

**ORIGINAL RESEARCH ARTICLE****HEALTH RELATED QUALITY OF LIFE OF DIABETIC PATIENTS VISITED IN KOSHI ZONAL HOSPITAL, BIRATNAGAR****RK Mehta<sup>1\*</sup>, S Subedi<sup>2</sup>, S Bohora<sup>3</sup>**<sup>1</sup> College of Nursing, Chitwan Medical College, Bharatpur, Chitwan, Nepal,<sup>2</sup> PBBN, Birat Health College and Research Centre, PU, Biratnagar\<sup>3</sup> PBBN, Medical Ward, Koshi Zonal Hospital, Biratnagar

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**ABSTRACT**

Globally, diabetes is ranked as the 4<sup>th</sup> leading cause of death in terms of disease and places a huge strain on public health funding. Quality of life (QOL) is an important and understudied topic in the diabetes. Most studies reports that quality of life among people with diabetes is worse than QOL in general population. Thus, this study is aimed to assess health related quality of life of diabetic patients. We conducted a hospital- based non experimental prospective study. Total 50 diabetic patients were enrolled in this study by using purposive sampling technique. Short-Form 36 questionnaire was used to assess the QOL of diabetic patients. Among 50 respondents, 27 were female and 23 were male. In physical health, 56% respondents had obtained score above 50, 2% respondents had obtained score 50 and 42% respondents had obtained score below 50. Similarly, in mental health, 56% respondents had obtained score above 50 and 44% respondents had obtained score below 50. This result indicates that majority of respondents (56%) had better QOL. It concludes that majority (56%) of respondents had better QOL in both physical and mental health and in physical health 2% had average QOL and 42% had poor QOL and in mental health 44% had poor QOL. So, the family, physician, nurses and policy makers can use this finding to identify and implement appropriate interventions for better management and ultimately improving QOL of diabetic patients.

**Key words:** *Quality of life, Diabetes, Short-Form 36, Physical health, Mental health.*

**INTRODUCTION**

Diabetes Mellitus is a major cause of morbidity and mortality and places a huge strain on public health funding. <sup>1</sup> Diabetes mellitus has reached epidemic proportions. According to the world health organization (WHO) there is “an apparent epidemic of diabetes which is strongly related to the life style and economic changes”. <sup>2</sup>

Globally, diabetes is ranked as the 4<sup>th</sup> leading cause of death in terms of disease. Each year an estimated 3.8 million people died from diabetes related causes, such as cardiovascular disease, stroke, diabetes nephropathy etc. The United Nations estimates number of people globally affected by diabetes to be 246 million and approximately half of those are in India, China, Nepal and other countries. <sup>3</sup> Globally, it is expected to about 300 million by the year 2025<sup>1</sup>. In South East Asia, number of people with diabetes in 2010 are 58.7 million and it is expected to be 101 million in 2030. <sup>4</sup> Report till date show that there are 9,00,000 diabetes people in Nepal. <sup>5</sup>

Quality of life (QOL) is an important and understudied topic in the diabetes. Quality of life is the subjective wellbeing. It

should not be confused with the concept of standard of living, which is based primarily on income. Standard indicators of quality of life include not only wealth and employment but also the built environment, physical and mental health, education, recreation, leisure time and social belonging. <sup>6</sup>

People with diabetes often feel challenged by their disease and its day to day management demands. Most studies reports that quality of life among people with diabetes is worse than quality of life in general population. <sup>7</sup> Factors related to lower quality of life includes; less education, lower income, older age, being female, duration of disease, number of co-morbidillness and lower level of physical activity. <sup>8</sup> Diabetes affects the health related quality of life through macro vascular complications, associated non-vascular co-morbidity and also by total burden of disease. <sup>9</sup>

Therefore, measurement of quality of life in diabetic patients is very essential. There is limited study regarding quality of life in diabetic patients in our populations. Thus this study is aimed to assess health related quality of life of diabetic patients from Koshi Zonal Hospital, Biratnagar.

**MATERIALS AND METHODS**

We conducted a hospital- based, Quantitative, non experimental prospective study. Total 50 diabetic patients were selected by non-probability, purposive sampling technique with written consent from Koshi Zonal Hospital, Biratnagar. Subjects were selected from inpatient and outpatient department of Koshi Zonal Hospital, Biratnagar, which was carried out over 3 months. Data were collected through standardized tool, Short-Form 36 (SF-36) Questionnaire. Written consent was taken from each respondent. Privacy, confidentiality and anonymity was assured and maintained. Data were summarized by using descriptive statistical method.

**RESULTS**

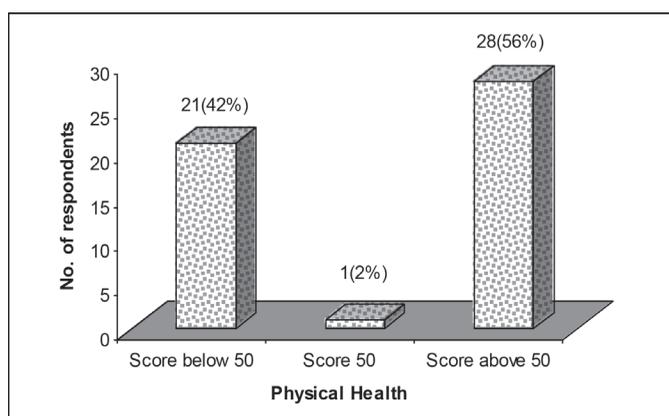
Fifty consecutive diabetic patients visited in Koshi Zonal Hospital, Biratnagar were studied prospectively. In this study, age of patients ranged between 20 to 60 years and above. The highest numbers of respondent i.e.30% were in the age group of 40-50 years and lowest number i.e.6% was in the age group of 20-30 years. Out of total respondents Female are 54% and male are 46%. 46% respondent's weight was in the range of 50-60 kg and there was no one in the range of 30-40 kg. Majority of respondents 98% were Hindu and only 2% were Muslim. The highest number of respondents 38% were illiterate and lowest respondents 14% were from higher education. Most of the respondents were housewife, which accounts for 28%. The other occupation includes business, farming, labor etc. Majority 42% of respondent's income was in the range of Rs.5000 to7, 500 and only 4% respondent's income was below Rs.2, 500. Duration of disease ranged between below 1year to 7 years and above. Majority of the respondents 76% had no family history of diabetes. Most of them were taking oral medicine, which accounts for 88% of the total respondents (Table1).

|     |  |                                  |                                     |
|-----|--|----------------------------------|-------------------------------------|
| 6.  | Education<br>• Illiterate<br>• Primary<br>• Secondary<br>• Higher  | 19<br>11<br>13<br>7              | 38<br>22<br>26<br>14                |
| 7.  | Occupation<br>• Housewife<br>• Farmer<br>• Businessman<br>• Labor<br>• Job<br>• Unemployment<br>• Others         | 14<br>8<br>9<br>4<br>4<br>9<br>2 | 28<br>16<br>18<br>8<br>8<br>18<br>4 |
| 8.  | Income<br>• Below Rs. 2500<br>• Rs.2,500-5,000<br>• Rs.5,000-7,500<br>• Rs.7,500-10,000<br>• Rs.10,000 and above | 2<br>10<br>21<br>7<br>10         | 4<br>20<br>42<br>14<br>20           |
| 9.  | Duration of disease<br>• Below 1 year<br>• 1-3 yrs<br>• 3-5 yrs<br>• 5-7 yrs<br>• 7 years and above              | 6<br>23<br>7<br>6<br>8           | 12<br>46<br>14<br>12<br>16          |
| 10. | Family History<br>• Yes<br>• No  | 12<br>38                         | 24<br>76                            |
| 11. | Medicine<br>• Oral<br>• Injection  | 44<br>6                          | 88<br>12                            |

**Table 1: Demographic characteristics of respondents (n=50).**

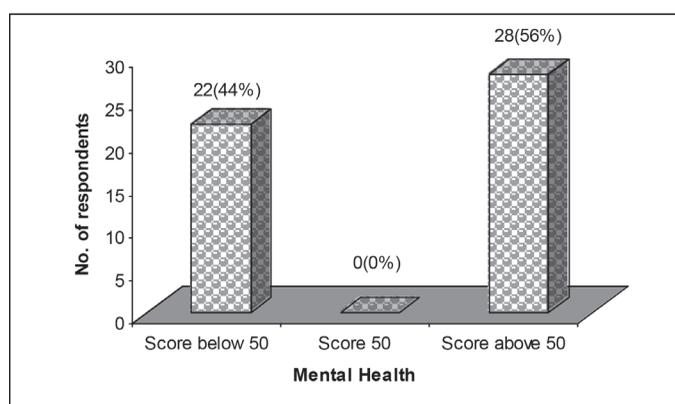
| S.N. | Variables   | Cases                    | Percentage                |
|------|---|--------------------------|---------------------------|
| 1.   | Total subjects  | 50                       | 100                       |
| 2.   | Age<br>• 20-30 yrs<br>• 30-40 yrs<br>• 40-50 yrs<br>• 50-60 yrs<br>• 60 yrs and above | 3<br>5<br>15<br>14<br>13 | 6<br>10<br>30<br>28<br>26 |
| 3.   | Sex<br>• Female<br>• Male   | 27<br>23                 | 54<br>46                  |
| 4.   | Body weight<br>• 30-40 kg<br>• 40-50 kg<br>• 50-60 kg<br>• 60 kg and above            | 0<br>7<br>23<br>20       | 0<br>14<br>46<br>40       |
| 5.   | Religion<br>• Hindu<br>• Buddhist<br>• Muslim<br>• Christian<br>• Others              | 49<br>0<br>1<br>0<br>0   | 98<br>0<br>2<br>0<br>0    |

In physical health (Fig. 1), majority i.e.56% of respondents had obtained score above 50 and 42% of respondents had obtained score below 50 while only 2% had obtained score 50.



**Fig. 1: Frequency distribution of respondents according to score obtained by them in physical health (n=50)**

In mental health (Fig. 2), majority i.e. 56% of respondents had obtained score above 50 while 44% of respondents had obtained score below 50. But, no one had obtained score 50 in mental health.



**Fig. 2: Frequency distribution of respondents according to score obtained by them in mental health (n=50)**

## DISCUSSION

Quality of life (QOL) is an important and understudied topic in the diabetes. Most studies report that diabetes significantly affects the health related quality of life of patients. In contrast to the findings of those studies; we found that majority (56%) of respondents have better QOL in both physical and mental health.

Similar study was conducted by Hanestad BR<sup>10</sup> and he has reported that 45% of patients perceived their life situation to be negatively effected due to diabetes. These findings indicate that the majority of patients in the study experienced a satisfactory QOL despite living with diabetes. Westaway MS, Rheeder P and Gumede T<sup>11</sup> have reported similar findings that diabetes mellitus has more impact on general health and level of pain than on wellbeing.

A recent German study, which included people with both types of diabetes found that QOL did not differ between those with or without diabetes except when those with diabetes had complications.<sup>7</sup> Similar study was done by Arcega Dominguez A, et al.<sup>12</sup> and they found that clinical factors did not correlate with QOL. It is the way the patient lives with diabetes and not the diabetes by itself, what affects QOL of diabetic patients.

These studies focus on the finding that diabetes mellitus doesn't affect the QOL directly. Therefore, above studies support the findings of our study.

Similarly, in our study, we found that, score was lower among patients who were more than 40 years of age, male, illiterate, had family history of diabetes and duration of disease more than 3 years, which is similar with the findings reported by Angelos A Papadopoulos et al.<sup>1</sup>, Glasgow RE et al.<sup>8</sup>, Ankinci F et al<sup>13</sup>.

Active coping with diabetes leads to improved functional status, well being psychological outcomes and finally improves quality of life. But poor coping with diabetes leads to sense of failure, guilt, denial and depression which directly affects the physical and mental health of diabetic patients<sup>7</sup>. So, to improve QOL, active coping with diabetes is essential.

In Nepalese context, for the generalization of result, study should be conducted in large sample size and a comparison group of non diabetic subjects should be included in the study.

## CONCLUSION

In this study, we found majority of subjects had better Health Related Quality Of Life (HRQOL) and remaining had average and poor HRQOL in both physical and mental health. Score was lower among patients who were more than 40 years of age, male, illiterate, had family history of diabetes and duration of disease more than 3 years. This finding can be used by family, physician, nurses and policy makers to identify and implement appropriate interventions for achieving better management of diabetes and ultimately improving the QOL of diabetic patients.

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