

THE EFFECTS OF BLUE DOCUMENTARY ON VIEWERS' PERCEPTIONS AND ATTITUDINAL CHANGE TOWARD MARINE LIFE CONSERVATION

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Received: 07.01.2021

Accepted: 03.06.2021

ABSTRACT

Background and Purpose: This study's aim was to examine the persuasive effects of a blue documentary (BD), representing marine life extinction on viewers' perceptions and their attitudinal change toward conservation.

Methodology: This study selected 36 participants using purposive sampling technique, according to the characteristics of their location and age categories. A total of 72 semi-structured interviews were conducted in two stages – the pre- and post-viewing of the documentary. A documentary program of *Lestari Ujana Marin (LUM)* was the media text used in gathering the necessary data. The data were then perused qualitatively through the employment of thematic analysis.

Findings: The findings suggest that the participants' perceptions and attitudinal changes were more positive toward marine life conservation after being exposed to the documentary. The attitudinal changes have been sustainable and exhibited through the participants' real actions in supporting marine life conservation.

Contributions: This study paves the way for collaboration between experts in different fields, such as filmmakers, oceanologists, and non-governmental organizations, who are fundamentally concerned in disseminating knowledge about environmental conservation for the benefits of future generations.

Keywords: Media, blue documentary, persuasion, pro-conservation, marine life, young generation.

Cite as: Mat, N. H., Rashid, R. A., Che Noh, C. H., & Said Al-Rawahi, M. A. (2021). The effects of blue documentaries on viewers' perceptions and attitudinal change toward marine life conservation. *Journal of Nusantara Studies*, 6(2), 379-402.
<http://dx.doi.org/10.24200/jonus.vol6iss2pp379-402>

1.0 INTRODUCTION

Marine space is fundamental for the livelihood and sustenance of Malaysians because of its rich natural resources and diversity, such as coral reefs, mangroves, sea grasses, mudflats and estuaries, in addition to countless species of marine life. Essentially, the major components that generate the Malaysian economy are fisheries and other maritime sectors such as oil, gas, shipping industries, and tourism. As a result, marine life is facing a serious threat of extinction, due to the various human activities for economic gain involving marine spaces, which have openly affected the ocean's ecosystems. This is increasingly recognized as a serious national conservation concern (Muhammad & Kari, 2015; Ray & Ray, 2004). It has been reported in previous studies that many marine life species were listed as endangered by the World Wildlife Fund (WWF), and the wilds inclusive of marine turtles (the loggerhead, hawksbill, Olive Ridley, green and leatherback turtles), sea cows (dugong), coral reefs as well as marine fish (Abd. Mutalib & Fadzly, 2015; Abd Mutalib, Fadzly, Ahmad, & Nasir, 2015; Lee, 2010).

With the addition to the limited knowledge on actual marine life extinction among the general public, as reported previously (see Lee, 2010; Ministry of Natural Resources and Environment, 2016), there is also a lack of clear priorities on the part of Malaysian media practitioners, under the observation on the limited media coverage and discussion in raising public awareness about the importance of marine life conservation.

This study attempted to answer the following research questions:

- a) How effective is a blue documentary in raising viewers' awareness toward marine life conservation?
- b) What are the impacts of a blue documentary in changing viewers' perceptions and attitudes toward marine life conservation?
- c) Do geographical locations (urban, rural and coastal areas) play important roles in viewers' marine life conservation?

In responding to these questions, the present study investigated the effectiveness of a blue documentary in persuading people about the truth and importance of issues of marine life extinction. This study also examined whether the locality of the issue can have a greater impact in raising the public's awareness of or attitude toward marine life conservation.

2.0 LITERATURE REVIEW

2.1 Media Effects

Studies on media effects are based on the assumption that, a media report, broadcast or on the internet, has a significant influence on its audience, yet there is little agreement on its assumed effects. As Beaudoin (2007) claimed, media effects can be segregated into three types, consisting of cognitive effects (attitudes and beliefs), affective effects (emotional responses), and behavioral effects (pro- and anti-social action). He also claimed that the significance of these cognitive and affective effects rest on the degree to which they influence behavioral effects (Beaudoin, 2007). Similarly, McQuail (2010, p. 466) organized media effects into four criteria (see Figure 1 for a summary):

- (i) Planned and short-term (propaganda, individual responses, media campaigns, news learning, framing, agenda-setting);
- (ii) Unplanned and short-term (individual reaction, collective reaction, policy effects);
- (iii) Planned and long-term (development diffusion, news diffusion, diffusion of innovations, distribution of knowledge); and
- (iv) Unplanned and long-term (social control, socialization, event outcomes, reality defining and construction of meaning, displacement, cultural and social change, social integration).

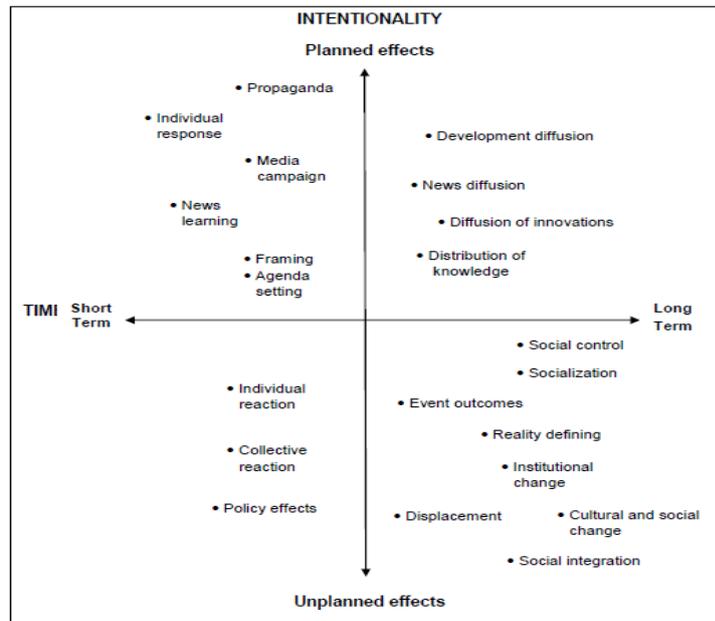


Figure 1: A typology of media effects

This governed the discussion of persuasive powers of blue documentary in promoting environmental conservation movements.

2.2 Persuasive Powers of a Blue Documentary

Blue documentary (BD) is a relatively new term, which describes the representation of marine life extinction in documentary filmmaking, by focusing explicitly on ocean eco-system conservation and sustainability (Mat, 2017). Meanwhile, persuasion has been broadly defined by a number of scholars. Simons (2001, p. 7) clearly stated that persuasion is a ‘human communication designed as a form of attempted influence in the sense that it seeks to alter the way others think, feel, or act’, while Hogan (1996, p. 20), perceived persuasion as ‘the ability to induce beliefs and values in other people by influencing their thoughts and actions through specific strategies’. Fogg (2003, p. 15) defined persuasion as ‘the attempt to change attitudes or behaviors or both’.

In addition, persuasion was viewed by Bettinghaus and Cody (1994, p. 5) as a “conscious effort by one individual or group to change the attitudes, beliefs, or behavior (of a receiver) of another individual or group of individuals through the transmission of some messages at influencing the thoughts or actions”. Lulofs (1991, p. 5), perceived persuasion as “the use of verbal and nonverbal symbols to create meanings in a situation of mutual influence, in which the original goals of the participants are to affect changes in the beliefs, attitudes, values, or behaviors of the other participants”. This classification of persuasion explains media

effect in the context of this study, that persuasive communication plays a significant role in BD filmmaking by employing various persuasive elements to represent reality and change people's conservation stance toward marine life conservation.

As elaborated by Stiff and Mongeau (2003) "persuasive communication can be defined as any message that is intended to shape, reinforce or change the response of another, or others" (p. 10). This view is supported by Nichols (2001), who reported five persuasive approaches involved (when making a documentary) in transmitting voices to persuade the viewers and change their perceptions and attitudes. These approaches are guided by Aristotelian principles, namely invention, arrangement, style, memory and delivery. First and foremost, viewers can be convinced through invention, a technique which is used to support an argument in a documentary, in which the filmmaker is required to discover the two forms of evidence; the artificial and the non-artificial proof. Artificial proof consists of *ethos* (ethical proof), *pathos* (emotional proof) and *logos* (rational proof), which appeals to the audiences' emotional state, while non-artificial proofs are referred to the facts of the matter, in the form of ideas, beliefs and facts such as witnesses, documents (photographs or archival footage), confessions, physical evidence (fingerprints, hair or blood samples, DNA and so forth).

Secondly, viewers can be convinced through the arrangement of a rhetorical speech, which is organized to the maximum effect through two characteristics; (i) stating an issue (the inclusion of arguments for and against, black or white, right or wrong, true or false, and guilty or innocent), and (ii) making an argument about it (the balance between certainty and ambiguity, classic alternation between appeals to evidence and appeals to audiences, factual appeals and emotional appeals). Furthermore, style (in the form of camera angle, composition, lighting, acting, sound and editing) is crucial for the filmmaker as it eases the documentary voice to speak to his or her audience not in a purely factual or didactic way, but rather in an expressive, rhetorically or poetically powerful manner. Apart from this, memory is also crucial as a persuasive approach, which stimulated in two ways. Firstly, the film itself provides a tangible 'memory theatre' of its own, and secondly, viewers draw the memory on what they have already seen, as it could navigate the clear interpretation of what they currently see.

Finally, viewers can also be persuaded through delivery, combined expressions, and gestures, accompanied with what was said and the way it was said during the filmmaking. In simpler words, the researchers derive a fact that, these persuasive communications in documentary filmmaking can be reinforced with the evidence of the arguments produced through the planning of the available material rhetorically, presented through the technical

skills of the filmmakers, accompanied by the viewers' levels of retention and experience, and equipped with effective language of communication of the issues raised.

Taken together, persuasive power of blue documentary can be functional in understanding the deeper meanings of the visual rhetoric ploys identified in the previous studies. It encompasses the construction of the historical reality about marine life extinction issue (authenticity or historical footage) and the employment of the indexicality of the narrative images (animal suffering, plastic pollution and aesthetic details) to form the evidence in the BD filmmaking, then leading to the *Lestari Ujana Marin (LUM)*, which is the researched media text of the present study.

In consideration, this study was designed to examine the effect of a documentary program, as it arguably plays a significant role in the determination of the audience's perception, emotions, attitude and/or behavior toward marine life conservation.

3.0 METHODOLOGY

A qualitative approach was significant for this study, with the aim of extracting insights from participants' viewing experience in documentaries about marine life extinction. In doing so, the semi-structured interview was employed to evaluate the potential attitudinal change two months later, and to permeate into participants' documentary viewing experiences. According to Mytton, Diem, and Dam (2016), qualitative research is valuable in understanding human behavior that is influenced by media messages, by providing in-depth findings with broader social perspectives. An in-depth interview was deemed appropriate for this study for several reasons. Firstly, the interviews for this study were conducted in two stages; (i) before the documentary screening, and (ii) two months after the screening had taken place. The strategy was executed with the intention of identifying the prior and subsequent levels of awareness, perceptions of or attitude changes resulting from the documentary screening.

Secondly, the factor is significantly attributed to the location of the participants. For this study, the participants were identified from three geographical locations comprising the urban, the coastal and the rural. Twumasi (2001, p. 35) suggested that the in-depth interview is suitable for all populations, especially "in collecting data from rural and illiterate people". Hence, the participants' opinions and their various viewpoints are relevant when investigating the role of the documentary, which act as agents in promoting the change in attitudes and perceptions toward marine life conservation.

Thirdly, an in-depth interview enables the interviewers to formulate semi-structured questions, both before and during the interview process. As Wimmer and Dominick (2006)

asserted, a semi-structured interview allows the interviewer to construct additional questions on the scene based on the participants' answers. Therefore, semi-structured questions were formulated in guiding the interview process, while gaining rich information from the participants. Additional questions were created on the site based on the participants' responses and behavior demonstrated during the interviews. This strategy was repeated on each participant until data saturation was reached.

The interview process should create a discussion between the participant and the researcher; more so, the researcher has to be flexible in order to establish a good rapport with the interviewee by using appropriate language, having the right attitude and remaining objective during the whole interview process.

3.1 Study Setting and Subject

This study focused on three states in Malaysia, which are Kuala Lumpur, Johor and Terengganu, and each represented the population from three different areas – (i) the urban area, (ii) the rural area and (iii) the coastal area respectively. The participants were recruited through various means, which included correspondence with representatives, phone calls, e-mails and instant messaging services such as WhatsApp. For example, the researchers managed to contact the public relation officers at the District Offices of *Felda Kemelah* and *Kuala Besut*. With the assistance of the person in charge, 12 participants from rural areas and 12 from coastal areas were recruited to participate in this study. Meanwhile, another 12 participants residing in the Klang Valley were recruited via e-mail, social-networking websites and instant messaging services (WhatsApp).

The reason for selecting these diverse locations was to assess the audiences' reception of locality in the illustrated issues (how they responded to what is familiar to them or whether distance with the coastal area influenced their reception of the issue).

In the effort to screen the documentary of this study, the researchers provided the technical tools (computer and projector), reserved a room in a community hall for participants from rural and coastal areas, including a meeting room at the *Jabatan Kemajuan Masyarakat* (KEMAS) for urban population. Meanwhile, the in-depth interviews were conducted at various locations, in accordance with the participants' accessibility and suitability.

3.2 Sample Size and Participant Selection

In this study, non-probability sampling was adopted in selecting the participants, with purposive sampling as the specific method. Babbie (2010) asserted that, purposive sampling

facilitates an open interaction between the researchers and the participants, where the selection of those to be interviewed is based on the researcher's judgment in choosing the most accurate participants related to the research or representatives of the population studied. Thus, the reliable participants were selected based on the characteristics listed below:

- 1) Malaysians residing in the Klang Valley (represents the urban area), *Felda Kemelah* (represented the rural area) and *Kuala Besut* (represented the coastal area);
- 2) Youth population (aged 21–35 years old);
- 3) Any ethnicity and marital status; and
- 4) Voluntary participants.

A youth population, aged between 15 to 30 years old was chosen because this age group is considered the young generation in Malaysia (Arfa Yunus, 2019). Upon receiving the consents, all 36 participants underwent the documentary screening and two stages of in-depth interview sessions; prior and two months after the documentary screening. This sampling strategy was repeated until data saturation was reached for each population of the target areas. In total, the researchers conducted 72 in-depth interviews as to achieve the purpose of this study.

3.3 Participant Identification

To recap, the data were obtained from three populations, namely coastal, rural, and urban. The participants were categorized into three groups, labeled as population A, B, and C, and tagged as 1 to 12 in order to help the researchers easily identify each group. This tagging, as follows, will be used in the findings and discussion sections:

Table 1: Participant identification

Population	Area and documentary viewed	Tagging
Population A	Coastal population who watched the local BD, <i>Lestari Ujana Marin</i> (LUM)	A1 to A12
Population B	Rural population who watched the local BD, <i>Lestari Ujana Marin</i> (LUM)	B1 to B12
Population C	Urban population who watched the local BD, <i>Lestari Ujana Marin</i> (LUM)	C1 to C12

3.4 The Materials under Study

A blue documentary program, *Lestari Ujana Marin* or The Sustainable Marine Park, was selected as the media text in order to investigate the role played in the promotion of a change in attitudes and perceptions toward marine life conservation by Malaysians. The documentary program was suitable due to its representation of the issue related to local marine life extinction without involving inland and other wildlife species, yet was sufficient to generate credible outcomes in line with the objectives of the present study. Permission through e-mail was obtained from the producers and responsible parties to use the documentary for academic purposes.

Lestari Ujana Marin (LUM) is a 25-minute documentary produced in 2014. This documentary is one of the episodes of *Simfoni Alam*, a documentary series that was launched in 2010 by Radio Television Malaysia (RTM). *Simfoni Alam* was broadcasted every Tuesday through Channel TV1 and covered various topics including nature issues, wildlife, discoveries, culture, environment, tourism, science and technology as well as current issues. LUM described the conservation journey and effort of Mr. Nasrulkhakim, a marine research officer and his team to save the polluted ocean. This documentary won a local award for Best Video Documentary at the Malaysian Journalist Night in 2015.

3.5 Interview Questions

In this study, the two-phase interview was imperative to discover whether the perceptions and attitudes of the viewers changed toward marine life conservation. The questions asked during the data collection process and the guidelines on the viewer's responses for each research question are presented in Table 2. In reiteration, the research questions and supplementary questions for the in-depth interviews were formed largely based on this premise.

Table 2: List of questions' criteria for the semi-structured interviews

Research question	Criteria
How effective is a blue documentary in raising viewers' awareness toward marine life conservation?	<p>Pre-viewing experiences:</p> <p>-Question of awareness and perception of and attitude toward marine life conservation.</p> <p>Post-viewing experiences/action taken:</p> <p>-Question about attitude changes up to now.</p>
What are the impacts of a blue documentary in changing viewer's perceptions and attitudes toward marine life conservation?	<p>Pre-viewing experiences:</p> <p>-Question of awareness and perception of and attitude toward marine life conservation.</p> <p>Post-viewing experiences/action taken:</p> <p>-Question about attitude changes up to now after watching the BD.</p>
Two months later, do geographical locations (urban, rural and coastal areas) play an important role in viewers' perceptions and attitudes in marine life conservation?	<p>Pre-viewing experiences:</p> <p>-Question of awareness and perception of and attitude toward marine life conservation.</p> <p>Post-viewing experiences/action taken:</p> <p>-Question about attitude changes up to now.</p>

3.6 Data Analysis Procedure

The analysis involved 72 in-depth interviews, with each session lasted for one hour on average. The thematic analysis was employed in order to identify, interpret and analyze the important and interesting patterns emerged from the data. As Braun and Clarke (2006) claimed, "a theme captures something important about the data in relation to the research question and represents some level of patterned response or meaning within the data set" (p. 82).

The analysis adopted the Braun and Clarke (2006)'s six designated steps of a practical framework in doing thematic analysis (Figure 2), whereby the phases could be used simultaneously while dealing with a lot of the data in this study.

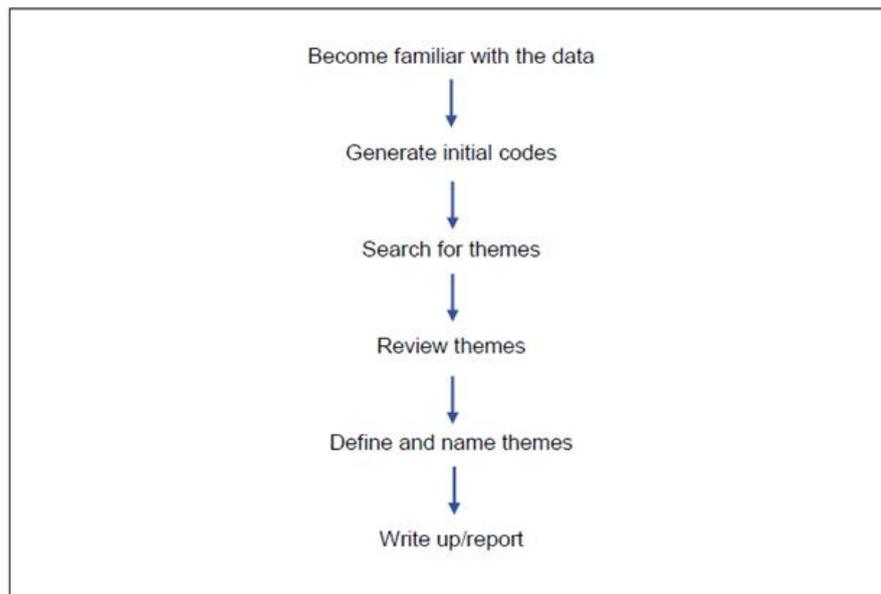


Figure 2: Six-step framework for doing thematic analysis

Firstly, it was suggested for the researchers to be familiar with the data obtained from the interviews by reading and re-reading the transcriptions. Abiding by it, the researchers jotted down the early patterns and impressions which emerged from the data before proceeding with further steps. Secondly, the researchers started to organize the data in a systematic way by narrowing them down to more specific and relevant categories. The acts are posited as a process known as coding. This process was undertaken manually without using any qualitative data analysis software; the researchers simply used pens and highlighters to work through hard copies of the transcripts.

Thirdly, the themes were then categorized based on their significance to the research questions. At this stage, the preliminary themes were first defined by overlapping codes and then examining the codes that clearly fitted together to form a theme. Next, the researchers reviewed, evaluated and revised the preliminary themes identified in the previous step. At this stage, the data were gathered and coded in themes accordingly by using the cut-and-paste technique in Word documents and in hard copies. The themes emerged from the data were inserted in codes, in Microsoft Word tables, where each theme was considered in the context of this study.

The analysis proceeded with the identification of themes according to their respective importance, and the extraction of the relevant codes in relation to each other. Afterward, the researchers commenced with the report and analysis of the findings by categorizing them into two main themes and nine sub-themes.

4.0 ANALYSIS AND FINDINGS

This section discusses the viewers' long-term perceptions and attitudinal changes toward marine life conservation.

4.1 Findings Pertaining to Pre-viewing Interviews

It is important to report the major changes detected between the pre-viewing BD experiences, and the post-viewing experiences of the viewers in regards to marine life conservation. In the pre-viewing interview, all 12 participants in each population (urban, rural and coastal areas) indicated strong evidence of the participants having low awareness about marine life extinction and possessed limited knowledge about marine life.

This was further categorized as such: (i) limited knowledge about threats to marine life among youth generation, (ii) a high consumption of marine life as a main source of food, (iii) an extensive use of plastic, (iv) an irresponsible means of rubbish disposal, and (v) minimal recycling efforts. In addition: (vi) a high consumption of endangered marine life species, (vii) a poor attitude toward the environment, and (viii) a generally low expectation of the educational function of a documentary were also discovered to be under the same category.

Interestingly, there is an obvious difference in knowledge about marine life, between before and two months after viewing the BD among the participants. Two months after post-viewing BD experiences verified positive changes where the participants were able to sustain pro-conservation awareness and practices. However, these were discussed in brief, as the analysis concentrated on an in-depth explanation of post-viewing experiences, that showed the substantial transformations prior to and two months later of viewing blue documentary.

4.2 Findings Pertaining to Post-viewing Interviews

The findings revealed that, the participants displayed promisingly long-term change in their perceptions and attitudes toward environmental conservation movement, as a result of the exposure to new information or knowledge about marine life extinction. The changes experienced by the participants, as noted at the individual level, are , (i) they informed other people of what they know about marine life conservation, (ii) they reduced their plastic usage,

(iii) they became more responsible toward beach preservation, (iv) they became interested in any initiatives to recycle, (v) they managed their waste and rubbish properly, (vi) they reduced their seafood consumption, and (vii) they were in pursuit of additional knowledge on marine life conservation.

However, lack of intervention from responsible parties and the insufficient number of organizations for conservation have caused the participants to experience difficulties in achieving social change through (viii) participation in mass conservation activities, (ix) methods of donation and (x) contact with the appropriate organizations. These results suggest that the BD can be a powerful device for promoting social change because it embodies those of McQuail (2010) and Beaudoin (2007) categories of media effects; planned and short-term effects through news learning about the marine life extinction and the viewer's responses in terms of their educational, emotional and attitudinal changes; planned and long-term effects through the distribution of knowledge by informing other people about this issue; and unplanned and long-term effects through the reality defining social change of marine life conservation movement.

Therefore, the actions were implemented as to help marine life conservation at the individual and communal levels, as claimed by the BD's viewers two months after their viewing experiences, indicating the possibly positive social change concerning environmental conservation, as explained in detail below.

4.2.1 Informing others about marine life conservation

The results show a dynamic correlation between the dissemination of knowledge on marine life conservation, and the two months after the BD viewings. Both were evidenced by the majority of the participants from all populations, demonstrating the ways they shared the information represented in the BDs with their family members, friends, colleagues and neighbors, as well as on their social media accounts. This study confirms the association between BDs and pedagogic values, due to its potential as a knowledge dissemination platform (Fortner, 1985; Mat, 2017). This finding further supports the idea of Mills (2010) that good aesthetic, societal and educational values in documentary films encourage viewers' participation in global environmental movements, informing and engaging citizens in environmental debates.

As 10 of the 12 participants from the coastal population said, they had shared the information gained from the BD viewing with their family members, including parents, children, partners, siblings, friends and colleagues:

A4: ... *I shared this information with my family members, parents, siblings and friends.*

A6: *I told my office mate about the beauty of the marine life that has been destroyed because people did not protect it. I also told my husband, children and nephews not to throw anything away when we visit the beach.*

In addition, the participants from the rural population were keen to share the knowledge about marine life conservation on their social media, as well as with people around them, including family members and friends.

B5: *I've shared the information from the documentary with my family members and friends. Then, I told my husband right after I came back from the interview. I also shared on my Twitter and Facebook accounts that marine life is as important as life on the land.*

B6: *I've shared the information on my Twitter account and on Instagram... Also, I shared the information with my roommate, housemates and even with my family members.*

Meanwhile, the participants from the urban population did not share the knowledge gained on their social media, but rather with people around them, including students, family members and friends:

C3: ... *I shared it with my younger brother, he's in form 1... I also told my parents and my friends...*

C9: ... *in the past two months, I have shared the stories with my husband, sisters, students, friends and a few of my colleagues...*

In conclusion, their pledge to share knowledge about conservation in the past two months were manifested in real actions, which was by becoming agents for knowledge dissemination of marine life conservation, both through direct communication and on social media platforms. It is also important to note about virtual knowledge-sharing occurred after two months of the BD viewing.

4.2.2 Reducing the use of plastics

The BD encouraged a minimal use of plastic products as exhibited by all participants in this study. There are similarities in the positive attitude toward the environment shown by the participants in this study, regardless of population group, and that of Hofman and Hughes'

(2018) and Holbert, Kwak, and Shah' (2003) participants, where eco-documentaries had influenced them to purchase products that are environmentally friendly. This intention has been translated into real action taken as all participants noticed a significant reduction of plastic usage in their daily lives in the two months after their BD viewing experiences, especially in their use of plastic bags and other plastic products:

A4: I used less plastic after I watched that documentary. For example, I did not take plastic bags given by the cashier if I bought just two to three things... I also do not buy any plastic plates anymore... I'd rather choose plates made from glass so that I can re-use them again next time.

B8: My plastics usage and purchases have lessened... For example, for my business I just re-use any existing plastic bags that I collected to put in the fish crackers that I sell to the customers...

C10: I tried to reduce my plastic usage... I take my own bags when I go grocery shopping because I think it is much easier now to not deal with a lot of plastic when I get home.

This result is significant for the Malaysian local authorities, validating the idea of negative attitudes toward the new regulation banning plastics, which has been disseminated through printed materials such as posters and banners, as reported by Mustafa and Yusoff (2011). The negative attitudes might be lessened, or altogether eradicated by utilizing a BD to promote less plastic usage in the long term by the general public.

4.2.3 Becoming more responsible about beach preservation

This study indicates that the BDs encouraged participants to have a relatively better level of moral responsibility when they went to the beach, as they had a better picture of how plastic can threaten marine life.

The responsibility sensed right after the BD viewing experience happened to be a great influence in persuading the participants to be more responsible toward beach preservation in the following two months, as exemplified by their willingness to pick up litters when spending leisure time at the beach. This finding supports the idea of the influence of the documentary in encouraging moral responsibility – in acts such as by picking up other people's litter – using post-viewing support for long-term conservation behavior (Hofman & Hughes, 2018).

Accordingly, 10 out of 12 of the participants from the coastal population spoke of their activities in conserving marine life:

A5: ...before this, when I went to the beach, I would throw everything that I brought with me on the beach. But now I collect up the plastic or anything that I see on the beach and put it into the bin...

These views also surfaced in eight of the 12 participants from the rural population, who were known to have geographic boundaries to the marine environment, and where their desire to reduce pollution had led them to clean the beaches:

B12: ... I visited a beach in Melaka. But I saw a lot of rubbish and I picked up as much as I could, because I just happened to drop by there.

Meanwhile, five out of the six participants from the urban population, who watched the local BD, reportedly did not have any opportunity to go to the beach, due to their work commitments, as well as the distance from the sea:

C2: After watching the documentary, I do want to visit the beach because I want to see whether they are being polluted or not. But because of my work, I could not go.

This suggests that any outreach program involving BD screening can be practiced by conservation organizations, in order to persuade the public to participate in volunteering activities, particularly beach cleaning, and promote litter-free beaches.

4.2.4 Becoming interested in any initiatives to recycle

From this study, it is found that a BD can be a powerful stimulus in motivating the participants to initiate and sustain recycling habit. This result may be explained by the fact that all 36 participants admitted to having minimal recycling efforts in their first interview. However, two months after their BD viewing experience, they revealed a stronger commitment to recycling, even without additional support.

This finding corresponds with those of previous studies that have examined the effect of the documentary in stimulating frequent recycling habits (Hofman & Hughes, 2018; Holbert et al., 2003). Since then, a variety of recycling initiatives have been put forward by the majority of the participants from all populations as alternatives, because recycling facilities were not fully available in their neighborhoods:

A3: ...I sort the rubbish into different categories and throw them into the main rubbish bin.

B1: No, because there's no facility for recycling in this area... But I collect bottles and I sell them.

C9: ... I have practiced recycling at home. For example, in my home area, there are no recycling bins provided. So, I split my own garbage into plastic, bottles, paper and food waste, and send them to the recycling center...

The findings denote that recycling facilities are not fully available in developing countries such as Malaysia. However, this has not stopped the public from recycling because the BD has encouraged them to resort to substitution, such as reusing plastic products several times before disposing of them. The findings also suggest that the Malaysian local authorities or related environmental organizations should take into consideration the importance of providing and improving the existing recycling facilities in the country.

4.2.5 Managing waste and rubbish properly

The present study discovered that the habit of irresponsible rubbish disposal among the participants have been traded with the encouraging habit of practicing an environmentally friendly disposal approach.

The change in habit was manifested in the actions taken during the two months following all 36 participants viewing experiences, and it supports the idea of Hofman and Hughes (2018) of careful disposal behavior resulting from documentary viewing. The participants avowed:

A7: ...Before this, I just simply left rubbish wherever I liked when I went to the beach... But, not anymore... I try my best to find a rubbish bin. If I cannot find a bin, I throw it away on my way home when I come across one, or I just take it home...

B11: In the past, I would just throw it in my backyard or burn it. Nowadays, I've become more careful because I live near the sea, and it can directly pollute the ocean.

C5: I became stricter about recycling at home... I started practicing with four bins at home. So, meaning there's one for paper waste, one for glass waste, one for plastic waste and one for food waste.

This finding should be taken seriously by the Malaysian local authorities, who consequently should create educational programs as a way to improve waste disposal methods for the public.

4.2.6 Reducing seafood consumption

Surprisingly, it is found that there was a reduction in seafood consumption among the participants, probably due to the fact that the marine life represented in the BD is part of their staple diet. The viewing of BD had transformed the attitude of the participants to reduce seafood consumption. Hence, this finding has bridged the gap left by previous studies (e.g. Hofman & Hughes, 2018) about seafood consumption, in the sense that a majority of the participants had significantly changed their daily diet as part of a long-term plan by reduction and, in some cases had resulted in zero marine life consumption of endangered marine life and other types of fish.

A3: Normally, I love turtle eggs... I always buy it... But even though they are in season right now, I have not eaten any. I feel guilty, sorry and really bad, which makes me unable to eat them after I watched the documentary.

B1: I feel sorry about consuming any seafood and other marine life. I feel sorry, especially for the marine turtle eggs and fish, so it makes me stop eating fish.

C10: Previously, I ate without even thinking about the catching process of the marine life. It makes me think that if we consume marine products every day, they will be depleting... less and less. So, I eat more chicken instead of fish because I feel sorry for them.

The participants confessed to feeling guilty and responsible, thus materializing their feelings by consuming less marine life to support the conservation movement. This view is justified by the study of Hazel (2005), who wrote that guilt can be a potent emotional tool for the persuader, and leads people to act by giving, and motivating people to change their habits. This finding may help us to understand, that a connection exists between the mediator of a BD and the possibility of long-term positive attitude toward marine life conservation among general public.

4.2.7 Seeking additional knowledge in the marine life conservation

This study has revealed that the BD encouraged the majority of the participants to seek additional knowledge about marine life conservation in the two months following the viewing. A possible explanation for these results may be identified through the issue represented, which had previously received limited coverage on mainstream television channels. Fortunately, seeing it spoken of in the BD has magnified their interest in finding out more about this environment. This result is consistent with those observed in an earlier study (Hofman & Hughes, 2018) and suggests that a BD stimulates the general public in searching for additional

information about the environment, particularly on marine life, through other media platforms. Participants from the coastal, rural and urban population shared:

A5: ... It's like I want to learn more about how to protect it... sometimes I search my Facebook, where I came across and now follow a page about the ocean... I also use Google to find out about it.

B8: ...I did some research on it. But there's not much about local marine life on the Internet. I've found several departments, but they were more related to tourism.

C1: I have also been looking for information through Google regarding marine life in Malaysia. So, I found a lot of news, but not so much about extinction...

This finding indicates that a BD can be an eye-opener into marine life extinction and a significant device promoting the long-term search for additional information among people. This finding confirms the statement of Smaill (2007), who suggested the conservation documentaries that focus on marine life as powerfully facilitate the desire for knowledge, which revolves around the visual evidences of human exploitation on animals. Other than that, social media, the product of the internet has broad function for the marine life extinction campaign and thus should be utilized to the greatest extent possible.

4.2.8 Participating in mass conservation activities

This study disclosed that BD can stimulate Malaysian viewers' long-term contributions to mass conservation activities but on the condition that the responsible parties are involved in organizing them. Contrary to other studies, this study also shows that only a minority of the participants were willing to donate to the conservation and protection issue in the two months after watching the BD due to the unavailability of donation platforms. Therefore, the findings do not fully support previous research on positive donation behavior toward the environment and nature (e.g. Arendt & Matthes, 2016; Hofman & Hughes, 2018; Janpol & Dilts, 2016).

Furthermore, this study revealed that no contact with conservation organizations was initiated two months after the BD viewing. This result may be an indication of the lack of outreach programs and campaigns offered by conservation organizations, as well as the limited number of environmental organizations established in Malaysia that focus on marine sustainability. As the participants shared:

A3: I have not participated in any activity because there were no parties to organize it...

B7: No, because I do not know where to donate it, and there are no activities to protect marine life being carried out here...

C6: No, not really [I have not participated] because I did not find any programme related to conservation around here...

The finding calls for conservation organizations and local authorities to approach the public throughout the country and organizing mass conservation activities in order to raise funds for marine life conservation, while encouraging the public to participate in wildlife species and environmental sustainability.

5.0 DISCUSSION

This study identified a number of perceptions and/or attitude modifications among the participants, attesting to the BD's potential as an agent of change for long-term marine life conservation. At a broad level, it is vital for new information and knowledge about marine life extinction to be conveyed to the public in order to develop and sustain pro-conservation attitudes.

This study would suggest that BD films/programs have to be made accessible in classrooms, schools, community events, public places, and even cinemas. Also, it is significant to show the entire documentary film/program, unlike the methodology adopted in previous studies. However, if only mere extracts were to be shown rather than the complete films, this study suggests that they should be chosen for the purpose of incorporating certain or specific rhetorical elements that move viewers powerfully, such as locality of the issue, plastic pollution and animal suffering.

The findings of the present study contradict those from previous studies on the short-term impact of documentaries on environmental awareness (e.g. Nolan, 2010), but is consistent with the long-term impact described by Hofman and Hughes (2018). The insight of audience's perspective about which factors were powerful to influence conservation, make this study different from the others. The locality of the issue and marine ecological catastrophe depicted to the audience, particularly if it is a home affair (as it can trigger a sense of belonging) can be a stimulus for a further sustained positive perceptions and/or attitude at the individual level. Meanwhile, interventions from responsible parties are urgently needed for the public's greater participation in a mass conservation movement.

Therefore, a BD can encourage long-term perceptions and/or attitudinal changes toward conservation in three ways: (i) at the individual level, (ii) through local issues which expand the positive attitude at the individual level, and (iii) intervention from the parties responsible for greater social change. Firstly, over the two months since viewing the BD, the participants changed their attitude at the individual level, as they were informed about the detrimental effect of human activities.

Secondly, the relevance or familiarity between the issue represented and the viewers – (or in this study known as the locality of the issue) has encouraged further attitudinal change at the individual level, including less marine life consumption in their daily diet, and has even resulted in a zero consumption of endangered marine life species among the coastal population. This assertion has filled a knowledge gap left by a previous study (Hofman & Hughes, 2018) on the effects of a documentary on marine life consumption. Thus, the present study has shown that the locality of the issue represented has significantly contributed to environmental and species sustainability, as its relevance and association for the people has navigated their long-term change in attitudes to marine life conservation.

Lastly, the interventions from responsible parties, such as organizing conservation activities, collecting funds and reaching out to the public, have emerged as reliable stimuli for a sustainable attitudinal change toward conservation at the general or communal level. These comprise participation in mass conservation activities, making donations and making actual contact with conservation organizations. To some extent, these findings reinforce the relevance of post-viewing support in terms of reminders, prompts and strategies (Hofman & Hughes, 2018), and support from close people (Mustafa & Yusoff, 2011); these act as a significant stimulus for a long-term behavioral change toward conservation.

6.0 CONCLUSION

The present study discovered that the blue documentary (BD) raises concerns about the environment and encourages people to think positively about conservation – particularly of marine life, because it gives viewers the opportunity to discover the detrimental aspects of this unfamiliar world, making it different from any other nature documentaries that promote beautiful marine creatures. This result suggests that the dissemination of knowledge and information, which is generally unreachable by the public, vital in engaging the viewers toward with marine life conservation movement in the long run.

Taking all into consideration, the current researchers concluded that the blue documentary (BD) is potentially a key persuasive device in promoting marine life pro-

conservation awareness, encourage positive perception and/or attitude and also inspire a greater environmental conservation movement among the Malaysian general public in the future. Therefore, this study is hoped to be significant for policymakers on marine conservation, key media player practices and media research, particularly on documentary studies.

REFERENCES

- Abd Mutalib, A. H., & Fadzly, N. (2015). Assessing hatchery management as a conservation tool for sea turtles: A case study in Setiu, Terengganu. *Journal of Ocean and Coastal Management*, 113(1), 47–53.
- Abd Mutalib, A. H., Fadzly, N., Ahmad, A., & Nasir, N. (2015). Understanding nesting ecology and behaviour of green marine turtles at Setiu, Terengganu, Malaysia. *Marine Ecology*, 36(4), 1003–1012.
- Arendt, F., & Matthes, J. (2016). Nature documentaries, connectedness to nature, and pro-environmental behavior. *Journal of Environmental Communication*, 10(4), 453–472.
- Arfa Yunus, E. L. (2019, July 3). Youth now defined as those between 15 and 30. 3 July 2019. *New Straits Times*. <https://www.nst.com.my/news/nation/2019/07/501288/youth-now-defined-thosebetween-15-and-30>
- Babbie, E. (2010). *The practice of social research*. Cengage Learning.
- Beaudoin, C. E. (2007). Media effects on public safety following a natural disaster: Testing lagged dependent variable models. *Journalism and Mass Communication Quarterly*, 4(4), 695–771.
- Bettinghaus, E. P., & Cody, M. J. (1994). *Persuasive communication* (5th edition). Holt, Rinehart & Winston.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Fogg, B. J. (2003). *Persuasive technology: Using computers to change what we think and do*. Morgan Kaufmann.
- Fortner, W. R. (1985). Relative effectiveness of classroom and documentary film presentations on marine mammals. *Journal of Research in Science Teaching*, 21(2), 115–126.
- Hazel, H. (2005). *The power of persuasion*. Wipf & Stock.
- Hofman, K., & Hughes, K. (2018). Protecting the great barrier reef: Analysing the impact of a conservation documentary and post-viewing strategies on long-term conservation behaviour. *Journal of Environmental Education Research*, 24(4), 521–536.

- Hogan, K. (1996). *The psychology of persuasion: How to persuade others to your way of thinking*. Pelican.
- Holbert, R. L., Kwak, N., & Shah, D. V. (2003). Environmental concern, patterns of television viewing, and pro-environmental behaviors: integrating models of media consumption and effects. *Journal of Broadcasting and Electronic Media*, 47(2), 177–196.
- Janpol, H. L., & Dilts, R. (2016). Does viewing documentary films affect environmental perceptions and behaviors? *Journal of Applied Environmental Education & Communication*, 15(1), 90–98.
- Lee, O. A. (2010). Coastal resort development in Malaysia: A review of policy use in the pre-construction and post-construction phase. *Ocean and Coastal Management*, 53(8), 439–446.
- Lulofs, R. S. (1991). *Persuasion, context, people, and messages*. Pearson.
- Mat, N. H. (2017). Blue documentary as a tool for marine life conservation. http://25qt511nswfi49iayd31ch80wengine.netdnassl.com/wpcontent/uploads/papers/mediasia2017/MediAsia2017_38180.pdf
- McQuail, D. (2010). *McQuail's mass communication theory*. Sage.
- Mills, B. (2010). Television wildlife documentaries and animals' right to privacy. *Journal of Media and Cultural Studies*, 24(2), 193–202.
- Ministry of Natural Resources and Environment. (2016). *National policy on biological diversity (2016–2025) Malaysia*. MONRAE.
- Muhammad, M. M., & Kari, M. (2015). Community attitudes toward environmental conservation behaviour: An empirical investigation within MPAs, Malaysia. *Marine Policy*, 52(1), 38–144.
- Mustafa, H., & Yusoff, R. M. (2011). Measuring the long-term effectiveness of a compulsory approach to behaviour change: Analysis of the 'Say No to Plastic Bags' campaign at the Universiti Sains Malaysia. *Journal of Education for Sustainable Development*, 5(2), 233–244.
- Mytton, G., Diem, P., & Dam, P. H. V. (2016). *Media audience research: A Guide for professionals*. Sage.
- Nichols, B. (2001). *Introduction to documentary*. Indiana University Press.
- Nolan, J. M. (2010). An inconvenient truth: Increased knowledge, concern, and willingness to reduce greenhouse gases. *Environment and Behavior*, 42(5), 643–658.
- Ray, G. C., & Ray, J. M. (2004). *Coastal-marine conservation: Science and policy*. Blackwell Science.

Simons, H. (2001). *Persuasion in society*. Sage.

Smaill, B. (2007). Injured identities: Pain, politics and documentary. *Studies in Documentary Film*, 1(2), 151–163.

Stiff, J. B., & Mongeau, P. A. (2003). *Persuasive communication*. Guilford Press.

Twumasi, P. A. (2001). *Social research in rural communities*. Ghana University Press.

Wimmer, R. D., & Dominick, J. R. (2006). *Mass media research*. Cengage Learning.