



**A STUDY TO ASSESS THE IMPACT OF EDUCATIONAL INTERVENTION REGARDING HOME CARE MANAGEMENT ON QUALITY OF LIFE OF DIABETIC PATIENTS ADMITTED IN SELECTED TERTIARY CARE HOSPITAL, BELAGAVI**

**Pratiksha Mandal and Preeti Bhupali**

Janaki Medical College, Dhanusha, Nepal

**ARTICLE INFO**

**Article History:**

Received 13<sup>th</sup> September, 2019

Received in revised form 11<sup>th</sup> October, 2019

Accepted 8<sup>th</sup> November, 2019

Published online 28<sup>th</sup> December, 2019

**Key words:**

Impact, Educational intervention, Home care management, Quality of life, Diabetes, SD

**ABSTRACT**

Among non-communicable diseases, diabetes is recognized as the fastest growing chronic condition worldwide. The surge in prevalence of diabetes is higher in nations with middle and low income including Asia and Africa. There were about 108 million diabetic population in 1980 which was dramatically raised by four times in 2014 and reached 422 million. The direct cause of death by diabetes in 2016 was around 1.6 million. By 2030, as per the report of WHO, it will be considered 7<sup>th</sup> principal reason for mortality. In 2017, there were more than 72,946,400 cases of diabetes found in India. Around 8 – 9 people out of 100 are affected by diabetes in 20 – 70 years of age in India which is the matter of great concern. DM can be managed and its complications can be prevented or deferred. Seven major areas has been identified by American Association of Diabetes Educators (AADE) to focus on self-management learning among diabetic patients. Self management learning among diabetic clients helps to improve their quality of life.

Copyright©2019 **Pratiksha Mandal and Preeti Bhupali**. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**INTRODUCTION**

**Background**

Among non-communicable diseases, diabetes is recognized as the fastest growing chronic condition worldwide. The surge in prevalence of diabetes is higher in nations with middle and low income including Asia and Africa. There were about 108 million diabetic population in 1980 which was dramatically raised by four times in 2014 and reached 422 million. The direct cause of death by diabetes in 2016 was around 1.6 million. By 2030, as per the report of WHO, it will be considered 7<sup>th</sup> principal reason for mortality. In 2017, there were more than 72,946,400 cases of diabetes found in India. Around 8 – 9 people out of 100 are affected by diabetes in 20 – 70 years of age in India which is the matter of great concern.

DM can be managed and its complications can be prevented or deferred. Seven major areas has been identified by American Association of Diabetes Educators (AADE) to focus on self-management learning among diabetic patients. Self management learning among diabetic clients helps to improve their quality of life.

**Objectives of the Study**

1. To assess the level of knowledge regarding home care management of diabetes among diabetic patients in study group and control group.

2. To assess the impact of education intervention regarding home care management on quality of life of diabetic patients in study group.
3. To find the association between level of knowledge regarding home care management of diabetes with demographic characteristics of diabetic patients in study group and control group.
4. To assess and compare the quality of life of diabetic patients after educational intervention in study group and control group.

**RESEARCH METHODOLOGY**

A study was conducted to find out the impact of educational intervention regarding home care management on QOL of clients affected with diabetes. Evaluative research approach was used for the study. It was done on 70 type 2 diabetic patients admitted in selected tertiary care hospital of Belagavi, Karnataka. The participants of the study were chosen by non-randomized purposive sampling technique and divided into two groups. The study group (SG) consists of 35 participants to whom educational intervention was provided after pre-test. The control group (CG) consists of 35 participants to whom educational intervention was not provided. Data collection in pre-test and post-test was done by self structured knowledge questionnaire. Quality of life of participants in both groups was assessed by WHOQOL BREF Scale. Post-test was conducted after 7<sup>th</sup> day of educational intervention. Data was collected from 29/11/2018 to 20/12/2018. Nine demographic

variables were analyzed for the study. The data obtained was analyzed by using appropriate statistics.

## RESULT

The study results revealed that in study group, majority 13(37.14%) of the participants belongs to  $\leq 40$  years of age whereas in control group, majority 21(30.00%) of the participants belongs to 41-50 years of age. In study group maximum 19 (54.29%) of participants were male whereas in control group minimum 14(40.00%) were female. Majority 31(88.57%) participants were married in study group whereas in control group maximum 27(77.14%) of participants were married. In study group, majority 13(37.14%) of participants have completed their secondary education whereas in control group maximum 13(37.14%) of participants have completed their primary education. In study group maximum 8(22.86%) of participants were in agriculture and 8(22.86%) of participants were in business respectively whereas in control group majority 16(45.71%) of participants were into agriculture. In study group, maximum 18(51.43%) of participants were residing in rural area and minimum 17(48.57%) in urban area whereas in control group majority 26(74.29%) of participants were residing in rural area and minority 9(25.71%) in urban area. In study group maximum 13(37.14%) of participants were having monthly income Rs. 5001-10,000/- whereas in control group majority 18(51.43%) of participants were having monthly income Rs. 5000/- and below. In study group, majority 21(60.00%) of participants were having no family history of diabetes mellitus whereas minority 16(45.71%) were having family history of diabetes in control group. Majority 18(51.43%) of participants had previous knowledge/information related to diabetes in study group whereas in control group, majority 19(54.29%) do not had previous knowledge/information related to diabetes.

The association among demographic characteristics and knowledge level was done by Chi-square test. Family history of diabetes mellitus and residence showed significant association with pretest level of knowledge score of participants in study group at  $p < 0.05$ . Gender, educational status, previous knowledge/information related to diabetes showed association with pretest knowledge level of participants which was significant in control group at  $p < 0.05$  level. Gender and educational status showed significant association with knowledge level of post-test among participants in CG.

Post-test and Pre-test knowledge level within the group was compared by Mc Nemar test. In study group Mc Nemar test yielded  $p$  value 0.0001 suggesting significant increase in post-test knowledge score in study group ( $p < 0.05$ ) whereas no changes was seen ( $p > 0.05$ ) in control group. In both tests (Pre and post) knowledge level between the groups was compared by Chi-square test. Comparison between pre-test knowledge level between two groups by chi-square test yielded  $p = 0.2320$  suggesting no significant difference. While,  $p$  value obtained after post-test knowledge score between two groups by chi square test was  $p = 0.0001$  which was very much significant at ( $p < 0.05$ ). Similarly, the comparison for mean knowledge scores of pre-test among participants between two group by independent 't' test yielded  $p = 0.2288$  suggesting no significant difference ( $p > 0.05$ ) whereas comparing mean knowledge of post-test score of participants in both groups

after educational intervention by independent 't' test yielded  $p = 0.0001$  and that was significant.

Comparison of knowledge score within the group was done by paired 't' test. In study group, mean scores of knowledge and SD was  $48.29 \pm 11.96$  in pretest whereas  $70.93 \pm 10.18$  in posttest which was much significant. Similarly in control group, it was found to be  $44.71 \pm 12.64$  and  $46.14 \pm 12.31$  respectively indicating no significant difference. Therefore, post-test knowledge score between two groups was significant which indicates that educational intervention was beneficial in increasing knowledge of diabetic patients in SG.

The comparison between two groups with transformed T (0-100) domain scores of QOL, showed significant difference in all four domains at 0.05 level. Physical ( $p = 0.0004$ ), Psychological ( $p = 0.0001$ ), Social relationship ( $p = 0.0001$ ) and Environmental ( $p = 0.0001$ ). This indicates that educational intervention was efficient in enhancing QOL of the diabetic clients in study group compared to control group.

## CONCLUSION

Educational program was valuable teaching strategy in increasing the awareness of diabetic patients on home care management of diabetes and upgrading their quality of life. Considering the above study findings, it may be recommended that educational intervention should be provided to diabetic patients to increase their knowledge and enhance their quality of life to maintain well being and prevent complications.

## Reference

1. Habib S, Saha S. Burden of non-communicable disease: global overview. Diabetes and metabolic syndrome: clinical research and review. 2010 March; 4(1): 41 – 47. Available from: URL: <https://www.science-direct.com/science/article/abs/pii/S1871402108000489>
2. World health organization fact sheet.(2017) Diabetes, Retrieved March. 2018. Available from: URL: <http://www.who.int/mediacentre/factsheets/fs312/en>
3. Diabetes - South-East Asia Regional Office. Available from: URL: [http://www.searo.who.int/india/topics/diabetes\\_mellitus/en/](http://www.searo.who.int/india/topics/diabetes_mellitus/en/)
4. Smeltzer SC, Bare BG, Hinkle JL, Cheever KH. Brunner & Suddarth's Text book of Medical Surgical Nursing. 12th ed. Wolters Kluwer India Private Limited: New Delhi; 2010: p. 1170 – 1171 , 1199
5. Kaveeshwar SA, Cornwall J. The current state of diabetes mellitus in India. AMJ 2014, 7, 1, 45-48. Available from URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3920109/>
6. WHO | About diabetes. [Online]. Available from: URL: [http://www.who.int/diabetes/action\\_online/basics/en/index3.html](http://www.who.int/diabetes/action_online/basics/en/index3.html)
7. Diabetes Self-Management, Diabetes Education and Goal Setting. [Online]. Available from: URL: <https://www.appledrugs.com/diabetes-self-management-diabetes-education-goal-setting/>
8. Rubin Richard R. Diabetes and Quality of Life - American Diabetes Association. Available from URL: [journal.diabetes.org/diabetesspectrum/00v13n1/pg21.htm](http://journal.diabetes.org/diabetesspectrum/00v13n1/pg21.htm)
9. Mohammad Fathia Attia, Yohannan Ancy. Effect of Self-learning Package on Quality of Life of Diabetic

- Patients at Mohaiel Asser Region, KSA. *International Journal of Diabetes Research* 2017; 6(1): 7-15. Available from: URL:<http://article.sapub.org/10.5923.j.diabetes.20170601.02.html>
10. Dr Colin Tidy. Diabetes Education and Self-management Programmes. 02 Dec 2016 Available from: URL: <https://patient.info/doctor/diabetes-education-and-self-management-programmes>
  11. Prevalence of Diabetes in India | My India. Available from: URL: <https://www.mapsofindia.com/my-india/india/prevalence-of-diabetes-in-india>
  12. Diabetes in India's fastest growing disease. Available from URL: <https://www.firstpost.com/india/diabetes-is-indias-fastest-growing-disease-72-million-cases-recorded-in-2017-figure-expected-to-nearly-double-by-2025-4435203.html>
  13. Ambady Ramchandran, Chamukuttan Snehalatha. Current scenario of diabetes in India. *Journal of Diabetes*. 2009 March. Available from URL: [https://www.researchgate.net/publication/47348990\\_Current\\_scenario\\_of\\_diabetes\\_in\\_India](https://www.researchgate.net/publication/47348990_Current_scenario_of_diabetes_in_India)
  14. Indi Santosh. A study to assess the effectiveness of Structured Teaching Programme on knowledge regarding self care activities among patients with diabetes mellitus in a selected PHC at Tumkur. *IOSR Journal of Nursing and Health Science*. 2015 June; 4(3): 2320-1959. Available from: URL: <http://iosrjournals.org/iosr-jnhs/papers/vol4-issue3/Version-2/A04320108.pdf>
  15. Basavanthappa BT. *Nursing theories*. 1st ed. Jaypee brothers Medical Publishers (P) Ltd: New Delhi; 2007: 147-68
  16. Gupta Somesh Kumar. A Study to Assess the Effectiveness of Self-Instructional Module(SIM) Regarding Home Care Among Patients With Diabetes Mellitus In Selected Hospital At Kota (Rajasthan). *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*. 2017 October; 6(5): 41 – 46. Available from: URL: [www.iosrjournals.org](http://www.iosrjournals.org)
  17. Issac Shipra S. Home management of diabetes. *International Journal of Nursing Research and Practice*. 2014 June; 1(1): 34 – 36. Available from: URL: <http://www.uphtr.com/IJNRP/home>
  18. Varghese Joisy, Naidu Shoba. A Study to Assess the Effectiveness of Self Instruction Module on Knowledge, Attitude, and Practice Regarding Prevention of Complications among Diabetic Patients in Selected Hospitals in Pune. *International Journal of Science and Research (IJSR)*. 2015 July; 4(7): 297 – 301. Available from: URL: <https://www.ijsr.net/archive/v4i7/SUB156225.pdf>
  19. Pal R, Pal S, Barua A, Ghosh M. Health education intervention on diabetes in Sikkim. *Indian J Endocrinol Metab*. 2010; 14(1): 3-7. Available from: URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3063532/>
  20. Jalilian F, Motlagh FZ, Solhi M, Gharibnavaz H. Effectiveness of self-management promotion educational program among diabetic patients based on health belief model. *J Educ Health Promot*. 2014 February; 3(14): doi:10.4103/2277-9531.127580 Available from: URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3977410/>
  21. R Renukadevi. A study to assess the effectiveness of structured Teaching programme on self management of Type 2 diabetes mellitus among patients with type 2 diabetes mellitus in ESI hospital at Ayanavaram. 2011. Master Thesis Madha College of Nursing, Chennai. Available from: URL: <http://ijanm.com/AbstractView.aspx?PID=2015-3-1-10>
  22. Joshi B. A Study to assess the Effectiveness of Self Instructional Module on the Knowledge and Practice of the Mothers of School Age Children with Juvenile Diabetes in the selected Ommunity area of Ahmedabad City of Gujarat State. *Int. J. Adv. Nur. Management*. 2017; 5(2):109-111. Available from: URL: <http://ijanm.com/AbstractView.aspx?PID=2017-5-2->
  23. Khunti K et al. Effectiveness of a diabetes education and self management programme (DESMOND) for people with newly diagnosed type 2 diabetes mellitus: three year follow-up of a cluster randomized controlled trial in primary care. *BMJ* 2012 April 26; 344. Available from: URL: <http://www.bmj.com/content/344/bmj.e2333>
  24. Ahmed MM, Degwy HME, Ali MI, Hegazy NH. The effect of educational intervention on knowledge, attitude and glycemic control in patients with type 2 diabetes mellitus. *International Journal of community medicine and public health*. 2015 Aug;2(3):302-307. Available from: URL: <http://www.ijcmph.com/index.php/ijcmph/article/viewFile/970/839>
  25. Merakou K, Knithaki A, Karageorgos G, Theodoridis D, Barbouni A. Group-based education for people with type 2 diabetes mellitus in Greece: An observational study. *Journal of Nursing Education and Practice*. 2015 mar; 5(5): 118-125. Available from: URL:<http://dx.doi.org/10.5430/jnep.v5n5p118>
  26. Moghadam B., Mohammad A. The Effect of educational Intervention on Quality of Life of diabetic patients Type 2, referee to diabetic research centre of Yazd. *OFOGH-E-DANESH*. 2008; 13(4): 21-29. Available from: URL: <http://www.sid.ir/En/Journal/ViewPaper.aspx?ID=117886>
  27. Mohammad F, Yohannan A. Effect of Self-learning Package on Quality of Life of Diabetic Patients at Mohaiel Asser Region, KSA. *International Journal of Diabetes Research* 2017; 6(1): 7-15. Available from: URL:<http://article.sapub.org/10.5923.j.diabetes.20170601.02.html>
  28. Didarloo A, Shojaeizadeh D, Alizadeh M. Impact of educational intervention based on interactive approaches on beliefs, behavior, hemoglobin A1c, and quality of life in diabetic women. *International Journal of Preventive Medicene*. 2016; 7(1): 38. Available from: <http://www.ijpvmjournal.net/text.asp?2016/7/1/38/176004>

29. Taghdisi MH, Borhani M, Solhi M, Afkari ME, Hosseini F. The effect of an education program utilising PRECEDE model on the Quality of Life in patients with type 2 diabetes. *Health Education Journal*. 2011 March; 71(2): 229-238. Available from: URL: <https://doi.org/10.1177/0017896911398812>
30. Miraj SS, Roy RT, Unnikrishnan M, K V, Rodrigues GS, Mukhopadhyay C. Effect of Patient-Education on Health-Related Quality of Life of Diabetic Foot Ulcer Patients In A Tertiary Care Hospital. *Journal of the International Society for Pharmacoeconomics and Outcome Research*. 2015 November; 18(6). Available from: URL: [http://www.valueinhealthjournal.com/article/S1098-3015\(15\)04250-3/fulltext](http://www.valueinhealthjournal.com/article/S1098-3015(15)04250-3/fulltext)
31. Kargar Jahromi M, Ramezanli S, Taheri L. Effectiveness of diabetes self-management education on quality of life in diabetic elderly females. *Glob J Health Sci*. 2014 July; 7(1): 10-15. Available from: URL: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4796384/>
32. Sadek A, Maher A, Khalifa A, Madhy R, Fouad A, Fouad H. Impact of health education on quality of life in Egyptian type 2 diabetic patients. *Int. J. Adv. Res*. 2017 May; 5(5): 1850-1856. Available from: URL: <http://dx.doi.org/10.21474/IJAR01/4320>
33. Pour J S, Jafari M, Asgar M G, Dardashti H D, Teymoorzadeh E. The impact of self-care education on life quality of diabetic patients. *Journal of Health Administration (JHA)*. 2013; 16(52): 26-36. Available from: URL: <https://www.cabdirect.org/cabdirect/abstract/20133249145>
34. Roopa, K.S., and Rama Devi, G. Quality of life of Elderly Diabetic and Hypertensive People – Impact of Intervention Programme. *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*. 2014 March; 19(3): 67-73. Available from: URL: <http://www.iosrjournals.org/iosr-jhss/papers/Vol19-issue3/Version-4/N019346773.pdf>
35. Abolfotouh M, Kamal MM, Bourgy MD, Mohamed SG. Quality of life and glycemic control in adolescents with type 1 diabetes and the impact of an education intervention. *International journal of general medicine*. 2011 February. 141-152. Available from: URL: [https://www.researchgate.net/publication/51034798Quality\\_of\\_life\\_and\\_glycemic\\_control\\_in\\_adolescents\\_with\\_type\\_1\\_diabetes\\_and\\_the\\_impact\\_of\\_an\\_education\\_intervention](https://www.researchgate.net/publication/51034798Quality_of_life_and_glycemic_control_in_adolescents_with_type_1_diabetes_and_the_impact_of_an_education_intervention)

**How to cite this article:**

Pratiksha Mandal and Preeti Bhupali (2019) 'A Study to Assess the Impact of Educational Intervention Regarding Home Care Management on Quality of Life of Diabetic Patients Admitted in Selected Tertiary Care Hospital, Belagavi', *International Journal of Current Advanced Research*, 08(12), pp. 20648-20651. DOI: <http://dx.doi.org/10.24327/ijcar.2019.20651.4043>

\*\*\*\*\*