

ORIGINAL ARTICLE

Relationship between Nurses' Perception and Interest in Implementing Foot Massage Action

Sajodin Sajodin, Perla Yualita

Faculty of health sciences, Universitas 'Aisyiyah Bandung 40264, Indonesia

ABSTRACT

Introduction: Currently, many studies have been carried out on foot massage that are recommended as one of the complementary nursing interventions. However, the reality in the field of foot massage action has not been widely conducted by nurses. Therefore, researchers are interested in investigating nurses' perceptions related to nurses' interest in performing foot massage nursing actions. The purpose of this study was to determine the extent of the relationship between nurses' perceptions and interests in carrying out foot massage actions in the inpatient room of Muhammadiyah Hospital Bandung. **Methods:** The correlational quantitative descriptive study with a cross sectional approach was conducted on 40 nurses using total sampling. The instrument used in this study was questionnaire. The data was analyzed using univariate analysis of the frequency distribution while bivariate analysis used Spearman rank. **Results:** The results of this study indicated that nurses' perceptions of foot massage were in the good category, while nurses' interests in carrying out foot massage actions were in the high category. The results of statistical tests indicated a relationship between nurses' perceptions of foot massage and nurses' interest in carrying out foot massage actions (p -value = 0.000). **Conclusion:** There was a significant relationship between nurses' perceptions of foot massage and nurses' interest in conducting foot massage actions. Thus, the hospital needs to be facilitated so that nurses are able to carry out foot massage as an independent nursing action in providing nursing interventions.

Keywords: Foot message action, Nurses' perception, Nurses' interest

Corresponding Author:

Sajodin, M.Kes

Email: jodinsajodin@gmail.com

Tel: +6281284003331

INTRODUCTION

Massage is an action using various forms of touch to achieve certain goals (1). According to Moyer in Kennedy et al, massage is a manipulative act of soft tissue (2), while massage is an act of manipulation of the connective tissue through the action of hitting, rubbing and squeezing to increase circulation, improve muscle condition and have a relaxing effect (3). Foot massage is a combination of four massage techniques, namely effleurage, petrissage, friction and tapotement.

The benefits of foot massage include increasing blood circulation and the work of the endocrine system and immune system (4). In addition, foot massage carried out for 20 minutes can relax muscles, provide a calm and comfortable rest and reduce pain with the gate control theory mechanism. In that process, there will be a stimulus to the gelatinous substance so that it stimulates an increase in the production of endorphins (endogenous opioids) which will prevent the release of substance P playing a role in the transmission and

blocks the transmission of pain (3). This is in line with the study stating that effleurage massage techniques can reduce the intensity, duration, and frequency of pain in patients with dysmenorrhea (5), Foot massage can also reduce acute pain in postoperative patients (6). Besides, a massage can be used as a therapy to lower blood pressure (7). Meanwhile, massage can overcome fatigue, injury, and improve blood circulation (8). Foot massage can also reduce edema in pregnant women (9) and can improve the sleep quality of patients in the ICU (10).

Massage therapy is a non-pharmacological nursing action that has many benefits, does not cause side effects and at a low cost. Foot massage has been recommended as a complementary therapy in providing holistic nursing care. Based on the history of massage, it has been recommended and taught to nursing students since the 20th century in the United States, but the implementation of massage in nursing care decreased by the time. However, recently, in line with the increase in the study on massage and foot massage, the recommendation for massage and foot massage as one of the nursing actions has increased again (11). Nevertheless, the action of foot massage in hospitals in Indonesia, especially in Bandung, has not yet been implemented. Therefore, researchers are interested in

conducting a study entitled The Relationship between Perception and Nurses' Interests in Implementing Foot Massage Actions.

A nurse is one of the professional health workers who have the ability to provide professional nursing care after completing formal education in nursing education institutions. In performing nursing care, a nurse has the right to provide nursing interventions in the form of complementary therapies, one of which is foot massage. There have been many studies on the benefits of foot massage, but until now, foot massage nursing interventions are still rarely implemented in providing nursing interventions. Based on the above background, the problem to be studied can be formulated as follows: What is the relationship between perceptions and interests of nurses in conducting foot massage actions in the inpatient room of Muhammadiyah Hospital Bandung? The purpose of this study was to determine the relationship between nurses' perceptions and interests in implementing foot massage actions in the inpatient room of Muhammadiyah Hospital Bandung.

MATERIALS AND METHODS

Study design

This study was correlational quantitative research with a cross sectional study design focused on the nurses in the inpatient room of Muhammadiyah Hospital Bandung.

Participant and setting

The participant and setting were 40 nurses in the inpatient room of the Muhammadiyah Hospital Bandung in Multazam 2 room, Multazam 3 room, Multazam 4 room, Dewi Sartika room. In other words, the proper naming of the sampling technique was the total population.

Ethical considerations

The ethical approval had been obtained from the ethical committee of 'Aisyiyah Bandung University (Ethical Approval no. 03/KEP.01/UNISA-BANDUNG/I/2021).

Data collection

The data collection process was carried out between November and December 2020. The instrument in this study used a questionnaire containing nurses' perceptions about foot massage and nurses' interest in carrying out foot massage actions. The questionnaire had been tested for validity (Pearson Product Moment test) and reliability (Alpha Cronbach test). The validity test of questionnaire nurses' perceptions about foot massage was 0,435 – 0,814 (r table = 0,344). The validity test of questionnaire nurses' interest in carrying out foot massage actions was 0,398 – 0,866 (r table = 0,344). The reliability test was 0,799. The instrument was distributed to nurses in the inpatient room of Muhammadiyah Hospital Bandung via Google forms.

Data Analysis

The statistical analyses were performed using SPSS. The normality test used was Shapiro Wilk. The data was analyzed using univariate analysis of the frequency distribution while bivariate analysis used Spearman rank (p -value < 0.05).

RESULTS

Characteristics of Respondents

Characteristics of respondents supporting this variable study were demographic data consisting of age, gender, education, length of service. Table I shows the characteristics of the study's respondents. Based on the category of nurses age in the inpatient room of Muhammadiyah Hospital Bandung, there were 31 nurses aged 20-40 years with a percentage of 77.5% and 9 nurses aged 41-60 years with a percentage of 22.5%. Based on gender, there were 6 male nurses with a percentage of 15% and 36 female nurses with a percentage of 85%. According to education background, there were 31 nurses graduated from Nursing Diploma with a percentage of 77.5% and 9 nurses graduated from Nurses with a percentage of 22.5%. Meanwhile, based on the length of work, there were 25 nurses with the length of work 1-10 years (62,5%) and 15 nurses with the length of works over 10 years (37.5%).

Table I: Data on Characteristics of Respondents in the Inpatient Room of Muhammadiyah Hospital Bandung

Characteristics	Frequency (f)	Percentage (%)
Age		
20 – 40 years old	31	77.5
41 – 60 years old	9	22.5
Gender		
Male	6	15
Female	34	85
Education		
Diploma of Nursing	31	77.5
Ners	9	22.5
Length of Work		
1 – 10 years	25	62.5
Above 10 years	15	37.5

Nurses' Perception about Foot massage

Data on nurses' perceptions of foot massage in the inpatient room at Muhammadiyah Bandung Hospital are presented in Table II. It can be shown that there were 15 nurses (37.5%) with a good perception category about foot massage, while 25 nurses (62.5%) with less perception category about foot massage.

Nurses Interest in Implementing Foot Massage Action

Data on nurses' interest of implementing foot Massage Action in the inpatient room at Muhammadiyah Bandung Hospital are shown in Table III. There were 19 nurses (47.5%) with low interest and 21 nurses (52.5%) with high interest in implementing foot massage.

Table II: Distribution of the frequency of nurses' perceptions about foot massage in the inpatient room at Muhammadiyah Hospital Bandung

Group	Frequency	The Percentage Result (%)
Nurses' Perception		
Less	15	37.5
Good	25	62.5
Total	40	100

Table III: Distribution of Nurses' Interest in Implementing Foot Massage Action

Nurses' Interest	Frequency	The Percentage Result
Low	19	47.5
High	21	52.5
Total	40	100

The relationship between nurses' perception and interest in Implementing Foot Massage Action

The cross tabulation between the nursing perception about foot massage and the nurses' interest in carrying out foot massage are shown in Table IV. There are 3 (20%) nurses with low perceptions about foot massage and low interest in carrying out foot massage actions. There were 12 (80%) nurses with low perception of foot massage and high interest in carrying out foot massage actions. There were 25 (100%) nurses with a good perception of foot massage and high interest of nurses in carrying out foot massage actions. In addition, table 4 shows the results of the statistical analysis of the Spearman rank test between nurses' perceptions about foot massage and nurses' interest in carrying out foot massage actions. The results of statistical tests obtained p-value 0.000 at = 0.05 so that there was a relationship between nurses' perceptions about foot massage and nurses' interest in carrying out foot massage actions.

Table IV: Spearman Test Results about the Relationship between Nurses' Perception and Interest in Implementing Foot massage action

Nurses's Perception	Nurses'Interest in Implementing Foot Massage Action				Total		P-Value
	Low		High		f	%	
	f	%	F	%			
Less	3	20	12	80	15	100	0.000
Good	0	0	25	100	25	100	
Total	3	7.5	37	92.5	40	100	

DISCUSSION

Nurse's Perception of Foot Massage

According to the results of the analysis of nurses' perceptions about foot massage in table 1, it can be seen that perception is a person's process to organize and interpret sensory received stimuli (12). The results of this study indicated that the nurse's perception of foot massage with a presentation of 62.5% was good. This indicated that everyone's perception will be different from the same stimulus. Therefore, the perception can be influenced by four factors, namely: functional

factors, the result of mood, past experiences, services, and needs; Structural factors, resulting from stimulation of a person's nervous system; Situational factors, factors related to nonverbal language, which are influenced by prokemic cues, kinesic cues, paralinguistic cues, facial cues; Personal factors consist of experience, personality and motivation (13).

Furthermore, nurses are personnel who have the ability to work professionally, have authority and are responsible for providing nursing care. One of the subjects in the nursing field discussing massage is the subject of basic human needs and complementary. This is in line with the results of study stating that nurses' knowledge about baby massage was still in the less category with a percentage of 40%, enough category with a percentage of 28.6%, and good category with a percentage of 31.4%. This shows that nurses' knowledge about baby massage was still lacking, as well as nurses' knowledge about foot massage (14).

Foot massage therapy is a combination of four massage techniques, namely effleurage (rubbing), petrissage (massaging), friction (rubbing) and tapotement (patting). The benefits of foot massage include increasing blood circulation, improving the performance of the endocrine system and immune system, and reducing pain (4). Massaging the hands for 10 minutes on nurses who are on duty can increase nurses' perceptions of physical and psychological conditions including perceptions about massage (15).

Nurse's Interest in Performing Foot Massage Actions

The analysis results of the nurse's interest in carrying out foot massage in table 9 show that it was in the high category with a percentage of 52.5%. This is in line with the study stating that there was a positive perception and interest in sports massage among sports coaches in East Kalimantan (16). Interest refers to feelings of deep pleasure and passion for something, (17). There are two factors influencing interest, namely: Intrinsic factors, namely innate nature and Extrinsic factors including the environment, family and surrounding community. There are three factors underlying the emergence of a person's interest. Firstly, the encouragement factors which can be in the form of needs related to physical and psychological condition. Secondly, social motive factors emerging the interest, such as the need to get appreciation. Thirdly, emotional factor is a measure of a person's intensity in paying attention to a particular activity or object. Meanwhile, Agusni stated that there are factors influencing interest, namely; physical, emotional, social, and experiential needs. According to Foster and Anderson (18), interest begins with feelings of pleasure and a positive attitude.

The formation of interest can be done in the following ways:
 Providing the widest possible information, both

advantages and disadvantages caused by the object in question. The information provided can come from experience, print media, electronic media. Providing stimulation by giving gifts in the form of goods or flattery was carried out by individuals related to the object. Bringing individuals closer to the object or otherwise involving individuals in activities was organized by the object in question. Learning from experience was also conducted. Thus, the nurse's interest in carrying out foot massage nursing actions is influenced by knowledge about the benefits of massage from the lecture process on the subject of basic human needs as a complementary therapy.

Relationship between Nurses Perception and Interest in Implementing Foot massage Action

The results of the analysis of nurses' interest in carrying out foot massage actions in table I show a strong relationship with the direction of a positive relationship between nurses' perceptions and interests in carrying out foot massage actions. This is in line with the study stating that there was a significant relationship between patients' perceptions and interests about service quality and repeat visits (19). Likewise the study indicated that there was a significant relationship between students' perceptions, interests and attitude about the effectiveness of using learning media together and the student learning outcomes (20). According to study, it was indicated that good knowledge is twice as likely to have a good perception (21). The formation of a good perception of foot massage is influenced by the material about massage that has been included in the nursing learning curriculum in basic nursing and complementary nursing courses. This is in accordance with the statement that massage can be implemented as a holistic nursing intervention (22). Likewise, the role of nurses related to foot massage can be done as complementary therapy including as counselors, health educators, researchers, direct service providers, coordinators and as advocates. Meanwhile, according to study, it was stated that massage provides many benefits but has few risks so that it can enter into nursing practice (11).

CONCLUSION

Based on the data analysis, it can be concluded that nurses' perceptions of foot massage were in the good category, while the nurses' interest in carrying out foot massage actions were in the high category. There is a relationship between nurses' perceptions of foot massage and nurses' interest in performing foot massage actions.

ACKNOWLEDGEMENTS

The author would like to thank the Chancellor, Head of Nursing Undergraduate Study Program, LPPM Aisyiyah University Bandung, Muhammadiyah Hospital Bandung and colleagues in the inpatient room at Muhammadiyah Hospital Bandung.

REFERENCES

1. Fritz S. *Fundamentals of Therapeutic Massage*. Sixth. Vol. 15, American Speech. Missouri: Elsevier; 2017. 310 p.
2. Kennedy AB, Cambron JA, Sharpe PA, Travillian RS, Saunders RP. Clarifying definitions for the massage therapy profession: The results of the best practices symposium. *Int J Ther Massage Bodyw Res Educ Pract*. 2016;9(3):15–26.
3. Perry. P. *Fundamentals of Nursing*. Elsevier. Elsevier Health Sciences; 2017. 1560–1561 p.
4. Jiang S. Foot massage: effective or useless? *Nurs Palliat Care* [Internet]. 2017;2(4):1. Available from: <https://www.oatext.com/foot-massage-effective-or-useless.php>
5. Lestari AD, Nandang, Sajodin, Kurniawan H. Penerapan Teknik Pijat Effleurage Terhadap Penurunan Skala Nyeri Saat Menstruasi (Dismenorea) Pada Siswi Kelas Xi Di Madrasah Aliyah Negeri 1 Kota Bandung. *J Keperawatan Aisyiyah* [Internet]. 2017;4(6):17–22. Available from: <http://journal.unisa-bandung.ac.id/index.php/jka/article/view/14>
6. Petpichetchian W, Chongchareon W. Does Foot Massage Relieve Acute Postoperative Pain A Literature Review. *Nurse Media J Nurs* [Internet]. 2013;3(1):483–97. Available from: <https://ejournal.undip.ac.id/index.php/medianers/issue/view/1015>
7. Patria dan Haryani. Pengaruh Masase Kaki Terhadap Penurunan Tekanan Darah pada Kelompok Dewasa yang Mengalami Hipertensi. *J Kesehat Panca Bhakti Lampung* [Internet]. 2019;7(1):48. Available from: <http://ejournal.pancabhakti.ac.id/index.php/jkpbl/article/view/60>
8. Satria, Ali dan Priyonoadi B. *Terapi Massage Frirage* [Internet]. Yogyakarta: Universitas Negeri Yogyakarta; 2012. 1–95 p. Available from: <http://staffnew.uny.ac.id/upload/132304484/penelitian/BUKU+MASASE+FRIRAGE+2012.pdf>
9. Navaee M, Rakhshkhorshid M. Comparing the Effect of Foot Massage with Grape Seed Oil and Sweet Almond Oil on Physiological Leg Edema in Primigravidae: A Randomized Clinical Trial. *Evidence-based Complement Altern Med*. 2020;2020.
10. Alfianty N, Mardhiyah A. Pengaruh Foot Massage terhadap Kualitas Tidur Pasien di Ruang ICU The effect of Foot Massage on Sleep Quality of in ICU Rooms ' Patients. *JKP* [Internet]. 2017;4(3):576–80. Available from: <https://www.bpb.de/politik/innenpolitik/arbeitsmarktpolitik/187829/lohnentwicklung-in-deutschland-und-europa?p=all%0Ahttp://pxjournal.org/journalhttp://pxjournal.org/journal/vol4/iss3/17%0Ahttp://www.embase.com/search/results?subaction=viewrecord&from=exp>
11. Westman KF, Blaisdell C. CE: Many Benefits, Little Risk: The Use of Massage in Nursing

- Practice. *Am J Nurs* [Internet]. 2016;116(1):34–9. Available from: <https://nursing.ceconnection.com/ovidfiles/00000446-201601000-00021.pdf>
12. Suharsono S dan. Hubungan Persepsi terhadap Kesehatan dengan Kesadaran (Mindfulness) Menyetor Sampah Anggota Klinik Asuransi Sampah di Indonesia Medika. *J Ilm Psikol Terap* [Internet]. 2016;III(2):2016. Available from: <https://ejournal.umm.ac.id/index.php/jipt/article/view/2876>
 13. Anggarawati TK. Hubungan Persepsi Dan Sikap Siswa Kelas III Pada Mata Pelajaran PKN Di SD Kanisius Kumendaman Yogyakarta. Univ Sanata Dharma Yogyakarta [Internet]. 2017; Available from: <http://repository.usd.ac.id/id/eprint/9568>
 14. Situmorang K. Skripsi Oleh: Krisnawati Situmorang. Inst Kesehat Helv [Internet]. 2018; Available from: <http://repository.helvetia.ac.id/id/eprint/1038/>
 15. Kirschner M, Robin Kirschner R. Hand Massage Reduces Perceived Stress, Anxiety and Fatigue. *Int J Innov Stud Med Sci* [Internet]. 2019;3(4):1–6. Available from: www.graphpad.com
 16. Priyambada G, Raharja AT, Putra F. Persepsi dan minat pelatih olahraga sekolah khusus olahraga internasional terhadap sport massage Perception and interests of sports coaches of sekolah khusus olahraga internasional on sport massage. *J Keolahragaan* [Internet]. 2018;6(1):77–86. Available from: <https://doi.org/10.21831/jk.v6i1.21180>
 17. O’Keefe PA, Harackiewicz JM. The science of interest. *The Science of Interest*. Singapore: Springer; 2017. 1–232 p.
 18. Hartono AB, Nusantara U, Guru P, Indonesia R, Kediri UNP. survai masyarakat terhadap pijat Tradisional Sangkal Putung Se-Kabupaten. Univ Nusan Persat Guru Republik Indones [Internet]. 2020; Available from: <http://repository.unpkediri.ac.id/1074/>
 19. Roza YD, Sumarwan U, Yulianti LN. Persepsi pasien tentang kualitas pelayanan dan minat kunjungan ulang di unit rawat jalan rs unand tahun 2019. *J Kesehat Masy Andal* [Internet]. 2019;13(2):27–33. Available from: <http://jurnal.fkm.unand.ac.id/index.php/jkma/article/download/525/262>
 20. Mulyana A, Hidayat S, Sholih S. Hubungan Antara Persepsi, Minat, dan Sikap Siswa dengan Hasil Belajar Siswa dalam Pembelajaran PKN. *J Pendidik dan Kebud* [Internet]. 2013;19(3):315–30. Available from: <http://jurnaldikbud.kemdikbud.go.id/index.php/jpnk/article/view/291>
 21. Rahayu S, Pertiwi WE, Meidina L, Poddar S. The Roles of Knowledge and Perceptions in Covid-19 Transmission Prevention Behavior. *Malaysian J Med Heal Sci* [Internet]. 2021;17(March 2020):62–6. Available from: https://medic.upm.edu.my/upload/dokumen/2021061711373114_MJMHS_0146.pdf
 22. Suhartini Ismail. Keperawatan Holistik dan Aplikasi Intervensi Komplementer [Internet]. 1st ed. ISMAIL S, editor. Indonesia: LPPM Stikes Kendal; 2016. 283 p. Available from: [http://eprints.undip.ac.id/72736/4/1._Buku_-_Insight_Of_Holistic_Nursing_\(Belum_edit\).pdf](http://eprints.undip.ac.id/72736/4/1._Buku_-_Insight_Of_Holistic_Nursing_(Belum_edit).pdf)