International Journal
of Medical and
Pharmaceutical Research

| ORIGINAL ARTICLE | OPEN ACCESS |

A pilot study to Determine the Health-related Quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis in RNTCP centre Villupuram district

Prof. Karthi.R[1], Dr. Hemavathy.J[2], Dr. Sudhakar.R[3]

[1] Vice Principal, E.S college of Nursing, Villupuram. Affiliated to The TamilNadu Dr.M.G.R Medical University, Chennai, Tamilnadu, India.
[2] Professor and HOD, Department of Mental Health Nursing, Omaiyal Achi college of Nursing, Chennai, Affiliated to The TamilNadu Dr.M.G.R Medical University, Chennai, Tamilnadu,India.
[3] District Tuberculosis Officer, Villupuram District, Tamilnadu, India

A B S T R A C T

Aim: To determine the Health-related Quality of life and Self-Esteem of patients who have undergone Dots regimen for pulmonary tuberculosis in Rntcp centre Villupuram district. **Objectives**: (i) To determine the Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis. (ii) To compare the scores of Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis at different intervals. (iii) To correlate the mean differed scores of Health-related quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis. (iv) To associate the selected background variables with the mean differed scores of Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis. **Methodology**: Non experimental Descriptive Survey method was adopted.100 samples selected by using non-probability purposive sampling technique. Formal administrative permission obtained from concerned authorities and informed written consent obtained from the sample. Background variables data was collected and Health-related quality of life and Self-Esteem was assessed by FACIT-TB Health-Related Quality of Life Scale and SERTHUAL Self-Esteem Scale respectively by using structured interview schedule from selected samples at 0, 3rd and 6th month. **Results**: In level of Health-related quality of life there is highest level of frequency is moderate QOL 79 (79%), in 0 month and Good QOL 59 (59 %) and 74 (74%) in 3rd and 6th month respectively. In level of Self-Esteem the highest level frequency at positive general Self-Esteem is 57 (57%), 74 (74%) and 81 (81%) at 0, 3rd and 6th month respectively. The overall Health-related quality of life score and Self-Esteem score, there is a significant, positive, moderate correlation. It indicates quality of life score increases and the Self-Esteem score also increases moderately. **Conclusion**: The result of the study revealed that Health-Related Quality of Life and Self-Esteem was improved after the completion of the treatment. There was a moderate positive correlation between the Health-Related Quality of Life and Self-Esteem among patients who have undergone DOTS regimen.

Key Words: *Health-related Quality of life, Self-Esteem, Pulmonary Tuberculosis, DOTS regimen.*

INTRODUCTION:

Tuberculosis (TB) is a disease caused by Mycobacterium tuberculosis that are spread from person to person through the air. Tuberculosis can affect anyone anywhere, but most people who develop the disease are adults and 30 high TB Burden countries accounts for almost 90% of those who fall sick with Tuberculosis each Year. Worldwide 9.4 million cases are detected annually out of which half are sputum positive. 1.98 million cases are from India. In India, every day more than

Prof. Karthi.R *et al.* A pilot study to Determine the Health-related Quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis in RNTCP centre Villupuram district. *Int. J Med. Pharm. Res., 6 (4): 527-532, 2025*

527

5000 people develop tuberculosis disease. Nearly 1000 die due to tuberculosis i.e. 2 deaths every 3 minutes. India is the highest TB burden country in the world having an estimated incidence of 26.9 lakh cases in 2019 (WHO). Though most focus is being directed towards mortality and incidence rate, the changes in morbidity and other health status parameters are not been well considered.

The HRQoL is deformed in tuberculosis on both active and inactive cases; the quality of life was affected by demographic and socio-cultural characteristics, treatment period and accompanying diseases. All the predicted fields of quality of life get affects in TB, the field includes general health perception, corporal sense, psychological health, mental peace and physical function and social roles.

TB is the major cause of morbidity in most of the countries, and alike an awareness of its result on quality of life and health status is fundamental for patient care, the assessment of newer treatments or preventative strategies, as data on quality of life are used in evaluation of health economic.

TB patients may experience low-self-esteem which makes total burden of disease more challenging to carry. Low self-esteem, depression, anxiety, feelings of hopelessness and worthlessness are highly associated with each other while low self-esteem intensifies susceptibility to the stressors, which leads to difficulty in collaborating and foster reluctance to contribute in the treatment procedures.

The present study is adopted to assess the Health-related quality of life and Self-Esteem among patients who have undergone DOTS regimen for pulmonary tuberculosis and compare and correlate the Health-related quality of life and Self-Esteem.

STATEMENT OF THE PROBLEM
To determine the Health-related Quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis in RNTCP centre Villupuram district.

OBJECTIVES OF THE STUDY
1. To determine the Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis
2. To compare the scores of Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis at different intervals.
3. To correlate the mean differed scores of Health-related quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis.
4. To associate the selected background variables with the mean differed scores of Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis.

RESEARCH HYPOTHESES
1. RH1: There is a significant difference between the scores of health-related quality of life and Self-Esteem for patients who have undergone DOTS regimen for pulmonary tuberculosis at different intervals.
2. RH2: There is a significant correlation between the mean differed scores of health-related quality of life and Self-Esteem for patients who have undergone DOTS regimen for pulmonary tuberculosis.
3. RH3: There is a significant association of the selected background variables with the mean differed scores of Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis.

DELIMITATIONS
1. The study is limited to the patients who have undergone DOTS regimen at selected setting.
2. The patients available at the time of data collection.

RESEARCH METHODOLOGY
Non experimental Descriptive Survey method.100 samples selected by using non-probability purposive sampling technique. Formal administrative permission obtained from concerned authorities and informed written consent obtained from the sample. Background variables data was collected and Health-related quality of life and Self-Esteem was assessed by FACIT-TB Health-Related Quality of Life Scale and SERTHUAL Self-Esteem Scale respectively by using structured interview schedule from selected samples at 0 month. Health-related quality of life and Self-Esteem was assessed for 3rd and 6th month.

Prof. Karthi.R *et al.* A pilot study to Determine the Health-related Quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis in RNTCP centre Villupuram district. *Int. J Med. Pharm. Res., 6 (4): 527-532, 2025*

528

Table 1 Distribution of Level of health-related quality of life score among patients undergone DOTS regimen for Pulmonary Tuberculosis at different intervals

N=100

Assessment	Level of HRQOL	Frequency	Percentage
		N	%
0 Month	Poor HRQoL	19	19.00
	Moderate HRQoL	**79**	**79.00**
	Good HRQoL	2	2.00
3rd Month	Poor HRQoL	15	15.00
	Moderate HRQoL	26	26.00
	Good HRQoL	**59**	**59.00**
6th Month	Poor HRQoL	11	11.00
	Moderate HRQoL	15	13.00
	Good HRQoL	**74**	**74.00**

Table: 1 shows that in 0 month, 19.00% of patients were had Poor HRQoL, 79.00% of them had moderate HRQoL score and 2.00% of them had good HRQoL. In 3rd month, 15.00% of patients were had poor HRQoL, 26.00% of them had moderate HRQoL and 59.00% of them had good HRQoL. In 6th month, 11.00% of patients were had poor HRQoL, 15.00% of them had moderate HRQoL and 74.00% of them had good HRQoL.

Table 2 Distribution of Level of Self-Esteem score among patients undergone DOTS regimen for Pulmonary Tuberculosis at different intervals.   N=100

Assessment	Level of Self-Esteem	Frequency	Percentage
		N	%
0 Month	Negative General Self-Esteem	21	21.00
	General Self-Esteem	21	21.00
	Positive General Self-Esteem	**58**	**58.00**
3rd Month	Negative General Self-Esteem	16	16.00
	General Self-Esteem	10	10.00
	Positive General Self-Esteem	**74**	**74.00**
6th Month	Negative General Self-Esteem	12	12.00
	General Self-Esteem	7	7.00
	Positive General Self-Esteem	**81**	**81.00**

Table: 2 shows that In 0 month 21.00% of the patients were had negative general Self-Esteem score, 21.00% of them had 101-200 general Self-Esteem and 57.00% of them had 201-300 positive general Self-Esteem. In 3rd month, 16.00% of the patients were had negative general Self-Esteem, 10.00% of them had general Self-Esteem and 74.00% of them had positive general Self-Esteem In 6th month, 12.00% of the patients were had negative general Self-Esteem, 7.00% of them had general Self-Esteem and 81.00% of them had positive general Self-Esteem.

Table 3 Comparison of mean Health-related quality of life During 0, 3rd and 6th month among patients undergone DOTS regimen for Pulmonary Tuberculosis at different intervals.

N=100

	0 Month		3rd Month		6th Month		Mean difference	Oneway Repeated measures ANOVA F-test
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**		
PWB	44.69	11.65	51.54	12.64	**56.76**	12.78	12.07	**F=1213.58 p=0.001*** (S)**
SWB	16.59	4.18	19.35	3.58	**23.19**	4.14	6.60	**F=924.69 p=0.001*** (S)**
EWB	29.35	8.15	34.81	7.90	**37.97**	7.66	8.62	**F=1013.80 p=0.001*** (S)**
FWB	15.86	3.55	19.67	3.88	**22.88**	4.36	7.02	**F=1072.02 p=0.001*** (S)**

SPWB	9.47	1.01	10.06	1.04	**10.23**	1.01	0.76	**F=669.23 p=0.001*** (S)**
Total QOL	115.95	25.34	135.43	27.90	**151.03**	29.06	35.08	**F=2756.20 p=0.001*** (S)**

***P≤0.001 high significant

Table: 4 shows that Total HRQoL score, in 0-month HRQoL mean score was 115.95, in 3rd month HRQoL mean score was 135.43 and in 6th month HRQoL mean score was 151.03, and the mean gain HRQoL score was 35.08. Repeated measures F-test analysis shows that, mean HRQoL score was statistically significant difference between 0 month and 6th month (F 2756.20, P ≤ 0.001).

Table 4 Comparison of mean Self-Esteem score During 0, 3rd and 6th month among patients undergone DOTS regimen for Pulmonary Tuberculosis at different intervals.

N=100

0 Month		3rd Month		6th Month		Mean difference	One-way Repeated measures ANOVA F-test
Mean	SD	Mean	SD	Mean	SD		
179.55	53.511	201.74	54.915	239.36	66.639	59.81	**F=1362.65 p=0.001*** (S)**

***P≤0.001 high significant

Table: 4 shows that in 0-month Self-Esteem mean score was 179.55, in 3rd month Self-Esteem mean score was 201.74 and in 6th month Self-Esteem mean score was 239.36 and the mean gain score was 59.81Self-Esteem score. Repeated measures F-test analysis shows that, mean overall Self-Esteem score was statistically significant difference between 0 month and 6th month (F = 1362.65, P ≤ 0.001).

Table 5 Correlation between Health-related quality of life and self –esteem scores.

N=100

Correlation between	Mean gain score Mean±SD	Karl pearson Correlation coefficients	Interpretation
Self-Esteem score Vs PWB score	59.81±25.48 Vs 11.89±6.21	**r= 0.507 P=0.001*****	High correlation
Self-Esteem score Vs SWB score	59.81±25.48 Vs 6.55±3.69	**r= 0.326 P=0.01****	Fair correlation
Self-Esteem score Vs EWB score	59.81±25.48 Vs 8.51±5.20	**r= 0.385 P=0.001*****	High correlation
Self-Esteem score Vs FWB score	59.81±25.48 6.98±2.95	**r= 0.384 P=0.001*****	High correlation
Self-Esteem score Vs SPWB score	59.81±25.48 0.76±0.65	**r= 0.215 P=0.01****	Fair correlation
Self-Esteem score Vs Overall QOL score	59.81±25.48 34.68±12.47	**r= 0.517 P=0.001*****	Moderate correlation

P≤0.001 high significant

Table: 5 shows that Self-Esteem score and overall HRQOL score, there was a significant, positive, moderate correlation between Self-Esteem gain score and QOL gain score. It means Self-Esteemscore increases their HRQoL score also increases moderately

DISCUSSION:
Objective 1: To determine the health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis.
In 0 month, 19.00% of patients were had Poor HRQoL, 79.00% of them had moderate HRQoL score and 2.00% of them had good HRQoL. In 3rd month, 15.00% of patients were had poor HRQoL, 26.00% of them had moderate HRQoL and 59.00% of them had good HRQoL. In 6th month, 11.00% of patients were had poor HRQoL, 15.00% of them had moderate HRQoL and 74.00% of them had good HRQoL.

In 0 month 21.00% of the patients were had negative general Self-Esteem score, 21.00% of them had 101-200 general Self-Esteem and 57.00% of them had 201-300 positive general Self-Esteem. In 3rd month, 16.00% of the patients were had

Prof. Karthi.R *et al.* A pilot study to Determine the Health-related Quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis in RNTCP centre Villupuram district. *Int. J Med. Pharm. Res., 6 (4): 527-532, 2025*

530

negative general Self-Esteem, 10.00% of them had general Self-Esteem and 74.00% of them had positive general Self-Esteem In 6th month, 12.00% of the patients were had negative general Self-Esteem, 7.00% of them had general Self-Esteem and 81.00% of them had positive general Self-Esteem.

Objective 2: To compare the level of Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis at different intervals.
The overall Health-related quality of life mean score, in 0 month was 115.95, in 3rd month was 135.43 and in 6th month was 151.03, and the mean gain score of health-related quality of life was 35.08. the F=2756.20 was significant at p=0.001. Self-Esteem mean score in 0 month was 179.55, in 3rd month was 201.74 and in 6th month was 239.36, and the mean gain score of Self-Esteem score was 59.81. the F=1362.65 was significant at p=0.001**. Hence hypothesis **RH1 was accepted**

Objective 3: To correlate the level of Health-related quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis.
The overall Health-related quality of life score and Self-Esteem score, there is a significant, positive, moderate correlation. It indicates quality of life score increases and the Self-Esteem score also increases moderately. Hence hypothesis **RH2 was accepted**

Objective 4: To associate the selected background variables with the mean differed scores of Health-related Quality of Life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis.
In Health-related quality of life there was a significant association with age (F=1.24; p=0.001), gender (F=3.31, p=0.001), education (F=17.33, p=0.001), occupation (F=38.66, p=0.001), family monthly income (F=18.17, p=0.001)

In Self-Esteem there was significant association with age (F=3.84; p=0.05), gender (F=7.53, p=0.001), education (F=17.33, p=0.001), occupation (F=33.66, p=0.001), family monthly income (F=3.42, p=0.05). Hence hypothesis **RH3 was accepted**

Conclusion:
The result of the study revealed that Health-Related Quality of Life and Self-Esteem was improved at 6th month after the completion of the treatment. There was a moderate positive correlation between the Health-Related Quality of Life and Self-Esteem among patients who have undergone DOTS regimen.

RECOMMENDATION
➢ Study can be done to improve Health-related quality of life and Self-Esteem among the elderly and co morbid patients.
➢ Education and daily life style practices can be provided to the patient to maintain their good quality of life and Self-Esteem.
➢ Study can be done about the family burden and the family members coping to patient disease condition.

REFERENCES:
1. World Health Organization, Global tuberculosis report 2019 Geneva Available at: https://www.who.int/news-room/fact-sheets/detail/tuberculosis.
2. India TB report 2019, Central TB Division, Ministry of Health and Family Welfare, http://www.tbcindia.gov.in
3. National TB Prevalence Survey in India, 2019 – 2021, ICMR, National Institute for research in tuberculosis.
4. Shahriar Salehitalia, Kobra Nooriana, Masoud Hafizib, Ali Hassanpour Dehkordi, Quality of life and its effective factors in tuberculosis patients receiving directly observed treatment short-course (DOTS), J Clin Tuberc Other Mycobact Dis 2019, 100093.
5. Vasiliu Ana-Maria, Self-Esteem as an indicator of Quality of Life, Science, Movement and Health, 2015 15, 2, 570-574.
6. Awaisu et al.: Impact of connecting tuberculosis directly observed therapy short-course with smoking cessation on health-related quality of life. Tobacco Induced Diseases 2012 10:2. doi:10.1186/1617-9625-10-2.
7. M. Muniyandi, R. Rajeswari, R. Balasubramanian, C. Nirupa, P. G. Gopi, K. Jaggarajamma, F. Sheela, P. R. Narayanan Evaluation of post-treatment health-related quality of life (HRQoL) among tuberculosis patients, INT J TUBERC LUNG DIS, 2007 11(8):887–892.
8. Jaber AAS, Ibrahim B. Health-related quality of life of patients with multidrug-resistant tuberculosis in Yemen: prospective study. Health Qual Life Outcomes. 2019 Aug 16;17(1):142. doi: 10.1186/s12955-019-1211-0. PMID: 31420045; PMCID: PMC6698009.
9. Sathiyamoorthy R, Kalaivani M, Aggarwal P, Gupta SK. Prevalence of pulmonary tuberculosis in India: A systematic review and meta-analysis. Lung India. 2020 Jan-Feb;37(1):45-52. doi: 10.4103/lungindia.lungindia_181_19. PMID: 31898620; PMCID: PMC6961104.
10. Kamble BD, Singh SK, Jethani S, Chellaiyan VGD, Acharya BP. Social stigma among tuberculosis patients attending DOTS centers in Delhi. J Family Med Prim Care. 2020 Aug 25;9(8):4223-4228. doi: 10.4103/jfmpc.jfmpc_709_20. PMID: 33110836; PMCID: PMC7586534.

11. Srujana, Mude & N, Rakshitha & Sai, Dronavalli & Miya, Riyaz. Assessment of Health-related Quality of Life Among Tuberculosis Patients at Government Teaching Hospital. International Journal of Scientific and Research Publications (IJSRP). 2020, 10. 380-385. 10.29322/IJSRP.10.08. 2020.p10445.
12. Pokam Thumamo, Benjamin & Fokam, Pius & Njamen, Theophile & Guemdjom, Prisca & Asuquo, Anne, Assessment of Health-Related Quality of Life of Tuberculosis Patients in Fako Division, South-West Region of Cameroon. Journal of Tuberculosis Research, 2020, 08. 93-110. 10.4236/jtr.2020.83009.
13. Suleiman Mohammed, Sahal Nagla, Sodeman Morten, Eldony Asma, Aro Arja, Illness perceptions and quality of life among tuberculosis patients in Gezira, Sudan, African Health Sciences, 2015;15;2, 385-393.
14. Sana Hussain, Anila A. Malik, and Zareen Hussain, A Randomized Controlled Intervention Trial: Effect of Counselling on Treatment Adherence and Self-Esteem of Women Patients Receiving Tuberculosis Treatment, Open Medicine Journal, 2016, 3, 27-33.
15. Malik M, Nasir R, Hussain A. Health-related Quality of Life among TB Patients: Question Mark on Performance of TB DOTS in Pakistan. J Trop Med. 2018:2538532. doi: 10.1155/2018/2538532.

Prof. Karthi.R *et al.* A pilot study to Determine the Health-related Quality of life and Self-Esteem of patients who have undergone DOTS regimen for pulmonary tuberculosis in RNTCP centre Villupuram district. *Int. J Med. Pharm. Res., 6 (4): 527-532, 2025*

532