



EVALUATION PHYSICAL FUNCTIONAL DISABILITY IN RELATION TO DIABETES AMONG MIDDLE AGE MALE AND FEMALE GENDER

Lokesh.R and Daniel

Assistant Professor, School of physiotherapy, VISTAS, Chennai.

*Corresponding Author Email: lokesh.sp@velsuniv.ac.in

ABSTRACT

BACKGROUND OF STUDIES: The risk of disability as a result of diabetes varies from none to double, disability is an important measure of health and an estimate of the risk of disability as a result of diabetes is crucial in view of the global diabetes epidemic in middle age male and female genders. **AIM AND OBJECTIVE OF STUDY:** The aim of this study is to evaluate physical and functional disabilities in middle age male and female genders with Diabetes Mellitus. **METHODS:** In the study 60 diabetes mellitus subjects will be selected from various Physiotherapy clinics, based on the inclusion and exclusion criteria. After getting informed consent form from the subjects, they are allowed to fill the questionnaire which is based on the ADL, Katz index Of Independence in Activities Of Daily Living, Lawton Instrument Activates Of Daily Living Scale. **RESULT:** The result of the study shows a high dependence among the Male gender, Mean of 31.000 to the Female gender of 25. **CONCLUSION:** This study concludes that middle age females are more dependent than middle age males

KEY WORDS

Functional disability, Physical disability, Actives of daily living, Diabetes Mellitus

INTRODUCTION

Diabetes an international pandemic, is a growing public health concern, and its prevalence is escalating exponentially with a high frequency of morbidity, premature mortality, disability, loss of productivity and socio-economic challenges². Diabetes mellitus increases the risk of disabling disorders including cardiovascular disease, retinopathy, renal failure, and peripheral vascular disease, Physical disability is a useful measure of the overall effect of diabetes on health¹⁹. The risk of disability as a result of diabetes varies from none to double, disability is an important measure of health and an estimate of the risk of disability as a result of diabetes is crucial in view of the global diabetes epidemic¹⁸.

Disability can be defined in several ways, including difficulties with activities of daily living (ADL), difficulties with instrumental activities of daily living (IADL), and mobility limitations¹⁸. The threats of physical disability, loss of independence, and diminished quality of life may ultimately be the greatest concern for many with the

disease³. Diabetes Mellitus increases the risk for disorders that predispose individuals to hospitalization, coronary artery, cerebrovascular and peripheral vascular diseases, infections and lower extremities amputations¹⁶. Adults with diabetes not only experience greater levels of physical disability but also faster rates of deterioration over time.

Diabetes is a major cause of functional disability, defined as difficulty performing activities of daily living and routine social activities, is a common problem in ambulatory patients' Functional disability is highly prevalent in individuals with chronic diseases and it predicts functional dependence, increased health services use, increased health care costs, and increased risk of death². Diabetes is common chronic conditions that are significantly associated with increased odds of functional disability. So therefore, in order to successfully manage and rehabilitate individuals with diabetes a proper assessment of their physical and functional ability should be carried out because a good

treatment plan is based on a well detailed assessment, thereafter rehabilitation aims to help individuals with diabetes mellitus to maximize their potential capabilities of achieving functions and independence for activities of daily living.

There is increased recognition of value of rehabilitation including acceptance through education, independence and social interaction⁴. As the diabetes epidemic grows in size and complexity, there is an increasing realization that physicians alone are unable to provide the care required by people with diabetes. To help them live life to the fullest, people with the condition need the services of a range of healthcare personnel, including diabetes nurses, dietitians, podiatrists, psychologists and eye specialists. The role of most of these is well defined; the multi-disciplinary team approach benefits increasing numbers of people with diabetes worldwide. However, the potential of some specialties, such as physiotherapy, has hardly been explored. However, because holistic rehabilitation without proper assessment will lead to a not so effective improvement in quality of life and activity of daily living and also reduced performance in individuals with diabetes¹. Therefore, this study will be designed to evaluate the physical and functional disabilities in individuals with diabetes across both genders.

METHODOLOGY

STUDY DESIGN: Observation study.

STUDY SETTING: Subjects will be selected from Today's Physiotherapy, KuberaPhysiotherapy Clinic, Sparsh Clinic, Betherny physiotherapy.

SAMPLE SIZE: 60(30 male and 30 females)

STUDY DURATION: Single time study

INCLUSION CRITERIA

Both male and female patient who have been diagnosed with diabetes are to be recruited

Both male and female with age limit from 50 to 65 years
Patient who shows signs of any type of functional disability.

Patient who have under gone any of this test

- A1C test, also called the hemoglobin A1c, HbA1c, or glycohemoglobin test
- A fasting plasma glucose (FPG) test
- An oral glucose tolerance test (OGTT).

EXCLUSION CRITERIA

Any systemic illness which affects the ADL

Individual who have not been diagnosed with diabetes.

Patient with mental disorientation

TOOLS USED:

Katz index Of Independence in Activities Of Daily Living.

Lawton Instrument Activates of Daily Living Scale

PROCEDURE

In the study 60 diabetes mellitus subjects will be selected from various Physiotherapy clinics, based on the inclusion and exclusion criteria. After getting informed consent form from the subjects, they are allowed to fill the questionnaire which is based on the ADL. Katz index Of Independence In Activities Of Daily Living, Lawton Instrument Activates Of Daily Living Scale. The questionnaire was given to participants with DM to complete and provide information about the questions asked. Also, participants were lectured on how to fill the questionnaires properly, also help was provided when needed. They were assured of confidentiality of their response.

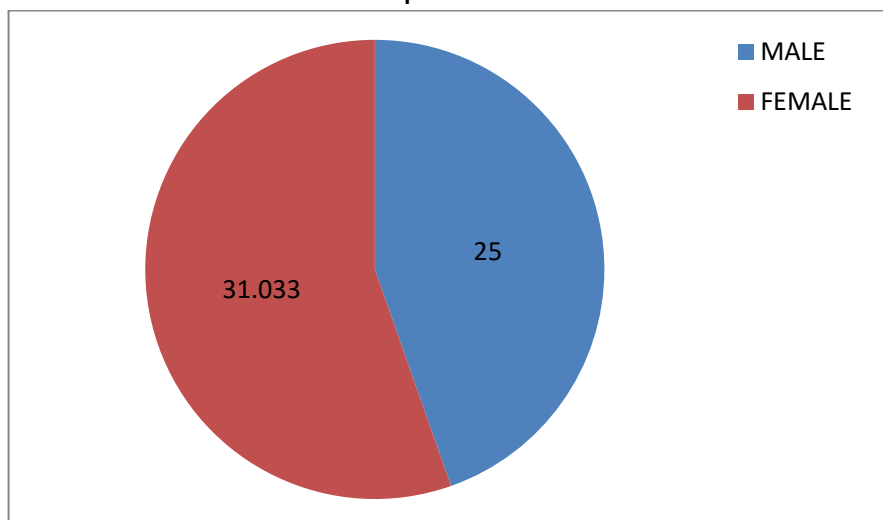
Copies were distributed to participants through personal visitations to the clinic. Only completed questionnaires by the participants were used for analysis.

DATA ANALYSIS

Dependence chart

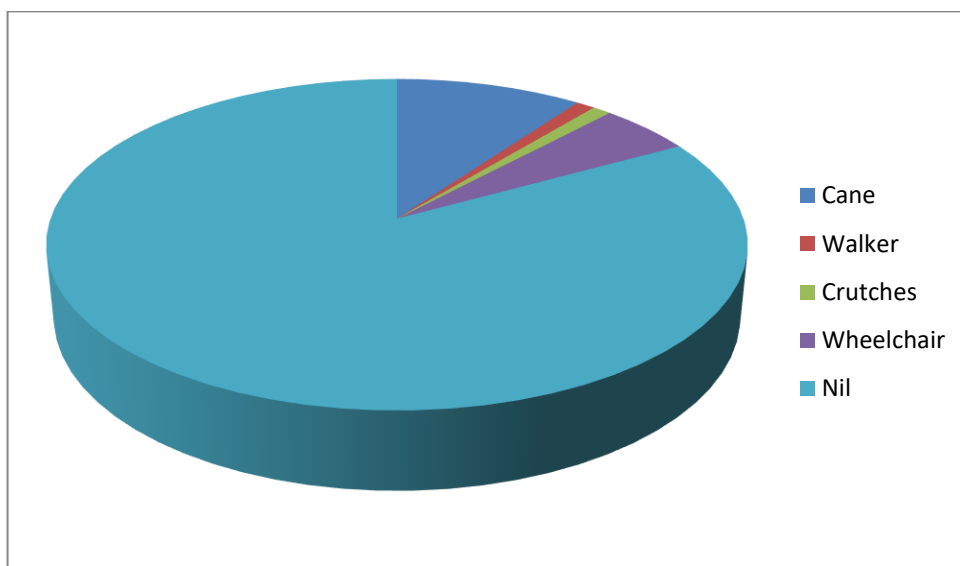
S.no	MALE	FEMALE
1	31.003	25

Destitution of the level of dependence between male and females



AIDS AND DEVICES DISTRIBUTION

S.no	Aids and Devices	Percentage
1	Cane	15
2	Walker	5
3	Crutches	5
4	Wheelchair	10
5	Nil	65



RESULT

The result of the study shows a high dependence among the Male gender, Mean of 31.000 to the Female gender of 25.

The is no relationship of the time of diagnoses to the level of dependence

The associated illness plays a major roll in the level of dependence.

DISCUSSION

This study was primarily designed to evaluate physical and functional disability with associated illnesses (co morbidities) in individuals with Diabetes mellitus. It sought to assess the activities of daily living musculoskeletal disorders, pain and the association of other conditions related to individuals with diabetes

mellitus. The duration of the disease had no association on disability in this study similar to those of previous study; we found women had significantly higher rates of functional and physical disability, a result which is consistent with previously reported data.

Diabetes is often accompanied by vascular and neurological disorders, as well as depressive symptoms and dementia, but these cannot explain completely the increased risk of disability. Many of the respondents use medication for the condition however majority of the age falls between 50 and 65 years resulting in the finding of the study showing prevalence among the elderly which is consistent with previous work.

Most of the respondents could dress themselves, eat and perform personal hygiene without any difficulty while Many could stand from chair, walk. Run errands and reach to get objects with some difficulty, some percentage were unable to do this thing, but they were few.

Most make use of walking aids, Majority do not need up from another person, however majority had high blood pressure and most of the respondents complained of this high blood pressure and some other illnesses like knee osteoarthritis, visual impairments and back pain limiting their activities and causing them to sweat more and get fatigued and exerted easily. This study also showed that over time these respondents have found ways to cope with their condition due to long term use of drugs and also the length of time since diagnosis example pain, most of the respondents have considered the pain they feel normal so also is loss of sensation.

Majority of the respondents complained of ache, weakness and stiffness on weight bearing joints and extremities and it prevented them from doing their normal work, many of them had lower back pain which could be as a result of many other factors such as age, posture and sleeping pattern other than diabetes mellitus alone, any did not have deformity.

In conclusion, understanding the pathway from diabetes to disability is very important, because diabetes may be one of the few reversible causes of disability. Our findings should prompt clinicians to find secondary and tertiary preventive strategies for optimizing the quality of life of older people with diabetes. In addition to appropriate glycaemic control and management of diabetes and its complications, a multidimensional assessment should always be performed.

CONCLUSION

- Diabetes is associated with an increased incidence of functional disability, which is likely to further erode health status and quality of life.
- Diabetes is associated with a major burden of physical disability and these disabilities are likely to substantially impair their quality of life.
- A wide range of impairments and co morbidities explains the diabetes- disability relationship, suggesting that the mechanism for such an association is multifactorial.
- In older patients, impaired lower extremity function is a long term diabetic complication. Comprehensive assessment of older diabetic patients should include a standardized evaluation of lower extremity performance.
- Aggressive management of cardiovascular risk factors may significantly reduce the burden of disability in diabetic patients.
- This study concludes that middle age females are more dependent than middle age males

RECOMMENDATION

Based on the findings of this study, the recommendations suggested including:

1. Proper evaluation and assessment of physical and functional disability of individuals with diabetes mellitus should be done alongside treatment.
2. Cardiovascular diseases such as stroke should not occur before individuals with diabetes mellitus are referred for physiotherapy
3. Encourage individuals with diabetes mellitus to involve physiotherapy in their healthcare plan earlier on diagnosis rather than later when they present with musculoskeletal disorders
4. Physiotherapist should create awareness for the impact of physiotherapy in the management of diabetes mellitus.

IMPLICATION OF FURTHER STUDY

Future studies should involve the knowledge and perception of physician towards the role of physiotherapy in diabetes mellitus. The role of physiotherapy in the management of symptoms of individuals with diabetes mellitus.

LIMITATION OF STUDY

The study was not carried out on diabetes patient across all ages

The study did not provide any treatment plan to reduce the levels of dependence

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***Corresponding Author:**

Lokesh.R*

Email: lokesh.sp@velsuniv.ac.in