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# Public Awareness in Management of Pro-Environmental and Sustainable Tourism Area

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ABSTRACT: Attitudes and behaviours of caring for the environment are the willingness arising from internal encouragement to express actions to care about the environment, to improve or maintain the quality of the environment. The purpose of this research is to see the dominant factor that influences the attitudes and behaviours of caring for the environment in the community who live in the tourist area. Research is in the Bili-Bili Dam Tourism Area, South Sulawesi Province. The number of samples in this study was 100 respondents. The survey method in this study conducted by in-depth interviews and through questionnaires to respondents. The sampling technique used is to use purposive sampling. Processing questionnaires obtained from respondents then proceed with data analysis with confirmatory analysis or often referred to as Confirmatory Factor Analysis (CFA) with IBM AMOS Program. The results showed that attitudes and behaviours in environmental care would increase if there is direct involvement of the community in tourism management in the region. The existence of a sense of belonging will lead to attitudes and behaviours to guard the tourist area. Factors that are encouraging attitudes and behaviours to care for the environment by the surrounding community will have a direct impact on the sustainability of the region and the environment.

Keywords: Confirmatory Factor Analysis (CFA), Environmental Attitude, Environmental Behaviour, Participation.

# I. INTRODUCTION

Tourism, as John Naisbitt said in his book Global Paradox, can be categorized as the world's largest industry. About 8 percent of exports of goods and services, in general, comes from tourism (Naisbitt, 1993). In Southeast Asia, according to WTO records, tourism contributes to the country's foreign exchange by 10-12 percent of DGP and 7-8 percent of total employment (Hall & Page, 2012). The tourism sector in the last few decades is proliferating, along with advances in science and technology that make it easy for tourists to determine tourist destinations. These conditions can use as opportunities for regions that have tourism potential. The utilization of tourism potential will have an impact on increasing regional income and community welfare (Leiper, 1990).

Tourism activities do have a positive impact on the regional economy (Sadler & Archer, 1975). The existence of tourism can also absorb labour. However, on the other hand, tourism activities put environmental pressure. Various tourist activities will affect the condition of the beach environment (Curtin Kragh, 2014). The ability of the beach to support tourist activities has tolerance limits. Utilization that exceeds the carrying capacity will cause environmental degradation.

Gowa Regency has considerable tourism potential to be developed. One of them is the use of the coast for tourism. The beach area can be an alternative tourist destination for tourists. Mill (Mill, 1990), states that nearly three-fourths of the world's tourist destinations are coastal areas. Utilization efforts with consideration of environmental aspects are needed to ensure the existence of tourism. In addition to ensuring the quality of the waters, the level of satisfaction and safety of tourists in their activities in the tourist area can also be maintained (May, 1991). For this

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reason, a balanced tourism environment needed.

The environmental problems that occur can be said to be moral problems, which are related to human behaviour. The environment is not only related to technical issues but also becomes a global moral crisis. Pollution and damage that occurs in forests, seas, water, land, atmosphere and various other forms of damage caused by human behaviour that does not care and is not responsible and only thinks about their needs. It can say that the leading cause of pollution and environmental damage is humans (Keraf, 2002). Humans and the environment have interdependent and reciprocal relationships. The environment for humans is one of the essential elements of their lives. Interaction between humans and the environment that occurs continuously will affect human behaviour towards the environment (Bandura, 1978).

Population or community is an integral part of the central point in the development of a sustainable environment because the real role of the population is as the subject and object of sustainable environmental development. Large population with fast growth, but has a low quality, will slow the achievement of ideal conditions between the quantity and quality of the population with the carrying capacity of nature and the capacity of the increasingly limited environment. To realize sustainable development in a country, a quality component of the population is needed (W. H. Lee & Moscardo, 2005).

Attitudes and behaviours that care about the environment are mutually interacting attitudes in understanding, feeling, and behaving towards an object (Hargreaves, 2011). In other words, the attitude of caring for the environment intended as a change in the behaviour of learning outcomes shown through understanding, experience, and mental readiness of students in applying the knowledge they learn through social processes to respond to particular objects consistently in the direction that supports or rejects, agrees or disagrees against a particular object (Tikka, Kuitunen, & Tynys, 2000).

Green Theory (Green, 1991), states that there are 3 (three) factors that influence changes in individual or group behaviour, namely:

- Predisposing factors, which include knowledge, attitudes, beliefs, beliefs, values, and perceptions of a person
  which is the basis of individual or group motivation to act. With increasing knowledge, a person does not
  always cause a change in behaviour. Knowledge of occupational health programs may be needed before
  occupational health practices are carried out. Desired occupational health practices may not realize unless
  someone receives secure enough instructions from those who motivate to act based on their occupational
  health knowledge.
- Enabling factors, including the skills and resources needed to support behaviour. These resources can include the availability of health facilities, health workers, the availability of facilities, and infrastructure to support the success of the program.
- Reinforcing factors, namely factors that strengthen changes in a person's behaviour due to the attitudes and other behaviours.

According to Gibson (Gibson, Ivancevich, Donnelly, & Konopaske, 1991), that attitude can determine affection, cognition, and behaviour, namely:

- Affection, emotion, or feeling is an emotional segment of an attitude, a component of the attitude learned from parents, teachers, peer group members. Affective components can be measured by using a questionnaire used to survey attitudes, and emotional responses can be measured by agreeing or disagreeing reactions, supporting or not supporting the statement.
- Cognition, the cognitive component of an attitude consists of a person's perceptions, opinions, and beliefs. It refers to the thought process, with emphasis on rationality and logic. An essential element of cognition is a belief that is judged by someone. Evaluative trust manifested as a good or bad impression by someone about an object.
- · Behaviour, the behavioural component of an attitude refers to a person's tendency to act towards someone

- or something in a certain way.
- Environmental problems faced today are the consequences of low attitudes and behaviours that care about the environment. Various attempts were made to reduce the possibility of developing environmental problems occurring.

## II. RESEARCH METHODS

## 2.1. Location Survey

Exact research is in the Bili-Bili Dam Tourism Area, South Sulawesi Province. Bili-Bili Dam is the largest dam in South Sulawesi, located in Gowa Regency, about 30 kilometres east of Makassar City. This dam was inaugurated and operated in 1999.

# 2.2. Population and Sample

The population in this study is the people who live around the tourist area of the Bili-Bili dam, Gowa Regency, South Sulawesi whose numbers cannot be known with certainty. The sampling technique used is to use purposive sampling, which is the technique of determining the sample with specific criteria or considerations. The number of samples for correlational research the minimum number of samples to obtain good results is 30, while in experimental studies the minimum sample size is 15 from each group and for survey research, the minimum sample size is 100 (Groves et al., 2011; Weber, 2017). From this explanation, the number of samples in this study was 100 respondents.

## 2.3. Data Collection

Data collection techniques used in this study is to conduct a survey. The survey method is used to obtain data from certain places that are not artificial (natural) and carried out specific treatments in data collection. The survey method in this study conducted by in-depth interviews and through questionnaires to respondents. The measurement used in this technique uses a Likert scale, which is strongly agreed, agree, disagree, strongly disagree.

# 2.4. Data Analysis

After calculating the results of the quantitative data processing questionnaire obtained from respondents, then proceed with data analysis with confirmatory analysis or often referred to as Confirmatory Factor Analysis (CFA) designed to test multidimensional theoretical constructs. This analysis is often called testing the validity of a theoretical construct. Latent variables used in research are formed based on theoretical concepts with several indicators or manifests (Bagozzi & Fornell, 1982; Bollen & Long, 1993; Hoyle, 1995). Confirmatory Factor Analysis is also called a measurement model that measures the relationship (loading value) between indicators and constructs (Garson, 2016). Analysis of the measurement results using the IBM AMOS Program version 23.0 to facilitate the completion of calculations. The following is the design of the relationship between behaviour and attitude in managing the environment.

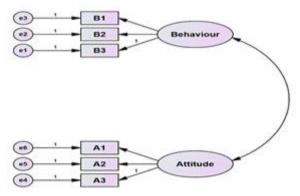


Figure 1. Correlation of Behaviour and Attitude with Confirmatory Factor Analysis.

## III. RESULT AND DISCUSSIONS

# 3.1. Description Demographics

General description of respondents consisting of gender, age, and education can be seen in Table 1 as follows:

Table 1. Demographics of Respondents

	Frequency	Percent
Gender	68	68.00
- Man	32	32.00
- Women		
Age	13	13.00
- 20 – 30 year	32	32.00
- 30 – 40 year	36	36.00
- > 50 year	19	19.00
Education		
- Primary School	18	18.00
- Junior high school	41	41.00
- Senior High School	28	28.00
- Diploma/Bachelor Degree	13	13.00

Differences in male and female behaviour can see from how to dress and do daily work, and men behave based on rational considerations while women behave emotionally (Kanter, 2008). Women more often use their right brain, and this is the reason women are more able to see from various points of view and draw conclusions. Ragini Verma (Verma & Gur, 2013), women's brains are more able to link memory and social conditions, this is the reason women rely more often on feelings. Women can absorb information five times faster than men. It is the reason women conclude something faster than men (Ingalhalikar et al., 2014).

Unlike women, men have much stronger motor skills than women. This ability can use for activities that require good coordination between hands and eyes. One reason man is better at sports that rely on throwing the ball. According to Daniel Amen (Amen, 2015), men's brains are 10% bigger than women, but that does not mean men are smarter than women. Brain size does not affect a person's intelligence or IQ. According to Witelson (Witelson, Beresh, & Kigar, 2005), the male brain is more vulnerable than the female brain. Besides, the male brain experiences sexual changes that are influenced by the hormone testosterone.

Age is also the most crucial factor in determining individual attitudes and behaviour, so that in the circumstances above respondents will tend to have positive behaviour compared to the age below. According to Hurlock (Hurlock, 2007), adulthood divided into three periods, namely early adulthood (18-40 years), middle adulthood (41-60 years), and late adulthood (>61 years). According to Santrock (Santrock, 2003), young adults are in transition, both physically, intellectually transitioning, and transitioning social roles. The social development of early adulthood is a crucial source of social development in adulthood.

Formal and informal education activities focus on the learning process with the aim that behaviour change occurs, from not knowing to know, from not understanding to understanding and not being able to. Education influences human behaviour, and he also said that if the acceptance of new behaviour based on knowledge, awareness, positive attitude then the behaviour will be lasting (Brislin, 1993; Serpell, 1976). Thus, the higher the level of one's knowledge, the more precise in determining behaviour and the sooner to achieve the goal of improving health status (Kloos, 1995).

Knowledge can be obtained from the learning process that can form certain beliefs so that someone behaves following the beliefs obtained. The higher the level of one's education, the greater the ability to absorb, receive, and adopt the information obtained. Knowledge of cognitive is a significant domain for the formation of a person's actions (over behaviour). The existence of a new behaviour change in someone is a complex process and requires a relatively long time where the first stage is knowledge. Before a person adopts a new behaviour, one must know in advance what the meaning or benefit of the behaviour is for himself or his family or others. The ability of a person can be influenced by knowledge and skills, while knowledge can be obtained through training, work experience or education, and skills can be influenced by various factors including types of education, curriculum, practical experience, and training.

# 3.2. Confirmatory Factor Analysis (CFA)

In the CFA analysis process, one of the essential things is assessing the Goodness of Fit (GOF). If the Goodness of Fit produced by a model is right, then the model can be accepted and vice versa if the Goodness of Fit generated by the model is terrible, then the model is rejected, or the model must be modified. With the IBM AMOS Program, 25 sizes of Goodness of Fit will be obtained. Schumacher & Lomax (Schumacher & Lomax, 2010), recommends reporting only four dimensions, namely Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index.

(CFI), Normed Fit Indices (NFI), and Goodness of Fit Indices (GFI).

Table 2. The goodness of fit (GOF)

Dimensions	Recommendation	Estimation	Result
RMSEA	< 0.050	0.001	Fit
CFI	> 0.900	1.054	Fit
NFI	> 0.900	0.972	Fit
GFI	> 0.900	0.985	Fit

From the results of the analysis, the Goodness of Fit value for the Root Mean Square Error of Approximation (RMSEA) is obtained at 0.001, which means fit because < 0.050 (Browne & Cudeck, 1993; Chen, Curran, Bollen, Kirby, & Paxton, 2008; Hu & Bentler, 1999; Schumacher & Lomax, 2010; Williams & O'Boyle Jr, 2011), Comparative Fit Index (CFI) obtained at 1,054 means fit because >0.900 (Bentler & Hu, 1995; Brown, 2015; Lomax & Schumacker, 2004), Normed Fit Indices (NFI) obtained as 0.972 means fit because >0.900 (Bentler & Bonett, 1980; Schumacher & Lomax, 2010), and Goodness of Fit Indices (GFI) obtained for 0.985 means fit because >0.900 (Schumacher & Lomax, 2010).

Table 3. Loading Factor Estimation

Variable	Constructs	Estimate
Latent		
	Cognitive (A1)	0.765
Attitude	Affective (A2)	0.456
	Behaviour (A3)	0.371
	Predisposing (B1)	0.745
Behaviour	Enabling (B2)	0.782
	Reinforcing (B3)	0.464

From the results of factor loading shown in Table 3, it appears that cognitive factors in attitudes appear to be more dominant in influencing later behaviour variables, enabling factors to appear to be more dominant than existing factors, although it appears that the scores obtained are not significant because there are other factors that are quite influential.

According to Schwartz (Schwartz, 1992), attitude is generally a belief that translated into action on the desired object. Attitude is defined by Social Psychology as a positive or negative evaluation of reactions to objects, people, situations or other aspects, and allows us to predict and change people's behaviour (Atkinson, 1990; Ugulu, Sahin, & Baslar, 2013). Eagly and Chaiken (Eagly & Chaiken, 1993), dividing the two models of the definition of attitude, namely (1) Attitude is a combination of affective, cognitive and conation (Definition of three components); (2) Attitude as a positive or negative assessment of an object which is expressed with a certain intensity. Attitude is a brief evaluation of everything based on cognitive, emotional, and behavioural information (Omran, 2014).

Ajzen (Ajzen, 1991), about The Theory of Planned Behaviour and Fazio (Fazio, 1995), about Motivation and Opportunity as Determinants models, has been widely studied that the relationship between explicit and implicit attitudes can influence someone in processing information so that behaviour changes occur (A. Lee, Martin, Thomas, Guillaume, & Maio, 2015). The value of fundamental beliefs that contain an element of individual consideration about what is right, proper, or desired. Sources of value from genetic and environmental factors derived from education, during childhood. Value is relatively more stable and durable so it is difficult to change if it is embedded for a long

time. In contrast to values, attitudes are less stable so that they are more easily changed or influenced, although attitudes are also not that easy to change quickly (Tucker & Speirs, 2003).

Humans are not born with individual attitudes or feelings, but the attitude formed throughout its development. The attitude will cause humans to act correctly against objects. Attitude is a product of a person's socialization process in giving a reaction following the stimuli he encounters. Attitudes can source from the environment (parents, teachers, colleagues) by not ignoring genetic factors as predisposing factors. The process of forming attitudes takes place gradually; the ability to behave obtained through the learning process. Changes in attitude can be in the form of addition, transfer or modification of one or more of the three components of attitude with the possibility that one or two components of attitude change but the other components remain (Kollmuss & Agyeman, 2002).

Pro-environment behaviour is behaviour that grows from one's existence to minimize the negative impacts of one's actions on nature and development, such as minimizing the use of resources, saving energy consumption, using non-toxic materials, reducing waste production (Hargreaves, 2011; Jensen, 2002). Dumitru (Dumitru, 2015), argues that pro-environment behaviour is a select type of pro-social behaviour (a behaviour directed and carried out to improve the welfare of individuals, groups or organizations). Pro-environment behaviour considered as an attempt by someone to take preventive and protective actions towards the environment (protecting nature and addressing environmental issues) (Schultz, 2000; Stern, 2000). Behavioural measurement can be done indirectly, namely by interviewing activities that have carried out a few hours, days, or months ago (recall). Measurements can also be made directly by absorbing the actions or activities of the respondents.

# 3.3. Relationship between Attitudes with Pro-Environmental Behaviour.

The relationship between attitude and behaviour has led to an interest in attitude towards the environment as a predictor of action based on the environment and the decision to participate. Based on the Theory of Planning behaviour, individual ideas have a set of personal values that become criteria for assessing the suitability of certain behaviours. Potential behaviour with better outcomes for individuals is associated with stronger behavioural intentions, which will increase the likelihood that this behaviour occurs or not.

The relationship between attitude and behaviours can vary because attitude and behaviour are dependent factors but influenced by other factors (mood, emotions, personality, social pressure, potential, risk or time). Attitudes will influence behaviour, if; (1) the factors that influence the statement of attitude and behaviour are reduced to a minimum, (2) When the measurement of attitude refers to a more specific behaviour, (3) There is an awareness of the attitude that owned when will show a behaviour. Myers (Myers, 2005), states that attitudes towards behaviour usually refer to theories of planned behaviour. Based on this theory, the most crucial determinant of one's behaviour is the intention to behave. Where, the intention of the behaviour influenced by good individual attitudes towards the behaviour, individual perceptions of subjective norms, and the extent to which the individual feels the behaviour that is under his control (Sawitri, Hadiyanto, & Hadi, 2015). Attitudes towards behaviour defined as positive or negative research of an individual on a behaviour. Attitudes toward behaviour determined by a combination of individual beliefs about the positive and or negative consequences of performing a behaviour with an individual's subjective value of the consequences of that behavior (Fishbein & Ajzen, 2005). A person's positive attitude will lead to positive behaviour towards an object. The better the attitude of consumers towards green products, the more motivated they will be to buy green products (Banyte, Brazioniene, & Gadeikiene, 2010). Based on (Suki & Suki, 2011), states that someone who has an environmentally friendly attitude will have a positive attitude towards eco-friendly products and will undoubtedly participate in activities that protect the environment. In his research (Kumar, Jain, & Kumar, 2014), states that attitude has a significant relationship with the intention to buy environmentally friendly products.

The expectation of the Health Belief Model Theory is that there can be changes in people's behaviour into more in terms of health actions that are supported by the attitude-forming factors approach. Besides, approaches can also be used using other factors if the approach using one factor fails (Rosenstock, 1974; Rosenstock, Strecher, &

Becker, 1988).

## IV. CONCLUSIONS

A positive attitude towards pro-environment behaviour will influence one's behaviour to become more concerned about the environment. This has become important in order to reduce the negative impact of environmental damage to create a sustainable environment. Human attitude and behaviour will determine the merits of an environmental condition. The way humans treat their environment will have an impact on the quality of human life itself.

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