



CRITICAL MEDICAL AND SURGICAL NURSING JOURNAL

Vol. 12, no. 2, October 2023

Journal Homepage: <https://e-journal.unair.ac.id/CMSNJ>



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Analysis of Factors Associated with Self-Efficacy in Helping Victims of Drowning in the Kalimas River – Indonesia

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ARTICLE HISTORY

Received: May 28, 2023

Accepted: October 5, 2023

Published: October 6, 2023

KEYWORDS

Self efficacy, Drowning victims, River bank, Health and threat of death

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ABSTRACT

Introduction: On the banks of the Kalimas River, Indonesia, drowning cases often occur because many people fish and swim in the river, especially when the munggut phenomenon occurs (fish die due to toxic factory waste being thrown into the river), but when drowning cases occur there are actually many people. feel afraid and confused about providing assistance to drowning victims. Objective of this research is to analyze what factors are related to self-efficacy in helping drowning victims based on Albert Bandura's Theory of Self-Efficacy.

Methods: This study was a correlational descriptive research with a cross-sectional design. The population in this study were all residents of the Kalimas Riverbanks, Gresik Regency. This research involved 146 respondents who live on the river banks in Gading Village, Wates Village, and Cangki Village using a cluster sampling technique. This research variable refers to Theory of Self-Efficacy including enactive mastery, vicariously experience, verbal persuasion, physiological and emotional state and self-efficacy. Data was collected using a structured questionnaire and analyzed using a logistic regression test with a significance level of ≤ 0.05 .

Results: The results of statistical tests show a significant correlation between enactive mastery ($p=0.001$), vicarious experience ($p=0.004$), and verbal persuasion ($p=0.000$) with self-efficacy. In contrast, physiological and emotional state did not show a significant correlation with self-efficacy.

Conclusion: The higher the level of enactive mastery, vicarious experience, and verbal persuasion, the better the self-efficacy in helping drowning victims. This provides input for health workers and local government, as well as for further research, in increasing self-efficacy and the ability of residents to help drowning victims.

Cite this as:

Prasetyo, S., Dewi, Y.S., Wahyuni, S.D., Alfaruq, M.F. (2023). Analysis of Factors Associated with Self-Efficacy in Helping Victims of Drowning in the Kalimas River – Indonesia. Crit. Méd. Surgical. Nurs. J, 12(2),39-44.

1. INTRODUCTION

Drowning is the phenomenon of fluid entering the respiratory tract or lungs to the point that the entire body is submerged in unnecessary fluids (Putra, 2019). Drowning often occurs in riverbank areas. On the banks of the Kalimas River, drowning cases often occur because many residents are fishing and swimming in the river, especially when there is the munggut phenomenon (fish that die due to toxic factory waste that is dumped in the river) thus attracting residents to go to the river to look for fish (BPBD, 2021). Some people realize that there is fear

and confusion when helping drowning victims (Istiqomah et al., 2021).

Self-efficacy influences how a person thinks, feels, motivates himself, and acts (Alfionita, 2018). Self-efficacy is influenced by four main influencing factors, including: performance accomplishments (action mastery experience), namely managing task demands successfully, vicarious experience (modeling experience) namely seeing people who are similar to oneself, verbal persuasion about the ability to succeed in certain activities, somatic and emotional state, shows personal strengths and vulnerabilities (A. Bandura, 1997). However, the

factors that influence the self-efficacy of local residents along the Kalimas river in helping drowning victims have not been identified.

According to the World Health Organization (WHO), more than 500,000 deaths in the world are caused by drowning. The United States estimates that drowning cases each year can reach 500,000 cases (Morgan & Ozanne-smith, 2021). Based on data from the National Disaster Management Agency (BNPB) in Indonesia from 2016 to 2021, the number of drowning cases was 1,200 and almost 90% did not receive quick help from the coast guard or the nearest community (Hasanah, 2022). More than half of drowning deaths occur under the age of 25 (Patimah, 2019). Globally, the ratio between children and adults in cases of drowning is around 4 : 1 (Davey et al., 2019). In a preliminary study conducted by researchers on 11-14 June 2022, local residents stated that 32 people had drowned in the Kalimas River in the last 2 years. Twenty-eight of them died and 4 others survived after immediately taken to the hospital and receiving help from local residents and officers. Almost all of the victims were aged between 9-15 years and the others were adults.

Incidents of drowning victims on the banks of the Kalimas river often occur, so the role of ordinary people is needed in helping drowning victims quickly and appropriately in order to increase the life expectancy of drowning victims (Lesmana et al., 2018). Self-efficacy is a belief in a person's ability to carry out a task. People with good self-confidence can carry out tasks as well as possible and their abilities can be successful, whereas people who feel like they have failed tend to fail in the actions they take (Szpilman, David, 2012). Human self-efficacy arises from gradual changes in complex cognitive, social, linguistic and physical skills through experience (Koon et al., 2021). In addition, emergency management training for drowning victims has an effect on increasing community self-efficacy Nugroho & Suryono (2020).

Bandura's theory has advantages in forming the character of individuals in carrying out actions that have a positive impact by growing self-confidence which is supported by several factors including understanding (enactive mastery), experience (vicarious experience), persuasion from other people (verbal persuasion) which are previous education or learning, behavioral models that foster attitudes, and physical and emotional conditions (psychological and emotional state). Increased health education related to the management of drowning victims has been taught to people living along river banks, but there are still incidents of drowning victims (Istiqomah et al., 2021). Based on this background, the aim of this research is to explain what factors are related to self-efficacy in helping drowning victims on the banks of the Kalimas river.

2. METHODS

Study Design

This was a descriptive correlational research with a cross-sectional design. The research variable refers to Albert Bandura's Theory of Self-Efficacy including enactive mastery, vicariously experience, verbal persuasion, physiological and emotional state and also self-efficacy.

Population, Samples, and Sampling

The population in this research were all residents on the banks of the Kalimas River, especially residents who lived on Bantaran Driyorejo, Cangkir Village, Driyorejo District, Gresik Regency, East Java, Indonesia with a total of 231 residents based on data from Cangkir Village office. As result, 146 sample obtained through cluster sampling technique.

The inclusion criteria for this research included residents aged 20 -50 years, able to read and write, and living on the banks of the Kalimas river, Cangkir Village Area, Driyorejo District, Gresik Regency. The exclusion criteria were residents with physical disabilities and those who were sick with decreased consciousness during data collection

Instruments

This research instrument is in the form of a questionnaire about enactive mastery, vicariously experience, verbal persuasion, and physiological and emotional states and self-efficacy. The instrument was developed by the research team itself by referring to Albert Bandura's theory. This instrument has been tested for validity and reliability involving 20 respondents and obtained a calculated r value of above 0.3 and a Cronbach's alpha of more than 0.6 ($p=0.841$).

Procedure

Respondents who have agreed to become research respondents will be sent information about their consent to be approved by respondents. Respondents agreed to informed consent by sending it back to the researcher. Next, the researcher sent a Google form link containing the research questionnaire to the respondent's WhatsApp. Respondents filled out a questionnaire that had been prepared by researchers. The researcher obtained the results of the questionnaire research which had been filled in by the respondents. After that, coding process is carried out. Researchers conducted analysis using SPSS software

Data Analysis

The data were then analyzed using a logistic regression test with a significance level of ≤ 0.05

3. RESULTS

Based on table 1, it can be seen the distribution of data for 146 respondents based on demographic characteristics where more than half of the respondents were men (50.68%) and were in the age

Table 1. The characteristics of respondents

No.	Respondents	(N)	(%)
Characteristics			
1.	Gender		
	Male	74	50,68
	Female	72	49,31
	Total	146	100
2.	Age		
	< 21	5	3,42
	21 - 30	23	15,75
	31 - 40	84	57,53
	41 - 50	23	15,75
	51 - 60	11	7,53
	Total	146	100
3.	Education		
	Elementary School	2	1,36
	Middle School	8	5,47
	High School	36	24,66
	Diploma (DIII)	53	36,30
	Bachelor (S1)	4	30,12
	Magister (S2)	2	1,36
	Doctoral (S3)	1	0,68
	Total	146	100
4.	Occupation		
	Civil employee	35	24
	Private employee	59	40,4
	House wife	29	19,9
	Self employee	13	8,9
	Unemployment	6	4,1
	College student	4	2,7
	Total	146	100

range 31 – 40 years (57.53%). Based on education level, as many as 53 respondents (36.30%) had a Diploma (DIII) education level and the majority of respondents worked as private employees (40.41%).

Based on table 2, it can be seen that more than half of the respondents were in the high category for the variables enactive mastery (51.4%), vicarious experience (51.4%) and physiological and emotional (55.5%). Meanwhile, regarding the verbal persuasion factor, the majority of respondents were in the medium category (73.3%).

Based on the data results in table 3, 23 respondents (15.8%) have a high category of enactive mastery with good self-efficacy and no one (0%) who have low category enactive mastery with

Table 2. Data of research variable

No.	Variabel	Categories	N	(%)
1.	Enactive Mastery	Low	6	4.1%
		Medium	65	44.5%
		High	75	51.4%
	Total	146	100.0%	
2.	Vicarious Experience	Low	6	4.1%
		Medium	65	44.5%
		High	75	51.4%
	Total	146	100.0%	
3.	Verbal Persuasion	Medium	107	73.3%
		High	39	26.7%
		Total	146	100.0%
4.	Physiological and Emotional State	Low	2	1.4%
		Medium	63	43.2%
		High	81	55.5%
	Total	146	100.0%	
5.	Self efficacy	Less	17	11.64%
		Enough	68	46.58%
		Good	61	41.78%
	Total	146	100.0%	

less self-efficacy. Based on the results of statistical analysis using the Spearman's Rho test, p value= 0.001 ($\alpha < 0.05$) which means H1 is accepted, there is a relationship between enactive mastery and self-efficacy. The relationship between enactive mastery and self-efficacy has a low correlation with a correlation coefficient (r) = 0.261. The direction of the relationship is positive or in the same direction, which means that the higher the enactive mastery, the higher the self-efficacy. Furthermore, it shows that 40 respondents with moderate vicarious experience have sufficient self-efficacy, and at the same time, 35 respondents with moderate vicarious experience also show good self-efficacy. The results of the Spearman's Rho test show a p value = 0.004 ($\alpha < 0.05$) which means that H1 is accepted, indicating that there is a relationship between vicarious

Table 3. Results of statistical correlation tests between research variables

Variable	Self Efficacy			Total
	Less f	Enough f	Good f	
Enactive Mastery				
Low	0	1	5	6
Moderate	5	27	33	65
High	12	40	23	75
subtotal	17	68	61	146
Spearman's Rho result: $p=0.001$ $r=0.261$				
Vicarious Experience				
Low	0	0	7	6
Moderate	6	40	35	65
High	11	28	19	75
subtotal	17	68	61	146
Spearman's Rho $p=0.004$ $r=0.238$				
Verbal Persuasion				
Moderate	16	56	35	107
High	1	12	26	39
subtotal	17	68	61	146
Spearman's Rho $p=0.000$ $r=0.314$				
Physiological and Emotional State				
Low	1	0	1	2
Moderate	8	30	25	63
High	8	38	35	81
subtotal	17	68	61	146
Spearman's Rho $p=0.538$ $r=0.051$				

experience and self-efficacy with a low level of correlation ($r=0.238$). The relationship is positive, which means that the higher the vicarious experience, the higher the self-efficacy. Variable verbal persuasion showed similar result with previous variables, which the Spearman's Rho test obtained p value = 0.000 ($\alpha < 0.05$) which means H_1 is accepted which shows that there is a significant relationship between verbal persuasion and self-efficacy with a quite strong quite strong coefficient ($r=0.314$). The direction of the relationship is positive or in the same direction, which means that the higher the verbal persuasion, the higher the self-efficacy. The only variable that did not show a significant relationship was the physiological and emotional state variable, with p value = 0.538 ($\alpha > 0.05$).

4. DISCUSSION

The results of this research showed that there was a significant relationship between enactive mastery and self-efficacy. A person who has high enactive mastery will have sufficient self-efficacy so that when there is a drowning victim he will have confidence yourself to help. Albert Bandura (1986)

states that active mastery experience is the most influential information because it provides the most authentic evidence regarding a person's ability to do something. The results that an individual will achieve through previous experience are an important source of information because they are directly related to a person's personal experience. This is in line with research Pramudya, (2022) states that enactive mastery experience is considered effective for increasing self-control in school students in controlling negative emotions because the enactive mastery experience technique provides experience to gain success in taking the next action. People with high enactive mastery experience will understand the characteristics of drowning victims, how to provide first aid to drowning victims, how to ask for help from drowning victims and safety in helping drowning victims.

Based on the research results, it shows that there is a fairly strong significant relationship between vicarious experience and self-efficacy. In this case vicarious experience is observation of other people. Vicarious experience is a method for managing individuals to be able to overcome their own problems through the experiences of other people, both successes and failures, which influence them to carry out their duties well. (Awaluddin, 2019). Vicarious experience is a method with a modeling role, namely by observing, listening to experiences of success and success in overcoming problems even in very difficult situations, the impact can change the self-confidence and motivation of other people for the better (Albert Bandura, 1997). Experience observing the rescue of drowning victims or experience of rescuing drowning victims can be gained directly from observing people who have successfully assisted drowning victims. And indirect observations from films or videos. So these two things can suggest someone can increase their self-efficacy in helping drowning victims. Give rise to the belief that you will succeed if you try and study diligently. Respondents can suggest to themselves that if other people can do it, of course they can also succeed with at least a slight improvement in performance.

Based on the results of this research, it was found that there was a fairly strong significant relationship between verbal persuasion and self-efficacy in helping drowning victims. This is in accordance with the opinion of Artino (2012), that people who receive verbal persuasion so that they have the ability to complete the tasks given, will exert greater effort than people who are not persuaded that they are capable in this area apart from verbal persuasion. Verbal efforts to convince someone that they have the ability to perform certain behaviors to be more constructive. If someone is confident in their own abilities, then they will persist and not give up easily (Lenz, 2002; Mutshaeni, 2019). This means that people with high verbal persuasion can be a support as long as the verbal persuasion is given in a realistic context or in the form of suggestions in

helping drowning victims, warning yourself urgently in helping drowning victims, self-commanding in helping drowning victims and correcting old, wrong interpretations.

Based on the results of this research, it was found that there was no significant relationship between physiological and emotional state and self-efficacy in helping drowning victims. Positive physiological and emotional conditions (not in pain, pressure, anxiety) do not necessarily make someone want to help. This is in accordance with the opinion of Sarwono and Meinarno (2009), who explain that there are 2 factors that influence a person in providing help, namely situational factors covering six aspects (bystander, attractiveness, attribution to the victim, model, time pressure, and the nature of the victim's needs). And internal factors include 5 aspects (mood, nature, gender, place of residence, and parenting style). Therefore, in building self-efficacy you must also consider and integrate information from different sources. There are many factors that influence a person in providing help physiological and emotional factors are not the only sources of self-efficacy that make someone moved to provide help to drowning victims

CONCLUSION

Enactive mastery, verbal persuasion and vicarious experience have a significant relationship with people's self-efficacy in helping drowning victims on the Kalimas River Bank, Indonesia. Meanwhile, physiological and emotional state does not have a significant relationship with community self-efficacy in helping drowning victims on the Kalimas River Bank. The higher the level of enactive mastery, vicarious experience, and verbal persuasion, the better the self-efficacy in helping drowning victims. This provides input for health workers and local government, as well as for further research, in increasing self-efficacy and the ability of residents to help drowning victims

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