International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 06, 2020
ISSN: 1475-7192

The Effect of Lemon Hydrotherapy on Blood Pressure of the Elderly with Hypertension in Karang Jaya Sub-district, Gandus Regency, Palembang

[1]Septi Ardianty

ABSTRACT--- *Hypertension is a process of compiling individuals who increase blood pressure under normal or chronic conditions. About 60% of the elderly will experience hypertension after successfully 75 years. This is the impact of degeneration that occurs in people who are getting older. Management of advanced hypertension can be done with lemon hydrotherapy. Lemon hydrotherapy is an alternative therapy for relaxation that combines comfort with blood circulation and blood thinners. Lemon hydrotherapy against blood pressure with hypertension in Karang Jaya District, Gandus Regency, Palembang. The method in this study was quantitative, comparative analytical pretest-posttest design (pre-experimental design), the population of all the elderly in Karang Jaya District, Gandus Regency in Palembang as much as 280 further by using a purposive sampling technique obtained a sample of 52. The study was conducted on May-April 2019 in Karang Jaya Sub-district, Gandus Regency, and Palembang. This study shows the average systolic pressure after administration of lemon hydrotherapy by 150.51 mmHg and diastolic blood pressure by 91.03 mmHg. This shows a decrease in blood pressure after being given an intervention with ρ = 0.001. With a 95% confidence interval and a p value of 0,000 (p value <0.05) showing a decrease in blood pressure before and after lemon hydrotherapy. In conclusion, lemon hydrotherapy has an influence on blood pressure in hypertension in Karang Jaya District, Gandus Regency, and Palembang.*

Keywords--- *Hydrotherapy, Hypertension, Elderly, Lemon, Blood Pressure.*

I. INTRODUCTION

A person is said to be elderly if when both male and female individuals begin to enter the age between 60 years or more due to a certain factor so that their basic needs are not met from physical, spiritual, and social needs (Nugroho, 2012). When individuals begin to enter old age, they will experience an aging process and a decline in physiological abilities that can interfere with the daily activities of the elderly, such as setbacks in taking care of themselves, so that changes in these abilities will have an impact on psychological changes, both in terms of both good and the worse (Martono, 2008). According to the World Health Organization (WHO) the percentage of elderly people around the world in 2025 is expected to reach up to 1.2 billion and will continue to grow until it reaches 2 billion (Central Statistics Agency, 2015).

[1] *Sekolah Tinggi Ilmu Kesehatan Muhammadiyah Palembang, Indonesia, septi.ardianty@stikesmp.ac.id.*

Received: 22 Sep 2019 | Revised: 13 Oct 2019 | Accepted: 15 Jan 2020

About 60% of elderly people will experience hypertension after 75 years of age. This is the effect of degeneration that occurs in people who get older. The incidence of hypertension in adults is around 29 - 31%, which means there are 58 - 65 million people with hypertension in America. Based on data from the Ministry of Health (2010), the prevalence of hypertension in Indonesia is 31.7%. Coverage of hypertension diagnosis by health workers only reached 24%, or in other words as much as 76.0% of the socio-economic and health events of the Elderly carried out by the National Commission on Elderly in 10 provinces in 2008, it was found that hypertension was ranked the second most diseases suffered by the elderly after joint disease.

Cardiovascular system disorders in the elderly such as hypertension can be controlled by using pharmacological and non-pharmacological therapies. Pharmacological therapy in handling hypertension in the form of anti-hypertensive medication, whereas for nonpharmacological therapy it can be in the form of water therapy.

Water therapy that can be used to stimulate the meridian area in the soles of the feet and improve blood circulation using hydrotherapy soak the feet of warm water. Soak the foot of warm water by using a water temperature of 37^{o}C for at least 10 minutes able to relieve muscle tension and stimulate the production of brain glands that will provide a calm and relaxed effect (Flona, 2010). Foot hydrotherapy with warm water has an influence on stress levels in the elderly. The physiology of warm water can increase blood circulation by widening blood vessels so that oxygen supplied to the network becomes more, so the warm foot bath therapy can stimulate the production of endorphin and suppress the adrenaline hormone which will reduce stress levels (Ningtias, 2014).

Another technique that can be used as complementary therapy is aromatherapy. One of the scents used is lemon essential oil. According to Muaris (2014) lemon can be used to remove toxins and cleanse the blood by filtering toxins and other particles, so that it can provide a relaxing effect. The content of vitamin C and flavonoids in lemon has antioxidants that act as antidotes to free radicals that are stress-causing hormones (the hormone cortisol) and are able to prevent stress (Sarangarajan, 2017).

Based on research by Wulandari (2016) on the effect of foot soaking using warm water with a mixture of salt and lemongrass on blood pressure reduction in patients with hypertension in the Podorejo area Rw 8 Ngaliyan shows there are significant differences or there is an effect of providing foot bath therapy using warm water with a mixture of salt and lemongrass against changes in blood pressure in patients with hypertension in Podorejo Region RW 8 Ngaliyan.

Preliminary study of researchers conducted at the Gandus Health Center on February 14-15, 2019, data on patient visits to health centers with complaints of hypertension in the elderly amounted to 16 people from the initial survey that had conducted interviews with 6 elderly people, 2 elderly people said they were sometimes difficult controlling emotions and irritability, 1 elderly complained of illness, insufficient economic conditions and more time spent at home, and 3 elderly said they enjoyed life, life was relaxed, and if bored they would play with grandchildren. The observations obtained show that there are still a number of elderly people who want to interact with the environment and participate in social activities such as helping neighbors who will have a celebration.

From the problems above, the treatments that can be done include doing lemon hydrotherapy as an alternative therapy that can make you feel relaxed and comfortable and stimulate blood circulation and meridian centers in the legs of hypertensive patients. In this regard, the researchers were interested in conducting a study entitled "The Effect of the Lemon Hydrotherapy Method on Blood Pressure in Elderly with Hypertension in Karang Jaya Village, Gandus District, Palembang".

Received: 22 Sep 2019 | Revised: 13 Oct 2019 | Accepted: 15 Jan 2020

II. METHODOLOGY

1) Research Design

This research is a type of quantitative research and numerical comparative analytic research in pairs with pre-experimental research designs, with one-group pretest-posttest design, without a control group. This research was conducted in February to May 2019 in Karang Jaya Sub-District, Gandus District, Palembang.

2) Population and Sample

The population in this study were all elderly with hypertension in Karang Jaya Sub-district, Gandus Palembang District, as many as 280 elderly. The sample in this study was the elderly aged ≥60 and above in Karang Jaya Sub-District, Gandus Palembang District as many as 52 elderly.

3) Research Variables

The independent variable is lemon hydrotherapy, while the dependent variable is the measurement of blood pressure.

4) Operational Definition

Lemon hydrotherapy is a therapeutic method by soaking the feet using warm water as high as ankles for 10-15 minutes at 37 ° C for 7 days. Blood pressure is the result of measurement of work activity and resting heart in respondents with a tendency to experience increased blood pressure or hypertension.

5) Research Instruments

The research instrument used in this study was the measurement of blood pressure using a mercury blood pressure meter (sphygmomanometer) to measure blood pressure and a questionnaire to record the results of blood pressure measurements of respondents.

6) Data Analysis

The analysis used in this research is to use the paired T statistical test because it is to test the average value of blood pressure in the elderly before and after lemon hydrotherapy.

7) Research Ethics

Research ethics in this study include informed consent (consent sheet), anonymity (anonymity), confidentiality (confidentiality), benefits (benefits), justice (justice), and the principle of expediency.

Table 1: Average value of blood pressure in elderly hypertension before lemon hydrotherapy in Karang Jaya Sub-District, Gandus Palembang District

Variable	*Mean*	*Median*	*Min.*	*Max.*	*SD*
Systolic Blood Pressure	163,31	150.00	140	220	23.61
Diastole Blood Pressure	101.03	100,00	80	110	9,118

From the table above, the average value of systolic blood pressure before the mean treatment is 162.31 with a minimum value of 140 and a maximum value of 220, a standard deviation of 23.671. While the systolic blood pressure frequency distribution before the mean treatment is 101.03 with a minimum value of 80 and a maximum value of 110, a standard deviation of 9,118.

Table 2: Average value of systolic blood pressure in elderly hypertension after lemon hydrotherapy in Karang Jaya Village, Gandus District, Palembang

Variable	*Mean*	*Median*	*Min.*	*Max.*	*SD*
Systolic Blood Pressure	158.21	150.00	150.51	162.95	17.751
Diastole Blood Pressure	93.85	90.00	80	110	7.819

Table 3: Differences in the average value of blood pressure in elderly hypertension before and after lemon hydrotherapy in Karang Jaya Village, Gandus District, Palembang

Variable	*Mean*	*SD*	*Z*	*P Value*
Systolic pressure before	163,31	23.61	-4.779	0.001
Systolic pressure after	158.21	17.751		
Distole pressure before	101.03	9,118	-3.889	0.001
Distole pressure after	93.85	7.819		

From the table above the results of the paired T test statistic obtained p value 0,000 (p value </ = 0.05) meaning that there are significant differences in systolic and diastolic blood pressure in the elderly before and after the lemon hydrotherapy intervention in the elderly in Karang Jaya Sub-district Gandus Palembang.

III. RESULTS AND DISCUSSION

1) Average Value of Blood Pressure Elderly Hypertension Before Performing Lemon Hydrotherapy Intervention

Based on the results of research that has been conducted on 52 respondents obtained blood pressure measurements on research respondents obtained the average blood pressure of systole before lemon hydrotherapy was 162.31 mmHg and 101.03 mmHg for diastole blood pressure.

Old age as the final stage of the life cycle is a normal stage of development that will be experienced by every individual who has reached such old age and is a reality that cannot be blocked. In the Elderly cells decline because of the aging process that can result in organ weakness, physical deterioration, the emergence of various diseases, especially degenerative diseases. One problem that often occurs in old age is hypertension or high blood pressure.

In line with the opinion of Wahyunita (2010) who said that one of the degenerative diseases that often appear in the elderly is high blood pressure caused by the aging process. If hypertension is not quickly treated or treated it can cause interference with the heart, kidneys, and blood vessels.

The results of blood pressure tests for hypertension sufferers in this study were found to be high on average so that they require special countermeasures to overcome these problems.

The hormone serotonin is a hormone that affects feeling comfortable and optimistic, relaxed, feeling refreshed, increasing the ability to concentrate and focus attention, increase appetite, and sexual desire. Hormones that function to regulate stress levels in a person's mind and body are called the hormone cortisol. When the body is in danger or confusion, the hypothalamus will produce a number of hypothalamic regulating hormones that are sent to the pituitary gland under the hypothalamus. The hypothalamus hormone regulates the secretion of hormones produced by the anterior lobe in the pituitary gland or the pituitary gland, the adrenocorticotropic hormone (ACTH). When the pituitary gland is stimulated, ACTH will be secreted into the blood to be carried to other endocrine glands, including to the adrenal cortex. Then this gland is stimulated to secrete specific hormones such as cortisol, which are carried by the blood to hormone receptors in or on target tissue cells. Then enter the bloodstream, the heart rate accelerates, oxygen levels in the brain increase, and release energy from body fat and glucose. So that it stabilizes blood pressure (Wibowo, 2015).

Soaking feet with warm water for 10 minutes has been shown to reduce the strength of the sympathetic nerves so as to create a feeling of pleasure and relax. In adults, soaking feet using warm water can produce physiological changes that provide many health benefits (Becker, 2009).

Based on the results of research, theories, and related research, researchers argue that the level of stress in the elderly is caused by several factors, such as the environment and also age. Researchers assume that the more you age, the higher the stress level in the elderly. Elderly who experience stress before doing hydrotherapy due to lack of information about how to do hydrotherapy thus reducing the respondents' interest to do it. Stress factors in respondents cause an increase in emotions thereby increasing sympathetic stimulation, blood frequency, cardiac output and peripheral vascular resistance. The effects of sympathetic stimulation cause blood pressure to increase (Price, 2015).

2) Average Blood Pressure Values for Elderly Hypertension After Lemon Hydrotherapy Interventions

Based on the results of research that has been conducted on 52 respondents found that after doing hydrotherapy for at least 10 minutes every morning for 7 consecutive days the stress level of elderly is an average value of 13.77 with a standard deviation of 3.040. The results of univariate analysis using the paired T test showed that there was a decrease in stress levels after hydrotherapy with a mixture of lemons with 52 elderly people.

The results of this study are also in line with research by Sari (2017) with statistical results showing that the value of $p < \alpha$ or $0{,}000 < 0.05$, so that these results can be concluded that there is an effect of the application of ablution as a hydrotherapy to stress levels in elderly in Blitar UPT PSLU in Tulungagung.

Elderly people who experience a decrease in stress levels after hydrotherapy because elderly people regularly do hydrotherapy for at least 10 minutes in the morning within 7 days. The reduction in the level of stress in the elderly is based on adherence to performing hydrotherapy regularly every day according to information obtained from researchers.

Based on the theory of Wijayanti (2009) in Syarif (2016) the provision of hydrotherapy used to reduce stress levels in the elderly because water is used as a trigger to improve the level of strength and resistance to disease.

According to Pratiwi (2018) in normal conditions, the highest cortisol hormone levels reach a peak at 08.00 am and will decrease further. Soaking feet with warm water is done between 8:00 a.m. until 11:30 a.m. WIB so that the feeling of warmth from the water with a temperature of 37°C which directly touches the skin on the feet

so it can cause a relaxing effect and reduce blood pressure. When a person experiences psychosocial disorders such as stress, the production of the hormone cortisol will increase so that it can suppress the production of the hormone melatonin, which disrupts the circadian rhythm of the elderly. The intervention of soaking the feet with warm water is carried out for 10 to 15 minutes because giving heat can cause maximum vasodilation within 20 minutes (Berman, 2009).

Physiologically the body's response to heat is to cause dilation of blood vessels, decrease blood viscosity (viscosity), reduce muscle tension, and increase tissue metabolism and increase capillary permeability. This warm response is used for therapeutic purposes in various conditions and conditions in the body (Destia, 2014). This hydrotherapy also provides a relaxation / comfort response where the warmth that directly touches the skin because on the soles of the feet there are many acupuncture points consisting of six meridians (liver, bile, bladder, kidney, spleen, and stomach) can stimulate the endorphin hormone to cause relax and reduce stress (Arnot & Wijayanti, 2009).

The warmth that is obtained by touching the skin directly that there are many blood vessels and nerves, especially in the skin (*plexux venosus*) from this series of stimulation is transmitted to the posterior corners then proceed to the spinal cord, from here forwarded to lamina I, II, III *Radiks dorsalis*, then to ventral basal thalamus and enter the brain stem precisely in the lower *Raphe* area of the pons and medulla and there is a soporific effect (wanting to sleep), so that people who do hydrotherapy soak feet warm water will relax. Most of the heat produced in the body is the result of oxidation, so the main source of heat is the most active tissue namely the liver, glandular secretions, and muscles (Guyton, 2010). The warm conditions given to foot-soaking hydrotherapy create a relaxing effect that stimulates the release of the endorphin hormone, so that the sympathetic nerve stimulus will decrease and parasympathetic stimulus will increase releasing acetylcholine which causes blood vessel dilation (Muttaqin, 2009).

Based on the results of the study, researchers argue that the blood pressure of systole and diastole in elderly with hypertension after lemon hydrotherapy intervention has decreased, i.e. the mean score of systole decreases from 162.05 to 150.51 and diastole from 99.74 to 91.03 which means it is at the level of blood pressure. This is because the elderly has received routine lemon hydrotherapy interventions within 7 days. The warm water stimulus can provide respondents with a comfortable and relaxed feeling and trigger a decrease in blood pressure.

3) Differences in the Average Value of Blood Pressure in Elderly Hypertension Before and After Getting Lemon Hydrotherapy Intervention

Based on the results of the study, researchers then conducted a statistical analysis test of the data on blood pressure values before and after the lemon hydrotherapy intervention on 52 respondents. Before conducting a statistical analysis test, researchers have first performed a data normality test and obtained the results of a normal data distribution. So that in this study, researchers used the paired T parametric test analysis because the parametric test requirements met the requirements.

Based on the analysis of paired T test results obtained p-value of 0,000, so that from these results can be known if the value of p (0,000) $<\alpha$ (0.05) so that it can be concluded that there is a significant difference between elderly blood pressure before and after hydrotherapy lemon.

Hydrotherapy is a therapy using warm water in various forms and various temperatures. Hydrotherapy can provide benefits such as increasing energy, improving skin function, and appearance and improving health (Chaitow, 2016). Soaking feet with warm water for 10 to 15 minutes has been shown to reduce the strength of sympathetic nerves so as to create a feeling of pleasure and relax (Becker, 2009).

Foot soaking therapy with warm water will cause muscles to relax and blood vessels to widen so that blood carrying oxygen will quickly reach the tissues (Chaitow, 2016). By doing hydrotherapy, the hormone serotonin in the body will be stimulated which is then converted to melatonin which can cause the effects of relationship (Lendengtarian, 2018). Turner and Merriman (2015) explain soaking feet with warm water can stimulate endorphins hormone secretion which can provide a sense of comfort and calm and stabilize blood pressure.

In the results of this study there were differences in the average decrease in blood pressure before and after the lemon hydrotherapy intervention ($p < 0.05$). There is a difference before and after the intervention because it is a relaxation therapy, this is in accordance with the research of Carsita (2018), namely the effect of soaking feet of warm water plus salt on the stress level of workers at PT X can get a value of 0,000 ($\alpha < 0.05$) and in this study obtained a similarity of p value of 0,000 which means that there is an effect of soaking foot of warm water on blood pressure after an intervention with a temperature of 37.4 °C carried out for 10 minutes once a day for 1 week in a row. While the difference in the Carsita study (2018) with this study after the intervention was an average difference before and after the intervention, in the Carsita study (2018) there was a decrease of 4.13 in this study an average decrease of 3.38.

According to Muaris (2014), lemon can be used to remove toxins and cleanse the blood by filtering toxins and other particles, so that it can provide a relaxing effect. The content of vitamin C and flavonoids in lemon has antioxidants that act as antidotes to free radicals that are stress-causing hormones (the hormone cortisol) and are able to prevent stress (Sarangarajan, 2017). The content of flavonoids found in lemon peel is considered easily absorbed, so that when found in the *Stratum corneum* the absorption of these compounds passes through the epidermis layer of the skin and enters the lymphatic channels and blood, sweat glands, nerves, and into the bloodstream and into each body cell to protect cell (Price, 2015).

According to researchers a decrease in average blood pressure in the elderly occurs due to the increased effect of relaxation after hydrotherapy soak the feet of warm water. This happens because the effect of heat on water can reduce muscle tension, accelerate blood circulation, stimulate nerves, and increase the hormones endorphins, melatonin, and cortisol which can provide a happy effect, relax, reduce stress in the elderly, and reduce anxiety physiologically.

From the discussion above there are differences in the average value of blood pressure in elderly hypertension before and after lemon hydrotherapy with p value = 0,000 (p value <0.05) and means that there are significant differences between before and after lemon hydrotherapy.

IV. CONCLUSION

The results of the study showed that the average decrease in blood pressure in the elderly was due to the increased effect of relaxation and dilatation of blood vessels after hydrotherapy soaking the feet of warm water

and the content of lemon flavonoids that were soluble in water so that they were absorbed by the pores and then methettered into O-methylated, sulphates, and glucuronides. O-methylated in the blood can thin the concentrated blood. Conclusion Lemon hydrotherapy affects blood pressure in the elderly with hypertension in Karang Jaya Sub-District, Gandus District, Palembang.

REFERENCES

1. Azizah, L. M. (2011). Keperawatan lanjut usia. Yogyakarta: Graha Ilmu.
2. Arnot. (2009). Pengobatan praktis perawatan alternatif dan traditional. Jakarta: Bhuana Ilmu Populer.
3. Badan Pusat Statistik (BPS). (2015). Statistik penduduk lanjut usia. Jakarta: BPS.
4. Becker, B. (2009). Biophysiologic effects of warm water immersion. International Journal of Aquatic Research and Education, 3(1), 24-37.
5. Berman. A. (2009). Buku Ajaran Praktek Keperawatan Klinis Kozier dan Erb. Jakarta: EGS.
6. Carsita, W. N., Herlangga, A. R., & Puspitasari, N. R. (2018). Pengaruh terapi rendam kaki air hangat ditambah garam terhadap tingkat stres pekerja di PT X. Indonesian Journal of Health Science, 10(2), 19-25.
7. Chaitow, L. (2016). Hydrotherapy, water therapy, for health dan beautiful (terapi air untuk kesehatan dan kecantikan). Jakarta: Prestasi Pustaka.
8. Darmasanti, P., Anggraini, R., & Setianingsih. (2018). Pengaruh rendam kaki dengan air hangat terhadap tingkat kecemasan pada ibu hamil trimester III di Puskesmas Pegandon Kendal. Nurscope: Jurnal Keperawatan dan Pemikiran Ilmiah, 4(1), 1-10.
9. Destia, D., & Umi, P. (2014). Perbedaan tekanan Darah Sebelum dan Sesudah Dilakukan Hidroterapi Rendam Hangat pada Penderita Hipertensi. Jurnal Kesehatan Ngudi Waluyo Ungaran, 5(10).
10. Gunarsa, S. D. (2011). Psikologi perkembangan anak dan remaja. Jakarta: Gunung Mulia.
11. Guyton, A. C., & Hall, J. E. (2010). Textbook of medical physiology. Jakarta: EGC.
12. Kozier, B. (2010). Buku ajar praktik keperawatan klinis. Jakarta: EGC.
13. Lendengtarian, C. (2018). Pengaruh terapi rendam air hangat pada kaki terhadap insomnia pada lanjut usia di Kelurahan Angges Kecamatan Tahuna Barat. e-Journal Keperawatan, 6(2), 3-5.
14. Martono. (2008). Geriatri. Jakarta: Yudistira.
15. Muaris, H. (2014). Khasiat lemon untuk kestabilan kesehatan. Jakarta: Gramedia.
16. Muttaqin, A., & Kumala, S. (2009). Asuhan keperawatan perioperatif. Jakarta: Salemba Medika.
17. Nasir, A., & Muhith, A. (2011). Dasar-dasar keperawatan jiwa: Pengantar dan teori. Jakarta: Salemba Medika.
18. Ningtiyas, A. P., & Ruhyana, R. (2014). Pengaruh Rendam Kaki Dengan Air Hangat Terhadap Kualitas Tidur Pada Usia Lanjut di Dusun Mangiran Trimurti Srandakan Bantul. Skripsi thesis, STIKES 'Aisyiyah Yogyakarta.
19. Nugroho. (2012). Keperawatan gerontik dan geriatrik. Jakarta: EGC.
20. Pratiwi, N. N., Winarko, & Narwati. (2018). Perbedaan Tekanan Darah Sebelum dan Sesudah Terpapar Tekanan Panas (Studi Pada Pekerja di Pabrik Tahu “Ibu Lis” Kecamatan Donorojo Kabupaten Pacitan Tahun 2017). Gema Lingkungan Kesehatan, 16(1), 83-91.
21. Price, S. A. (2015). Patologis: Konsep klinis proses-proses penyakit. Jakarta: EGC.

22. Rapoliene, L., Razbadauskas, A., Salyga, J., & Martinkenas, A. (2016). Stress and fatigue management using balneotherapy in a short-time randomized controlled trial. Evidence-based Complementary and Alternative Medicine.
23. Sarangarajan, R., Meera, S., Rukkumani, R., Sankar, P., & Anuradha, G. (2017). Antioxidants: Friend or foe? Asian Pacific Journal of Tropical Medicine, 10(12), 1111–1116.
24. Sari, D. K. (2017). Penerapan Wudhu Sebagai Hydro Therapy Terhadap Tingkat Stress Pada Lansia UPT PSLU Blitar di Tulungagung. Journal of Nursing Practice, 1(1), 24-32.
25. Selo, J., Candrawati, E., & Putri, R. (2017). Perbedaan tingkat stres pada lansia di dalam dan di luar panti werdha pangesti lawang. Nursing News, 2(3), 522-533.
26. Turner, W., & Merriman, L. (2015). Clinical skills in treating the foot. China: Elsevier.
27. Wahyunita. (2010). Perubahan Pada Menopause. Yogyakarta: Gramedia Pustaka Utama.
28. Wati, E., Susilowati, T., & Wulandari, R. (2018). Penerapan Rendam Kaki Menggunakan Air Hangat dengan Campuran Garam dan Serai Terhadap Penurunan Tekanan Darah Pada Pasien Hipertensi di Wilayah Puskesmas Gambirsari Kota Surakarta. Working Paper, Jawa Tengah: STIKES ‘Aisyiyah Surakarta.
29. Wibowo, A. (2015). Hormon, pengaruhi stress hingga gairah. Artikel Kesehatan.
30. Wijayanti, C., & Pramasanti, T. (2009). Terapi komplementer makalah hidroterapi. Yogyakarta: Universitas Sanata Dharma.
31. Wirawan. (2012). Menghadapi stres dan depresi: Seni menikmati hidup agar selalu bahagia. Jakarta: Platin.

Received: 22 Sep 2019 | Revised: 13 Oct 2019 | Accepted: 15 Jan 2020