

Lecture And Multimedia Education Methods Are Equally Effective In Increasing The Knowledge Of Lay Health Workers About Schizophrenia And Other Mental Disorders

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Abstract

Background

One of the efforts that can be made to support a mental health program is to provide the community with knowledge about mental disorders by providing education. Education about mental disorders can be made by various methods, including lecture and multimedia methods. In Indonesia, studies that analyze differences in the effectivity of the lecture method compared to the multimedia method about schizophrenia and other mental disorders do not yet exist, so the authors intend to study this.

Method

This study is a randomized controlled trial to analyze the effectiveness of the lecture method compared to the multimedia method about schizophrenia and other mental disorders. One group of lay health workers is received education using the lecture method, and the other group of lay health workers received education using the multimedia method. Each group filled the pre-and post-test questionnaires. Data analysis was done by a t-test with a significance level of $p < 0.05$.

Results

Before education, the average test scores obtained by participants in the lecture group was 8.77 with a standard deviation of 1.521, and the average test scores obtained by the multimedia group was 9.36 with a standard deviation of 2.453. After education, the average test scores obtained by the lecture group 10.10 ($p = 0.003$) with a standard deviation of 2.371, and the average test scores obtained by the multimedia group was 10.46 ($p = 0.017$) with a standard deviation of 3.049. There was no significant difference in the increase in knowledge gained by lay health workers after education either by the lecture method and by the multimedia method ($p = 0.331$).

Conclusion

Lecture and multimedia education methods are equally effective in increasing the knowledge of lay health workers about schizophrenia and other mental disorders.

INTRODUCTION

According to WHO, health is “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”, and mental health is “a state of well-being in which the individual realizes his or her abilities, can

cope with the normal stresses of life, can work productively and fruitfully, and can make a contribution to his or her community”. Mental disorders as defined by WHO comprises a broad range of problems, with different symptoms that are generally characterized by some

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combination of abnormal thoughts, emotions, behavior, and relationships with others.¹ Mental disorders cause various negative impacts on the patients, such as difficulties in education or the ability to work, lowered productivity, poverty, social problems, other health problems and decreased quality of life. Mental disorders not only have a negative impact on individuals but also on their families and society.² Therefore it is important to promote mental health and prevent mental health problems, and this required the active role of all elements of the society.³ Elements of society that play a major role in public health are lay health workers. Lay health workers are health worker who performs functions related to health care delivery and is trained in some way in the context of an intervention, but who has not received a formal professional or paraprofessional certificate or tertiary education degree. These lay health workers are part of the community so that its role is very important in supporting efforts to improve health, including in the field of mental health.¹ One effort that can be done to support a mental health program is to provide the community the knowledge about mental disorders by providing education.³

The most common education method is the lecture method. But this method requires trained personnel, a specific place that meets some standard and needs to gather listeners at a certain time. One of the alternative methods is education using multimedia such as video education.⁴ In Indonesia, there are no studies that compare the effectivity between lecture method compared to multimedia methods in increasing knowledge about schizophrenia and mental disorders in lay health workers.

METHOD

This study aimed to analyze the effectivity of education using the lecture method compared to the multimedia method in increasing knowledge about schizophrenia and other mental disorders. The subjects were lay health workers in the area of Margahayu Raya Primary Health Centre, Margasari Village, Buah Batu District, Bandung City, West Java, Indonesia. One group of lay health workers received education about schizophrenia and other mental disorders using the lecture method using Power Point presentation, and the other group received education using a multimedia method in the form of educational video. This study was supported financially by Padjadjaran University Internal Grant. and was approved by the Ethics Committee of Padjadjaran University, number 1506/UN6.KEP/EC/2019.

The inclusion criteria were lay health workers, aged ≥ 18 years, speak the Indonesian language, and have not been specifically trained in mental health. The exclusion criteria are uncorrected visual impairment and uncorrected hearing impairment. Based on the records in the Primary Health Centre, lay health workers who met the criteria were selected randomly and given informed consent. Selected cadres who agree to join the study divided into 2 groups randomly. The lay health worker's knowledge about schizophrenia and other mental disorders before the education (pre-test) and after the education (post-test) was assessed using 15 multiple-choice questions. The media for the lecture method are the microphone, presentation slides, and sound system. The lecture was given by a third-year psychiatric resident. The media used for the multimedia method are the educational video and sound system. Data analysis was done by a t-test with a significance level of $p < 0.05$.

RESULTS AND DISCUSSION

The study was conducted in December 2019. A total of 59 lay health workers attended, consisting of 31 cadres in the lecture method group and 28 cadres in the multimedia group.

The demographic data of participants are shown in table 1:

Table 1
The Lay Health Workers Demographic Data

Demographic Profile	Lecture Method (n=31)		Multimedia Method (n=28)		p-value
	n(%)	Mean(DS)	n(%)	Mean(DS)	
Sex					
- Men	-	-	3(10.71)	-	-
- Woman	31(100)	-	25(89.29)	-	-
Age		50.65(8.42)		49.07(12.27)	0.108
Education					0.124
- No Formal Education	3(9.68)		-	-	
- Primary School	7(22.58)		4(14.29)		
- Elementary School	1(3.23)		5(17.86)		
- High School	13(41.94)		14(50.00)		
- Associate Degree	5(16.13)		2(7.14)		
- Bachelor Degree	2(6.45)		1(3.57)		
- Master Degree	-		2(7.14)		
Occupation					
- Unemployed	-		6(21.43)		
- Employed	31(100)		22(78.57)		

We analyzed the difference in the demographic profile between the two treatment groups. The results showed that there were no significant differences in the age of respondents ($p=0.108$) and the education level ($p=0.124$). The sex of the respondent is incomparable because there are no males in the lecture method group. Occupation of the

respondent also cannot be compared, because no respondent is currently working in the lecture method group.

The average pre-test scores obtained by participants in the lecture group were 8.77 with a standard deviation of 1.521, and the average pre-test scores obtained by the multimedia group were 9.36 with a standard deviation of 2.453. After education, the average post-test gained by participants in both treatment groups increased significantly. The average post-test scores obtained by the lecture group are 10.10 with a standard deviation of 2.37. There was a significant increase in post-test scores compared with the pre-test scores ($p = 0.003$). The average post-test scores obtained by the multimedia group is 10.46 with a standard deviation of 3.049, there was also a significant increase in post-test scores compared with the pre-test scores ($p = 0.017$). The comparative analyses of the increase of pre and post-test scores obtained by the two treatment groups show that there was no significant difference in the increase in knowledge gained by lay health workers after education either by lecture method or by multimedia method ($p=0.331$). This finding is similar to the results of a study from Kobra et al. They found that there is no significant difference between knowledge, belief and performance score of nursing students after training by using lecture with PowerPoint method and film displaying method.⁸ Another study from Smyrni et al in university students found that teaching material on kinesiology and psychological issues based on video clips was at least as equally effective as standard teaching lectures. They suggest that the use of videos in education may hold great promises.⁹

The lecture is one of the oldest and the most widely used teaching method. A lecture can be defined as one person as the central focus of information transfer, speaking to a group of people on a particular subject or theme. The lecture method has some advantages, such as good for the introduction of a new subject or topic to a large group of learners.¹⁰ But this method requires an expert or trained personnel to be a lecturer, need a specific place and room arrangements that fulfilled the standards, and gathering listeners at a certain time sometimes is not easy. The multimedia such as video education become a promising alternative because it needs no expert or trained personal, could be delivered on various occasions in a various place without a need to gathering some listeners at the same time

and the same place.⁵⁻⁷

CONCLUSION

Data analysis showed that there was a significant increase in the knowledge of lay health workers about schizophrenia and other mental disorders after receiving education in both treatment groups. There is no difference in the effectiveness of the lecture method compared to the multimedia method to increase the knowledge of lay health workers. Thus, it can be concluded that the two methods of education both lecture and multimedia, are equally effective in increasing knowledge for lay health workers significantly.

We hope that the results of this study can be the basis for further developing and expanding health education programs for the community using a multimedia method, and can be the basis for further research in the interests of health education about schizophrenia and other mental disorders.

References

1. Undang-undang Republik Indonesia. No.8 tentang Pemberdayaan Masyarakat Bidang Kesehatan. Jakarta : Sekretariat Negara., (2019).
2. Kaplan SB, Kaplan & Sadock's Synopsis of Psychiatry: Behavioral Sciences/Clinical Psychiatry. Edisi ke-11. Philadelphia: Lippincott Williams & Wilkins; 2015.
3. Undang-undang No.36 tentang Kesehatan. Jakarta : Sekretariat Negara, (2009).
4. Kraft SA, Constantine M, Magnus D, Porter KM, Lee SS-J, Green M, et al. A randomized study of multimedia informational aids for research on medical practices: Implications for informed consent. *Clinical Trials*. 2017;14(1):94-102.
5. Stegeman CA, Zydney J. Effectiveness of multimedia instruction in health professions education compared to traditional instruction. *American Dental Hygienists' Association*. 2010;84(3):130-6.
6. Almara'beh H, Amer EF, Sulieman A. The effectiveness of multimedia learning tools in education. *International Journal*. 2015;5(12).
7. Biffi EZ, Woodbury M. Interactive Multimedia Learning vs. Traditional Learning in Optometry: a Randomized Trial, B-scan Example. *Optometric Education*. 2018;44(2).
8. Parvan Kobra, Lakdizaji Sima , Roshangar Fariborz , Alehe Seyyed Rasouli, Khirkhahi Neda, The Comparison of the effectiveness of Two Education Methods video and lecture on Knowledge, Belief and Practice of Hand Hygiene in Nursing Students: *Clinical Trial, International Journal of Medical Research & Health Sciences*. 2016; 5(7S):240-248
9. Panagiota Nikopoulou-Smyrni, Christos Nikopoulos, Evaluating the impact of video-based versus traditional lectures on student learning, *Educational Research*. 2010:304-311
10. Alex Amartei Marmah, Student's perception about the lecture as a method of teaching in tertiary institutions; Views of students from college of technology education, *International Journal of Education and Research*.2014: 2(6)

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