

The Effect of First Aid Education on the Level of Knowledge Regarding Syncope Management in the KSR PMI Unit of Universitas Muhammadiyah Purwokerto

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ABSTRACT

Background: Syncope is an emergency condition characterized by sudden loss of consciousness due to inadequate blood flow to the brain, lack of oxygen and symptoms of other chronic diseases. The global incidence of syncope is estimated at 12 million cases per year. Syncope incidents on campus require help quickly and appropriately. The KSR PMI Unit of Muhammadiyah University Purwokerto is a volunteer corps organization that provides first aid for syncope. Objective: To determine the effect of first aid education on syncope management on the level of knowledge of members of the PMI KSR Unit, Purwokerto Muhammadiyah University. Method: This research uses quantitative research methods with a pre-experimental design with a one-group pre-test-post-test approach. The sample consisted of 35 respondents selected through total sampling technique. Results: The research results obtained a P value of 0.01, with an average knowledge score before being given the intervention of 8.46, with a minimum score range of 6 to a maximum score of 11. After receiving the intervention the average knowledge score increased to 14.29, with a minimum score of 11 and a maximum score of 15. Conclusion: There is an influence of first aid education on syncope management on the level of knowledge of members of the PMI KSR Unit, Purwokerto Muhammadiyah University.

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1. INTRODUCTION

Syncope is a state of unconsciousness in a person that occurs suddenly due to transient global cerebral hypoperfusion characterized by rapid onset, short duration, spontaneous recovery and is caused by a lack of blood flow to the brain, lack of oxygen, poisoning, shock, hunger, thirst, weakness, and symptoms of other chronic diseases^[2]. The incidence of syncope in the world is estimated at 12 million cases each year and can cause respiratory, cardiac arrest, and even death. In European countries and Japan the incidence of syncope reaches 1 – 3.5% [6].

According to the Indonesian Ministry of Health (2015), one of the emergency indicators in the cardiovascular system (heart and blood vessels) is syncope. According to data obtained from Emergency YES 118 Syncope cases, in Indonesia 76.6% of syncope cases are caused by physical injury [5].

From a preliminary study conducted through interviews with PMI KSR UKM Unit Muhammadiyah Purwokerto University members, it was found that PMI KSR UKM members did not understand how to do first aid for syncope properly and correctly, so it was necessary to provide education. Health education is one of the

interventions carried out to increase knowledge and invite others to carry out activities that can improve health [3].

Previous research results say that there is a need for first aid health education for syncope for students because better knowledge results are obtained after being given education, namely there is a difference in the pre-test and post-test values because the value is $0.000 < 0.05$ [4].

Members of UKM KSR PMI UMP Unit have an important role in dealing with people who experience syncope both in the campus area and outside the campus. In addition, members of UKM KSR PMI UMP Unit also need to disseminate information through education about correct and proper syncope management. Based on this background, it is necessary to conduct research on the effect of syncope first aid health education on the level of knowledge in UKM KSR PMI Muhammadiyah University Purwokerto Unit.

2. RESEARCH METHOD

This research is a quantitative study, with a pre-experimental design of the one group pretest posttest type. This research was conducted on February 12 2023 at KSR UKM Muhammadiyah University Purwokerto with a total population and research sample of 35 KSR UKM members. UKM KSR is an organization under the auspices of the Muhammadiyah University of Purwokerto.

The sampling technique in this study used a total sampling technique. The data collection tool in this study was a questionnaire consisting of two parts. The first part contains the characteristics of the respondents (name, age, gender, study program, semester, cellphone number), the second part contains a syncope knowledge questionnaire. The contents of the questionnaire use the product moment correlation formula and have been tested for validity.

The data analysis used was univariate analysis to determine the frequency distribution of respondents characteristics (gender, age, study program, semester), and bivariate analysis to determine the effect of the independent variable (syncope education) on the dependent variable (knowledge level). Data is examined through editing, coding, scoring, tabulation, processing and cleaning processes. The statistical test used is the Wilcoxon test.

3. RESULT AND DISCUSSIONS

When presenting results in a table or figure, do not repeat all those contents in the text. Present only the summary of the text. Describe only new and important aspects of the study. Do not repeat all information from results section or any section above. Present limitations of the study. Write the issues that are new or unsolved, for future research. This section consists of the information on What/How the presented data were produced, no raw data should be present in the article. The produced data are presented in tables, or figures with an explanation of what is the result/findings from the work.

3.1. Univariate

Tabel 1. Distribution of respondent characteristics (n=35 respondents)

Characteristics of Respondents	Total	Percentage (%)
Gender		
Woman	26	74,3
Man	9	25,7
Age		
18	3	8,6
19	15	42,8
20	16	45,7
21	1	2,9
Study program		
primary teacher education	9	25,7
Psychology	6	17,1
English language education	4	11,4
Characteristics of Respondents	Total	Percentage (%)
Informatics Engineering	2	5,7
Early Childhood Teacher Education	3	8,6
Indonesian Literature	3	8,6

Characteristics of Respondents	Total	Percentage (%)
Applied Bachelor Medical Laboratory		11,4
Engineering	4	
Pharmacy	3	8,6
Midwifery	1	2,9
Semester		
2	19	54,3
4	16	45,7

Based on table one above, the majority of respondents were female (74.3%), respondents aged 20 years (45.7%), PGSD study program (25.7%), semester 2 (54, 3%) of respondents.

Table 2. Frequency Distribution of Respondents Knowledge Before and After Being Provided with Education (n=35)

	Pretest	Posttest
Mean	8.46	14.29
Median	9.00	14.00
Standard Deviation	1.221	0.926
Minimum	6	11
Maximum	11	15

Based on table two, the average value before receiving health education is 8.46, the median value is 9.00 with a standard deviation of 1.221, the minimum value is 6 and the maximum value is 11. The average value of the study after receiving health education is 14.29, the median value 14.00 with a standard deviation of 0.926, a minimum value of 11 and a maximum value of 15.

3.2. Bivariat

Table 3. Hasil Uji Wilcoxon Signed Rank Test

Pengetahuan	N	Z	P
Pre test-post test		-5,202	0,0001
Negative Ranks	0		
Positive Ranks	35		
Ties	0		
Total	35		

Based on table three, the Z value is -5.202 and the Asymp.Sig value is 0.0001, meaning that the Asymp.Sig value is < the significance value, which is 0.05.

3.3. The effect of first aid health education before and after being given syncope education

The results of bivariate analysis using the Wilcoxon test obtained a p-value of 0,0001. This means that the p-value is $0.000 < 0.05$ so that it can be concluded that H_0 is rejected, which means that there is an effect of First Aid education on the knowledge of UKM KSR PMI UMP Unit members. The results of the analysis test showed that the knowledge level of UKM KSR PMI members of the UMP Unit before being given first aid education was an average of 8.46 and after being given first aid education was 14.29. Apart from that, the results of observations showed that there was an increase in respondents' knowledge and activeness in participating in first aid health education for syncope. They are of the opinion that with health education on first aid for syncope, they will have a better understanding and understanding of how to provide first aid for syncope correctly and appropriately if there are people who need first aid for syncope around them.

Respondents' knowledge in this study was caused by the existence of health education which was given in the form of lectures. This is indicated by the difference in the average knowledge before and after lectures. In line with (Arlı & Yildirim, 2017), regarding P3K education in emergencies that increased cadre knowledge can increase because lectures are conducted as an effort to increase one's knowledge^[1].

The results of previous research stated that there is a need for health education on first aid for syncope for someone because the knowledge obtained is very different between physical education professionals and those who have never received first aid education about syncope.

According to Damayanti (2020), the act of providing assistance The correct first step can save a person's life, prevent disability, and support healing[1]. According to Triyadi (2015), he believes that knowledge and skills during training are very important as a determinant of performance, but performance is influenced by other factors such as perception and motivation, a person's attitude, society and a supporting environment. Therefore, it is important that motivation comes from within oneself to give encouragement and strength to perform desired actions[1]. Marbun (2019) said that taking action or handling an incident proves that someone understands and also has sufficient knowledge good [2].

The lecture method has advantages over other methods. The lecture method is a learning method that uses oral media without complicated preparation and respondents can immediately receive knowledge. According to Warouw, (2018) in their research, it was stated that the information provided by researchers in health education P3K syncope management was well received and was able to change the mindset of respondents to increase knowledge without differences in educational levels[7].

4. CONCLUSION AND RECOMMENDATION

From this study it can be concluded that there is a significant effect on the level of knowledge before and after being given first aid education to members of UKM KSR PMI UMP Unit. The results of this study can be used as an evaluation to improve the quality of one's knowledge, especially members of UKM KSR PMI UMP Unit. For future researchers, it is hoped that they can continue this research by increasing the research variables.

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REFERENCES

- Arli, S. K., & Yildirim, Z. (2017). The Effects of Basic First Aid Education on Teachers' Knowledge Level: A Pilot Study. *International Journal of Caring Sciences May*, 10(2), 2–813. www.internationaljournalofcaringsciences.org
- D. Damayanti, "Sosialisasi penanganan pertama sinkop terhadap pengetahuan murid SMPN 1 kayen kidul dalam meningkatkan derajat kesehatan siswa sekolah," *jurnal kesehatan pengabdian masyarakat*, vol. 1, no. 2, p. 68, 2020.
- E. S. G. V. S. Agnes Silviana Marbun, "A predictor of outcome following head injury : A retrospective study," *Malahayati international journal of nursing and health science*, vol. 03, no. 2, p. 81, 2020.
- Febrina, V., Semiarty, R., & Abdiana, A. (2017). Hubungan Pengetahuan Siswa Palang Merah Remaja dengan Tindakan Pertolongan Pertama Penderita Sinkop di Madrasah Tsanawiyah Negeri 1 Bukittinggi. *Jurnal Kesehatan Andalas*, 6(2), 435. <https://doi.org/10.25077/jka.v6.i2.p435-439.2017>
- Maceno, P. C., Clael, S., Nogueira de Souza, P. V., Aguiar Bezerra de Melo, L. M., de Araújo Filho, G. F., & Ribeiro, A. (2020). Students' and physical education professionals' knowledge about first aid maneuvers in cardiopulmonary resuscitation and syncope: A cross-sectional study. *International Journal of First Aid Education*, 3(2), 36–41. <https://doi.org/10.21038/ijfa.2020.0203>
- Ondang, M., Engkeng, M., Raule, S., & H, J. (2021). Pengaruh penyuluhan kesehatan terhadap perilaku masyarakat dalam pengelolaan sampah di desa kaneyan kecamatan tareran kabupaten minahasa Selatan. *Jurnal Kesehatan Masyarakat*, 10(3), 82–88.
- Rahmawati, I., & Pawiliyah, P. (2021). The Effect of Health Education towards the Level Knowledge of Youth Red Cross Members about First Aid of Syncope in Senior High School Bengkulu. *International*, 14(2), 1269–1273. http://www.internationaljournalofcaringsciences.org/docs/51_rahmawati_original_14_2.pdf
- Singletary, E. M., Kleinman, M. E., Perkins, G. D., Bhanji, F., Billi, J. E., Bray, J. E., Callaway, C. W., Caen, A. de, Finn, J. C., & Hazinski, M. F. (2015). ILCOR Scientific Knowledge Gaps and Clinical Research Priorities for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care: A Consensus Statement. *Circulation*, 137(22), e802–e819. <https://doi.org/10.1161/CIR.0000000000000561>
- S. Triyadi, "Efektivitas Penggunaan Media Audio-Visual Untuk Meningkatkan Keterampilan Menyimak Siswa

-
- Pada Mata Pelajaran Pendidikan Bahasa Indonesia," *Jurnal Pendidikan Unsika*, vol. 3, no. 2, p. 233, 2015.
- Tobing, Y. A. L. (2019). Gambaran Pengetahuan Siswa tentang Penanganan Pertolongan Pertama Pada Siswa/I Yang Mengalami Pingsan/Sinkop Di Smp Negeri 1 Tanjung Morawa Tahun 2019. *Keperawatan Poltekes Kemenkes Medan*, 13, 1–11.
- Warouw, J. A. (2018). Pengaruh Penkes dan Simulasi Terhadap Pengetahuan Balut Bidai Pertolongan Pertama Fraktur Tulang Panjang Pada Siswa Kelas X SMK NManado. *...Jurnal Keperawatan Muhammadiyah*, 6(1).
- WHO. (2017). *World Health Organization. 2017* (Issue 1). [%0AUnder](https://creativecommons.org/licenses/by-nc-sa/3.0/igo).