

A Descriptive study to assess the Health Related Quality of Life among patients with Diabetic Foot Ulcer at selected hospitals in Puducherry

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Abstract: According to the National Health Survey 2020, 4.54% of Type 2 Diabetes Mellitus patients in India had diabetic foot ulcers; of these, 46.1% had neuropathic, 19.7% had ischemic, and 34.2% had neuropathic-ischemic foot ulcers. The aim of the study was descriptive study to assess the quality of life among patients with diabetic foot ulcer. A Descriptive Research design of 130 patients with Diabetic Foot Ulcer by Purposive Sampling technique. The Health Related Quality of Life were assessed on a 5 pointed Likert scale. The overall health related quality of life among patients with diabetic foot ulcer, 106 (81.54%) had moderate health related quality of life, 15 (11.54%) had lower health related quality of life and only 9 (6.92%) had good quality of life among patients with Diabetic Foot Ulcer. Diabetic foot problems had the most negative impact on quality of life. Foot care and foot assessment should be promoted for preventing diabetic foot problems.

Keywords: Quality Of Life, Diabetic Foot Ulcer, Diabetes Mellitus.

1. INTRODUCTION:

The global epidemic of diabetes mellitus is severe. There are currently 425 million individuals worldwide who have diabetes mellitus, and the number is expected to climb to 628 million by the year 2045, according to statistics from the International Diabetes Federation (IDF). ⁽¹⁾

According to the National Health Survey 2020, 4.54% of Type 2 Diabetes Mellitus patients in India had diabetic foot ulcers; of these, 46.1% had neuropathic, 19.7% had ischemic, and 34.2% had neuropathic-ischemic foot ulcers. ⁽²⁾ One of the major morbidity-associated consequences of diabetes mellitus, diabetic foot ulcers seriously affect patients' quality of life, impair their functional status, and increase their dependence. Diabetic foot illness is becoming more common and has a big influence on health care spending and mortality rates. ⁽³⁾

The health care system is financially heavily burdened by diabetic foot ulcers. Over the course of their lifetime, 15% of diabetic patients will get foot ulcers. In 14% to 24% of diabetes individuals, foot sores develop to severe amputation. Patients who have lower limb amputations have a significant mortality rate during the previous five years (50–68%). The morbidity rate among people with diabetes mellitus is significantly raised by diabetic foot ulcers. A common late-stage consequence of diabetes, diabetic foot ulcers have a significant negative impact on health and quality of life. ⁽⁴⁾

Due to decreased mobility, which impairs the patient's ability to complete daily tasks and increases the likelihood of dependent on others, diabetic foot ulcers have a detrimental impact on the patient's perceived health-related quality of life. In individuals with diabetic foot ulcers, the stress associated with wound healing or re-ulceration and the fear of foot amputation both worsen the mood and interfere with sleep. Due to frequent referrals to doctors and clinical care settings, a reduction in quality of life in such diabetic patients not only impacts the outcome of treatment but also raises health care costs. ⁽⁵⁾

This is crucial for patients who have struggled to deal with their diagnosis, such as those who have disabilities that could hinder their ability to understand or follow the care plan or those who lack family or social support. ⁽⁶⁾

It is believed that more than 50% of these amputations may be avoided if patients with diabetes received the correct instruction in foot care procedures and put such procedures into daily practise to prevent foot ulcers. ⁽⁷⁾

Diabetes patients are more at risk due to psychological problems including depression, which leads to poor results and poor self-care. Depression in Type 2 Diabetes has been linked to greater rates of amputation, four years of follow-up, and the first diabetic foot ulcer occurring twice as frequently. Furthermore, the mortality rate has increased by a third over the previous five years in diabetes patients who get their first diabetic foot ulcer. ⁽⁴⁾

According to the International Diabetes Federation, at least one limb is amputated owing to diabetic foot disease globally every 30 seconds. A diabetic person is thought to have a 25% lifetime risk of acquiring a diabetic foot ulcer. About 40% of people die within five years of developing diabetic foot ulcers. ⁽⁸⁾

A systemic analysis that was undertaken in 2017 found that 3% to 13% of diabetic people worldwide have foot ulcers. The socioeconomic position of diabetic patients and the length of their hospital stays are further impacted by the prolonged time needed for proper healing of diabetic foot ulcers. ⁽⁹⁾

Between 36% and 93% of individuals with diabetes mellitus adhere to their drug regimens globally. Compliance with prescribed medicine is essential for metabolic regulation because non-compliance leads to elevated blood glucose or lipid levels linked to cholesterol, as appropriate. ⁽¹⁰⁾ So, investigator selected this descriptive study to assess the quality of life among patients with diabetic foot ulcer.

2. MATERIALS & METHODS:

Design: A Descriptive Research design was adapted for the present study.

Sample Size: A sample of 130 patients with Diabetic Foot Ulcer.

Sampling Technique: Purposive Sampling Technique was used to select the sample.

Data collection Procedure: The formal setting permission was obtained from Institutional Research committee and Institutional Ethical committee clearance and written permission from the higher authorities of the Institution a brief Introduction about the Procedure and Purpose of the study was given to the study participants. Oral and written consent were obtained from each subject and reassurance was provided that the data collected would be kept confidential. The data collection was conducted for the period of 1 week. The participants were seated comfortably and the questionnaire was issued to collect the data regarding their demographic and clinical variables and the participants were instructed to mark their Health Related Quality of Life on a 5 pointed Likert scale. The data were analyzed based on the objectives of the study using Descriptive statistics as frequency, percentage distribution, mean, and standard deviation and Inferential statistics as chi square test.

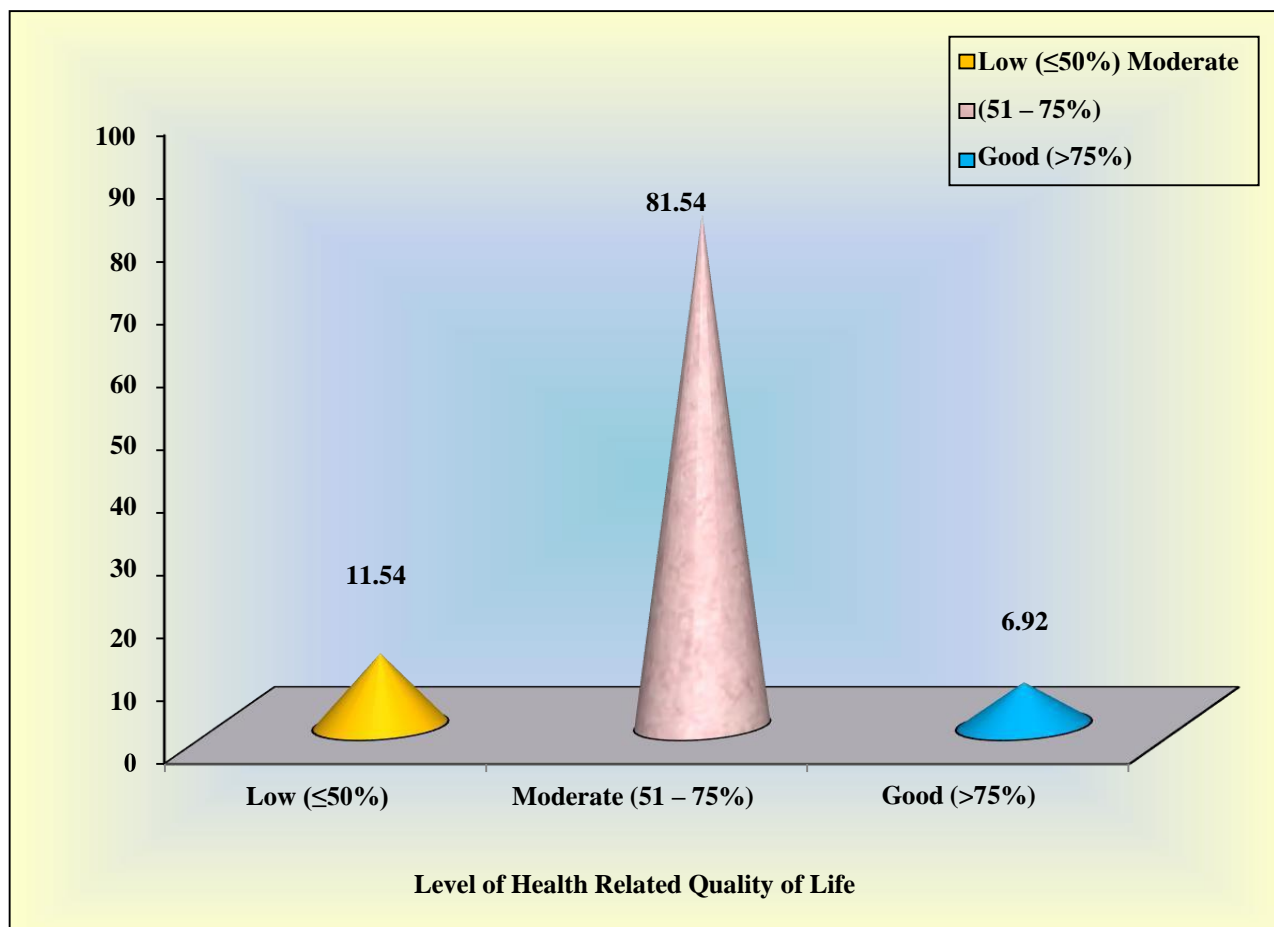
3. RESULTS:

Frequency and percentage distribution of demographic variables of patients with diabetic foot ulcer, majority of the patients with diabetic foot ulcer, 51 (39.2%) were aged between 40 – 60 years, 66 (50.8%) were male, 38 (29.2%) were single, 39 (30%) were illiterates, 44 (33.8%) were sedentary workers and 49 (37.7%) had no additional floors in the house.

Frequency and percentage distribution of clinical variables of patients with diabetic foot ulcer, most of the patients with diabetic foot ulcer, 53 (40.8%) were having Diabetes for more than 5 years, 47 (36.2%) were treated with both insulin and Oral Hypoglycemic Agents, 58 (44.5%) had foot ulcer episode for the 1st time, 53 (40.8%) had ulcer in the mid foot, 37 (28.5%) had grade 0 depth of foot ulcer, 47 (36.2%) had changed the dressing daily, 94 (72.3%) did not have any history of related surgeries and 47 (36.2%) had 0 comorbidity and 1 comorbidity present at the time of study.

Frequency and percentage distribution of health related quality of life among patients with diabetic foot ulcer, 106 (81.54%) had moderate health related quality of life, 15 (11.54%) had lower health related quality of life and only 9 (6.92%) had good quality of life among patients with Diabetic Foot Ulcer. **(Figure 1)**

Figure 1: Percentage distribution of health related quality of life among patients with diabetic foot ulcer



The mean score of Health Related Quality of Life among patients with Diabetic Foot Ulcer was 104.28 ± 17.02 . The median score was 104.50 with minimum score of 49.0 and maximum score of 162.0. (Table 1)

Table 1: Mean score of Health Related Quality of Life among patients with Diabetic Foot Ulcer

Health related quality of life	Score
Minimum score	49.0
Maximum score	162.0
Median	104.50
Mean	104.28
Standard Deviation (S.D)	17.02

Association of level of health-related quality of life among patients with diabetes foot ulcer with their selected demographic variables, the demographic variable age ($\chi^2=14.616$, $p=0.023$) had shown statistically significant association with level of Health Related Quality of Life among patients with Diabetes Foot Ulcer at $p<0.01$ level respectively and the other demographic variables had not shown statistically significant association with level of Health Related Quality of Life among patients with Diabetes Foot Ulcer. The clinical variables did not show statistically significant association with level of Health Related Quality of Life among patients with Diabetes Foot Ulcer.

4. DISCUSSION:

A descriptive research design was used to select the sample; Total 130 Diabetic Foot Ulcer patients were selected by purposive sampling technique. The aim of the study was to explore the relationship between Diabetic Foot Ulcer and Health Related Quality of Life among diabetic patients.

The first objective was to assess the Health Related Quality of Life among patients with Diabetic Foot Ulcer. The result exhibited that, among the patients with Diabetic Foot Ulcer 106 (81.54%) had moderate health related quality of life, 15 (11.54%) had lower health related quality of life and only 9 (6.92%) had good quality of life. The present study was supported by the previous study of Fotoula Bartzoki Stasini et.al⁽¹¹⁾ (2020). They had conducted a descriptive study to investigate the health-related quality of life (HRQoL) of patients with diabetic foot ulcers. For this study, 145 samples were selected by Convenience sampling technique. The Results revealed that, the quality of life among patients with diabetes mellitus seemed to be moderately affected using leisure time (47.6%), physical activity (52%) and satisfaction (40%), while in the other parameters has been affected to a lesser extent. Hypothesis (H1): From the above results it is clear that there was significant reduction in the Health Related Quality of Life related to Diabetic Foot Ulcer was accepted. Hence the research hypothesis H1 is accepted.

The second objective was to find the association of Health Related Quality of Life with selected demographic variables. The result depicts that, the mean score of Health Related Quality of Life among patients with Diabetic Foot Ulcer was 104.28 ± 17.02 . The median score was 104.50 with minimum score of 49.0 and maximum score of 162.0. Further it shows that, the demographic variable age ($\chi^2=14.616$, $p=0.023$) had shown statistically significant association with level of Health Related Quality of Life among patients with Diabetes Foot Ulcer at $p < 0.01$ level respectively and the other demographic & clinical variables had not shown statistically significant association with level of Health Related Quality of Life among patients with Diabetic Foot Ulcer. Hypothesis (H2): From the above results it was clear that, there was significant association between the Health Related Quality of Life with the age as one.

5. CONCLUSION:

The study concluded that Diabetic foot problems had the most negative impact on quality of life. Foot care and foot assessment should be promoted for preventing diabetic foot problems.

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