstock, 1974). The TPB, on the other hand, argues that an individual's behavior is influenced by their attitudes towards the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991).

These models have been applied in previous studies on health-related behaviors, including substance abuse, environmental pollution, and risky sexual behaviors (Chukwu et al., 2019; Martinelli & Oliveira, 2017). The underpinning of this study is the Health Belief Model. By applying this model to the context of illegal refining of crude oil, this study aims to understand the factors that influence engagement in the behavior and the effectiveness of public awareness campaigns in reducing the behavior.

2.2 Conceptual Review

A conceptual review is an evaluation or analysis of a concept or idea. In a conceptual review, the focus is on understanding the conceptual basis of a topic rather than examining empirical evidence or specific applications. To investigate and structure our copies of the questionnaire to suit our research purpose, we need a clear understanding of the concepts used in the study to better understand them and how other authors have defined them (Nwachukwu et al., 2023). We began by reviewing the concept of Public Awareness to have a better knowledge of the concept and how other authors have come to define them.

2.2.1 Concept of Public Awareness

Public awareness is a crucial concept that has been studied in various fields such as health, safety, and environmental protection. According to Oh (2018), public awareness refers to the process of informing and educating the public about a particular issue or topic. It involves disseminating information to the public through various communication channels such as media, social networks, and community engagement programs. The primary goal of public awareness is to raise consciousness among individuals about a specific issue and motivate them to take action to address it.

Lee et al. (2019) describe public awareness as an essential component of behavior change communication, which aims to motivate individuals to adopt healthier and safer behaviors. Behavior change communication involves the use of various communication strategies such as interpersonal communication, mass media, and community mobilization to promote positive behavior change among individuals. Public awareness campaigns are one of the most common behavior change communication strategies used to promote positive behavior change.

Ndlovu and Dube (2019) note that public awareness campaigns have been effective in promoting behavior change in various settings. For instance, in the health sector, public awareness campaigns have been used to promote healthy behaviors such as handwashing, safe sex practices, and vaccination. In the environmental protection sector, public awareness campaigns have been used to promote recycling, conservation, and waste reduction.

In the context of the illegal refining of crude oil, public awareness campaigns can play a significant role in educating local communities on the dangers of the behavior and promoting alternative sources of livelihood. However, the effectiveness of these campaigns depends on the level of awareness among local communities and the strategies employed. According to Eze and Onyekuru (2019), public awareness campaigns on the illegal refining of crude oil should be tailored to the specific needs of the target population. They suggest that campaigns should focus on raising awareness about the negative health and environmental impacts of the behavior and promoting alternative sources of income.

Therefore, public awareness is an essential concept that has been widely studied in various fields. It involves informing and educating the public about a particular issue or topic through various communication channels. Public awareness campaigns are one of the most common behaviors change communication strategies used to promote positive behavior change. In the context of the illegal refining of crude oil, public awareness campaigns can play a significant role in educating local communities about the dangers of the behavior and promoting alternative sources of livelihood.

2.2.2 Concept of Illegal Refining Of Crude Oil

Illegal crude oil refining, also known as artisanal refining or oil bunkering, refers to the theft of crude oil followed by local refining using traditional methods and resources, without modern technology (Douglas, 2018). This process involves heating crude oil in a makeshift oven to extract petroleum products, with the leftover residue being discharged into the environment without considering the harmful impact on the ecosystem." (Douglas, 2018; Barenboim et al., 2015). Emodi et al. (2022) see illegal refinery processes involving heating crude oil in metal containers to make petroleum products while ignoring all environmental, health, and safety procedures and can have catastrophic consequences.

The materials used for illegal crude oil refining are basic, such as drums and metal pipes welded together, and crude oil is heated in these makeshift setups to produce distilled crude products like kerosene, fuel, and diesel, which are collected, cooled, and stored in tanks for consumption (Barenboim et al., 2015; Douglas, 2018). These products are easily available at low prices, meeting local energy demand. This artisanal refining process has created jobs for local youths, but it has also harmed the ecosystem. (SDN, 2015).

The production and marketing system of illegal refining is well-organized, with some individuals involved in the production and others in the marketing and distribution of the refined products to communities within and outside the region (SDN, 2015; Douglas, 2018). The local term "Kpo-fire" is used to describe this artisanal refining process, which is characterized by the explosive sound when oil is used as fuel. The term is also used to refer to the kerosene, fuel, and diesel obtained from illegal refining. (Douglas, 2018).

Illegal refining of stolen oil is a major cause of oil spills in the Niger Delta, along with other factors like sabotage of oil installations, corrosion of pipelines and storage tanks, and accidents in oil production operations. (Efenakpo et al., 2018; Bello & Amadi, 2019).



Fig 1.1: Illegal Refining Site for Crude Oil

Source: Emodi, Okereke and Diemuodeke (2022)

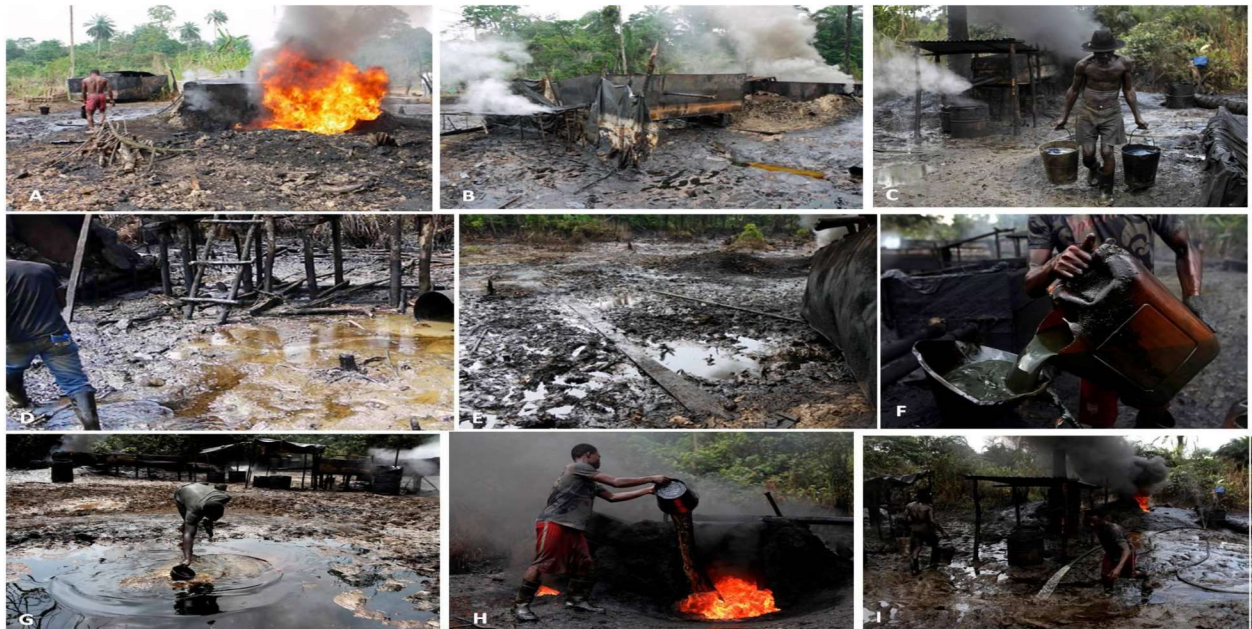


Fig 1.2 Illegal Refining Activities

Source: Emodi, Okereke and Diemuodeke (2022)

2.2.3 Current Level of Awareness of Dangers of Illegal Refining of Crude Oil

Awareness of the dangers of illegal refining of crude oil is a critical factor in reducing the prevalence of the behavior in local communities. However, previous studies have shown that there is a low level of awareness among local communities regarding the dangers of illegal refining of crude oil (Akpan, 2018; Uzundu & Nwokedi, 2019).

For instance, Akpan (2018) found that many local communities in the Niger Delta region are not aware of the environmental and health risks associated with the illegal refining of crude oil. The study revealed that the lack of awareness among local communities on the dangers of illegal refining of crude oil could be attributed to poor public education and ineffective communication strategies. Similarly, Uzundu and Nwokedi (2019) in their study on the impact of illegal oil refining on the environment of selected communities in Rivers State observed that the level of awareness of the dangers of illegal oil refining among the communities studied was very low.

To improve public awareness of the dangers of illegal refining of crude oil, it is essential to develop effective communication strategies that resonate with the target audience (Lee et al., 2019). Such strategies should also consider the socio-economic and cultural factors that may affect the acceptance of the message by the target audience (Ndlovu & Dube, 2019). Therefore, it is important to design public awareness campaigns that are tailored to the specific needs of local communities and address the concerns and challenges faced by them (Abdulahi et al., 2021).

The literature above suggests that there is a low level of awareness among local communities on the dangers of illegal refining of crude oil. Poor public education and ineffective communication strategies have been identified as key factors contributing to this low level of awareness. To address this issue, it is important to develop effective communication strategies that are tailored to the specific needs of local communities and address their concerns and challenges.

2.2.4 Factors Encouraging the Engagement in Illegal Refining of Crude

Illegal refining of crude oil is often encouraged by several factors, and scholars have identified some of these factors. Poverty is considered a significant driver of the illegal refining of crude oil (Nwilo & Badejo, 2019). The high rate of poverty in the Niger Delta region, coupled with the lack of alternative sources of income, has led many individuals to engage in the illegal refining of crude oil as a means of livelihood. This is in line with the finding of a study by Nwilo and Badejo (2019) that found that poverty is a significant factor that encourages engagement in the illegal refining of crude oil.

Another factor that encourages engagement in the illegal refining of crude oil is corruption (Oyegoke, 2019). Some individuals engage in the behavior to evade taxes and make quick profits. The corrupt practices of government officials and law enforcement agencies also contribute to the problem by creating an enabling environment for the practice to thrive.

In addition, the lack of government presence and infrastructural development in the Niger Delta region has encouraged the engagement in illegal refining of crude oil (Akpan, 2018). The neglect of the region by the government has led to a lack of employment opportunities and social amenities, which has made illegal refining of crude oil an attractive alternative. Furthermore, some individuals engage in the illegal refining of crude oil because they believe it is a means of getting back at the government for the neglect of their region (Uzundu & Nwokedi, 2019). This is often due to the belief that the government is benefiting from the oil resources in the region at the expense of the local communities.

Poverty, corruption, lack of government presence and infrastructural development, and the desire for revenge against the government have been identified as some of the factors that encourage engagement in the illegal refining of crude oil.

2.2.5 Strategies to Improve Public Awareness Campaign in Reduction of Illegal Refining of Crude Oil

To effectively reduce the illegal refining of crude oil, targeted public awareness campaigns are needed to address the factors that influence engagement in the behavior. Several strategies have been suggested for improving public awareness campaigns on this issue.

Community-based approaches: have been found to be effective in improving public awareness about the dangers of illegal refining of crude oil. A study by Ako and Ufot (2018) found that community-based approaches such as town hall meetings, focus group discussions, and community mobilization can effectively reach specific communities and address their unique concerns. By engaging with local communities in this way, public awareness campaigns can be tailored to specific contexts and more effectively communicate the dangers associated with the illegal refining of crude oil.

Traditional media such as radio and television: have also been found to be effective in disseminating information about the dangers of illegal refining of crude oil. Studies have shown that traditional media can reach a large audience, particularly in rural areas where internet access may be limited (Omeje, 2019; Enekwe & Ezeah, 2018). By using these channels, public awareness campaigns can effectively reach a broad audience and raise awareness about the risks associated with the illegal refining of crude oil.

Social media platforms: such as Facebook, Twitter, and WhatsApp have also been suggested as a strategy to improve public awareness campaigns. According to Emenike and Nwachukwu (2018), social media platforms can be used to engage and educate a large number of people, particularly young people who are more likely to be tech-savvy and active on social media. By using these platforms, public awareness campaigns can reach a wider audience, and can also encourage community members to share information with their social networks.

In addition to these strategies, there is a need for the development of targeted messages that resonate with the target audience. Messages should be tailored to address the specific concerns and motivations of the target audience. A study by Obi and Obi (2019) found that messages that emphasized the health and environmental consequences of illegal refining of crude oil were more effective in improving public awareness than messages that focused solely on the legal and economic implications.

By implementing these strategies, public awareness campaigns on the dangers of illegal refining of crude oil can be improved, and more effectively address the factors that encourage engagement in this behavior.

2.3 Empirical Review

Empirical studies have been conducted to examine the level of public awareness about the dangers of illegal refining of crude oil in Nigeria. A study by Omeje (2019) found that although there is a high level of awareness about the negative consequences of illegal refining of crude oil, many

people still engage in the behavior due to economic reasons and a lack of alternative sources of income.

Another study by Enekwe and Ezeah (2018) examined the effectiveness of public awareness campaigns in reducing the illegal refining of crude oil. The study found that although public awareness campaigns had been conducted in the study area, the campaigns were not effective due to the lack of targeted messaging and the failure to address the underlying factors that influence engagement in the behavior.

Similarly, a study by Ako and Ufot (2018) found that although public awareness campaigns had been conducted in the study area, the campaigns were not effective in reducing the level of illegal refining of crude oil due to the lack of community involvement and the failure to address the economic factors that drive engagement in the behavior.

Anyio (2015) examined the impact of illegal oil bunkering and theft which has continued to threaten the survival of the nation's economy. The paper adopted a qualitative/content research approach using secondary sources like government publications, journals, newspapers, magazines, live TV broadcasts, and the internet. Findings revealed that the nation has incurred colossal losses of oil revenues estimated at N1.29 trillion to industrial scale theft yearly, withdrawal of foreign investors and companies, degradation of the local environment, increased acquisition of light arms and ammunition, high incidents of school dropouts among primary and secondary schools pupils and students, while the Government has not done enough to combat the negative trends.

Overall, these empirical studies highlight the need for the development of targeted public awareness campaigns that address the underlying factors that influence engagement in the illegal refining of crude oil. The findings suggest that traditional approaches to public awareness campaigns may not be effective and that there is a need for innovative approaches such as community-based campaigns and the use of social media platforms to effectively reach and educate the target audience.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

This study will use a descriptive research design to explore the potential of a public awareness campaign in reducing illegal refining of crude oil in the Degema Local Government Area. A descriptive research design will allow the researcher to describe and analyze the current situation in the study area in terms of the level of awareness about the dangers of illegal refining of crude oil, the factors influencing engagement in illegal refining, the effectiveness of past public awareness efforts, and propose strategies for improving public awareness campaigns.

3.2 Population for the Study

The population for this study will be individuals living in the communities within the Degema Local Government Area that are affected by the illegal refining of crude oil. This includes residents in the areas where illegal refining activities take place, community leaders, law enforcement agencies, and relevant government officials. The population of the Degema local government area according to the 2006 Census figure was **138,941** inhabitants with the majority of the people residing there being members of the Degema and Ijaw tribal divisions.

3.3 Sample Size and Sampling Techniques

In order to determine our sample size from the population of 3,171,076, we deployed the Taro Yamen formula.

The formula is stated below.

$$n = \frac{N}{1 + N (e)^2}$$

$$n = \frac{138,941}{1 + 138,941 (0.05)^2}$$

$$n = \frac{138,941}{348.35} = 398.85$$

$$\text{Approximately} = 399$$

Where

N = sample size sought

e = Level of significance

n = Population size

Therefore, 399 residents of Port Harcourt constituted the sample size for this study. Using convenient sampling technique which is a non-probability sampling technique, the researcher conveniently administered 399 copies of questionnaire to residents of Port Harcourt that are accessible to her.

3.4 Data Collection Method

The study will use both primary and secondary data collection methods. Data will be collected using structured questionnaires for the primary collection method and literature for the secondary data collection method. The structured questionnaires will be used to collect data from the residents, community leaders, and government officials. The questionnaires will include closed-ended questions to collect qualitative data.

3.5 Validity and Reliability

In other to validate the research questionnaire, it was evaluated through expert checking by the supervisors and knowledgeable researchers for face, content, and construct validity. While for reliability, the study utilized a test-retest approach to check for the reliability of the research instrument which is the questionnaire. A pilot study of five (5) respondents was conducted to pretest the formulated questionnaire for reliability. The pilot testing was conducted to detect weaknesses in the design of the questionnaire and address issues of ambiguity to restructure the instrument in line with observation before executing the full study.

3.6 Method of Data Presentation and Analysis

The quantitative data collected through the structured questionnaires will be analyzed using descriptive statistics such as frequencies, percentages, and mean scores. The findings will be presented in tables, charts, and graphs to facilitate easy interpretation and understanding.

4.0 DATA PRESENTATION, ANALYSIS, RESULTS, AND DISCUSSIONS

4.1 Introduction

This chapter presents the results of the study on public awareness campaigns and the reduction of illegal refining of crude oil in the Degema Local Government Area. The chapter is divided into five sections. The first section provides an overview of the respondents' demographics, while the second section presents the current level of awareness of the respondents about the dangers of illegal refining of crude oil. The third section examines the factors that influence engagement in the illegal refining of crude oil, while the fourth section assesses the effectiveness of past public awareness efforts. Finally, the fifth section discusses the strategies proposed by the respondents to improve public awareness campaigns to reduce the illegal refining of crude oil in the Degema Local Government Area.

4.2 Data Presentation

In this section, data were presented using descriptive statistics in the form of tables, percentages, bar charts, and pie charts to present the respondents' response rates, gender, age, and education of the respondents to understand the capacity of the respondent to give meaningful responses to the research questions.

Table 4.1: Questionnaire Administration and Responses

	Number Involved	Percentage (%)
Total Distribution	399	100%
Useful Copies Returned	350	88%
Not Retrieved	49	12%

Source: Field Survey, 2023.

From Table 4.1 we were meant to understand that 399 copies of the questionnaire were distributed amongst the respondents. Out of the 399 copies of questionnaire administered, 350 copies returned were considered useful. This accounted for 88% responses rate. While 49 (12%) could not be retrieved due to misplacement and other reasons given by the respondents. Therefore, the total response rate that formed the basis of our analysis was 350 representing 88%.

4.3 Demographics of Respondents

Table 4.2 below shows the demographic characteristics of the respondents.

Table 4.2: Demographic Characteristics of Respondents

Variable	Frequency	Percentage
Gender		
Male	184	52.6%
Female	166	47.4%
Total	350	100%
Age		
18-25	87	24.9%
26-35	132	37.7%
36 & Above	131	37.4%
Total	350	100%
Education		
No formal education	17	4.9%
Primary education	105	30.0%
Secondary education	139	39.7%
Tertiary education	89	25.4%
Total	350	100%

Source: Field Survey, 2023.

4.4 Core Research Questions

Question number one: What is the current level of awareness among local communities about the dangers of illegal refining of crude oil in Degema Local Government Area?

Table 4.3: Current Level of Awareness

Variable	Frequency	Percentage
Familiarity with dangers associated with illegal refining of crude oil		
Very familiar	91	26.0%
Somewhat familiar	187	53.4%
Not familiar	72	20.6%
Total	350	
Directly affected by illegal refining of crude oil		
Yes	121	34.6%
No	229	65.4%
Total	350	

Source: Field Survey, 2023

Table 4.3 shows the current level of awareness among local communities about the dangers of illegal refining of crude oil in Degema Local Government Area. The majority of respondents reported being familiar with the dangers associated with illegal refining of crude oil, with 26.0% being very familiar and 53.4% being somewhat familiar. On the other hand, only 20.6% of respondents reported not being familiar with illegal refining of crude oil at all.

Question number Two: What are the factors that influence engagement in illegal refining of crude oil in the study area?

Table 4.4: Factors Influencing Engagement in Illegal Refining of Crude Oil

Variable	Frequency	Percentage
Reasons for engaging in illegal refining of crude oil		
Unemployment	130	37.1%
Poverty	107	30.6%
Lack of alternative means of livelihood	69	19.7%
Greed	44	12.6%
Total	350	100%
Benefits of illegal refining of crude oil outweigh risks		
Yes	51	14.6%
No	299	85.4%
Total	350	100%

Source: Field Survey, 2023

Table 4.4 outlines the factors that influence engagement in illegal refining of crude oil in the study area. The results show that 37.1% of respondents engaged in illegal refining due to unemployment, while 30.6% cited poverty as the reason. In addition, 19.7% of respondents reported engaging in illegal refining because of a lack of alternative means of livelihood. Only 12.6% reported engaging in illegal refining due to greed. Furthermore, the vast majority (85.4%) of respondents believed that the benefits of illegal refining did not outweigh the risks.

Question number Three: How effective have past public awareness efforts been in addressing the problem of illegal refining of crude oil?

Table 4.5: Effectiveness of Past Public Awareness Efforts

Variable	Frequency	Percentage
Exposure to past public awareness campaigns		
Yes	199	56.9%
No	151	43.1%
Total	350	100%
Source of information		
Government agencies	205	58.6%
Non-governmental organizations	81	23.1%
Community-based organizations	40	11.4%
Others	24	6.9%
Total	350	100%
Effectiveness of past public awareness campaigns in reducing illegal refining of crude oil		
Very effective	42	12.0%
Somewhat effective	195	55.7%
Not effective	113	32.3%
Total	350	100%

Source: Field Survey, 2023

Table 4.5 reveals the effectiveness of past public awareness campaigns in addressing the problem of illegal refining of crude oil. Among the respondents, 56.9% reported exposure to past public awareness campaigns. The most common sources of information were government agencies (58.6%) and non-governmental organizations (23.1%). In terms of effectiveness, 12.0% of respondents believed that past public awareness campaigns were very effective, while 55.7% thought they were somewhat effective, and 32.3% believed they were not effective.

Question number Four: What strategies can be proposed to improve public awareness campaigns to reduce illegal refining of crude oil in Degema Local Government Area?

Table 4.6: Strategies for Improving Public Awareness Campaigns

Variable	Frequency	Percentage
The focus of public awareness campaigns Should be		
Dangers associated with illegal refining of crude oil	146	41.7%
Alternative means of livelihood	120	34.3%
Legal consequences of engaging in illegal refining of crude oil	84	24.0%
Total	350	100%
Channels to be used in disseminating information on the dangers of illegal refining of crude oil		
Radio	80	22.9%
Television	60	17.1%
Community meetings	70	20.0%
Billboards/posters	50	14.3%
Social media	90	25.7%
Total	350	100%

Source: Field Survey, 2023

Table 4.6 outlines the proposed strategies for improving public awareness campaigns to reduce illegal refining of crude oil in Degema Local Government Area. The majority of respondents (41.7%) believed that the focus of public awareness campaigns should be on the dangers associated with illegal refining of crude oil, while 34.3% believed the campaigns should emphasize alternative means of livelihood. Moreover, 25.7% of respondents favored the use of social media as a channel for disseminating information on the dangers of illegal refining of crude oil, while 22.9% favored radio and 20.0% favored community meetings.

5.0 SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND AREAS FOR FURTHER STUDIES

5.1 Summary

5.1 Summary

This study aimed to investigate the effectiveness of public awareness campaigns in reducing the illegal refining of crude oil in the Degema Local Government Area. A total of 399 respondents participated in the study and were issued copies of the questionnaire out of which 350 copies of the questionnaire were found to be valid and useful in the study. The findings of the study indicate that while a majority of the respondents were familiar with the concept of illegal refining of crude

oil, there was a lack of awareness about the associated dangers. Additionally, poverty and unemployment were identified as the main factors that drive engagement in the illegal refining of crude oil in the study area.

The study also revealed that past public awareness campaigns have not been very effective in reducing the activities of illegal refiners in the community. However, respondents suggested that public awareness campaigns that focus on the dangers of illegal refining, alternative means of livelihood, and legal consequences may be more effective. The most commonly suggested channels for disseminating information were social media, radio, television, community meetings, and billboards/posters.

5.2 Conclusions

Based on the findings of the study, it can be concluded that there is a need for more effective public awareness campaigns to reduce the activities of illegal refiners in the Degema Local Government Area. The campaigns should focus on educating the public about the dangers associated with illegal refining, providing alternative means of livelihood, and highlighting the legal consequences of engaging in such activities. The channels for disseminating information should include social media, radio, television, community meetings, and billboards/posters.

The study also highlights the need for more research to identify the underlying causes of poverty and unemployment in the study area and to explore the potential of developing sustainable alternative livelihoods for affected communities.

5.3 Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1. The government and relevant non-governmental organizations should develop and implement more effective public awareness campaigns aimed at reducing the illegal refining of crude oil in the study area.
2. Public awareness campaigns should focus on educating the public about the dangers associated with illegal refining, providing alternative means of livelihood, and highlighting the legal consequences of engaging in such activities.
3. The channels for disseminating information should include radio, television, community meetings, billboards/posters, and social media.
4. There is a need for more research to identify the underlying causes of poverty and unemployment in the study area and to explore the potential of developing sustainable alternative livelihoods for affected communities.

5.4 Areas for Further Studies

This study provides a foundation for further research in the area of illegal refining of crude oil and public awareness campaigns. Some areas for further studies include:

1. A comparative study of public awareness campaigns in other areas affected by illegal refining of crude oil.
2. A study to identify the underlying causes of poverty and unemployment in the study area.
3. A study to explore the potential of developing sustainable alternative livelihoods for affected communities.
4. A study to assess the impact of public awareness campaigns on the reduction of illegal refining of crude oil in the study area.

5. A study to evaluate the effectiveness of different channels for disseminating information on illegal refining of crude oil and sustainable alternatives.

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