

## Quasi-Experiment on the Pro-Environmental Attitudes of DKI Jakarta Province Teenagers Influenced by the Documentary Film "Tenggelam dalam Diam"

Alvin Iqbal Baihaqi<sup>1</sup>, Suwandi Sumartias<sup>2</sup>, Wina Erwina<sup>3</sup>

<sup>1,2,3</sup>Faculty Of Communications, Universitas Padjadjaran, Sumedang, Indonesia

Jalan Raya Ir. Sukarno No.KM. 21, Hegarmanah, Kec. Jatinangor, Kabupaten Sumedang, Jawa Barat 45363

E-mail: <sup>1</sup>[Alviniqball@gmail.com](mailto:Alviniqball@gmail.com), <sup>2</sup>[suwandi.sumartias@unpad.ac.id](mailto:suwandi.sumartias@unpad.ac.id), <sup>3</sup>[Wina.erwina@unpad.ac.id](mailto:Wina.erwina@unpad.ac.id)

Received: February 2024; Accepted: April 2024; Published: June 2024

### Abstract

*When discussing climate change, one of the effects that is very pronounced is the abrasion and flooding that often occurs in Indonesia, especially in the province of DKI Jakarta, as one of the fastest sinking cities in the world. If this is not controlled, most of the city could be completely submerged by 2050 (Mayuri & Rafki, 2018). In an effort to combat climate change, some research suggests that young people are potentially well placed to trigger ambitious and long-term societal change by adopting sustainable attitudes and behaviours in energy use. (Ouariachi et al., 2017). To determine the increase in pro-environmental attitudes after an experiment using the documentary film "Tenggelam Dalam Diam" for teenagers in DKI Jakarta Province. This study will apply a Nonequivalent group design which is a quasi-experimental research design by comparing two pre-existing groups, where one group receives an intervention (experimental group) and the other group does not receive an intervention (control group) (Creswell, 2014). The results of Asym. Sig. (2-tailed) shows 0.00 which is less than 0.05, it can be stated that the documentary film "Tenggelam Dalam Diam" has an effect on pro-environmental attitudes of DKI Jakarta province teenagers. The results showed that the movie was effective in raising pro-environmental attitudes among teenagers in Jakarta, This research is expected to provide useful information for policy makers and stakeholders, in developing campaign strategies or programs that are more effective in increasing pro-environment attitudes and concrete actions towards the environment.*

**Keywords:** Environmental Awareness; Teenagers' Environmental Awareness; Documentary Film; Quasi-Experiment; Nonequivalent Group Design.

## INTRODUCTION

About 60.2% of the Earth's surface has recorded warming temperatures in the past decade (Nita et al., 2022). Recent data from Copernicus shows that the June-July-August (JAA) season in 2023 will be the hottest on record globally by a large margin, with an average temperature of 16.77°C, equivalent to 0.66°C warmer than average (Bonn, 2023). Ouariachi and colleagues (2017) also expressed their concern regarding climate change, stating that climate change is an inevitable and urgent global challenge with long-term implications for sustainable development in all countries. Understanding and awareness of the importance of the environment plays a very important role in efforts to maintain the survival of the earth (Ouariachi et al., 2017).

Discussing climate change, one of the impacts that is very pronounced is abrasion and flooding that often occurs in Indonesia, especially in DKI Jakarta Province. As explained in an article entitled "Jakarta, The Fastest-Sinking City in the World" which analyzes the sinking of Jakarta states that the capital city of Indonesia, DKI Jakarta is one of the fastest sinking cities in the world. If this is not controlled, most of the city could sink entirely by 2050 (Mayuri & Rafki, 2018). Bettle & Canelas (2016) revealed that adolescents are a very important group to shape their attitude and behavior towards the environment. Therefore, strengthening environmental awareness in adolescents is crucial to ensure a better environmental future (Gifford, 2011) Adolescents have a wide reach and great influence in society, so they have great potential to influence people's attitudes and behaviors towards the environment (Szagun & Mesenholl, 1993).

Besley and Shanahan (2005), Dudo et al (2011), and Sarewitz (2010) in Sakellari (2015) assert that it is important for entertainment media to encourage their audiences to act towards mitigating the consequences of climate change. Why is this so? Because research in social psychology, human agency and media effects theory shows how popular culture influences the ways in which our daily life experiences are shaped and, as such, entertainment media can also influence public understanding to produce behavioral and social change (Sakellari, 2015). According to a study conducted by John C. Maxwell, media and films can have a major influence on a person's attitude and behavior. Some previous studies have also shown that documentaries can help raise environmental awareness and influence individual attitudes and behaviors towards the environment (Maxwell & Miller, 2008). Documentary films are one of the effective media in providing information and raising awareness of environmental issues.

Documentary films can also influence a person's attitude and behavior towards the environment (Alyaz et al., 2017). Therefore, documentaries can be used as a tool to raise environmental awareness in adolescents. There are several studies related to documentary films chosen as a medium to increase awareness of Pro-Environmental among adolescents, including Korschun's research which states that documentary films were chosen because they have the ability to provide information and motivate the audience (Korschun et al., 2014).

Discussing documentary films, there are various documentaries made in Indonesia on environmental topics from various perspectives, one of which is a documentary entitled *Tenggelam Dalam Diam* (2021) by Watchdoc which tells about the environmental impacts that occur in Jakarta and how this can affect people's quality of life. The film, which has been viewed by more than 880,000 people on Watchdoc Documentary's YouTube channel, focuses on issues such as flooding. The film aims to raise public awareness of the importance of protecting the environment and provide solutions to overcome the environmental problems that exist in Jakarta, especially related to the sinking of Jakarta. In addition, the Watchdoc production house has also received various awards, including the Gwangju Prize for Human Rights in January 2021 and the President of the Ramon Magsaysay Award Foundation which is referred to as the annual "Asian version of the Nobel" (Sekar, 2021).

Based on the explanation above, researchers feel the need to conduct research that discusses the influence of documentary films on the attitude of Pro-Environmental among adolescents, especially in DKI Jakarta. This research will also choose the documentary film "Tenggelam Dalam Diam" because the film raises the topic of flooding and sinking of DKI Jakarta Province. This research will also focus on adolescents aged 19-24 years referring to the World Health Organizations (WHO) which defines adolescents into two parts, namely adolescents and youth, adolescent is someone with an age range of 10 to 19 years while youth is someone with an age range of 10 to 24 years (World Health Organizations, n.d.).

## RESEARCH METHOD

This study will apply a Nonequivalent group design which is a quasi-experimental research design by comparing two pre-existing groups, where one group receives an intervention (experimental group) and the other group does not receive an intervention (control group) (Creswell, 2014). Based on this design, Researcher will conduct pretests and posttests in accordance with the guidelines from Mohammad (2014). In this design, there are two groups involved, namely the experimental group and the control group. The steps of this design include giving a Pretest ( $O_1$ ) to both groups before the experiment begins. After that, the experimental group will receive the treatment/experiment ( $X$ ), while the control group will not get the treatment (without  $X$ ). After the treatment/experiment is given, both groups will undergo a post-test ( $O_2$ ). The structure of this design can be explained using the diagram as follows:

$$O_1 \quad X \quad O_2$$

$$O_1 \quad O_2$$

Based on a statement from Creswell (2014) that purposive sampling is a sampling method that is often used in qualitative research and quasi-experiments with Nonequivalent Group Design. This is also because purposive sampling allows researchers to select samples that have characteristics relevant to the research. This is important in Nonequivalent Group Design because Researcher wants to ensure that the two groups being compared have similar characteristics, except for the variable under study (Sugiyono, 2015).

Discussing research participants, based on the explanation previously stated and also according to Roscoe's advice cited in Sugiyono (2015), experimental research with strict control and experimental groups can be carried out with relatively small participants, around ten to 20 participants per group (Sugiyono, 2015). Based on these considerations, Researcher chose to use a sample of 20 participants who were then divided into two groups, namely the experimental group and the control group. Researchers also use the puposive sampling method with specific samples that have the following criteria:

- 1) Adolescents who live in DKI Jakarta Province
- 2) Have an age range of 19-24 years
- 3) Have never watched the documentary film "Tenggelam Dalam Diam"

## FINDINGS AND DISCUSSION

In the results of this study, researchers will present the findings in the field for the experimental & control groups, using descriptive analysis and then will be discussed using the Mann-Whitney non-parametric hypothesis test.

In the attitude of Pro-Environmental, there are three dimensions, namely social awareness, attitudes towards information related to the environment, and attitudes towards the environment (Lin et al., 2023). As discussed in the previous chapter, researchers have conducted validity and reliability tests on each statement contained in the three dimensions. After obtaining the postes results from both group, Researchers then descriptively analyzed each statement contained in the instrument, which can be seen in the following figure:

	Group	N	Mean Rank	Sum of Ranks
Results	Experiment	10	15.50	155.00
	Control	10	5.50	55.00
	Total	20		

**Figure 1 Descriptive Analysis of Experiment & Control Group**

The post-test in this study was used to determine the final condition of respondents in both groups. Judging from the data above, the experimental group in this post-test showed a higher mean rank (15.50) compared to the control group post-test (5.50) and sum of rank (155) compared to the control group (55) on the results of Pro-Environmental attitudes after being given treatment by the researcher.

Furthermore, researchers compared the results of the control group postes and also the postes of the experimental group using the Mann Whitney test, the results of which can be seen in the following figure:

Test Statistics <sup>a</sup>	
	Results
Mann-Whitney U	.000
Wilcoxon W	55.000
Z	-3.804
Asymp. Sig. (2-tailed)	.000
Exact Sig. [2*(1-tailed Sig.)]	.000 <sup>b</sup>

a. Grouping Variable: Group

b. Not corrected for ties.

**Figure 1 Mann Whitney Test Results**

Based on the figure above, it can be seen that the results of Asym. Sig. (2-tailed) shows 0.00 which is less than 0.05, it can be stated that the documentary film "Tenggelam Dalam Diam" has an effect on pro-environmental attitudes of DKI Jakarta province teenagers.

## CONCLUSION AND RECOMMENDATION

Based on the descriptive analysis on 10 experimental group respondents & 10 control group respondents as well as non-parametric mann-whitney analysis for the post-test results of both groups, it shows that the documentary film "Tenggelam Dalam Diam" has an effect on pro-environmental attitudes of DKI Jakarta province teenagers. Nevertheless, it is necessary to conduct further research to find out the direct impact of the documentary film with methods other than experiments, and different mediums in order to get more varied conclusion.

## REFERENCES

- Alyaz, Y., Isigicok, E., Studies, E. G.-J. of E. and T., & 2017, undefined. (2017). The Impact of the Environmental Documentary Movies on Pre-Service German Teachers' Environmental Attitudes. ERICY Alyaz, E Isigicok, E Gursoy *Journal of Education and Training Studies*, 2017•ERIC, 5(1). <https://doi.org/10.11114/jets.v5i1.1976>
- Bonn. (2023). *Summer 2023: the hottest on record*. <https://climate.copernicus.eu/summer-2023-hottest-record>
- Creswell, J. W. (2014). *Research Design Qualitative, Quantitative, and mixed method approaches* (4th ed.). Sage Publications.
- Gifford, R. (2011). The Dragons of Inaction: Psychological Barriers That Limit Climate Change Mitigation and Adaptation. *American Psychologist*, 66(4), 290–302. <https://doi.org/10.1037/A0023566>
- Korschun, D., Bhattacharya, C. B., & Swain, S. D. (2014). Corporate Social Responsibility, Customer Orientation, and the Job Performance of Frontline Employees. *Https://Doi.Org/10.1509/Jm.11.0245*, 78(3), 20–37. <https://doi.org/10.1509/JM.11.0245>
- Lin, C. A., Wang, X., & Dam, L. (2023). TikTok Videos and Sustainable Apparel Behavior: Social Consciousness, Prior Consumption and Theory of Planned Behavior. *Https://Doi.Org/10.1177/27523543231188279*. <https://doi.org/10.1177/27523543231188279>
- Maxwell, R., & Miller, T. (2008). Ecological Ethics and Media Technology. *International Journal of Communication*, 2, 331–353. <http://ijoc.org>.
- Mayuri, M. L., & Rafki, H. (2018). *Jakarta, the fastest-sinking city in the world*. <https://www.bbc.com/news/world-asia-44636934>
- Ouariachi, T., Olvera-Lobo, M. D., & Gutiérrez-Pérez, J. (2017). Analyzing Climate Change Communication Through Online Games: Development and Application of Validated Criteria. *Science Communication*, 39(1), 10–44. <https://doi.org/10.1177/1075547016687998>
- Sakellari, M. (2015). Cinematic climate change, a promising perspective on climate change communication. *Public Understanding of Science*, 24(7), 827–841. <https://doi.org/10.1177/0963662514537028>
- Sekar, G. (2021). Penghargaan sebagai Kontrak Sosial bagi Watchdoc Documentary. *Kompas.Id*. <https://www.kompas.id/baca/dikbud/2021/08/31/watchdoc-documentary-raih-penghargaan-ramon-magsaysay>
- Sugiyono. (2015). *Metode Penelitian Pendidikan (pendekatan kuantitatif, kualitatif, dan R&D)* (22nd ed.). Alfabeta.
- Szagan, G., & Mesenholl, E. (1993). Environmental ethics: An empirical study of west german adolescents. *Journal of Environmental Education*, 25(1), 37–44. <https://doi.org/10.1080/00958964.1993.9941943>
- World Health Organizations. (n.d.). *Adolescent health in the South-East Asia Region*. Retrieved September 16, 2023, from <https://www.who.int/southeastasia/health-topics/adolescent-health>.