Implementation of Family Affective Functions in Leprosy Patients in North Gresik Region

Zuliani[1], Mat Fathoni[2], Abdul Ghofar[1], Ana Farida Ulfa[1], Andi Yudianto[1], Masruroh[1], Kurniawati[1], Fitri Firranda Nurmalisya[3]

[1]Faculty of Health Science, Universitas Pesantren Tinggi Darul Ulum, Jombang, Indonesia
[2]Sidayu Health Center, Gresik, Indonesia
[3]STIKES Pemkab Jombang, Jombang, Indonesia

ABSTRACT

Introduction: Leprosy or better known as leprosy is an infectious disease caused by Mycobacterium leprae which tends to attack the skin and peripheral nerves, causing neuropathy, chronic disorders, and disabilities (neurology and blindness). The general objective of this study was to determine the description of the affective function of families in leprosy patients in the North Gresik region. **Materials and Methods**: This research used a descriptive analytical design with a total population of 20 leprosy patients in the North Gresik region, which includes the working areas of several health centers: Sidayu, Bungah, Dukun, Mentaras, Sekapuk, Panceng, and Ujung Pangkah. Sampling technique used was total sampling, and data were collected using a questionnaire. **Results and Discussion**: The results showed that most families demonstrated good affective function, with 12 respondents (57.1%) categorized as good, and 9 respondents (42.9%) as sufficient. **Conclusion**: This study concludes that the majority of families of leprosy patients in the North Gresik region demonstrated a good level of affective function, indicating positive emotional support within the household. Health services are advised to provide counseling to leprosy patients to address negative emotions and support both patient and family well-being.

Keywords: Family affective function, leprosy, leprosy patients

INTRODUCTION

Leprosy, commonly known as leprosy or Morbus Hansen, is a chronic infectious disease caused by Mycobacterium leprae. The origin of the word leprosy itself comes from Sanskrit, namely kustha, which means a collection of symptoms found on the skin. Leprosy is classified as a chronic granulomatous infectious disease that can cause disability if not treated immediately. This is what distinguishes leprosy from other diseases considering the impacts caused in terms of physical, psychological, and social aspects which are quite large. The burden of disease associated with Mycobacterium leprae infection in humans comes from the ability of this pathogenic bacteria to induce severe injury to peripheral nerves (Schwann cells) and skin (keratinocytes and histiocysts) (Widasmara, 2018). This disease has an average incubation period of 2-5 years (Hidayah, et al., 2020). However, symptoms can appear within 1 year (Wijaya, et al., 2023). This disease can affect all ages with the most sufferers in the productive age (Yulita, et al., 2022). It is not yet known for certain how leprosy is transmitted. Theoretically, leprosy can be transmitted through respiratory and skin droplets, especially in individuals who have close and prolonged contact (Abidillah, et al., 2023).

Leprosy is still a global health problem because it is a chronic infectious disease if left untreated

because it can cause physical, psychological, and social disability development disorders (Najmuddin, 2022). The official report of the World Health Organization (WHO) noted that cases of leprosy sufferers in the world have increased in number since 2020. In 2022, there were 174,087 cases of leprosy with a prevalence of 165,628 from 135 WHO Member States. Indonesia is the third country with the most cases of sufferers in the world with leprosy cases reaching 12,441 cases. This can still increase along with unreported cases (World Health Organization, 2022). The high prevalence of leprosy shows that there is still transmission in the community and a lack of early detection activities for cases of sufferers (Armaijn and Darmayanti, 2019).

Based on the report of the East Java Provincial Health Office in 2022, new cases of leprosy were still found in Gresik Regency with a prevalence of 4.57 out of every 10,000 residents. The incidence of new leprosy cases is still found every year in a rural area in North Gresik. Several sub-districts such as Sidayu District, Bungah District, Panceng District, Ujung Pangkah District and Dukun District are still one of the eight leprosy pockets in Gresik Regency (Luthfia, et al., 2021). A preliminary study obtained data from the Gresik Regency Health Office in 2023 revealed that the number of new cases in Gresik was 79 cases consisting of 2 cases for the Pausi Basiler type while 77 cases for the Multi Basiler type. In 2024, 20 new cases of leprosy were recorded in the North Gresik region covering 5 sub-districts, namely Sidayu District, Bungah District, Dukun District, Ujung Pangkah District and Panceng District. This indicates that the source of leprosy transmission still occurs in this area, even though the elimination status has been achieved.

One of the obstacles in efforts to break the chain of leprosy transmission in the community is due to the high stigma against leprosy both by the community and the sufferers themselves (Armaijn and Darmayanti, 2019). When hearing the word leprosy, the first reaction that appears in society is anticipation that is nuanced by stigma. Most leprosy sufferers experience poor self-acceptance. sufferers feel the loss of their role in the family because of the leprosy they suffer from. The high disability rate in leprosy sufferers is caused by feelings of fear, shame because of the stigma of leprosy in society, lack of knowledge, and family concern for sick family members. Leprosy sufferers tend to lock themselves at home because they are ashamed and have no self-esteem in society. The family support received by leprosy sufferers tends to be lacking (Putri, et al., 2016).

The preliminary study that has been conducted found that most leprosy sufferers ask for time to take medicine during the day and in a separate room. This happens because leprosy sufferers do not want to be known by neighbors or people around them because they have leprosy. To overcome this self-stigma, of course, support from the family is very important. The family is the smallest unit of society that has a great influence on a person's life, especially in health. One of the functions of the family is the affective function as a source of affection and positive reinforcement for family members in it. Positive support from the family can raise the spirit of leprosy sufferers to improve their quality of life, feel that their life is meaningful, and be able to respect themselves and others (Tamamengka, et al., 2019). Based on this background, researchers are interested in knowing more deeply the implementation of the affective function of the family in leprosy sufferers in the North Gresik region.

MATERIALS AND METHODS

A quantitative descriptive method was used in this study. The population consisted of 20 leprosy patients in the North Gresik region, which includes the working areas of several health centers: Sidayu, Bungah, Dukun, Mentaras, Sekapuk, Panceng, and Ujung Pangkah. A total sampling technique was applied, and data were collected using a questionnaire.

RESULTS

Respondent Characteristics

In **table 1**, data is obtained that the age of respondents in this study is almost half of the respondents, namely 6 (28.6%) early elderly, namely aged 46-55 years. In **table 2**, data is obtained that the majority of gender in this study were male, as many as 12 respondents (57.1%). In **table 3**, data is obtained that the majority of respondents' educational background in this study was junior high school, as many as 11 (52.4%). In **table 4**, data is obtained that the majority of the marital status of respondents in this study is Married, as many as 14 respondents (66.7%). In **table 5**, data is obtained that the work of respondents in this study is almost half of the respondents as housekeepers, which is 5 (23.8%).

Table 1 Frequency Distribution of Respondents by Age

No	Age	Frequency	Percentage (%)
1	Late adolescence (17-25 years)	4	19%
2	Early adulthood (26-35 years)	4	19%
3	Late adulthood (36-45 years)	4	19%
4	Early elderly (46-55 years)	6	28.6%
5	Late erderly (56-65 years)	2	9.5%
6	Seniors	1	4.8%
	Total	21	100%

Table 2 Frequency Distribution of Respondents by Gender

No	Gender	Frequency	Percentage (%)
1	Male	12	57.1%
2	Female	9	42.9%
	Total	21	100%

Table 3 Frequency Distribution of Respondents based on education

No	Education	Frequency	Percentage (%)
1	Not attending school	0	0%
2	Primary	2	9.5%
3	Junior high	11	52.4%
4	High school	6	28.6%
5	University	2	9.5%
6	Others	0	0%
	Total	21	100%

Table 4 Frequency Distribution of Respondents Based on Marital Status

No	Marital status	Frequency	Percentage (%)
1	Married	14	66.7%
2	Unmarried	7	33.3%
	Total	21	100%

Table 5 Frequency Distribution of Respondents by Occupation

No	Occupation	Frequency	Percentage (%)
1	Not working	2	9.5%
2	Teacher	2	9.5%
3	Self employed	4	19.0%
4	farmer	1	4.8%
5	Housekeeper	5	23.8%
6	Student	4	19.0%
7	Others	3	14.3%
	Total	21	100%

In **table 6**, it is found that almost half of the respondents in this study suffered from leprosy for 9 months, as many as 9 (42.9%). In **table 7**, data is obtained that the majority of the severity of leprosy types suffered by respondents in this study were dry or paucibacillary types as many as 11 (52.4%). In **table 8**, data is obtained that the majority of the level of leprosy disability of respondents in this study was level 0 (zero) as many as 13 respondents (61.9%). In **table 9** shows that most of the leprosy

treatment history suffered by respondents in this study was undergoing treatment as many as 12 (57.1%). In **table 10**, data is obtained that almost half of leprosy sufferers are in the Dukun Health Center area, namely 6 (28.6%).

Table 6 Frequency Distribution of Respondents based on Duration of Suffering

No	Duration of suffering (months)	Frequency	Percentage (%)
1	2 months	2	9.5%
2	5 months	2	9.5%
3	8 months	2	9.5%
4	10 months	1	4.8%
5	12 months	9	42.9%
6	24 months	2	9.5%
7	36 months	1	4.8%
8	48 months	1	4.8%
9	60 months	1	4.8%
	Total	21	100%

Table 7 Frequency Distribution of Respondents based on leprosy type

No	Types of leprosy	Frequency	Percentage (%)
1	Dry or paucibacillary type	11	52.4%
2	Wet or multibacillary type	10	47.6%
	Total	21	100%

Table 8 Frequency Distribution of Respondents based on leprosy disability level

No	Level of leprosy disability	Frequency	Percentage(%)
1	No disability	13	61.9
2	Level 1	5	23.8
3	level 2	3	14.3
	Total	21	100.0

Table 9 Frequency Distribution of Respondents based on Treatment History

No	Treatment history	Frequency	Percentage(%)
1	On treatment	12	57.1%
2	Post treatment	9	42.9%
	Total	21	100%

Table 10 Frequency Distribution of Respondents based on the Health Center Work Area

No	Health center working area	Frequency	Percentage (%)
1	Sidayu health center	1	4.8%
2	Dukun health center	6	28.6%
3	Sekapuk health center	3	14.3%
4	Bungah health center	2	9.5%
5	Panceng health center	5	23.8%
6	Mentaras health center	2	9.5%
7	Ujung Pangkah health center	2	9.5%
	Total	21	100%

Family Affective Function Criteria

In **table 11**, data show that the majority of families of leprosy patients demonstrated a good level of affective function, with 12 respondents (57.1%). Meanwhile, 9 respondents (42.9%) were in the sufficient category.

Table 11 Frequency Distribution of Respondents based on family affective function

No	Family affective function	Frequency	Procentage (%)
1	Sufficient	9	42.9%
2	Good	12	57.1%
	Total	30	100%

DISCUSSION

Based on the data research, it was found that the age of respondents in this study was almost half of the respondents, namely 6 (28.6%) early elderly, namely 46-55 years old. Most of the respondents' education level in this study was junior high school as many as 11 (52.4%). Most of the respondents' marital status in this study was married as many as 14 respondents (66.7%). Almost half of the respondents' jobs in this study were taking care of the household, namely 5 (23.8%). Almost half of the respondents' suffering duration in this study was for 9 months as many as 9 respondents (42.9%). Most of the types of leprosy suffered by respondents in this study were dry or paucibacillary types as many as 11 (52.4%). Most of the levels of leprosy disability of respondents in this study were level 0 (Zero) as many as 13 respondents (61.9%). Most of the leprosy treatment history of respondents in this study was under treatment as many as 12 (57.1%). Most of the family's affective function in this study was good as many as 12 respondents (57.1%).

The main affective function of the family teaches everything to prepare family members to relate to others, the socialization function is the function of developing and training children to live socially before leaving home to relate to others outside the home, and the function of health care or maintenance, namely the function of maintaining the health of family members to remain highly productive. Friedman in Diandry (2019) stated that the family has a role to carry out health care practices, namely to prevent health problems or care for sick family members by increasing the ability of sick family members to be able to carry out their own health care functions and tasks. The family is very important in caring for sick family members, Residan and Lystiana's research, plays a role as a supporter and plays a role as a decision maker in caring for their family members after a stroke at home.

Long treatment times often cause sufferers to be at risk of stopping treatment during the healing period for various reasons, including feeling healthy or economic factors, as a result of which the treatment pattern must be started from the beginning with even greater costs and taking a long treatment time Riskesdas in Diandry (2019). According to the theory (Edwinandro, 2017) men are more likely to get leprosy than women. This statement is in line with research conducted by (Syamsuar manyullei, 2012), with the results that leprosy occurs more often in men than women, because transmission in men is related to activities carried out every day. The review results found that client 1 worked as a private employee, client 2 as a housewife, client 3 was self-employed, and client 4 as a farmer. According to the theory (Menu, 2017) states that clients work in rice fields as farmers which allows clients to have active contact with many people in the community, so that they can transmit leprosy to others.

This leprosy disease mostly attacks members of low-income families. This statement is in line with research conducted by (Edwinandro, 2017), with the results that most leprosy sufferers in the world are in developing countries who earn income from farming or agriculture and heavy work are more likely to be affected by leprosy than clients who have light jobs. The review results found that client 1 worked as a private employee, client 2 as a housewife, client 3 as an entrepreneur, and client 4 as a farmer. According to Menu's theory, in Muniroh (2022) stated that clients work in rice fields as farmers which allows clients to have active contact with many people in the community, so that they can transmit leprosy to others.

This leprosy disease mostly attacks members of low-income families. This statement is in line with research conducted by Edwinandro, in Muniroh (2022), with the results that most leprosy sufferers in the world are in developing countries who earn

income from farming or agriculture and heavy work are more likely to be affected by leprosy than clients who have light jobs. According to Duvall's theory in (Friedman, 2018) family happiness is measured by the strength of family love, where the response of affection from one family member to another family member provides a basis for appreciation for family life. This statement is in line with research conducted by (Farid Wahyudi Agustiawan, 2020), with the results of the success of affective functions seen through happy families.

Family members who develop a positive self-concept, a sense of belonging and ownership, a sense of meaning that is a source of affection. Affective function in the family greatly influences leprosy, where clients with leprosy need the support of affection from family members. Not only that, the family also supports the treatment and healing of clients. If the affective function is absent or less good, then the client with leprosy will have a worse condition that can cause disability. The author assumes that leprosy sufferers are more common in men than women. Because men's activities are more often outdoors for work, so they are at risk of developing leprosy.

CONCLUSION

This study concludes that the majority of families of leprosy patients in the North Gresik region demonstrated a good level of affective function, indicating positive emotional support within the household. Families play a vital role not only in providing emotional support but also in motivating patients to complete their long treatment journey and maintain their self-esteem. Strengthening family-based interventions and counseling is highly recommended to enhance the support system for leprosy patients. Health services are advised to provide counseling to leprosy patients to address negative emotions and support both patient and family well-being.

Author Contributions
Conceptualization: Z. Methodology: Z. Formal Analysis: A.F.U. Writing – Original Draft: M.F. Writing – Review & Editing: Z. Investigation: Z.A.A., A.F.U. Supervision: M.F. Visualization: A.G. Project Administration: A.G. Software: A.G. Validation: A.F.U., M. Resource: A.F.U., A.Y., K. Funding Acquisition: F.F.N. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest
The authors declare no conflicts of interest.

Abbreviations
Not applicable.

REFERENCES

Abidillah, E., Hannan, M., and Huzaimah, N. (2023) 'Peran Media Informasi, Efikasi Diri, dan Perilaku Keluarga Dalam Upaya Mencegah Penularan Kusta', *Jurnal Keperawatan Profesional (KEPO)*, 4(1), p27-35.

Alinda, M.D., Geani, S., Agusni, R.I., Kusumaputra, B.H., Reza, N.R., Prakoeswa, C.R.S., and Listiawan, M.Y. (2020) 'Diagnosis and Management of Leprosy', *Periodical of Dermatology and Venereology*, 32(2), p149-157.

Amiruddin, M.D. (2019) *Penyakit Kusta: Sebuah Pendekatan Klinis*. Firstbox Media

Anggraini, F.D.P., Aprianti, A., Setyawati, V.A.V., and Hartanto, A.A. (2022) 'Pembelajaran Statistika Menggunakan Software SPSS untuk Uji Validitas dan Reliabilitas', *Jurnal Basicedu*, 6(4), p6491-6504.

Armaijn, L. and Darmayanti, D. (2019) 'Persepsi Penderita Kusta Terhadap Stigma Kusta Di Kota Ternate', *Kieraha Medical Journal*, 1(2).

Bhat, L., Khan, N., Vaida, N., Hassan, I., and Banday, M. (2023) 'Prevalence, Characteristics and Socio-Demographic Correlates of Self-Stigma among Leprosy Affected Persons-A Case Study', *Indian J Lepr*, 95, p1-15.

Darmawan, H., and Rusmawardiana, R. (2020) 'Sumber dan cara penularan Mycobacterium leprae', *Tarumanagara Medical Journal*, 2(1), p186-197.

Deps, P., and Cruz, A. (2020) 'Why we should stop using the word leprosy', *The Lancet Infectious Diseases*, 20(4), pe75-e78.

Hannan, M., Damayanti, C.N., and Hidayat, S. (2024) 'Studi Kualitatif Pemahaman Masyarakat tentang Penyakit Kusta di Kabupaten Sumenep', *Jurnal Keperawatan*, 16(3), p1055- 1062.

Herawati, C., and Sudrajat, S. (2018) 'Apakah upaya pencegahan, faktor penyakit dan faktor individu mempunyai dampak terhadap cacat tingkat II kusta', *Syntax Literate*, 3(7), p45-53.

Hidayah, E.N., Ginandjar, P., Martini, M., and Udiyono, A. (2020) 'Hubungan Tingkat Pengetahuan, Sikap dan Tingkat Dukungan Keluarga dengan Praktik Perawatan Diri Pada Penderita Kusta di Kota Semarang', *Jurnal Ilmiah Mahasiswa*, 10(1), p10-14.

Luthfia, R., Pramuningtyas, R., Dasuki, M.S., and

Zuliani et al. (2025) Healthcare Insight, 1(1)

24

Prakoeswa, F.R.S. (2021) 'Status Gizi dan Personal Hygiene Berpengaruh Terhadap Kusta Wanita di Kabupaten Gresik', *Proceeding Book National Symposium and Workshop Continuing Medical Education XIV*.

Maymone, M.B., Laughter, M., Venkatesh, S., Dacso, M.M., Rao, P N., Stryjewska, B.M., and Dunnick, C.A. (2020) 'Leprosy: Clinical aspects and diagnostic techniques', *Journal of the American Academy of Dermatology*, 83(1), p1-14.

Mellaratna, W.P. (2022) 'Penegakan Diagnosis Kusta Secara Dini untuk Pencegahan Kecacatan yang Ditimbulkan', *Lentera: Jurnal Ilmiah Sains, Teknologi, Ekonomi, Sosial, dan Budaya*, 6(2), p58-62.

Mukin, Y.M.D., Buntoro, I.F., Indriarini, D., and Setiono, K.W. (2022) 'The correlation between disability and depression level with quality of life leprosy patients at Rumah Sakit Lepra Damian Lewoleba', *Cendana Medical Journal*, 10(2), p309-314.

Najmuddin, M. (2022) 'Stigma Terhadap Penyakit Kusta: Tinjauan Komunikasi Antarpribadi', *Al-Din: Jurnal Dakwah dan Sosial Keagamaan*, 8(1), p70-83.

Nurhasanah, N., and Jufrizal, J. (2019) 'Stigma Masyarakat pada Penderita Kusta', *Idea Nursing Journal*, 10(1), p27-31.

Pattiruhu, I.C.S., Rompas, S., and Simak, V. (2019) 'Fungsi afektif keluarga dan fungsi sosialisasi keluarga dengan perilaku seksual remaja', *Jurnal Keperawatan*, 7(2).

Prihandini, C.W., Andarini, S., and Setyoadi, S. (2017) 'Pengaruh Pemberian Logoterapi terhadap Harga Diri Penderita Kusta yang Mengalami Harga Diri Rendah di UPT Rumah Sakit Kusta Kediri', *Jurnal Keperawatan Florence*, 2(1).

Pristianto, A., and Utami, K.I. (2023) 'Effect of Massage with Olive Oil and Scrub on Xerosis et Morbus Hansen Multi Basiler', *Journal of Agromedicine and Medical Sciences*, 9(2), p64-69.

Putra, I.G.N.D., Fauzi, N., and Agusni, I. (2009) 'Kecacatan pada Penderita Kusta Baru di Divisi Kusta URJ Penyakit Kulit dan Kelamin RSUD Dr. Soetomo Surabaya Periode 2004–2006', *Berkala Ilmu Kesehatan Kulit & Kelamin*, 21(1), p9-17.

Putri, M.A., and Harmayetty, H. (2016) 'Pengaruh Psycoeducative Family Therapy Terhadap Pengetahuan, Dukungan Keluarga Dan Stigma Kusta Dengan Model Pendekatan Calgary Di Puskesmas Balerejo Kabupaten Madiun', *Jurnal Ners*, 11(1), p88-98.

Sermrittirong, S., and Van Brakel, W.H. (2014) 'Stigma in leprosy: concepts, causes and determinants', *Leprosy review*, 85(1), p36-47.

Setiyanti, M., Jamilatun, M., and Kurniati, N. (2022) 'Gambaran BTA (+) Positif Mycobacterium leprae pada Mukosa Hidung Penderita Kusta di Rumah Sakit Sitanala Kota Tangerang', *Jurnal Medikes (Media Informasi Kesehatan)*, 9(1), p101-108.

Sholehuddin, S., Nulhaqim, S.A., and Raharjo, S.T. (2019) 'Dukungan keluarga bagi penderita kusta di kota Cirebon', *Prosiding Penelitian Dan Pengabdian Kepada Masyarakat*, 6(1): 81.

Siallagan, A., Ginting, F., Gaol, R.L., and Pujiastuti, M. (2021) 'Peningkatan Konsep Diri dan Perawatan Luka pada Penderita Kusta di Panti Rehabilitasi Kusta Gema Kasih Galang, Sumatera Utara', *Jurnal Peduli Masyarakat*, 3(4), p507-514.

Siregar, T., and Ratnawati, D. (2018) 'Pengalaman Keluarga Merawat Penderita Kusta Dalam Menghadapi Stigma Masyarakat Di Kelurahan Limo Depok-Jawa Barat', *Jurnal Ilmiah Keperawatan Indonesia (JIKI)*, 1(2), p63-82.

Tamamengka, D., Kepel, B., and Rompas, S. (2019) 'Fungsi Afektif Dan Perawatan Keluarga Dengan Kepatuhanpengobatan Tb Paru', *Jurnal Keperawatan*, 7(2).

Wahidin, A., and Nurlan, F. (2023) 'Pengembangan Kawasan Sehat Terpadu Masyarakat Penderita Kusta', *JMM (Jurnal Masyarakat Mandiri)*, 7(3), p2715-2729.

Widasmara, D. (2018) *Penyakit Kusta Sebuah Perspektif Klinis*. Malang: UB Press.

Wijaya, R.D., Rahesi, I.D., Satriani, S., Meilia, R.E., Karditiawati, A., Nurmiwiyati, N., and Mahendra, D. (2023) 'Capacity Building Deteksi Dini Lepra Kader Kesehatan di Kabupaten Bekasi', *JAM: Jurnal Abdi Masyarakat*, 4(1), p109-116.

Yulita, A., Gustina, E., and Yusnilasari, Y. (2022) 'Penyakit Kusta dan Peran Serta Masyarakat di Wilayah Kerja Puskesmas Batumarta II Kabupaten OKU Tahun 2021', *Jurnal Kesehatan Saelmakers PERDANA (JKSP)*, 5(2), p288-301.

Zahara, C.I., and Anastasya, Y.A. (2021) 'Dukungan Keluarga pada Lansia Program Keluarga Harapan', *Jurnal Psikologi Terapan (JPT)*, 3(1), p16-19.

Zaki, M., and Saiman, S. (2021) 'Kajian tentang Perumusan Hipotesis Statistik Dalam Pengujian Hipotesis Penelitian', *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, 4(2), p115-118.

Zulka, A.N. (2015) *Hubungan Pelaksanaan Fungsi Afektif Keluarga dengan Tingkat Harga Diri Klien Kusta di Wilayah Kerja Puskesmas Tanggul dan Sumberbaru Kabupaten Jember* [online]. Available at: http://repository.unej.ac.id/handle/123456789/66902.