The Effect of Self-help Group on Self-awareness of People with Hypertension in Yogyakarta

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Abstract

BACKGROUND: Hypertension increases the risk of end-organ injury and total mortality. It is a major modifiable risk factor for heart disease, stroke, and kidney failure. Self-awareness of people with hypertension can reduce the mortality and morbidity rates of complications. One intervention to improve self-awareness is the establishment of a self-help group (SHG) for those willing to share their experiences and motivations on a supportive strategy to build self-awareness of hypertension.

AIM: This study was conducted to determine whether there was an effect of SHG intervention on the self-awareness of hypertensive patients in Mantrijeron sub-district of Yogyakarta.

METHODS: This study used a pre-experimental research method with one group pre-test and post-test design. The data analysis used in this study was paired sample t-test. The data in this study were collected using a self-awareness questionnaire. Participants in the study were amounted to 23 SHG members in Hamlet number 10 Jogokaryan, Mantrijeron Village, which was determined using the sample size estimation formula and the respondent's anticipation to drop out. The sampling technique used in this study is the purposive sampling technique or a sample that has the criteria set by the researcher and the participants are willing to participate in the study.

RESULTS: The mean value of self-awareness before conducting SHG for hypertensive people at Mantrijeron was 48.35. The mean value of self-awareness after doing SHG in hypertensive patients at Mantrijeron is 62.39. The results of the paired sample t-test showed that there is a significant effect of conducting SHG on the intervention group with p = 0.001 (p <0.05).

CONCLUSION: There is an effect of SHG on self-awareness before and after the SHG. SHG can improve self-awareness and promote behaviors change among hypertensive sufferers.

Introduction

Hypertension is a silent killer where symptoms can vary from person to person and is vaguely similar to symptoms of other diseases. Hypertension, known as high blood pressure, is also defined as a condition in which systolic blood pressure is at ≥140 mmHg and or diastolic blood pressure is at ≥90 mmHg [1]. World Health Organization [1] stated that hypertension causes nearly 9.4 million deaths from cardiovascular disease every year. Approximately 972 million people or 26.4% of the population worldwide have hypertension, in which 333 million are in developed countries and the remaining 639 million are in developing countries, including Indonesia. This figure is likely to increase to 29.2% in 2025 [2]. Supported by data from the Ministry of Health Republic of Indonesia, hypertension causes 45% deaths due to cardiovascular disease and 51% of deaths due to stroke. Deaths caused by cardiovascular disease, especially coronary heart disease and stroke, are estimated to continue to increase to 23.3 million deaths in 2030 [3].

Yogyakarta Province (Special Region of Yogyakarta) is in the fifth position as a province with the highest case of hypertension in Indonesia. The 2017 outpatient hospital Integrated Survey of Diseases (STP) reported a total of 1151 cases of essential hypertension. In 2017, the Integrated Disease Survey *Puskesmas* (Public health Center) in DIY (Special Region of Yogyakarta) ranked hypertension as the highest case out of the top 10 diseases with a total of 29,862 cases. Therefore, it is important to raise the self-awareness of individuals who have hypertension to reduce morbidity and mortality due to complications of hypertension. Self-awareness is the ability to for individuals to understand themselves with subjective feelings for each individual and is the result of social interactions [4].

One of the social interactions that can be done to raise self-awareness is the self-help group (SHG). SHG is a group of people, by the people and for the people who are willing to voluntarily share experiences and motivation for raising awareness of their hypertension to avoid complications [5]. As mentioned by Raden Siti Maryam in her research, SHG can improve the knowledge of people with hypertension, although it was

not known whether SHG can also improve people's awareness regarding the disease [6]. This study was conducted to determine whether there was an effect of SHG intervention on the self-awareness of hypertensive patients in Mantrijeron sub-district of Yogyakarta.

Methods

This study used pre-experimental method with one group pre-test and post-test design. The study took place from December 30, 2019 to January 29, 2020. Participants in this study were 23 people as the intervention group. The sample was taken sing purposive sampling technique. Data were collected by filling out a self-awareness questionnaire that had been tested for validity and reliability so that it could be used for the pre-test; then, after the 4th intervention, participants are required to fill out the same self-awareness questionnaire for the post-test. Data collection was carried out for duration of 1 month at Mushola Amat Bani Rejo Jogokaryan, Mantrijeron Village, Yogyakarta.

The implementation of the SHG begins with the opening step, then in the working step led by the chairman, the group discussed 1 topic per meeting. The SHG topics discussed were hypertension medication adherence, routine control of blood pressure check, adherence to maintaining a healthy diet for people with hypertension, and the importance of exercising in for hypertension sufferers. During the implementation, researchers only acted as facilitators.

The data analysis using the method of the paired sample t-test shows that there is a significant effect of SHG on the intervention group (p = 0.000). The test results indicate that there is a significant difference in the self-awareness score of the participant before and after the SHG.

This study was approved by the Faculty of Medicine and Health Science, Universitas Muhammadiyah Yogyakarta Ethical Committee with the number of 041/EC-KEPK FKIK UMY/XII/2019.

Results

Based on Table 1, majority of the respondents are women, with a total of 18 respondents (78.3%). On the characteristics of respondents based on age, it was found that the majorities of respondents were late adults ranging from 46 to 59 years old, with a total of 19 respondents (82.5%). On characteristics of respondents based on education, it was found that the

majorities of the respondents are high school graduate with a total of 8 respondents (34.8%). On characteristics of respondents based on occupation, it was known that the majorities of the respondents are housewives, with a total of 9 respondents (39.1%).

Table 1: Characteristics of respondents

Respondent's characteristics	Number (n)	Percentage
Gender		
Male	5	21.7
Female	18	78.3
Age		
36–45 years old (early adulthood)	4	17.4
46–59 years old (late adulthood)	19	82.5
Education		
Elementary School	5	21.7
Middle School	4	17.4
High School	8	34.8
Diploma 3	1	4.3
Bachelor Degree	5	21.7
Profession		
Housewife	9	39.1
Civil Servant	3	13.0
Entrepreneur	8	34.8
Retired/Pensioner	2	8.7
Other	1	4.3

Overview of respondents self-awareness of hypertension

Table 2 shows the pre-test and post-test results of self-awareness of 23 respondents in the intervention group. Before intervention (SHG), the self-awareness average pre-test score is 48.35. The self-awareness score increased after SHG implementation with an average post-test score of 62.39.

Table 2: Self-awareness of hypertension

Characteristics	n	Min	Max	Mean ± SD
Self-awareness (pre-test)	23	23	66	48.35 ± 9/67
Self-awareness (post-test)	23	48	73	62.39 ± 5.82
Valid N	23			

Overview of the 3 parameters of respondents' self-awareness of hypertension

Table 3 shows the results of the pre-test and post-test on the parameters of emotions recognition of 23 respondents in the intervention group. Before the intervention (SHG), the respondents had an average emotions recognition pre-test score of 13.84. The emotions recognition score increased after SHG implementation with an average post-test score of 18.96.

Table 3: Self-awareness of hypertension (emotion recognition)

Characteristic	n	Min	Max	Mean ± SD
Self-awareness on emotion recognition (pre-test)	23	6	20	13.86 ± 3.81
Self-awareness on emotion recognition (post-test)	23	16	21	18.95 ± 1.39
Valid N	23			

Table 4 shows the results of the pre-test and post-test on the parameters of "accurate self-recognition" of 23 respondents in the intervention group. Before the implementation of SHG, the "accurate self-recognition" parameters average pre-test score was 32.61. The score for "accurate self-recognition" parameters increased after SHG implementation with an average post-test score of 40.74.

Table 4: Self-awareness of hypertension (accurate self-recognition)

Characteristic	n	Min	Max	Mean ± SD
Self-awareness on accurate self-recognition (pre-test)	23	14	43	32.61 ± 6.92
Self-awareness on accurate self-recognition (post-test)	23	30	49	40.74 ± 5.05
Valid N	23			

Table 5 shows the results of the pre-test and post-test on the self-confidence parameter of 23 respondents in the intervention group. Before the implementation of SHG, the respondent had an average self-confidence pre-test score of 1.87. The self-confidence score increased after implementation of SHG with an average post-test score of 2.7.

Table 5: Self-awareness of hypertension (self-confidence)

Characteristic	n	Min	Max	Mean ± SD
Self-awareness on self-confidence (pre-test)	23	0	3	1.87 ± 1.21
Self-awareness on self-confidence (post-test)	23	2	3	2.70 ± 0.47
Valid N	23			

Based on Table 6 that there is an improvement of post-test result compared to the pre-test results for self-awareness mean ± SD value from 48.35 ± 9.67 to 62.39 ± 5.82 with p-value of 0.001 ($p < 0.05$). These results indicate that there is a significant difference in self-awareness before and after the intervention, which mean there is a significant effect of SHG on self-awareness of people with hypertension. It can be concluded that SHG can increase the self-awareness of hypertension sufferers in the Mantrijeron area.

Table 6: The influence of self-help group on the self-awareness of people with hypertension in the Mantrijeron region

Characteristics	Min-Max	Mean ± SD	p
Self-awareness (pre-test)	23–66	48.35 ± 9.67	0.001
Self-awareness (post-test)	48–73	62.39 ± 5.82	

Table 7 shows that there is an increase in the mean ± SD value of the pre-test and post-test result of self-awareness in emotions recognition from 13.86 ± 3.81 to 18.95 ± 1.39 with a p = 0.001 ($p < 0.05$). These results suggest that there is a significant difference of self-awareness in the respondent's ability to recognize emotions after the SHG implementation.

Table 7: The effect of self-help group on the three parameters of self-awareness of hypertension patients in the Mantrijeron region

Characteristics	Min-Max	Mean ± SD	p
Self-awareness on emotion recognition			
Pre-test	6–20	13.86 ± 3.81	0.001
Post-test	16–21	18.95 ± 1.39	
Self-awareness on accurate self-recognition			
Pre-test	14–43	32.61 ± 6.92	0.001
Post-test	30–49	40.74 ± 5.05	
Self-awareness on self-confident			
Pre-test	0–3	1.87 ± 1.21	0.002
Post-test	02-Mar	2.70 ± 0.47	

According to Table 7 that there is an increase of the post-test mean ± SD result for self-awareness in "accurate self-recognition" compared to the pre-test result from 32.61 ± 6.92 to 40.74 ± 5.05 with a p-value of 0.001 ($p < 0.05$). These results indicate that there is a significant difference of self-awareness in "accurate self-recognition" in people with hypertension after the SHG implementation.

Based on Table 7, there is an increase in the mean ± SD results of the post-test compared to the pre-test value of the level of self-awareness in self-confidence from 1.87 ± 1.21 to 2.70 ± 0.47 with a p = 0.002 ($p < 0.05$). These results indicate that there is a significant difference of self-awareness in self-confidence in people with hypertension after SHG implementation.

Discussion

Respondent's characteristics

Based on previous research by Nurhayati and Lubis [7], it was known that women were more prone to hypertension when they reach menopause, which occurs in the age range of 48–55 years. It is proven in this study that hypertension sufferers are dominated by women aged 51 years and older. The previous researcher by Nuraini [8] mentioned that there is a reduction of estrogen production in women entering the age of 45–55 years. When the estrogen levels became lower, the level of high-density lipoprotein, which is a protective factor that prevents atherosclerosis, will also decrease.

In this study, 23 respondents were given intervention (SHG). The SHG group members were dominated by women, in which the percentage of women who had hypertension was 78.3% while the men were only at 21.7%. This result is in line with the 2018 Riskesdas [9], which stated that the percentage of women who have hypertension is higher with 36.9% while men are only at 31.3%.

This study is also supported by research conducted by Hugo [10], which showed that with higher self-awareness, better knowledge on how certain people react to event will emerge, because having self-awareness allows people to actively adjust their mindset.

Description of self-awareness of patients with hypertension in Mantrijeron, Yogyakarta

The results of the study based on Table 2 shows that there is a significant change in the self-awareness of the participant with an increase in average score of 14.043 point of the post-test compared to the pre-test. The increase of self-awareness after participating in SHG is supported by cognitive psychology theory by Cherry [11], which explain that self-awareness of the highest level is when someone is not only being aware of themselves from their own point of view but also becomes able to view themselves from other people's points of view.

In SHG public/social aspect play an important role, in which there are different point of views from each person in the group that means the dynamics of the group is determinant to achieve the desired goals of

the SHG. If the strength of interpersonal relationships in the group is lacking, then the group's goals will not be achieved. Conversely, if the interpersonal relationships of each group member are well established and the members support each other, the goal will be achieved. The strength of the interpersonal relationship will make the achievement of group goals better [12]. Akshaykumar [12] stated that the success of SHG can be seen from the achievement of the expected group goals. In SHG, participants can explore their feelings and provide support and motivation with fellow members and can find solutions to problems, especially health problems, in this case, hypertension. Through SHG, respondents can share experiences and share the information they have, which then can influence the self-awareness of hypertension sufferers.

Effect of SHG on self-awareness of patients with hypertension

The results of the paired sample t-test analysis show that there is a significant effect on the intervention group (p = 0.001). The test results indicate that there is a significant difference in the self-awareness score of hypertensive patients before the SHG and after the SHG.

Notoatmodjo [13] claimed that self-awareness can be influenced by other people's environmental responses; someone can be affected and/ may react or respond to stimuli or objects from other people experiences that are close to them. This is supported by Johnson's behavioral system nursing model. This nursing model explains that self-awareness of a person's behavior depends on the incoming stimulus and adaptation level/ability [13].

Asmadi [14] stated that the level of a person's adaptability is determined by three things, namely input/input, control, and output. In this study, the input is in the form of SHG activities. Respondents discussed adherence to taking medication, routine control of blood pressure checks, adherence to maintaining a healthy diet in hypertension, and the importance of exercise in people with hypertension. The control or process, in this case, is the respondent's mechanism to digest information from others, while the output, in this case, is the individual's decision to accept inputs, experience, or information which will ultimately shape their health behavior.

Malikah [15] stated that good individual self-awareness can form qualified individuals, namely individuals who understand the importance of preventing themselves from all types of diseases. This is in accordance with research conducted by Moradpoor _et al_. [16], which mentioned that with good self-awareness, the individual will not do things that are negative for themselves since the individual tends to think about the impact that will occur from their action. In addition, if an individual has good self-awareness, that individual will find it easier to make decisions and be able to think about what impacts will occur in the future.

Effect of SHG on three parameters of self-awareness of patients with hypertension

The influence of SHG on self-awareness in recognizing emotions

The results of the paired sample t-test analysis showed that there is a significant effect of SHG on self-awareness on the parameters of emotion recognition in the intervention group (p = 0.001). Goleman [17] said based on Goleman's theory of the emotional intelligence model from 1995, which is still being used in the current psychological model mentioned that when someone has high emotional intelligence, they are aware if they are being controlled by certain emotions.

Self-awareness in recognizing emotions is a state when a person becomes aware of their current emotions while being faced with problem/stimulus. Wooden [18] said that the parameters of self-awareness in recognizing emotions were when someone was able to recognize and sort out their feelings, be aware of the existence of emotions, able to express, control, and communicate their emotion with others. Self-awareness in recognizing emotion has a relationship with emotional intelligence, the most basic of it is self-recognition. Since without recognizing their feelings, a person will not be able to act and think properly in accordance with the existing situation.

Salmiyati's, in her research [5], explained that SHG is a form of psychological therapy in which each group member gets social support, able to tell stories, and expresses positive and negative feelings (emotions). This research is in line with Goleman's theory in that one of the parameters of self-awareness is having emotion recognition ability which characterized by a person being able to express what is being felt, recognizing the relationship between their feelings and what they think, understand how their feelings affect daily life and having emotional awareness which becomes a guideline for eliminating negative feelings due to their illness.

The influence of SHG on self-awareness of accurate self-recognition

The results of the paired sample t-test analysis showed that there is a significant effect of the intervention (SHG) on the self-awareness on accurate self-recognition parameters for the intervention group (p = 0.001). Ahmadi [19] mentioned in his research that SHG is a group composed of members who have homogeneous problems. Meaning that SHG is a forum for self-disclosure, sharing stories, pressures, feelings, problems, and recovery. They learn that they are not alone, so they can admit what is going on so they can face problems and find solutions together.

Habibi [20] stated that having self-awareness of accurate self-recognition is that when a person is aware of his own strengths and weaknesses in dealing

with his illness. A person can take the time to reflect on learning from experience, be open to other people's feedback, new perspectives, be willing to continue to learn and develop oneself, able to show a sense of humor, and be willing to see oneself with a positive perspective to prevent recurrence of the disease.

The influence of SHG on self-awareness of self-confidence

The results of the paired sample t-test analysis show that there was a significant effect of SHG on self-awareness of the accurate self-confidence parameters of the intervention group p = 0.002 (p < 0.05). Brody *et al*. [21] said that with the SHG, those who have the same shame and stigma can unite, without being judged, can provide identity as a community. They can provide emotional, social, and practical support to one another.

SHG can increase self-awareness for exploring and learning to understand and combat shared shame and stigma, increasing the individual self-esteem and self-confidence. Through participation to SHG, the member can increase their social skills and confidence for the treatment of their disease. Self-confidence creates a strong self-awareness of self-esteem and one's ability to make proper decisions.

Conclusion

Based on the research result of the effect SHG on self-awareness of hypertension sufferers in the Mantrijeron Region, it can be concluded that the majorities of hypertension sufferers in Mantrijeron are women with in late adult stage, of which the majority are high school graduate and work as housewives. The average value of self-awareness before intervention (SHG) in hypertensive patients at Mantrijeron is 48.35. The average value of self-awareness after intervention (SHG) in hypertensive patients at Mantrijeron is 62.39. There is a significant difference in the average value of the three self-awareness parameters before and after the SHG is carried out.

Acknowledgments

References

1. World Health Organization. Asthma Fact Sheets. Geneva: World Health Organization; 2016. Available from: http://www.who.int/mediacentre/factsheets/fs307/en. [Last accessed on 2020 Sep 26].

2. Yonata A, Satria A. Hypertension as a triggering factor for stroke. Majority 2016;5:17-21.

3. Center for Data and Information, Ministry of Health RI. Infodatin Heart Health Situation, Indonesian Ministry of Health; 2013. Available from: https://www.pusdatin.kemkes.go.id/download.php?file=download/pusdatin/infodatin/infodatin-jantung.pdf. [Last accessed on 2020 Sep 26].

4. Relawati A, Hakimi M, Huriah T. The influence of self-help group on the quality of life of hemodialysis patients at the muhammadiyah Yogyakarta public health center hospital. Sci J Nurs Health. 2015;11(3):122-35. https://doi.org/10.26753/jikk.v11i3.112

5. Salmiyati S. The effect of self-help group on knowledge about hypertension. J Health Stud. 2018;2(1):75-83.

6. Maryam RS, Sahar J, Ekasari MF, Nurhasanah A. Self help group activity in improving knowledge onelderly with hypertension in Jakarta, Indonesia. Indian J Public Health Res Dev. 2019;10(12):1935-9. https://doi.org/10.37506/v10/i12/2019/ijphrd/192153

7. Nurhayati EL, Lubis MY. The effect of giving salam leaves boiled water (*Syzigium polyanthum*) on decreasing blood pressure in patients with hypertension in the first environment of Sei Agul village in 2018. Pannmed Sci J. 2018;13(2):98-101.

8. Nuraini B. Risk factors of hypertension. J Majority. 2015;4(5):10-9.

9. Health Research and Development Agency of the Indonesian Ministry of Health. Riskesdas Results; 2018. Available from: http://www.depkes.go.id/resources/download/info-terkini/materi_rakorpop_2018/Hasil%20Riskesdas%202018.pdf. [Last accessed on 2020 Sep 26].

10. Hugo. Examples of Why Self-Awareness is Important; 2020. Available from: https://www.trackinghappiness.com/why-self-awareness-important. [Last accessed on 2020 Sep 26].

11. Cherry, K. Self-Awareness Development and Types; 2020. Available from: https://www.verywellmind.com/what-is-self-awareness-2795023. [Last accessed on 2020 Sep 26].

12. Akshaykumar. Success Story of Rupjyoti SHG, Doligaon; 2014. Available from: http://www.indiancooperative.com/cooperative-success-stories/success-story-of-rupjyoti-shg-doligaon. [Last accessed on 2020 Sep 26].

13. Notoatmodjo. Health Behavior and Education. Rineka Cipta; 2003.

14. Asmadi. Basic Concepts of Nursing. Jakarta: EGC; 2013.

15. Get Married. Self-awareness, the process of building islamic character. Al-Ulum J. 2015;13(1):129-34.

16. Moradpoor J, Miri M, Aliabadi S, Poorsadegh A. Effectiveness of training self-awareness and assertiveness skills on self-esteem and compatibility of mothers of mentally retarded children. Mod Care J. 2013;10(1):43-51.

17. Goleman D. Emotional Intelligence: Why EQ is more Important than IQ. Jakarta: Gramedia Pustaka Utama; 2001.

18. Wooden J. Humble Self-awareness a Devotional by Tim Kight; 2020. Available from: https://www.nbcnews.com/better/lifestyle/what-self-awareness-how-can-you-cultivate-it-ncna1067721. [Last accessed on 2020 Sep 26].

19. Ahmadi KS. What is a Self-Help Group; 2018. Available from: https://www.psychcentral.com/lib/what-is-a-self-help-group/?all=1. [Last accessed on 2020 Sep 26].

20. Habibi. Daniel Goleman's Theory of Emotional Intelligence; 2016. Available from: http://www.teoriuntukguru.com/2016/01/teori-kec Cerdas-emosional-daniel.html. [Last accessed on 2020 Aug 23]

21. Brody CM, de Hoop T, Vojtkova M, Warnock R. Can self-help group programs improve women's empowerment? A systematic review. J Dev Eff. 2019;9(1):15-40. https://doi.org/10.1080/1943 9342.2016.1206607