
The Effect of Health Promotion on Personal Protective Equipment on Boat Service Behavior in Handling Drowning Victims on the Solo River, Patihan Village, Widang District, Tuban Regency

Karyo¹(corresponding author), Moh. Ubaidillah Faqih²¹Department of Nursing, Institut Ilmu Kesehatan Nahdlatul Ulama Tuban, Indonesia; karyo@stikesnu.com²Department of Nursing, Institut Ilmu Kesehatan Nahdlatul Ulama Tuban, Indonesia; moh.ubaidillah.faqih@gmail.com

Submitted: February 6, 2020 -Revised: March 18, 2020 -Accepted: March 26, 2020 -Published: March 31, 2020

ABSTRACT

The use of PPE is one of the problems in the world of crossing work. the use of personal protective equipment along with its functions and benefits, so that it is expected to change the behavior of users of water transportation services to be good and can ensure their safety. This study used a one group pre-post test design. The sampling technique was taken using Simple Random Sampling on boat services. Data collection techniques using a questionnaire sheet with the number of respondents 19 people. Data analysis using Wilcoxon test. The results showed that there was an effect of health promotion of personal protective equipment on boat service behavior in handling drowning victims on the Bengawan Solo River, Patihan Widang Tuban Village, this was evidenced by the Wilcoxon test which obtained a value of $p = 0.000$ ($p < 0.05$), which means there is a The Effect of Health Promotion on Personal Protective Equipment on Boat Service Behavior in Handling Drowning Victims on the Solo River, Patihan Widang Village, Tuban. From the description above, it can be concluded that there is an influence of health promotion of personal protective equipment on the behavior of boat services in handling drowning victims on the Bengawan Solo River, Patihan Widang Tuban Village, so that the incidence of river crossing service users has decreased.

Keywords: health promotion; personal protective equipment; boat service behavior

INTRODUCTION

Behavioral factors are the main cause of the loss of life and material losses due to water transportation accidents in Patihan Village, Widang District, Tuban Regency. Many people tend not to know about the functions and benefits of using these personal protective equipment (PPE). For this reason, the role of the government and the related health team is needed to promote the use of personal protective equipment and its functions and benefits, so that it is expected to change the behavior of users of water transportation services to be good and can ensure their safety. Therefore, in fostering and improving public health, interventions or efforts aimed at behavioral factors are very strategic, because behavior is the second largest factor after environmental factors that affect individual, group, or community health (Blum: 1974, in Notoatmodjo's book, 2012).

Based on data from the NTSC, water transportation accidents that were recorded during 2016 in Indonesia based on the type of accident, namely: explosion/fire as much as 27%, drowning/overturned as much as 27%, collided as much as 13%, ran aground as much as 13%, and others as much as 13%. From the water transportation accidents that occur, it is certain to cause loss of life and material. Meanwhile, data from BASARNAS in April 2017 The number of crossing boat accidents in Gresik, East Java caused 2 deaths, 6 people survived and material losses 7 motorbikes, while for regional districts in East Java, in this case Tuban Regency there are as many as 7 people who died due to not using personal protective equipment when using the Bengawan Solo River crossing service.

Based on a preliminary study conducted through an initial survey and interviews with the community in Patihan Village, Widang District, Tuban Regency, of the 15 people interviewed, 10 interviewees said they did not know the dangers caused by not using PPE (Personal Protective Equipment), and even tended to more ignore this because of the lack of public attention about the role of the government and health workers in providing information about the dangers and consequences caused by bad behavior, and 5 of them said they already knew about the dangers if they did not use PPE (Personal Protective Equipment), so that when it happened accidents using crossing services can save yourself. This behavior occurs because people pay more attention to the information provided by health workers and are able to use personal protective equipment. From the initial survey, it can be concluded that there are still many river crossing service users who behave badly towards the use of personal protective equipment which can later cause bad impacts, especially fatalities.

The use of PPE is one of the problems in the world of crossing work. This can increase the level of risk of drowning victims. Handling behavior of drowning victims is a very important component and must be considered

by every individual, especially by crossing service owners (Silalahi in Panggabean, 2008). There are several factors that cause drowning victims, one of which is the lack of health promotion of personal protective equipment, and there are other factors, namely inadequate boat crossing equipment, crossing users who exceed the load, poor swimming techniques, so that many drowning victims occur while crossing. Many factors influence behavior including environmental education and knowledge factors that influence an individual's behavior in an action. Knowledge is a very important domain for the formation of one's actions (over behavior). A person's knowledge of an object contains two aspects, namely positive aspects and negative aspects. These two aspects will determine a person's attitude, the more positive aspects and objects that are known, the more positive attitudes will be towards certain objects. According to the theory of WHO (World Health Organization) quoted by Notoatmodjo (2007). enough to increase the attitude of crossing users in handling victims, it is expected that the behavior will be positive.

One of the efforts to overcome the cause of the high number of fatalities due to poor behavior of river crossing service users is to involve the role of the government or the related health team to change the behavior of these service users to make it better, the way that the government and health workers can do is promote personal protective equipment (PPE) as a breakthrough to change behavior for the better so that it can reduce the number of fatalities due to water transportation accidents. The factors that influence behavior are knowledge. Knowledge is a very important domain for the formation of one's actions. Knowledge is needed as support in growing self-confidence as well as attitudes and behavior every day, so it can be said that knowledge is a fact that supports one's actions (Notoatmodjo, 2003). For this reason, it is necessary to conduct health promotion. Health promotion is any combination of health education and interventions related to economics, politics, and organizations, which are designed to facilitate behavior and an environment that is conducive to health. Handling that must be given to boat services by means of health promotion of personal protective equipment includes good swimming ability, ability in the medical field, boat control techniques, rescue techniques in the water. With these various ways so that they can change people's behavior so that they can better help and reduce drowning victims. Delivery of good health promotion will later be able to change the behavior of crossing service owners and crossing service users to understand more about the use of personal protective equipment for safety, so that later it can reduce the number of fatalities.

Based on this description, the authors are interested in conducting research on the effect of health promotion of personal protective equipment on the behavior of boat services in handling drowning victims on the Bengawan Solo River in Patihan Village, Widang District, Tuban Regency.

METHODS

Research design is the final result of a decision stage made by researchers related to an applicable research (Nursalam, 2013). The type of research used is an analytic-pre-experimental research design with a one-group pretest-posttest design. The characteristic of this research is to reveal a causal relationship by involving a group of subjects. The subject group was observed before the intervention, then observed again after the intervention (Nursalam, 2013).

This is done for the resulting differences between the pre test and post test. The population in this study are subjects (eg humans; clients) who meet the established criteria (Nursalam, 2013). The population in this study were all boat services in Patihan Village, Widang District, Tuban Regency, totaling 20 people.

Sampling is the process of selecting a portion of the population that can represent the existing population (Nursalam, 2013). This study uses a probability sampling technique, namely "simple random sampling". Sample selection in this way each element is selected randomly. Variables are behaviors or characteristics that give different values to something (objects, humans, etc.) (Soeparto, et al., 2000, in Nursalam, 2013). In research, variables are characterized as degrees, amounts, and differences. Variables are also concepts from various abstract levels which are defined as a facility for measurement and or manipulation of a study. The intended concept in a research is concrete and can be directly measured. Something concrete can be interpreted as a variable in research (Nursalam, 2013).

An independent variable is a variable that affects or its value determines another variable. A stimulus activity that is manipulated by the researcher creates an impact on the dependent variable. This variable is also called the independent variable, usually manipulated, observed, and measured to determine its relationship or influence on other variables. In nursing, the independent variable is usually a stimulus or nursing intervention given to the client to influence the client's behavior (Nursalam, 2013). The independent variable in this study was the health promotion of personal protective equipment (PPE). The dependent variable is a variable whose value is determined by another variable. The response variable will appear as a result of the manipulation of other variables. This variable is also called the dependent variable, namely the factors that are observed and measured to determine whether there is a relationship or influence of the independent variables (Nursalam, 2013). The

dependent variable in this study is the behavior of boat services in handling drowning victims. Operational definition is operationally defining variables based on observed characteristics, enabling researchers to make careful observations or measurements of an object or phenomenon (Hidayat, 2010). So the operational definition is formulated for the sake of accuracy, communication, and replication (Nursalam, 2013).

Instruments are tools that are selected and used by researchers in their activities to collect data so that these activities become systematic and easier (Nursalam, 2013). The types of instruments used in this study were SAP and questionnaire sheets (Foa, et al. 1997).

This research was conducted in Patihan village, Widang Tuban District, the reason for choosing the research location was because some ferry boat service workers did not care about the safety of the dangers that came without using personal protective equipment.

The initial survey was taken in November 2017 and the research was conducted on April 12, 2018 to April 20, 2018. Data collection is a process of approaching the subject and the process of collecting the characteristics of the subject required in a study (Nursalam, 2013). The data collection in this study was carried out with the initial step, namely the orientation stage including: Submission of a permit to the Head of Patihan Village, Widang Tuban District. Furthermore, the researcher prepares materials and concepts that support this research by reading various references and journals. Researchers look for other literature to explore the topic of this research. Researchers conducted a preliminary study to determine the behavior of boat services in handling drowning victims. Researchers determined the object of research by selecting samples that met the inclusion and exclusion criteria. Observations were carried out by the researcher himself by previously providing an explanation to the respondent about the aims and objectives of the study and what treatment would be given and then proceeding with signing the consent form to become a respondent.

Data collection in this study was carried out primarily starting with permission from the institution, then after obtaining permission from the Patihan village head the researchers approached several communities in Patihan village. The researcher met the prospective respondents and conducted an informed consent, then asked the prospective respondents to sign the initial statement letter. Prior to counseling, boat services were given an assessment sheet regarding the health promotion of personal protective equipment (pre-test) to measure or determine understanding of personal protective equipment. After that the researchers provided health promotion of personal protective equipment on boat services for 1 meeting and the evaluation was carried out 2 times. After the health promotion of personal protective equipment was completed, the researcher gave an assessment sheet (post test).

RESULTS

Behavior of Boat Services Before Health Promotion is Given on Personal Protective Equipment in Patihan Village, Widang District, Tuban Regency

Table 1. Distribution of boat service behavior before being given health promotion about personal protective equipment in Patihan Village, Widang District, Tuban Regency in 2018

| No | Behavior | Frequency | Percentage |
|----|----------|-----------|------------|
| 1 | Good | 8 | 42.11 |
| 2 | Bad | 11 | 57.89 |
| | Total | 19 | 100 |

Table 1 explains that with regard to the use of PPE, before health promotion, most boat services behave in the bad category (57.89%)

Behavior of Boat Services After Health Promotion is Given on Personal Protective Equipment in Patihan Village, Widang District, Tuban Regency

Table 2. Distribution of boat service behavior before being given health promotion about personal protective equipment in Patihan Village, Widang District, Tuban Regency in 2018

| No | Behavior | Frequency | Percentage |
|----|----------|-----------|------------|
| 1 | Good | 13 | 68.42 |
| 2 | Bad | 6 | 31.58 |
| | Total | 19 | 100 |

Table 2 explains that with regard to the use of PPE, after health promotion, most boat services behave in the bad category (57.89%)

The Effect of Health Promotion on Personal Protective Equipment on Boat Service Behavior in Patihan Village, Widang District, Tuban Regency

Table 3. Effect of health promotion of personal protective equipment on boat service behavior in Patihan Village, Widang District, Tuban Regency in 2018

| Intervention | Boat service behavior | | |
|-------------------------|-----------------------|------------|-----------|
| | Good | Bad | Total |
| Pre-test (<i>f</i> %) | 8(42,11%) | 11(57,89%) | 19 (100%) |
| Post-test (<i>f</i> %) | 13(68,42%) | 6(31,58%) | 19 (100%) |

Table 3 explains that before health promotion was carried out, most of the respondents were categorized as good, amounting to 8 (42.11%) while most of the respondents were categorized as bad, amounting to 11 (57.89%). Then after health promotion was carried out, most of the respondents were categorized as good, amounting to 13 (68.42%) and a small number of respondents categorized as bad, amounting to 6 (31.58%).

DISCUSSION

Behavior of Boat Services in Handling Victims of Drowning in Bengawan Solo River Before Health Promotion is Given

The results showed that most of the respondents before being given Health Promotion behaved badly and a small proportion of respondents behaved well. Because behavior is an action or human action that can be observed and studied. The factors that influence behavior are knowledge, attitudes and actions. Behavior is all human activities or activities, both observable and unobservable by outsiders. (Notoatmojo, 2007). Behavior from the biological aspect is defined as an activity for the activity of the organism or living thing in question. There are activities that can be observed directly and indirectly. According to the American Encyclopedia, behavior is defined as an action or reaction of an organism to its environment. Skinner (1938) in Notoadmojo, (2005) defines behavior as a person's response or reaction to a stimulus (stimulus from outside). Thus, human behavior occurs through the response process so that this theory is called the stimulus organism theory "SOR" furthermore Skinner's theory explains two types of responses, namely the respondent response and the operant response, namely the response caused by certain stimuli (stimulus) which is called electing. stimuli because they cause a relatively fixed reaction while the operant response is a response that arises and develops then is followed by another stimulus or stimulus. The latter stimulus is called reinforcing stimuli or reinforces, because it serves to strengthen the response.

Based on the results of research conducted by researchers on boat services in Patihan Village, Widang District, Tuban Regency before health promotion was carried out, they argued that a small proportion of respondents who had knowledge of Personal Protective Equipment (PPE) were due to lack of education in respondents where most of the respondents only had education up to school. Basic (SD), so that the level of knowledge of respondents about Personal Protective Equipment (PPE) does not understand, both about the functions and benefits of the importance of Personal Protective Equipment (PPE).

This can be seen when researchers do a pre-test on respondents where respondents when there is a drowning victim only do help to drowning victims with only guts and belief, this is because the respondent's knowledge is less about Personal Protective Equipment (PPE), whereas Personal Protective Equipment (PPE) PPE) is a very important and main asset for the safety of respondents. The respondent's behavior and knowledge of handling drowning victims is very important both for the victim and for the rescuer himself, where the respondent can provide good and correct helping behavior. For this reason, it is necessary to promote the health of personal protective equipment on boat services so that knowledge and understanding of the importance of Personal Protective Equipment (PPE) is needed.

Behavior of Boat Services in Handling Victims who Drowned in the Bengawan Solo River after being Given Health Promotion

The results showed that most of the respondents after being given Health Promotion behaved well and a small proportion of respondents behaved less. Seen when the health promotion was carried out, the respondents were very enthusiastic about participating in the counseling event, and the respondents were aware of the importance of Personal Protective Equipment (PPE) as evidenced by the results of the questionnaires that the respondents had filled out.

From this research, it can be seen that there is a change in behavior after health promotion is carried out. According to Lawrence Green (Notoatmodjo, 2007), health promotion is any combination of health education and interventions related to economics, politics, and organizations that are planned to facilitate behavior and a conducive environment for health. Supported by research conducted by Rulik Tri Anggraini entitled *The Effect of the Use of PPE on the Incident of Work Accidents in Stone Marble Craftsmen in Gamping Village, Tulungagung Regency*. Personal Protective Equipment (PPE) is a set of safety equipment used by workers to protect all or part of their bodies from the possibility of exposure to potential hazards of the work environment to accidents and occupational diseases. (Tarwaka, 2008)

From the results of research conducted by researchers on boat services in Patihan Village, Tuban Regency, there were 19 respondents, after being given health promotion about Personal Protective Equipment (PPE) it was proven to show changes in behavior from before the promotion of bad respondent behavior, and after health promotion some Most of the respondents have good behavior. This shows that there is an increase in knowledge on the behavior of respondents after health promotion of Personal Protective Equipment (PPE). With this health promotion of Personal Protective Equipment (PPE), respondents become aware of the importance of safety for the respondents themselves or for drowning victims who will be given help.

This change in respondent's behavior is influenced by several things, including the willingness of the respondent to listen and understand the purpose of the health promotion. The health promotion of Personal Protective Equipment (PPE) was carried out for 2 weeks with a door to door system where an evaluation or post-test was carried out on the spot, it was proven to have significant benefits from this promotional activity. So that the health promotion of Personal Protective Equipment (PPE) is expected to provide an overview or knowledge to provide assistance in handling drowning victims.

The Effect of Health Promotion on Personal Protective Equipment on Boat Service Behavior in Handling Drowning Victims on the Bengawan Solo River, Patihan Village, Widang District, Tuban Regency

The results of data analysis indicate that there is an effect of health promotion on personal protective equipment on the behavior of boat services in handling drowning victims on the Bengawan Solo River, Patihan Village, Widang District, Tuban Regency. The results of the analysis and interpretation of the data obtained from the boat service respondents can be seen that half of the respondents understand the importance of using personal protective equipment in carrying out crossing activities on the Bengawan Solo river.

The results of this study are also supported by a previous study by Arta Novita Harlan, Indriati Paskarini entitled *Factors Associated with Behavioral Use of PPE in Laboratory Officers at Phc Hospital Surabaya*.

From the description of the theory and the facts, the researcher argues that there is a significant change that shows that the effect of health promotion on Personal Protective Equipment (PPE) has a positive impact on boat services in Patihan Village, Widang District, Tuban Regency. The success of the health promotion of personal protective equipment that was carried out was due to the provision of health promotion going well and carried out with implementation instructions in accordance with SAP. The success was also supported by the cooperative attitude of the respondents who took part in the research counseling program well. The success of providing health promotion personal protective equipment has a positive impact on boat service behavior.

CONCLUSION

In accordance with the specific objectives, in the study entitled "The Effect of Health Promotion of Personal Protective Equipment on the Behavior of Boat Services in Handling Drowning Victims in the Bengawan Solo River, Patihan Village, Widang District, Tuban Regency" it can be concluded that:

1. The behavior of boat services before health promotion of Personal Protective Equipment (PPE) in Patihan Village, Widang District, Tuban Regency shows that most of the respondents have a bad behavior category.
2. The behavior of boat services after health promotion of Personal Protective Equipment (PPE) in Patihan Village, Widang District, Tuban Regency shows that most of the respondents experienced a change into the category of good behavior.

3. There is an effect of health promotion of Personal Protective Equipment (PPE) on the behavior of boat services in Patihan Village, Widang District, Tuban Regency.

REFERENCES

1. Anggun Magfhira Gobel lucky T, 2014, Pengaruh Pendidikan Kesehatan Tentang Penanganan Pertama Korban Tenggelam Air laut Terhadap Peningkatan Pengetahuan Masyarakat Nelayan di Desa Bolang Itang II Kabupaten Bolang Mongondo Utara, Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Sam Ratulangi
2. Fayzanov, 2017, Promosi Penggunaan APD atau PPE Kepada Para Pekerja <https://fayzanov.wordpress.com/2017/03/23/promosi-penggunaan-apd-atau-ppe-kepada-para-pekerja/>, diakses 23 Maret 2017
3. Ismail, A, 2009, Promosi Penggunaan APD atau PPE Kepada Para Pekerja <http://healthsafetyprotection.com/promosi-apd-atau-ppe-kepada-para-pekerja/>, diakses 27 Agustus 2011
4. M Muthohar, 2016, Perahu Terbalik, 7 Santri Langitan Hilang di Bengawan Solo http://beritajatim.com/peristiwa/278970/perahu_terbalik,_7_santri_langitan_hilang_di_bengawan_solo.html , diakses Jum'at, 07 Oktober 2016
5. Notoatmodjo, S 2005. Metodologi Penelitian Kesehatan. Jakarta: PT Rineka Cipta.
6. Notoatmodjo, S. 2011. Teori dan Pengukuran Pengetahuan, Sikap dan Perilaku Manusia. Jogyakarta Mulia Media.
7. Notoatmodjo, S. 2012. Promosi Kesehatan dan Ilmu Perilaku. Jakarta: PT Rineka Cipta.
8. Nur Hadi, 2017, Perahu Penyeberangan Brantas Terbalik, 2 Penumpang Tewas Tenggelam <https://nasional.tempo.co/read/865730/perahu-penyeberangan-brantas-terbalik-2-penumpang-tewas-tenggelam/>, diakses Kamis, 13 April 2017
9. Nursalam. 2008. Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan. Pedoman Skripsi, Tesis, dan Instrumen Penelitian Keperawatan. Jakarta: Salemba Medika.
10. Rulik Tri Anggraini, 2010, Pengaruh Pemakaian APD Terhadap Kejadian Kecelakaan Kerja Pada Perajin Batu Marmer di Desa Gamping Kabupaten Tulungagung
11. Seviana Rinawati dkk, 2016, Pengaruh Tingkat Pengetahuan Terhadap Pelaksanaan Pemakaian Alat Pelindung Diri Sebagai Upaya Pencapaian Zero Accident di PT. X *Journal of Industrial Hygiene and Occupational Health* (Vol. 1, No. 1, Oktober 2016) <http://ejournal.unida.gontor.ac.id/index.php/JIHOH> , Universitas Sebelas Maret, Surabaya, indonesia