

RESEARCH ARTICLE

Analysis of factors affecting the success rate of open defecation free (ODF) and ODF target achievement in Binangun, Blitar Regency

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DOI : [10.33086/etm.v3i3.6631](https://doi.org/10.33086/etm.v3i3.6631)**Abstract**

Health development, especially in the field of hygiene and sanitation, is a major challenge faced by Indonesia. By 2030, Indonesia has a target to end open defecation free (ODF). ODF achievements in Indonesia have decreased over the past 10 years. The purpose of this study is to analyze the factors that influence the success rate of ODF in Binangun Subdistrict, Blitar District. This study used descriptive quantitative research with a Cross Sectional approach. The data used were primary data obtained by conducting direct observations and interviews. Data analysis used univariate and multivariate analysis using Partial Least Square (PLS). However, there is an influence between external variables on behavioral beliefs, external variables on normative beliefs (f -square 0.090). Demographic variables on behavioral beliefs (f -square 0.010). Demographic variables on normative beliefs (f -square 0.033). Behavioral beliefs on attitude (f -square 0.004). Normative beliefs to subjective norms (f -square 0.033). Attitude to behavior (f -square 0.335). Subjective norm to behavior (f -square 0.022). Behavior to ODF success (f -square 0.171). Based on the results of this study, it can be concluded that there is a large influence between external variables on behavioral beliefs and normative beliefs, attitudes towards behavior, behavior towards ODF success. There is a moderate influence between demographic variables on normative beliefs, normative beliefs on subjective norms, subjective norms on behavior. There is a small influence between demographic variables on normative beliefs, behavioral beliefs on attitudes. It is suggested that further researchers conduct coaching and visits to the community to increase the awareness of environmental health.

Keywords: Open Defecation, Behavioral Beliefs, Normative Beliefs, Subjective Norms, ODF Success.**INTRODUCTION**

Health development, especially in the hygiene and sanitation sector, is a major challenge faced by Indonesia, so it is necessary to intervene through a total sanitation approach (Kemenkes, 2014). Indonesia has continued to work towards achieving the Sustainable Development Goals (SDGs) by 2030, with one of the targets being to end Open Defecation Free (ODF). By 2024, the Indonesian government aims to achieve 0% open defecation (Sukarmi, 2022).

Since 2011 to 2021, ODF achievements in Indonesia have decreased. In Indonesia, there are still 18 provinces that have not been verified ODF, one of which is East Java (Sukarmi, 2022). In 2022, villages/sub-districts that had declared ODF in East Java were still 82.02%. The districts/cities that ranked in the bottom 10 were Situbondo, Probolinggo, Jember, Pasuruan, Bangkalan, Blitar, Nganjuk, Tuban, Bondowoso and Sumenep. Blitar district is ranked at the bottom 6 with an achievement of 93% (Helwig, 2022). Until 2022, there was only 1 sub-district out of 24 sub-districts in Blitar district that had been declared 100% percent ODF, namely Kademangan sub-district. The sub-districts with the bottom 3 positions are Panggungrejo, Wates and Binangun sub-districts.

Education, knowledge, family support, the role of village officials and the role of program facilitators influence community behavior to continue practicing open defecation (Tuhuteru, 2021 & Fera, 2022). Based on the Theory of Reasoned Action (TRA), the factors that influence the success rate of ODF are external variables, demographic variables, attitudes towards targets, personality traits, other difference variables, behavioral beliefs, outcome evaluation, normative beliefs, motivation to comply, attitudes, subjective norms, and behavior.

Based on the previous discussion, the researchers wanted to analyze the existence of external factors (income, distance from home to a place to defecate other than a toilet, availability of clean water, availability of public latrines), demographic factors (knowledge and education), behavioral beliefs, normative beliefs, attitudes, subjective norms (family support and support from village officials) and behavior in influencing the decline of ODF status in Binangun Subdistrict, Blitar District.

MATERIALS AND METHODS

The data used is primary data collected by conducting direct observations and interviews. Data analysis using univariate and multivariate analysis using Partial Last square (PLS). This research uses descriptive quantitative study with Cross Sectional approach. The sample in this study amounted to 72 with the research location in Binangun District, Blitar Regency.

RESULTS AND DISCUSSION

Outer Model Analysis

The outer model analysis is an analysis used to describe the relationship and see the validity value between the independent variables and their indicators.

Table 1. Validity value between free variables and their indicators

Variable	Indicator	Validity Value	Description
External Variable	VE 1 (income)	0,005	Invalid
	VE 2 (the distance of place to defecate other than a latrine)	0,870	Valid
	VE 3 (clean water availability)	-0,608	Invalid
	VE 4 (availability of public latrines)	0,005	Invalid
Demographic Variables	VD 1 (knowledge)	-0,216	Invalid
	VD 2 (education)	0,987	Valid
Subjective Norms	DK (family support)	-0,016	Invalid
	DAD (village government support)	0,970	Valid

Based on the table above, the validity value shows a value of more than 0.6 so that the indicator is declared valid to be an indicator of the independent variable. if the validity value is less than 0.06, it is considered invalid for the indicator to be unsuitable for use in the independent variable.

Inner Model Analysis

Inner model analysis is carried out to evaluate the influence between variables. Inner model analysis can be performed by looking at the f-square results. According to Henseler et al., 2009 the f-square assessment criteria are divided into three there are:

- a. F-square ≥ 0.002 indicates a small effect.
- b. F-square ≥ 0.015 indicates moderate influence.
- c. F-square ≥ 0.035 indicates a large influence.

Table 2. F-square Value of inner model

	External	Demographic	Behavioral Belief	Normative Beliefs	Attitude	Subjectif Norm	Behavior	ODF Success
External	-	-	0,090	0,090	-	-	-	-
Demographic	-	-	0,090	0,090	-	-	-	-
Behavioral Belief	-	-	-	-	0,004	-	-	-
Normative Beliefs	-	-	-	-	-	0,033	-	-
Attitude	-	-	-	-	-	-	0,335	-
Subjectif Norm	-	-	-	-	-	-	0,022	-
Behavior	-	-	-	-	-	-	-	0,171
ODF Success	-	-	-	-	-	-	-	-

The table above states that those with a large influence are external variables on behavioral beliefs with an f-square value of 0.090, external variables on normative beliefs with an f-square value of 0.090, attitudes towards behavior with an f-square value of 0.335, and behavior towards ODF success with an f-square value of 0.171. Variables that have a small influence are demographic variables on behavioral beliefs with an f-square value of 0.010, demographic variables on normative beliefs with an f-square value of 0.004. Variables that have a moderate influence are demographic variables on normative beliefs with an f-square value of 0.033, normative beliefs on normative beliefs with an f-square value of 0.033, and subjective norms with behavior with an f-square value of 0.022.

Discussion

The success in achieving the Open Defecation Free (ODF) success target can be influenced by several external factors such as economic factors, distance, and the availability of clean water are the main barriers to achieving latrine defecation behavior in the community, especially in Binangun Sub-district. People with low income tend to have difficulty owning a private toilet, while the distance from clean water sources and people's habit of defecating in the open make them reluctant to use existing toilets. The economic status can determine the availability of a facility needed for certain activities, so this socioeconomic status affects behavior change in a person (Apriyanti et al., 2018). Although many houses already have latrines, convenience and limited availability of clean water are the main obstacles. The availability of clean water is an important factor that supports comfort in the use of latrines (Anggoro, 2018).

In addition to the factors above, habits and social norms also play an important role. Many people still consider defecating in the river to be more practical and convenient. Lack of knowledge about the importance of sanitation and lack of social support are also barriers. Nonetheless, research shows that people without private latrines are still willing to use public latrines. This indicates the potential to change behavior through efforts such as counseling, improved latrine facilities, and increased availability of clean water. Thus, achieving latrine defecation behavior requires a comprehensive

approach, involving various parties, and considering the sociocultural context of the community (Imani et al., 2023).

Based on the F-Square value, it shows that a person's behavior has a major influence on the success of ODF. Community behavior regarding the use of latrines has shown good behavior. However, some people still do not apply behaviors about latrine use because they believe that using latrines is a burden because they have to maintain and clean them every day. There are two factors that influence a person's behavior, namely attitude and subjective norms. A person's attitude shows a huge influence on behavior. People have the belief and attitude that open defecation provides the same comfort as defecating in a toilet, open defecation is normal and a pleasant experience. People believe this because their parents taught them that open defecation is normal.

An attitude can be formed because of behavioral beliefs, but the results of the study show that behavioral beliefs have little effect on attitudes. Behavioral beliefs are behaviors in each individual that are assessed positively or negatively, attitudes toward a behavior, and beliefs about something that is good or bad. The belief that hygiene is a shared responsibility encourages people to actively participate in the ODF program. People tend to think more about their convenience in open defecation than about the health impacts if open defecation continues. Lack of awareness of maintaining cleanliness in the community can affect the practice of open defecation. Awareness of healthy living behavior and environmental hygiene is very important. Community attitudes about defecation are not a factor in the high rate of open defecation in Dingil Village, Jatigoro Subdistrict, Tuban Regency. A person's attitude can be formed due to behavioral beliefs, but the results of the study show that behavioral beliefs have little effect on attitudes (Hasanah, Suryono, et al., 2022). The open defecation behavior in rivers or fields will be reduced or completely absent because they are aware of environmental health (Astriani et al., 2019).

Subjective norms show a moderate influence on behavior. One of the subjective norms is the support of village officials. According to the community, support from village officials so far has only been in the form of public latrine assistance, but this support has not been balanced with counseling or information about healthy latrines and an appeal not to defecate in the open. The emergence of subjective norms can be influenced by normative beliefs. Normative beliefs have a moderate influence on subjective norms. Normative beliefs are a person's beliefs in influencing decision making. Support from the surrounding environment is useful as a source of information about the outside world, as a learning material that whatever is done in the open. outside, as learning material that whatever they have done is better, just as good or less good than other individuals. Based on Kurniawati and Windraswara, 2017 which states the Risk Prevalence (RP) value of 0.654 which means that respondents who get support from village officials, community leaders and religious leaders will be protected 0.654 times for not utilizing latrines. This study is also in line with research conducted by Anggoro, 2018 which states that the importance of advice to utilize latrines. The health worker program is still lacking in utilizing community leaders in the area in conducting counseling to residents.

Factors that influence the emergence of behavioral beliefs and normative beliefs are external variables and demographic variables. One of the external variables and demographic variables is the distance from the house to a place of defecation other than latrines and education. External variables have a large influence on behavioral beliefs and normative beliefs. Meanwhile, demographic variables have little influence on behavioral beliefs and moderate influence on normative beliefs. Many people who live far from rice fields, rivers or fields make it possible for them to practice open defecation. This is supported when researchers made observations and further explored information from respondents, almost some respondents have a nice and luxurious residence. However, they do not want to maintain and also repair damaged toilets so that the toilets do not function properly so that many people prefer to defecate in the river.

CONCLUSIONS

Based on the results of comparative research on the incidence of Toxoplasmosis in feces samples from cats house and cats market in the Sidoarjo City, it can be concluded that the incidence of Toxoplasmosis using feces samples from cats house and cats market found no Toxoplasmosis infection. The resulting p value $0.000 < 0.005$, it can be concluded that there is no relationship between the incidence of Toxoplasmosis in fecal samples from cats house and cats market in Sidoarjo City.

Author contributions

Ita Nur Rahma: Conceptualization, writing draft, writing review, formal analysis and editing; Abdul Hakim Zakkij Fasya: Data curation.

Conflict of Interest

There is no conflict of interest in this study.

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Data availability

Data related to the findings of this study are available at the corresponding author.

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