



Effects of diabetes in geriatric population: A survey study

Aarushi Rana¹, Dr. Kriti Sachan², Shivani Jha¹, Gaurav Kumar¹, Varsha Pandey¹

¹ Department of Physiotherapy, Sharda School of Allied Health Sciences Sharda University, Greater Noida, Uttar Pradesh, India

^{2*} Assistant Professor, Department of Physiotherapy, Sharda School of Allied Health Sciences Sharda University, Greater Noida, Uttar Pradesh, India

Corresponding Author: Dr. Kriti Sachan (PT)

Abstract

Background: Diabetes mellitus is a chronic progressive disease which has become a major problem among the elderly for a number of years. The older a person gets, the weaker his body gets, therefore he's more likely to develop type 2 diabetes. It is not only endangering their general health but also affects their body's performance and hence, leads to vulnerability in old age. It significantly reduces the quality of life of older adults. Early detection with a lifestyle survey and reporting of symptoms can help considerably in better management of the disease and the implementation of preventive strategies

Methodology: A cross-sectional survey was conducted using Questionnaire with 25 questions which were adapted from tools such as diabetes-39, Katz ADL, IADL Lawton scale and diabetes distress scale and the data was collected from 60 and above aged diabetic patient.

Result: The analysis showed moderate to severe impact of diabetes on physical activity (average score of 3.7), sleep quality (average score 3.4), emotional distress due to dietary restriction (average score 3.7). Over 70% people require assisted for daily activities and access to care was consisted in more than 90% of the participant.

Conclusion: The study conclude that diabetes has significant impact the physical and emotional wellbeing of the elderly. Most participants experienced complication that reduced their quality of life.

Keywords: Geriatric population, diabetes mellitus, lifestyle, physical activity, quality of life

Introduction

Diabetes is a condition which affects the body's metabolism characterized by high level of blood sugar in the body which is due to the abnormal release of insulin from the pancreas, reduced insulin effect or both. Diabetes is a chronic disease can cause complication unless it is treated. Long term high blood sugar level can cause damage to multiple organs particularly, heart, eyes, kidneys are most affected (Chentli F, 2015)^[2].

Ageing is one of the most important factors in developing Diabetes, In the last few decades, there has been a massive increase in the population of elderly people and this has been accompanied by increasing frequency of type 2 Diabetes among elderly population (Mordarska K, 2017)^[3]. As the population ages and lifestyle changes, Diabetes is expected to grow more, particularly among those 65 years of age and older. The effects of Diabetes are exacerbated when accompanied by age related physical changes, the result can be out of control. Diabetic geriatric patients not only have a higher chance of developing such complications such as cardiovascular disease, neuropathy, nephropathy, and retinopathy but also have poorer capacity for compensation to treatment. Moreover, the above category of patients will most frequently suffer from polypharmacy, immobilization, decline in mental function, and rates of social support, all these factors combined make the disease more complicated (Ahmed H. Abdelhafiz, 2022)^[1].

One of the reasons why diabetes research should target the geriatric population is because they are needy and not encompassed in the majority of world diabetes care models. Diabetes is a condition can cause complication unless it is

treated. Older individuals have other risk factors due to the normal loss of organ function, comorbid conditions, and natural degeneration of the ability to respond to self-care. The need and profile of individual who age with pre-existing diagnosis of diabetes are quite distinct from those of individual who newly diagnosed at older, and hence the need for age-specific treatment strategies for older patients. (G. Sesti, 2018)^[4].

Continuity of self-care behaviours is the greatest continuity barrier to diabetes care among older adults. Successful daily diabetes management entails a range of behavioural practices such as blood glucose monitoring, diet and food compliance, exercise, consistent medication, and close monitoring with health care providers. Yet certain older adults will not be able to carry out these practices due to physical disability, mental incapacity, poor motivation, or compromised support systems. Besides, socioeconomic status such as low income or education can be a significant factor for affecting their access to health care service and to health education, thus leading to delayed diagnosis, uncontrolled blood glucose, and high complication rates. The purpose of this research is to explore the diabetic status of the elderly using a certain questionnaire survey in an attempt to get their knowledge, self-care, and general status of health (Weinger K, 2014)^[5]

Objectives

To Determine the effects of Diabetes on quality of life in the geriatric population. To identify the occurrence of type 1 and type 2 Diabetes To perform comparative analysis of physical activity limitation, sleep quality, diet distress

among geriatric participants to evaluate the influence of diabetes related complications on daily functioning and emotional wellbeing in geriatric population

Sample Size: 30

Study setting: The study was conducted at Jewar, Gautambuddha nagar, Uttar Pradesh 2023155

Duration: The duration of study is 3 months

Methodology

Study Design: Survey Sample Method

Results

Questions	Responses /average response
Diabetes Limits Physical Activity (1-5)	3.7
Diabetes Effect Sleep (1-5)	3.4
Social Isolation Due to Diabetes (1-5)	3.3
%Needing Help with Daily Activities	70%
Experiencing Distress About Dietary Restriction	3.7
%Felling Helpless About Managing Diabetes	60%
Type of Diabetes (Type1 / Type 2)	6 / 24

The average score of 3.7 indicates diabetes significantly effects physical activity in geriatric individuals

A score of 3.4 score indicates sleep is moderately disturbed due to diabetes symptoms.

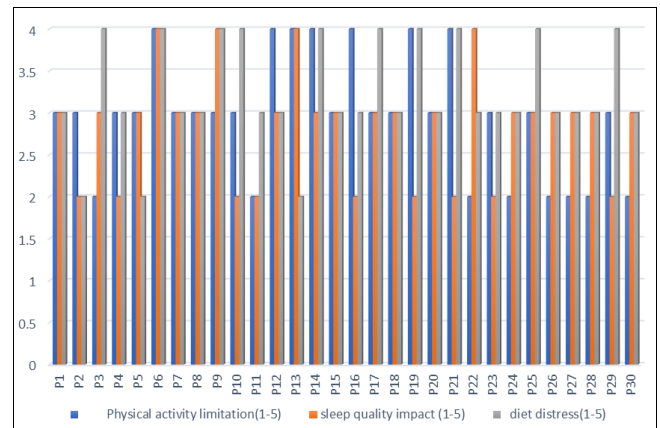
A score of 3.3 suggests moderate withdrawal from social life.

70% of people require help with day-to-day life activities reflects high dependency

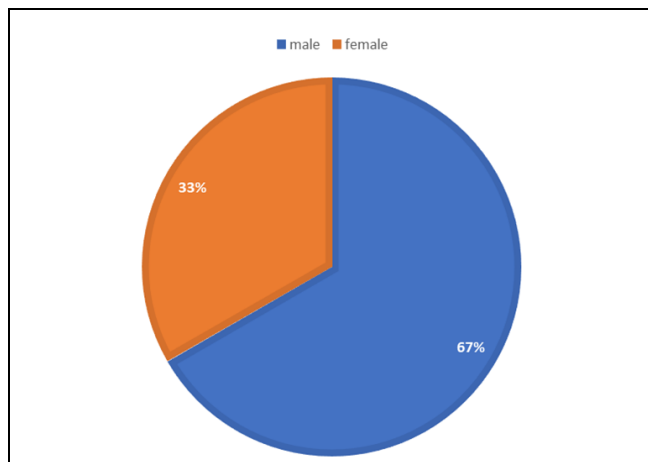
A score of 3.7 indicates emotional strain due to food restriction.

60% of people feels helpless managing diabetes indicating low confidence in self-care

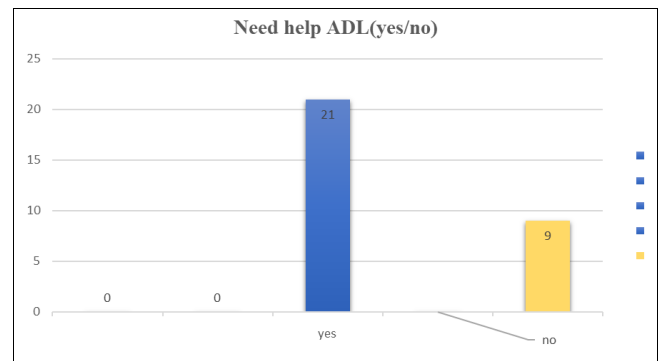
So overall diabetes heavily impacts physical, social, emotional and quality of life of the elderly



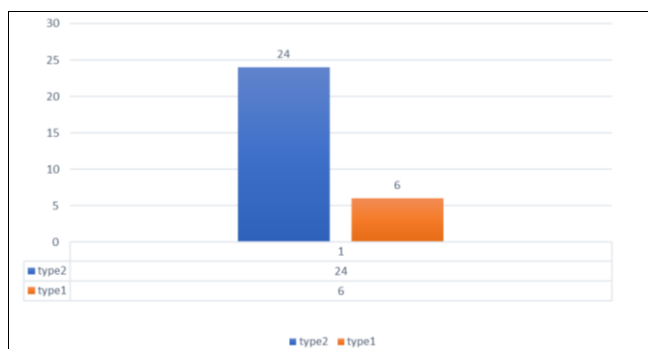
Graph 3: Comparative Analysis Between Physical Activity Limitation, Sleep Quality, Diet Distress Among Geriatric Participants



Graph 1: Showing the Percentage of Male and Female Participants



Graph 4: Showing that the need helps for Activity of Daily Living



Graph 2: Showing the Type of Diabetes in Geriatric Population

Discussion

This shows that how diabetes affects the quality of in geriatric individual using structured questionnaire based on data collected from participants aged above 60 and above Out of 30 participants, 67% were male, and 33% were female. the findings indicated that diabetes affects almost every aspect of their life physically, socially and functionally.

A significant number of elderly participants reported limitation in physical activities more than 70% of the elderly have difficulty performing daily tasks such as preparing meal, managing medications, highlighting the loss of independence.

Many individual experienced emotional distresses, feeling distress due to dietary restriction. sleep disturbances, social withdrawal and anxiety were common. Over half of the

participants reported feeling socially isolated and over 50% were feeling helpless about managing diabetes. In the terms of healthcare access over 90% of the participants have access to doctors and medication. Some participants expressed the need of services like free check-ups and dietary guidance.

Conclusion

This study concluded that the Diabetes significantly affects the quality of life in geriatric population and not only physically but also socially and emotionally and we require holistic approach for geriatric diabetes care. This should include community-based intervention, basic health care services and promoting independence and enhancing social connection that will help improving the quality of life of geriatric individual.

Reference

1. Abdelhafiz AH, Sinclair AJ. Diabetes in the elderly. *Medicine*,2022;50(11):713-717.<https://www.sciencedirect.com/>
2. Chentli F, Azzoug S, Mahgoun S. Diabetes mellitus in elderly. *Indian J Endocrinol Metabolism*,2015;19(6):744-752, <https://pmc.ncbi.nlm.nih.gov/articles/PMC4673801/>
3. Mordarska K. and Godziejewska-Zawada, M. Diabetes in the elderly. *Prz Menopauzalny*,2017;16(2):38-43. <https://pmc.ncbi.nlm.nih.gov/>
4. Sesti G, Antonelli Incalzi R, Bonora E, Consoli A, Giaccari A, Maggi S, *et al.* Management of diabetes in older adults. *Nutrition, Metabolism and Cardiovascular Diseases*,2018;28(3):206-218. <https://www.sciencedirect.com/>
5. Weinger K, Beverly EA, Smaldone A. Diabetes self-care and the older adult. *West Journal of Nursing Research*,2014;36(9):1272–1298. <https://pubmed.ncbi.nlm.nih.gov/>