Journal of Positive School Psychology http://journalppw.com
2022, Vol. 6, No. 8, 4284-4291

Implementation Of The Family Latrine Construction Model As An Effort To Overcome Covid-19 In Economically Weak Community In The Highlands Of South Sulawesi Province. (Training To Improve Knowledge, Attitudes, Motivation, And Behavior In Making Environmentally Safe Latrines)

Bakhrani Abdul Rauf[1] , Rahmansah[2] , Andi Yusdy Dwiasta[3] , Muhammad Ardi[4] , Faizal Amir[5]

[1,2,3,4,5] *Lecturer of the Faculty of Engineering, Universitas Negeri Makassar, Indonesia.*

ABSTRACT

This study aims to (1) ascertain the knowledge, attitudes, motivation, and behavior of economically weak community in coping with Covid-19 and making environmentally safe latrines before and after being trained on how to cope with Covid-19 in the highlands of South Sulawesi, and (2) determine the effect of training on increasing the knowledge, attitudes, motivation, and behavior of the community. This is a quasi-experimental study carried out in Bengo Sub-district (experimental area), and Mallawa Sub-District, Maros Regency (control area). Both areas are highlands and were selected by the purposive sampling method. The experimental and control group samples each consisted 30 heads of low-income families living in Bengo and Mallawa Sub-districts, resulting 60 samples. The variables to be considered are (1) knowledge, attitudes, motivation, and behavior of the economically weak community in coping with Covid-19 and constructing safe latrines before and after being trained, and (2) the effect of the training on increasing the knowledge, attitudes, motivation, and behavior. The experimental model used is the pretest-posttest control group design. Furthermore, the data were obtained by giving tests, questionnaires, and observing each sample unit. The descriptive and inferential statistical analyses were utilized and the inferential model used is an independent t-test. The results showed (1) the knowledge, attitudes, motivation, and behavior of the economically weak community in coping with Covid-19 and making environmentally safe latrines before and after being trained were categorized as low and high, respectively, and (2) the effect of the training was very significant on increasing knowledge, attitude, motivation, and behavior.

Keywords: Knowledge, Highlands, Motivation, Society, Weak economy.

INTRODUCTION

Human feces that are not properly managed can reduce environmental quality and cause diseases. It is a source of various diseases and viruses including Covid-19, hence, it needs to be disposed of in an environmentally safe latrine. Indonesian [Law No. 32 (2009)] explained that the environment is a unitary space with all objects, forces, conditions, and living things. These include humans and their behavior that affects the continuity of life and the welfare of other living creatures. Therefore, the human-built environment needs to be maintained and improved by providing safe latrines. [Bakhrani (2018)] stated that family latrines in coastal, lowland and highland areas are in poor condition and unsafe for the environment. Such latrines pollute the environment and can trigger the emergence of Covid-19. The condition of community latrines is caused by the limited knowledge, attitude, motivation, and behavior regarding environmental pollution, safe latrines, as well as how to cope with Covid-19. It is also caused by limited economic capacity. [Bakhrani

(2017)] discovered a family latrine model and its constituent materials for economically weak communities in the coastal, lowland, and highland areas of South Sulawesi. It is very important to provide education on this model to increase the knowledge, attitudes, motivation, and behavior of the economically weak community in making safe family latrines.

The study problems are as follows, (1) How are the knowledge, attitudes, motivation, and behavior of the economically weak community in coping with Covid-19 and making safe latrines before and after being trained? and (2) Does the training have a positive effect on increasing the knowledge, attitudes, motivation, and behavior of the community?

LITERATURE REVIEW

[Petrus Riski (2015)] stated that feces and urine not accommodated in a latrine will have a negative impact on environmental quality and public health. Furthermore, [Soemirat (2014)] indicated that family latrine buildings should meet health requirements, such as being protected from heat and rain, not causing odors, and having enough water for cleaning. According to [Fitriani (2011)], a latrine is a construction where human feces are disposed of, therefore, it does not cause odors, germs or interfere with aesthetics. [Firmansyah (2009)] and [Atika (2012)] showed that healthy latrines do not pollute the soil and surrounding water, are not accessible to insects, are odorless, easy to maintain, simple in design, inexpensive, and acceptable to users.

Environmental sanitation according to [Rauf (2013)] is an effort to control oneself from all factors that are detrimental to the physical development of human health and survival. [Notoatmodjo (2010)] defined this aspect as the current health status of the environment which includes, housing, sewage disposal, clean water supply, etc. [Suriasumantri (2010)] stated that knowledge is the basis of truth obtained from the results of knowing a certain object. Similarly, [Rusman (2011)] described this as a special and general memory of various methods, processes, and structures. Knowledge consists of three components, namely cognitive, affective, and psychomotor.

[Adnil (2011)] stated that motivation is a force that exists in a person which can promote, activate, move, and direct behavior. [Sarwono (2007)] proved that it exists in a person in the form of hopes, desires, and goals to be achieved. [Adnil (2011)] further stated that motivation consists of two parts, namely intrinsic and extrinsic. Meanwhile, [Azwar (2012)] stated that attitude is a choice in terms of feelings, thoughts, and predispositions to action towards environmental objects. According to [Ojedokun (2011)] environmental attitudes are feelings to accept or reject environmental issues. [Azwar (2012)] classified attitudes into three components, namely cognitive, affective, and conative.

[Hungerford and Volk, (1990)] described behavior as a series of human actions based on knowledge, motivation, attitudes, experience, culture, economic conditions, and the environment. [Tukiyat (2009)] stated that it is the result of a person's actions that are carried out continuously and have a tendency to be performed in situations. Furthermore, [Indonesian Law Number 32 of 2009] and [Ahmadi (2012)] reported that the environment is a unitary space with all objects, power, circumstances, and living things, including humans and their behavior, which affect the continuity of life as well as the welfare of living creatures. [Adnani (2011)] classified environment into 3 parts, namely the biological, physical, and social.

STUDY METHODS

This is a quasi-experimental study conducted in the highland area of South Sulawesi Province. The experimental and control sample areas are Bengo and Mallawa Sub-districts, Maros Regency, respectively. The samples of the

experimental and control group each consisted of 30 heads of low-income families, totalling 60 samples. The selection of both group samples was carried out using the purposive sampling method.

The variables are (1) knowledge, attitudes, motivation, and behavior of the economically weak community in coping with Covid-19 and making environmentally safe latrines before and after being trained, and (2) the effect of the training on increasing knowledge, attitudes, motivation, and behavior. The experimental model used is the pretest-posttest control group design [(Borg & Gall, 2007)].

The instruments include a knowledge test, questionnaire, and observation guide. The knowledge, attitude motivation, and behavioral data were obtained through a knowledge test, questionnaire, and the behavior observation of each sample member before and after the training, respectively. Moreover, the analysis was carried out using descriptive and inferential statistics, and the inferential analysis model used was an independent t-test.

RESULTS AND DISCUSSION

A. Result

1. Description on Knowledge of Experimental and Control Groups Before and After the Training

The results of descriptive statistical analysis on the knowledge of the experimental group before the training from 20 questions were classified as low by an average, maximum, and minimum value of 5.48, 8, and 2, respectively. Likewise, the control group was classified as low with average, maximum, and minimum values of 5.24, 8, and 2, respectively.

The analysis results on the knowledge of the experimental group after the training from 20 questions were classified as high by average, maximum, and minimum values of 15.21, 19, and 12, respectively. Meanwhile, the control group was classified as low by average, maximum, and minimum values of 5.39, 8, and 2, respectively.

2. Description on Attitudes of Experimental and Control Groups Before and After the Training

The results of descriptive statistical analysis on the attitude of the experimental group before the training from 15 statement items were classified as low. This is followed by the average, maximum and minimum values of 35.03, 36, and 17 respectively. Likewise, the control group was classified as low by the average, maximum, and minimum values of 34.57, 36, and 23 respectively.

The analysis results on the attitude of the experimental group after the training from 15 items were classified as high or positive. This is followed by the average, maximum, and minimum values of 62.76, 74, and 58, respectively. Meanwhile, the control group was classified as low with a mean, maximum, and minimum score of 31.75, 38, and 20, respectively.

3. Description on Motivation of Experimental and Control Groups Before and After the Training

The analysis results on the motivation of the experimental group before the training from 15 questions were low, as followed by an average, maximum, and minimum values of 32.89, 38, and 19, respectively. Similarly, the control group was classified as low by the average, maximum, and minimum scores of 30.61, 38, and 18, respectively.

The analysis results on the motivation of the experimental group after the training from 15 questions were classified as high by the average, maximum, and minimum values of 62.85 of 74, and 60, respectively. Meanwhile, the control group was classified as low by the average, maximum, and minimum scores of 31.87, 38, and 19, respectively.

4. Description on Behavior of Experimental and Control Groups Before and After the Training

The results on the behavior of the experimental group before the training from 15 observations were classified as low by average, maximum, and minimum values of 34.93, 36, and 20, respectively. Moreover, the control group was classified as low by the average, maximum, and minimum scores of 35.62, 39, and 21, respectively.

The results on the behavior of the experimental group after the training from 15 observations were classified as high by the average, maximum, and minimum values of 61.87, 73, and 58 respectively. However, the control group was classified as low by the average, maximum, and minimum scores of 25.44, 38, and 21 respectively.

5. The Effect of Training on Knowledge Improvement

The results of statistical analysis on independent t-test differences in knowledge of coping with Covid-19 and making environmentally safe latrines between the experimental and the control groups after the training are presented in Table 1.

Table 1. The Results of Statistical Analysis on Independent t-Test Knowledge Differences between the Experimental and the Control Groups After the Training

	Paired Differences					**t**	**df**	**Sig. (2-tailed)**
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Correlation = .920	10,25	0,48	0,09	15,12	5,39	62,00	29	.000

Table 1 shows the significance of $t = 0.000 < \alpha = 0.05$. This showed the knowledge of coping with Covid-19 and making environmentally safe latrines between the two groups after the training was very significantly different, and was categorized as higher in the experimental group. The correlation coefficient is 0.920 or the coefficient of determination is 0.85. This figure shows the effect of training on increasing public knowledge of coping with Covid-19 and making environmentally safe latrines was 85%.

6. The Effect of Training on Attitude Improvement

The results of the statistical analysis of the independent t-test on differences in attitudes toward coping with Covid-19 and making environmentally safe latrines between both groups after the training are presented in Table 2.

Table 2. Results of Statistical Analysis on Independent t-Test Differences in Attitudes between the Experimental and the Control Groups After the Training

	Paired Differences				**t**	**df**	**Sig. (2-tailed)**
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			

				Lower	Upper			
Pair 1 Correlation = .87	47,25	1.07	1.05	62,76	31,75	57,26	29	.000

Table 2 shows the significance of $t = 0.000 < \alpha = 0.05$. This showed the attitude of coping with the pandemic and making environmentally safe latrines was significantly different between the two groups. The attitude of the experimental group was higher. Also, the correlation and determination coefficients are 0.87 and 0.76, respectively. This figure shows the effect of training on improving people's attitudes was 76%.

7. The Effect of Training on Motivation Improvement

The results of the statistical analysis on the independent t-test of motivation to cope with Covid-19 and make environmentally safe latrines between both groups after the training are presented in Table 3.

Table 3. Results of Statistical Analysis on Independent t-Test Differences in Motivation between the Experimental and the Control Groups After the Training

	Paired Differences					**t**	**df**	**Sig. (2-tailed)**
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1 Correlation = .90	47,34	1,21	0,74	62,85	31,82	52,14	29	.000

Table 3 shows the significance of $t = 0.000 < \alpha = 0.05$. This indicates that the motivation for coping and making safe latrines between the experimental and control groups after the training was significantly different. The motivation of the experimental group was higher than the control. The correlation and determination coefficients are 0.90 and 0.81, respectively. This figure shows the effect of training on increasing motivation to deal with Covid-19 and making environmentally safe latrines was 81%.

8. The Effect of Training on Behavior Improvement

The results of the statistical analysis on the independent t-test behavior in coping with Covid-19 and making safe latrines between the two groups after the training are presented in Table 4.

Table 4. Results of Statistical Analysis on Independent t-Test Behavioral Differences Between Experimental and Control Groups After the Training

	Paired Differences				**t**	**df**	**Sig. (2-tailed)**
	Mean	Std. Devia	Std. Error Mean	95% Confidence Interval of the Difference			

		tion		Lower	Upper			
Pair 1 Correlation = .87	43,65	1,36	0,93	61,87	25,44	58,36	29	.000

Table 4 shows the significance of t = 0.000 < α = 0.05. This indicates that the behavior of coping and making safe latrines between both groups after the training was very different. The behavior of the experimental group was higher than the control. The correlation coefficient is 0.87 or the coefficient of determination is 0.76. This figure shows the effect of the training on improving behavior was 76%.

B. Discussion

The results of descriptive statistical analysis on knowledge, attitudes, motivation, and behavior in coping with Covid-19 and how to make safe latrines showed the experimental and control groups before the training were categorized as low. However, there was an increase in the knowledge, attitudes, motivation, and behavior of the experimental group after the training, and were categorized as high, while the control group remained in a low category.

The analysis results of the independent t-test differences in knowledge, attitudes, motivation, and behavior between the experimental and control groups showed sig t = 0.000 < = 0.05. This figure indicates differences in knowledge, attitudes, motivation, and behavior between both groups.

The average value of these variables for the experimental group was higher than the control. Therefore, it can be concluded that the training affected the increase in knowledge, attitudes, motivation, and behavior. This increase is caused by (1) the community is serious about participating in training, (2) the experimental material provided includes those needed and liked by the community, (3) the method effectively conveys the material in detail, and (4) in the implementation of the training, controlling for the effect of testing, maturation, and mortality was carried out.

CONCLUSION

This study shows the following, (1) the knowledge, attitudes, motivation, and behavior of the economically weak community in the highlands of South Sulawesi in coping with Covid-19 and making environmentally safe latrines before being trained were categorized as low. After the training, knowledge, attitudes, and motivation were categorized as high, while behavior was very high. (2) The effect of the training was very significant in increasing knowledge, attitudes, motivation, and behavior.

ACKNOWLEDGEMENTS

The authors are grateful to (1) the Chancellor of the Makassar State University for the direction and guidance in conducting this study and writing articles, (2) the Directorate of Research and Community Service, the Indonesian Ministry of Education for the funds prepared for the development of Lecturers in Higher Education, (3) Local Government (Pemda) of South Sulawesi Province, and Maros Regency, for the permission and time given to conduct the study, (4) Head of LP2M (Institute for Research and Community Service) of Makassar State University for guidance starting with the submission of proposals, conducting study, writing articles, and reporting the results, and (5) to all colleagues and parties involved. May this support become a charity and be accepted by Almighty Allah, Aamiin Yaa Rabbal ‘Aalamiin.

REFERENCES

1. Ahmadi. 2012. Psikologi Sosial. Jakarta: Rineka Cipta.

2. Adnani H. 2011. Ilmu Kesehatan Masyarakat, Cetakan 1. Yoyakarta: Penerbit Nuha Medika.

3. Adnil Edwin Nurdin. 2011. Tumbuh Kembang Perilaku Manusia. Jakarta: Penerbit Buku Kedokteran EGC.

4. Atika, 2012. Metode Pengolahan Tinja. Surabaya: Penerbit Buana Cipta.

5. Azwar, S. 2012. **Sikap Manusia, Teori dan Pengukurannya**. Yogyakarta: Penerbit Pustaka Pelajar.

6. Bakhrani A. Rauf., Muhammad Ardi, dan Faizal Amir. 2017. Model Jamban Keluarga untuk Masyarakat Ekonomi Lemah pada Wilayah Pesisir yang Aman terhadap Lingkungan. Makassar: Badan Penerbit UNM.

7. Bakhrani A. Rauf., Muhammad Ardi, dan Faizal Amir. 2018. Model Jamban Keluarga untuk Masyarakat Ekonomi Lemah pada Wilayah Dataran Rendah yang Aman terhadap Lingkungan. Makassar: Badan Penerbit UNM.

8. Borg & Gall. 2007. Educational Research: An Introduction, 8th Edition. USA: Pearson.

9. Firmansyah. 2009. Memiliki dan menggunakan Jamban Sehat. http://www. wordPress.com. Diakses 18 Oktober 2020.

10. Fitriani, S. 2011. Promosi Kesehatan. Yogyakarta : Graha Ilmu.

11. Hungerford, H.R, and Trudi L. Volk., 1990. Changing Learner Behavior Trough Environmental Education. Unesco, UNDP, UNICEF, and World Bank. (www.elkhornsloughctp.org. Diakses 20 Maret 2014).

12. Indonesian Law Number 32 of 2009 concerning Environmental Protection and Management.

13. Notoatmodjo, S. 2010. Promosi Kesehatan dan Ilmu Perilaku. Jakarta: Rineka Cipta.

14. Ojedokun, O. 2011. "Attitude towards littering as a mediator of the relationship between personality attributes and responsible environmental behavior" Waste management journal 31 (12), 2601-2611.

15. Petrus Riski. 2015. Kotoran Manusia Diubah Jadi Pupuk dan Energi. https://www.mongabay.co.id/2015/04/20/kotoran-manusia-diubah-jadi-pupuk-dan-energi-di-tempat-ini/. Diakses 16 April 2018.

16. Rauf, Rusdin. 2013. Sanitasi dan HACCP. Yogyakarta: Graha Ilmu.

17. Rusman. 2011. Model-Model Pembelajaran Mengembangkan Profesionalisme Guru. Jakarta: PT. Rajagrafindo Persada

18. Sarwono. 2007. **Psikologi Lingkungan**. Kerjasama PPS Psikologi UI dengan PT Gramedia Widiasarana Indonesia. Jakarta.

19. Soemirat J. 2014.Kesehatan Lingkungan. Yogyakarta: Gadjah Mada University Press.

20. Suriasumantri, J.S. 2010. Filsafat Ilmu Sebuah Pengantar Populer. Jakarta: Pustaka Sinar Harapan.

21. Tukiyat., 2009. **Perilaku Masyarakat Situ Rawa Besar dalam Mengelola Lingkungan**. Sinopsis Disertasi. Jakarta: Program Pascasarjana Universitas Negeri Jakarta.