"ASSESSMENT OF QUALITY OF LIFE IN ADULT DIABETIC PATIENTS: PHARMACOLOGICAL THERAPY AND NON PHARMACOLOGICAL THERAPY"

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ABSTRACT

Diabetes mellitus (DM) is a metabolic disorder which has emerged as a major health care problem throughout the globe and involve many complications till end of course that may impair quality of life and hence leads to problems in patient's daily life. **Objectives**: To assess the subjects health related quality of life with both pharmacological and non-pharmacological therapy. To assess the effect of patient counselling. **Materials and Methods:** A prospective observational study was conducted out for a period of six months at Basaveshwara Medical College Hospital and Research Centre, Chitradurga diabetic care centre in chitradurga. A total of 85 subjects were participared in the study. out of which 43 in intervention group and 42 in control group. Patient information leaflet and medication counselling were provided to intervention group. Quality of life scores were collected by using diabetes quality of life measure questionnaire and diabetes knowledge assessment questionnaire in intervention group and control group. After obtained the quality of life scores were compared between both groups at the end of the study. **Results:** The data revealed that quality of life in intervention group increased from pre-test to post-test from 36.87 (±6.84) to 56.25(±5.3). comparision between the intervention group and control group shows decreased quality of life score in intervention group in pre-test 36.87 (±6.84) and in control group 41.87 (±6.29). Whose P value is (<0.0001) significant. **Conclusion**: Therefore the patient counselling is found to have significant influence on improvement in the subject's knowledge towards their disease and medication which shows the positive impact on quality of life among the subjects of DM.

KEYWORDS: Diabetes Mellitus (DM), Quality of life (QOL), Diabetes Quality of Life (DQOL).

1. INTRODUCTION

Diabetes mellitus is defined as metabolic disorder characterized by hyperglycaemia due to defects in insulin secretion and action or a combination of both which results in chronic complications such as microvascular, macrovascular and neuropathic disorders.[1] As per the prediction of International Diabetes Federation (IDF), the diabetic population will increase to 380 million in 2025 with the prevalence of 4.2% in the general population, estimated to be 2.2% in the rural areas and as high as 12.2% in urban areas.[2] Diabetes mellitus is a chronic disease that requires a continuous medical care along with patient education, self-care, lifestyle modifications and support by the individual to prevent the risk of complications and associated co-morbidities.[3] One of the ultimate goals in the treatment for patients with diabetes is to improve the Quality of Life of persons affected by disease which may in turn also improve their disease status.[4]

Patient counseling is an important task for achieving pharmaceutical care by providing medication related information orally or in written form to the patients or their representatives. Nutritional counseling forms an essential component in the management of diabetes. Patient adherence to medication and lifestyle modifications plays an important role in diabetes management.[6] People with diabetes should receive Diabetes Self Management Education (DSME) and diabetes self-management support (DSMS) according to National Standards for Diabetes Self Management Education and Support (NSDSMES) when their diabetes is diagnosed and as needed thereafter.

Therefore the Present Study "Quality of life of Diabetes in Adults: Pharmacological Therapy and Non Pharmacological Therapy" has been carried out to educate the subjects health and improve their quality of life.

2. MATERIALS AND METHODS

A prospective observational study was approved by the Institutional Ethics Committee, of SJM College of pharmacy, Chitradurga, karnataka.The study was carried with out Patients and in patients admitted in general medicine department in Basaveshwara Medical College & hospital, Chitradurga diabetic centre.

- Diabetes subjects of either sex, above 18 years of age.

- Diabetes subjects who are on both insulin and oral medication.

- Both in-patients and out patients are included.

- Willing to sign informed consent form.

The study was started after obtaining the institutional ethical committee (IEC). In this study subjects are randomized in to two groups one is intervention group and other one is control group. The intervention group were provided with patient information leaflet (PIL's) and patient counselling on disease, medication, diet and lifestyle modifications (specially emphasizing on physical activity) where as other group is on normal follow up. PILS were provided in English and Kannada language. Subjects consent form was taken before the study in the form of Informed consent form which is explained to the patient or patient representatives in the local language (kannada). Demographic details of the enrolled patients are collected in a pre-designed data collection form which were necessary for the study. The details include name, age, patient history, laboratory data, diagnosis and drug therapy. The medication charts of the patients were referred to assess the drugs prescribed. All the enrolled patients were counselled regarding pharmacological, non pharmacological strategies of Diabetes and outcomes were assessed through follow up.

2.1 Statistical Analysis: The data was entered in Microsoft Excel-2010 version and the results are analysed using Statistical Package for Social Services (SPSS 19.0). The obtained data was analyzed by using student "t" test and chi-square test.

3. RESULTS

1. Details of subjects enrolled in the study groups

A total of 85 subjects were participated; out of which 43 subjects were included in intervention group and remaining 42 subjects were included in the control group. The details are shown in Table. No.1 and graphically presented in figure 1.

Table No. 1: Details of Subjects enrolled in the study groups.

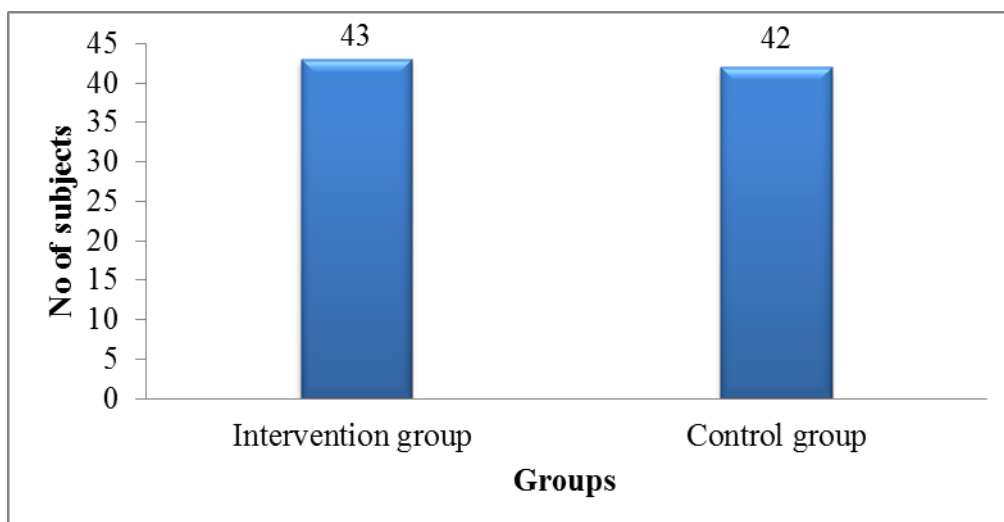| Sl.no	Groups	No of subjects
1	Intervention group	43
2	Control group	42

Figure 1: Details of Subjects enrolled in the study groups.

1. Details of gender wise distribution of the subjects in each group

In this study in intervention group female subjects were 23 (53.4%) and male subjects were 20 (46.5%) and in control group male subjects were 23 (54.7%) and female subjects were 19 (45.2%). The details are shown in Table.No.2 and graphically presented in figure 2.

Table No. 2: Details of gender wise distribution of the subjects in each group.

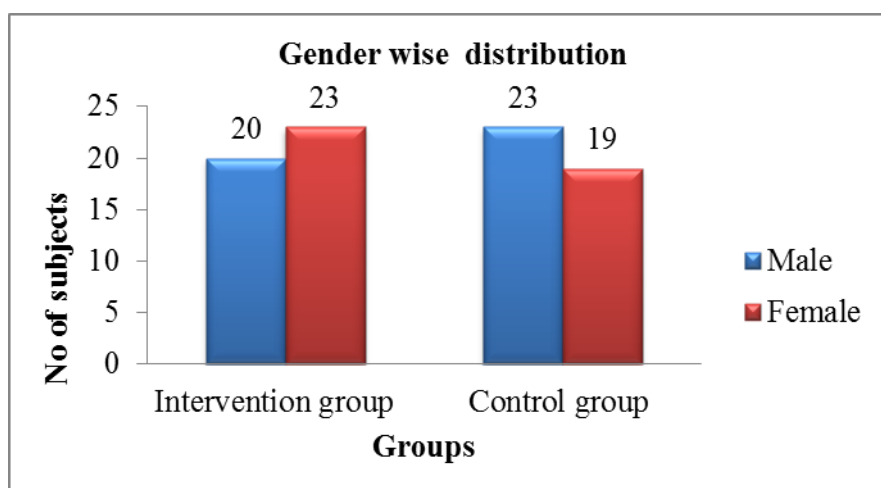| Sl.no	Gender	Intervention group (N)	Control group (N)
1	Male	20 (46.5%)	23 (54.7%)
2	Female	23 (53.4%)	19 (45.2%)
	Total	43 (100%)	42 (100%)

Figure 2: Details of gender wise distribution of the subjects in each group.

3. Details of age wise distribution of the subjects in each group

In this study subjects were divided in to 3 age groups 30-40, 40-50, 50-60. In intervention group under 30-40 age group 7(16.2%) subjects were present and under 40-50 age group 21 (48.3%) subjects were present and under 50-60 age group 15 (34.8%) subjects were present and In control group under 30-40 age group 11 (26.1%) subjects were present and under 40-50 age group 17 (40.4%) subjects were present and under 50-60 age group 14 (33.3%) subjects were present. The details are shown in Table.No.3 and graphically presented in figure 3.

Table No. 3: Details of age wise distribution of the subjects in each group.

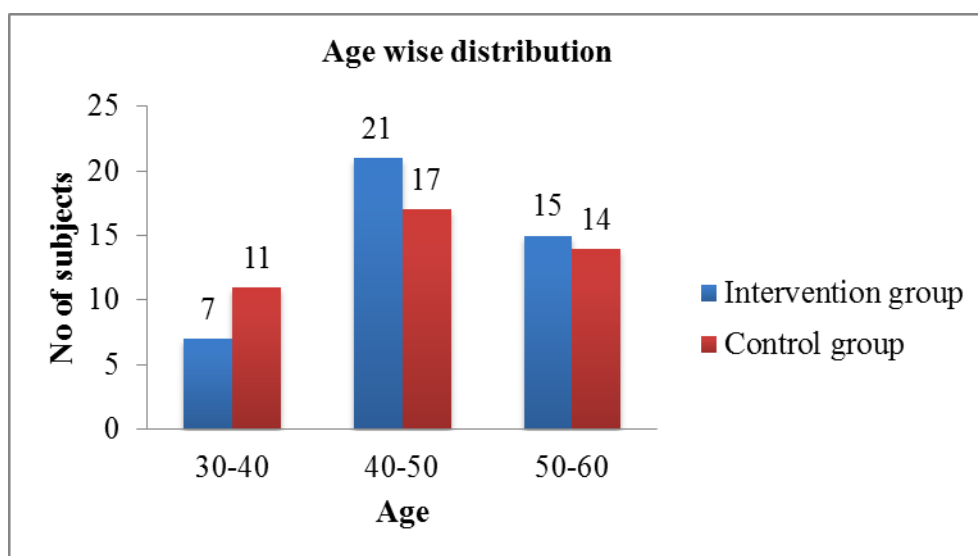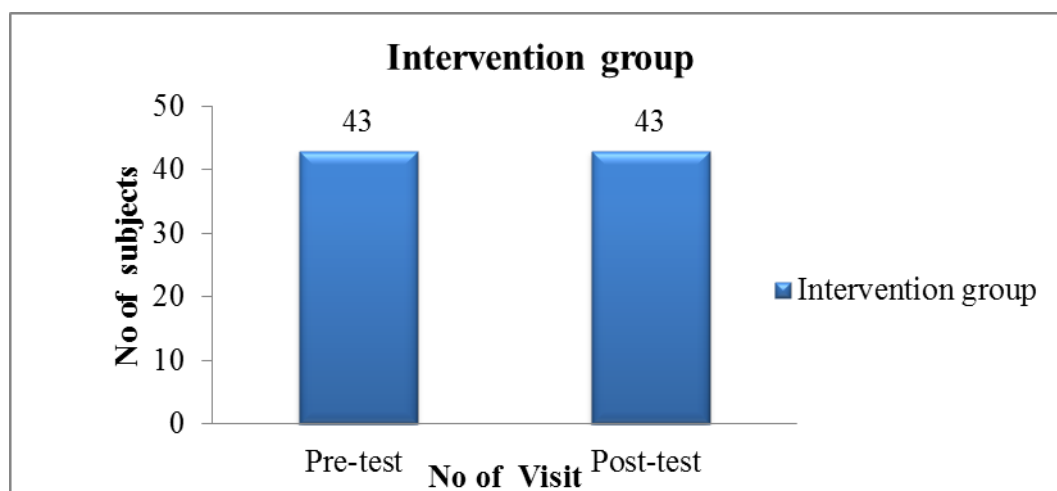| Sl.no	Age group	Intervention group (N)	Control group (N)
1	30-40	7 (16.2%)	11 (26.1%)
2	40-50	21 (48.3%)	17 (40.4%)
3	50-60	15 (34.8%)	14 (33.3%)
	Total	43 (100%)	42 (100%)

Figure 3: Details of age wise distribution of the subjects in each group.

4. Intervention group subjects during pre-test and post-test

In this study in intervention group during Pre-test 43 subjects were participated and in post-test also 43 subjects were participated. The details are shown in Table.No.4 and graphically presented in figure 4.

Table No. 4: Intervention group subjects during pre-test and post-test.

Sl.no	Participants	Pre-test	Post-test
1	Intervention group	43	43

Figure 4: Intervention group subjects during pre-test and post-test.

5. Comprision of quality of life with in the groups by using paired 't' test

Out of subjects 42 in control group, the pre-test scores of Mean(± SD) is 41.87 ± 6.29 and Out of subjects 43 in intervention group, the pre-test scores of Mean(± SD) is 36.87 ± 6.4 and T value is 3.362 and P value is 0.000 (significant). The details are shown in Table.No.5.

Table No. 5: Comprision of quality of life with in the groups by using paired 't' test.

Pre-test scores	Control group	Intervention group	T value	P value, Sig
Mean ± SD	41.87 ± 6.29	36.87 ± 6.4	3.632	0.000, Sig

6. Comprision of quality of life among the groups in the intervention group by using paired 't' test

Out of subjects 43 in intervention group, the pre-test scores of Mean (± SD) is 36.87 ± 6.4 and in post-test scores of Mean(± SD) is 56.25 ± 5.3 and T value is 19.38 and P value is 0.000 (significant). The details are shown in Table.No.6.

Table No. 6: Comprision of quality of life among the groups in the intervention group by using paired 't' test.

Intervention group	Pre-test scores	Post-test scores	T value	P value, Sig
Mean ± SD	36.87 ± 6.4	56.25 ± 5.3	19.38	0.000, Sig

DISCUSSION

In this study 85 subjects were participated they have been categorised in to 2 groups i.e, intervention group (n= 43) and control group (n= 42). Among intervention group and control group subjects were further categorised on the basis of age groups and details are shown in Table. No.3 respectively.

The subjects were grouped on the basis of gender in both intervention group and control group and details are shown in Table.No.2. A similar study was conducted by Shareef J[3] et al in which 106 patients, 58 were males (49.07%) and 48 were females (50.92%).

Present study findings showed that that there is increased quality of life in intervention group, our results were consistent with earlier studies conducted by Shareef J[3] *et al*, Sriram S[7] *et al*, Allad JS[13] *et al*, Arun KP[43] *et al* there is increased quality of life in intervention group.

In our study subjects in intervention group had a significant improvement from pre-test to post-test with mean in pre-test (36.87 (±6.84)) and in post-test of (56.25(±5.3)). Which was very similar when study carried out by Shareef J[3] *et al* with significant improvement from -2.69±1.53 at the baseline to -1.92±0.59 at the final visit (p<0.05) and in study conducted by Sriram S[7] *et al* also showed a significant improvement from -2.156 ± 0.12 at the baseline to-1.41 ± 0.13 at the final interview (p <0.01).

When comparing the (P value <0.0001) results improvement in quality of life score of intervention group of our study, it was very similar to the study carried out by Allad JS[13] *et al* with significant improvement in intervention group (p value <0.0001) when compared to control group.

CONCLUSION

From our study it has been concluded that majority of subjects in intervention group had decreased quality of life in pre-test. After the counselling the subjects in intervention group had increased quality of life. This can be seen in post-test score of intervention group subjects. Therefore the effective patient counselling and medication counselling will improve the quality of life of diabetic patients.

ACKNOWLEDGEMENT

respectful thanks to Dr. R.Yogananda, Dr.Prashanth for there guidance. I also extend my heartfelt thanks to my beloved batchmates for their guidance and helping hands.

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