

COMFORT IMPROVEMENT USING GARRA RUFA CARE IN OLDER PEOPLE WITH PSORIASIS

¹Ahmad AnNaufal, *Joni Haryanto, Makhfudli

Abstract---Psoriasis decreases the quality of comfort in the older people. Over a long period of time, a low level of comfort triggers a risk of psoriasis recurrence. Intervention with GarraRufa Care is an alternative to increase the comfort level of the older people with psoriasis. **Aims:** This research aims to identify the effect of GarraRufa Care on the comfort of older people with psoriasis and compare it with the older people group that did not undergo GarraRufa Care. **Method:** A total of 12 older people with psoriasis were chosen as the research respondents. The older people were divided into two groups, namely the treatment group and the control group. This research is a quasi-experiment with total sampling technique. The independent variable of this research was the GarraRufa intervention, while the dependent variable was older people comfort. The quality of comfort was measured using Short General Comfort Questionnaire (Short GCQ) based on the Katherin Kolcaba comfort concept. The results of the study were analyzed using Mann-Whitney statistical test with $p \leq 0,05$. **Result:** Older people who received GarraRufa Care treatment experienced an increase in the level of comfort ($p = 0,027$) compared to the control group. However, the treatment and control groups did not have a significant difference ($\alpha = 0,16$). **Conclusion:** GarraRufa Care can reduce psoriasis and improve comfort by providing a "micro massage" effect. In addition, this intervention can reduce the Psoriasis Area and Severity Index (PASI) score which will have an on the older people's activities.

Keywords---GarraRufa, psoriasis, quality of comfort, older people

I. Introduction

Psoriasis is a disease that can interfere physical and psychological comfort due to the itching it produces (Wong & Koo 2013). Socially, the older people with psoriasis have low comfort due to them being considered negative by their surrounding (Dawn et al 2007). The prevalence and incidence of psoriasis often occur in old age. The highest cases of psoriasis occur at age 60 to 69 years reaching 113 cases per 100,000 older people population in America; 1,5% of the country's population in the United Kingdom; and 3,9% of 16,924 older people in Taiwan (Grozdev et al 2011; Berth-Jones 2013). Previous studies mention 7,176 cases of psoriasis during 2001 to 2011 in Surabaya, East Java, Indonesia (Moningka et al 2015).

Older people with psoriasis indicate a low level of comfort, which eventually triggers the recurrence of psoriasis (Wong & Koo 2013). Psychological decline can cause a decrease in immunity, especially in the older people who have experienced aging (Azizah 2011; Deswita 2012; Santoso & Ismail 2009; Maryam et al 2008). Psoriasis is a disease that varies in each treatment depending on the individual (Dawn et al 2007). Types of psoriasis treatment can

¹Faculty of Nursing, Universitas Airlangga, Campus C Universitas Airlangga Jl. Ir. H. Soekarno, Mulyorejo, Surabaya, Indonesia 60115
Corresponding Author: Dr. Joni Haryanto, S.Kp., M.Si.
Faculty of Nursing, Universitas Airlangga, Campus C Universitas Airlangga Jl. Ir. H. Soekarno, Mulyorejo, Surabaya, Indonesia 60115

be in the form of topical corticosteroid treatment, phototherapy, immunotherapy, and oral medication, depending on the characteristics of psoriasis. Older people with psoriasis who consume corticosteroids for a long time might experience complications. One of them is kidney disease. The body will find it difficult to filter out these drugs since the organ function is decreasing due to aging.

Psoriasis combination treatment is much more effective since it works both internally and externally, however, the cost is considered to be high, especially types of drugs such as corticosteroids or immunotherapy (Dawn et al 2007; Takeshita et al 2015). One alternative treatment that is done to reduce psoriasis is with Garra Rufa fish which are cheap and natural for skin diseases (Takac 2014). Therefore, this study was conducted to determine the effect of Garra Rufa Care on the comfort level of the older people with psoriasis. The study also compared the comfort level of the older people with psoriasis who undergo Garra Rufa Care treatment and those with drug treatments.

Research methods. This research applied quasi experiment method. The study population is the older people with psoriasis in several Nursing Homes. There are 5 older people with psoriasis in Griya Werdha Surabaya and Pasuruan. In addition, there are 2 older people in Sidoarjo and 5 older people in Malang with psoriasis. The research sample was taken by total sampling technique. A total of 12 older people were divided into 2 groups, namely the treatment group and the control group. Furthermore, subjects were measured before and after the Garra Rufa Care procedure. The treatment group was given a Garra Rufa Care treatment, while the control group was not given any intervention. The independent variable of this research is the Garra Rufa Care intervention given to the treatment group. The comfort of older people with psoriasis becomes the dependent variable.

The study took place during July 2017. After the filling of informed consent, the treatment and control groups were given a pre-test to measure the level of comfort and measured PASI (Psoriasis Area and Severity Index). In the following step, respondents were asked to immerse their bodies in a pond containing 1000 liters of clean water and 50 Garra Rufa fish sized 4-7 cm. Respondents were given the intervention treatment for 10-15 minutes for 9 times in 2 weeks. Water is controlled in the temperature ranged 29-32°C and pH of 6,8-7,9. Meanwhile, the control group was only treated according to the indications of treatment without being given the Garra Rufa Care. At the end of the study, all respondents in the control and treatment groups filled out a post-test to see changes in the comfort level and PASI measurements score.

Measurement of comfort parameters using Shortened General Comfort Questionnaire (Shortened GCQ) (Kolcaba et al 2006). The parameters measured are 3 types of comfort, i.e. relief, ease, and transcendence. The questionnaire was modified into Indonesian before the pre-test and post test. Shortened GCQ as a whole assesses 4 contexts of experience in each type of comfort, such as physical, psycho-spiritual, environmental, and socio-cultural.

The pre-test data and post-test of both groups were analyzed using Mann-Whitney statistical test with the degree of significance of $\leq 0,05$. Furthermore, the data were analyzed again using Wilcoxon statistical test with a degree of significance of $\alpha \leq 0,05$ to find out the comparison of the post-test results on the comfort in the treatment group and control group.

This study was declared to have passed the nursing ethics test by the Faculty of Nursing Ethics Commission of Universitas Airlangga with the number 447-KEPK.

II. Result

Demographic data of respondents. The number of male respondents is the same as female respondents, each of 6 people or 50%. One third of respondents aged 60-70 years and the remaining two thirds aged over 70 years. 50% of respondents do not live in nursing homes but rather live at home and are subjected as control respondents. The average respondent has lived in a nursing home for less than 1 year. Most of the older people do not graduate from elementary school. 75% of older people suffer from psoriasis around the age of 60-70 years (**see table 1**).

Results of interpretation of PASI score shows that before the intervention, 58% of respondents had a total score between 2-2,9 and 25% had a PASI score between 1-1,9. The total score of PASI after intervention has decreased. One third of respondents (33%) had a PASI score of 1-1,9 (**see table 2**).

Data of Older people Comfort.

Before giving the intervention, the comfort level of the older people showed that 9 respondents felt less comfortable due to psoriasis, 2 felt very uncomfortable, and 1 person stated quite comfortable. After being given GarraRufaCare, the treatment group showed that 2 respondents felt quite comfortable and 4 people felt less comfortable. Meanwhile, 5 respondents in the control group felt less comfortable and 1 person felt uncomfortable (**see Table 3**).

Differences in the Comfort of the Older people with Psoriasis.

Statistical test results from the Wilcoxon test showed that the treatment group experience an increase in comfort after the GarraRufaCare treatment ($p = 0.027$). The comfort level of the older people with psoriasis increased by an average of 21,1 points in the treatment group (**see Table 4**). The results of the Mann Whitney test in the control and treatment groups obtained the value of $\alpha = 0,16$ which indicates that there is no significant difference in the treatment and control groups. This is due to the average difference in the increase of the two groups that is not high enough.

Discussion. Statistical test results show an increase in the comfort of older people with psoriasis after GarraRufa Care ($p = 0,027$). However, the results of the Mann Whitney analysis found no significant differences between the treatment and control groups.

Psoriasis provides discomfort due to physical and psychological disorders. Perceptions of comfort of the respondents according to their condition are the main factors in determining their comfort (Kim & Kwon 2007). The concept of comfort is quite difficult to be defined and cannot be determined only through subjective observation and experience of an individual (Dubois et al 1995). That is due to the intervention being done on the same day or week as usual treatment.

Treatment of psoriasis with GarraRufa Care gives positive results compared to corticosteroid treatment (Ozçelik et al. 2000). GarraRufa Care cleans the squama in a short time, thus it gives a psychological effect on the respondent's treatment (Sayili et al. 2007). Respondents experienced an increase in psychological comfort because they felt more relaxed with the "micro-massage" sensation during therapy. Respondents felt the impact both gradually and directly. The "micro-massage" sensation is felt when the fish bite dead skin cells (Undar et al 2015). In addition, a supportive environment has a positive effect following the physical skin repair such as reduced psoriasis thickness. Therefore, respondents feel more comfortable compared to being treated with drug administration alone.

The GCQ score in the control group showed that the score on the quite comfortable section develop more slowly compared to the respondents in the treatment group. The increase in GCQ scores shows the average results of comfort

level in the older people with psoriasis by 21,1% in the treatment group. This illustrates the change in comfort due to the intervention that is given to the respondents.

Enzyme dithranoloranhralin contained in the mouth of GarraRufa helps exfoliate dead skin cells so that the process of skin cell regeneration becomes faster (Bhattacharya 2016; Grassberger & Hoch 2006). Results of the GarraRufa Care show a clear change in physical factors due to PASI score of the respondent that has decreased from before. Aside from that, the GarraRufa Care show no side effects.

Older people stated there is a decrease in confidence due to psoriasis. The main factor that causes psoriasis in the older people is the decrease of organ function which results in decreased immune function, causing psoriasis to recur. This study found 67% of older people experience depression due to various things. The response was seen from questionnaire on psychological conditions. Other factors that cause psoriasis recurrence are psychological factors such as stress, anxiety, and discomfort (Grozdev et al 2011). However, the results of the assessment of shortened GCQ prior to the intervention showed that 11 out of 12 older people felt quite comfortable with the conditions they experienced. The level of comfort in the older people is due to a sense of resignation and how they are aware of their aging. The older people feel indifferent to the illness because of the lack of motivation to recover. The duration of suffering from psoriasis supports the idea that the disease is difficult to cure.

On the other hand, this study has limitations such as limited sources of literature since the intervention of GarraRufa is not yet much researched especially in Indonesia. The small prevalence of psoriasis in Indonesia causes a limited number of samples. In addition, the comfort of respondents is disturbed due to environmental and social factors that cannot be controlled.

III. Conclusion

GarraRufa Care has an influence in the process of increasing comfort for older people with psoriasis. However, the comfort that increases in older people with GarraRufa Care not much different from the convenience of the older people who only use prescribed drugs. Another factor that can trigger psoriasis is psychological. Older people with psoriasis have a sufficient level of comfort before the GarraRufa Care was done. Increased comfort occurs after the older people are given the GarraRufa Care. However, the older people in the control group still felt quite comfortable with topical and oral treatment. That is because the older people have decreased motivation to recover due to aging.

IV. Acknowledgement

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V. Conflict of Interest

There is no conflict of interest

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Table 1: Research Respondent Demographic Data

Characteristic	Number	%
Sex		
a. Male	6	50
b. Female	6	50
Age		
a. 60-70 Years old	4	33
b. >70 Years old	8	77
Duration of Stay		
a. Not staying at nursing home	6	50
b. <1 years old	6	50
c. 1-5 years old	-	-
d. 6-10 years old	-	-
Last Education		
a. Did not graduate elementary school	6	50

b. Elementary school	5	41
c. Junior high school	-	-
d. High school	-	-
e. University	1	8
Age When Contracted		
a. 40-50 years old	1	8
b. 50-60 years old	2	16
c. 60-70 years old	9	75
d. >70 years old	-	-

Table 2:PASI Respondent Score Before and After Intervention

Characteristic	Number	%
Before Intervention		
a. 0-0,09	-	-
b.1-1,9	3	25
c. 2-2,9	7	58
d. 3-3,9	-	-
e. 4-4,9	1	8
f. 5-5,9	1	8
g. >6	-	-
After Intervention		
a. 0-0,09	2	16
b.1-1,9	4	33
c. 2-2,9	4	33
d. 3-3,9	1	8
e. 4-4,9	1	8
f. 5-5,9	-	-
g. >6	-	-

Table 3.Comfort Levels of the Older people Before and After GarraRufa Care

Criteria	Treatment				Control			
	Before		After		Before		After	
	Σ	%	Σ	%	Σ	%	Σ	%
Very uncomfortable	-	-	-	-	-	-	-	-
Uncomfotable	-	-	-	-	-	-	-	-
Less	-	-	-	-	-	-	-	-

comfortable								
Quite comfortable	6	100	-	-	5	83	6	100
Comfortable	-	-	6	100	1	17	-	-
Very comfortable	-	-	-	-	-	-	-	-
Σ	6	100	6	100	6	100	6	100

Table 4. Comfort Level Score in the Older people with Psoriasis Before and After GarraRufa Care

Level of Comfort Score								
No.	Treatment			Control			Treatme nt	Contr ol
	Difference			Difference				
	Pre	Post		Pre	Post		Post	Post
1.	85	107	-22	82	80	2	107	80
2.	80	97	-17	96	95	1	97	95
3.	80	97	-17	102	101	1	97	101
4.	82	111	-29	74	83	-9	111	83
5.	87	98	-11	79	87	-8	98	87
6.	72	103	-31	77	83	-6	103	83
P = 0.027		Average		Average		α=0.16		
Wilcoxon		increase		increase		Mann		
P ≤ 0.05		127 6 = 21.1		19 6 = 3.1		Whitney		
							α≤ 0.056	