JOURNAL OF ADVANCE ACADEMIC RESEARCH (JAAR)

A Study On The Prevalence Of Diabetic Mellitus And Its Effects Among 60-Year-old Women Of Shankhu, Kathmandu

Rina Shrestha1, Nistha Shrestha2
1Nursing chief, Faculties of Nursing, Paropakar Maternity & Women Hospital, Thapathali, Kathmandu, Nepal
2Co-chief Physiotherapist, Faculties of Physiotherapy, EDCD, DOHS, MOHP
Corresponding Author: Dr Rina Shrestha, PhD Nursing
Email: rinastha2018@gmail.com | https://orcid.org/0009-0009-2577-994X

ABSTRACT

Background:

Diabetes mellitus is a burgeoning worldwide problem of considerable cultural, well-being, and economic impact. A calculation of two hundred and eighty five million individuals globally, or approximately 6.4% of the adult group, are living with this disease. Fatness and people aging are the major drivers of the increase.

Objective:

To assess the prevalence of diabetes and analyze the effect of Diabetes on women's lives.

Methods:

The study was carried out from March to July 2025, and Shankhu, Kathmandu, Nepal, was selected randomly for this research. Over 70 women over the age of 60 who completed usual surveys and used other research tools to have broader knowledge of the risk variables were studied. A mixed-methods approach was applied to analyze the factors associated with diabetes .

Results:

 The data state that the Primary causes of Diabetes are genetic effects, lack of exercise, consumption of calorie-based food, and hectic lifestyles, which are included in the study area. Diabetic patients face a common problem of weight loss, frequent urination, thirst, and blurred vision, chest, heart, and many internal problems related to women. A patient has less interest in physical activity, and many women have stated a situation of fatigue and high stress levels.

Conclusion:

The study concluded that Diabetes is a disease that causes a series of Problems in human life. To mitigate these health problems, a healthy lifestyle is extremely required to address health problems.

KEYWORD: Diabetic, Effects, Prevalence, Women

INTRODUCTION:

Chronic hyperglycemia is a feature of diabetes mellitus (DM), a prolonged organic process disease that severely compromises vascular health. Type 1 diabetes, type 2 diabetes, and gestational diabetes all carry their risks and complications. Through pathways of oxidative stress, inflammation, and endothelial dysfunction, the disease hastens vascular damage with profound microvascular

JOURNAL OF ADVANCE ACADEMIC RESEARCH (JAAR)

complications. It is speedily growing global issue with severe cultural, well-being, and economic implications. An estimated two hundred and eighty-five million individuals in the world, or roughly 6.4% of adults, had the disease. Without improved treatment or management, the figure is expected to rise to four hundred thirty million. The two firsthand causes of the rise are fatness and a biological process group. Also, it was seen that close to 50% of all diabetics are not diagnosed until a decade following the initial onset of the condition. (Donthula G, 2024)

Hyperglycemia a feature of diabetes mellitus (DM), a lifestyle disease that originates from an hormonal imbalance that is either pure (type 1 DM, or T1DM) or comparative (type 2 DM, or T2DM). Approximately 350 million individuals worldwide are projected to have diabetes, and if nothing is done, it is likely to increase fourfold by 2030. As a stark departure from the earlier misconception that diabetes is more prevalent in developed countries, developing nations are now reported to have experienced an unprecedented increase in the incidence and premature development of the condition. Moreover, diabetes is predicted to rank as the seventh largest cause of mortality by 2030 and accounts for about eighty percent of deaths in low-level and middle-income countries. (Sukla P, 2015)

Diabetes mellitus (DM), also known as hyperglycemia, is a condition that absolutely lacks one hormone, namely, insulin, type 1 DM, or T1DM, is relatively deficient, in which case there is an impaired action of insulin, type 2 DM, or T2DM. World-widely, three hundred fifty million people are seen to be suffered from diabetes, and if nothing is done, the number will quadruple by 2030. In contrast to the earlier belief that diabetes is more prevalent in industrialized countries, current estimates indicate that developing countries have seen a record increase in the prevalence and early age of onset of the disease. Additionally, diabetes is expected to be the seventh leading cause of death and is responsible for about eighty percent of deaths in-less-income nations. Apart from that, diabetes is predicted to be listed as the seventh most common cause of death by 2030 and accounts for 80% of death in low-income countries. (Donthula G, 2024)

In 2019, the prevalence of diabetes is all over the world, as also predicted for 2030 and 2045. to show 2019 global diabetes prevalence estimates, and projections for 2030 and 2045. According to the 1990 and 2018 data, a total of 255 best data was published. They were identified in 138 countries. Globally, approximately 9.3% cases of diabetes were seen in 2019. and 10.9% in 2045. The worry is higher in developed countries (10.4%) than in developing countries (4.0%), and also higher in urban people (10.8%) than in rural people (7.2%). Half (50.1%) of all people with diabetes don't know they have the disease. According to an estimate, the global prevalence of impaired glucose tolerance in 2019 will be 7.5% (374 million). According to the prediction, the ratio of weakened glucose disposition is expected to grow from an expected 7.5% in 2019 to 8.0% by 2030 and 8.6% by 2045. (NCD-RisC, 2024)

DM is a metabolic disorder caused by elevated blood glucose that impacts the body's ability to convert nutrients into energy. Failure of the physical structure to enough food or any insulin that the body needs could be the cause. People with diabetes mellitus in Nepal, only 52.7% know they have the disease. That this is the case is rather sobering. The kidneys, eyes, nerves, and other organs, as well as the blood vessels and heart, can all be severely impacted by diabetes mellitus. Long-term poorly controlled diabetes mellitus can increase the chances of cardiovascular disease, kidney disease,

neurological disease, and mental and cognitive disorders. DM has also been linked to eye conditions such as retinopathy, cataracts, and glaucoma. (Saeedi P,2019)

IDF South-East Asia region comprises seven countries and territories, of which Nepal is one. There are 107 million people with diabetes in the SEA Region and 589 million worldwide; this figure will increase to 185 million by 2050. In Nepal, there are 19,117,900 patients with diabetes, a prevalence of 7.7% the disease among all adults (1,259,100). (International diabetes federation, 2024)

There are many studies on diabetes and its related topics, including the prevalence of diabetes and its effects among 60-year-old women in Sankhu. However, a better perception of the hereditary, physical, and situational factors that contribute to this disease is necessary for many personalized diabetes management. The researcher was motivated to assess the prevalence of diabetes and analyze the effect of Diabetes on women's lives in Sankhu.

METHODS

A mixed-method approach was applied in this study. The Primary data collection and the secondary approach were applied in this study. The study area was chosen as Shankhu, Kathmandu. The target population is women who are 60 years old. To determine the prevalence of diabetes and the effects the disease has on the quality of life among women is the objective of this study. A sample of over 70 women aged 60 years, who answered the standard questionnaires and other research tools, provides a broader view of the risk factors. This sample was chosen randomly for this study. The study was conducted from March to July of 2025. Instruments were created drawing on existing research and consultations with subject matter experts. The instruments comprised a set of 15 questions spread across three sections. The first part, 6 sociodemographic variable questions, the second part had questions regarding the risk of diabetes using FGD, and the third component was about the effects of diabetes. All questions on demographics were closed-ended. Version 20 of the Statistical Package for Social Sciences (SPSS) is used for data analysis.

RESULTS:

Table 1: Sociodemographic variables:

Variables	Characteristics	N	%
Age	60 - 70 Years	53	76%
	71 -80 years	15	21%
	>80 years	2	3%
Caste	Bhrahman	18	26%
	Chetri	17	24%
	Newar	35	50%
Education	Literate	18	26%
	Never gone to School	52	74%

According to Table 1, Sociodemographic variables of the study women are presented. Among 70 women, the absolute majority (76 %) were in the age group of 60 -70 years old. Higher numbers were from Newar caste groups (50%), followed by Brahman (26%). A majority of them were never in school or illiterate (74%).

FGD interview with people stated that the

Women of this community are more engaged in earning activity and do less hard work, so often the workload and less exercise are the reasons for diabetic cases among the women in general.
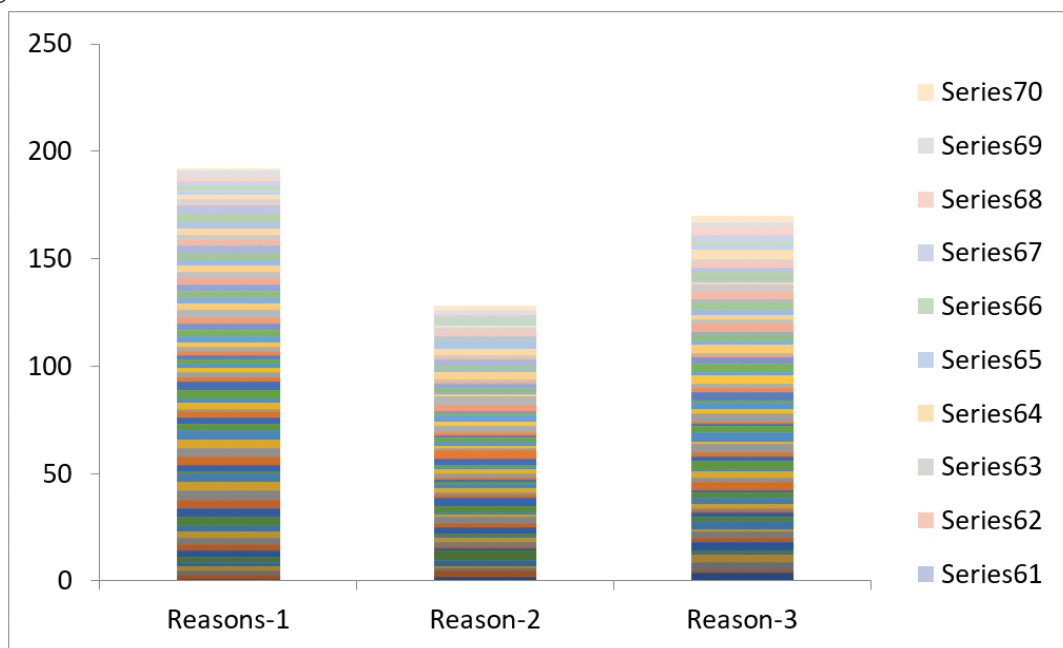
Figure 1: Risk factors of Diabetics

Figure 1: According to several studies, the risk factors for diabetes in people 60years old. Women are quite stable for a variety of reasons, including age, work commitments, and stamina, which are essential for boosting energy levels. According to a KII with community members, women in the study areas work too much. However, after 60 years, it was discovered that women had numerous health issues, with diabetes being one of the main causes. This is because junk food is more popular among all age groups. An 85-year-old woman with diabetes frequently added that genetic disease transmission is another factor contributing to the condition.

The HHs respondents frequently remarked that the spread of genetic diseases is another factor contributing to diabetes; for example, an 85-year-old woman with diabetes and her offspring also have the same condition. Another cause of disease is genetic transformation. Women who responded to the survey also mentioned that their diabetes was caused by a lack of effort and an imbalanced diet; they also listed a number of additional factors, including age, obesity, stress, family history, and more.
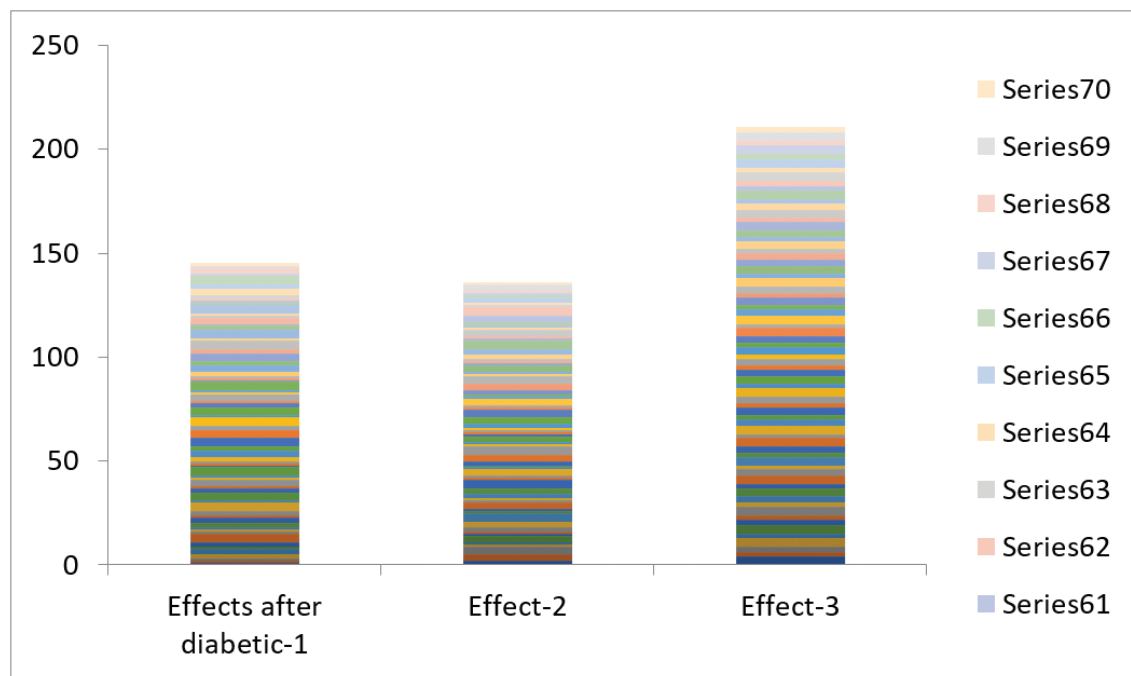
Figure 2: Effects of Diabetes

Figure 2: It also illustrates that the series level after diabetes is included with the effect-3 (Weight loss, thirst, increased hunger), followed by Effect 1(Fatigue, energy loss) and Effect 2 (problems in the eyes, and other parts of the body, loss of libido).

DISCUSSION

The determination of prevalence of diabetes and assess that how the disease affected the lives of women is the main objective of this study. The study was conducted on seventy women who lived in Shankhu, Kathmandu, Nepal; seventy-six percent of the volunteers were between the ages of sixty and seventy. The Newar caste group comprises a larger percentage of the population (50%) than the Brahman caste (26%). Seventy-four percent were illiterate or had never attended school. A Similar study, which is close to the research, was conducted on Nepal's diabetes prevalence and risk factors. According to findings of a national population-based survey, DM prevalence was found to be 8.5% (95% CI 7.8% to 9.3%).Compared to the 20–39 age group, the likelihood of DM. (Shrestha N,2022)

A regular review was conducted for meta-analysis research to establish risk factors and prevalence of diabetes mellitus type 2 date from 2000 to 2020 in Nepal. The subject-related keywords were searched on Google Scholar, PubMed, Embase, and Scopus. The inclusion criteria were 15 studies. The prevalence of diabetes mellitus type 2 were taken during the period of 2010 to 2015 was 7.75% (CI: 3.67–15.61) and during 2015–2020 was 11.24% (CI: 7.89–15.77). According to analysis, the risks of getting type 2 diabetes are reduced by 64.1%, 62.1%, and 67.3%, respectively, if a person's portion size and blood pressure is normal, and no family background

JOURNAL OF ADVANCE ACADEMIC RESEARCH (JAAR)

having such disease. According to the study's findings, in Nepal the prevalence of approximation type 2 diabetes, re-diabetes, and diminished glucose temperament was 10%, 19.4%, and 11%, respectively. (Shrestha DB,2021)

The Majority of respondents added that weight loss, increased thirst, and hunger are the primary symptoms of diabetes. Whereas Fatigue, losses of energy, are the second most important symptoms of Diabetes, problems with visibility and problems with other organs are the third symptoms of the patient. Similar research indicates that due to the greatest effects of thirst, weight loss, and disruption of vision, the patient lost physical property (M = 5.17). visual abnormalities (M = 5.09). (Sastre MTM,2023)

FGD participants also added that the risk factors of diabetes in women above 60 years are quite stable due to many reasons, such as age factors, Work engagements, and stamina, which are vital reasons to build energy levels. It was found that women have seen many health problems occur, and diabetes is one of the primary reasons due to the primary reason of junk foods, which are more preferred by all age groups. In low-and middle-income nations, the similar study of over 80% of individuals reside having diabetes type 2. Those of lower socioeconomic status are at overall risk of having diabetes type 2. While comparing between youth from more affluent families and less-affluent families, the risk of having diabetes type 2 is seemed in those family who are less-affluent. US Whites and Blacks are more likely to suffer from diabetes when they live in underprivileged neighborhoods. (Tang SS,2025)

CONCLUSION

The result of the above study illustrated that the common symptoms of diabetes are frequency of micturation, excessive thirst, and weight loss. There are some other symptoms, such as fatigue, reduced eye visibility, and other health-related problems. The study concluded that Diabetes is a disease that causes a series of Problems in human life. To mitigate these health problems, a healthy life and timetable are extremely required to manage a healthy lifestyle.

RECOMMENDATION

Based on the study of the above FGD, it is recommended to perform some physical exercise apart from family and professional life. A healthy lifestyle and the utilization of food are the best practices to control diabetes, and it is suggested that other academic institutes conduct similar research in rural, and rural-urban samples to conduct a comparative study of the diabetic phenomena.

ACKNOWLEDGEMENT

REFERENCES

Kaul, K., Tarr, J. M., Ahmad, S. I., Kohner, E. M., & Chibber, R. (2012). Introduction to diabetes mellitus. *Advances in Experimental Medicine and Biology, 771*, 1–11. https://doi.org/10.1007/978-1-4614-5441-0_1

JOURNAL OF ADVANCE ACADEMIC RESEARCH (JAAR)

Donthula, G., & Daigavane, S. (2024). *Diabetes mellitus and neurovascular pathology: A comprehensive review of retinal and brain lesions. Cureus, 16(10), e70611. https://doi.org/10.7759/cureus.70611*

Sukla, P., Shrivastava, S. R., & Shrivastava, P. S. (2015). *A longitudinal study to assess the impact of exercise on clinical, biochemical, and anthropometric parameters among type 2 diabetes patients of South India. Avicenna Journal of Medicine, 5(1), 16–20. https://doi.org/10.4103/2231-0770.148504*

NCD Risk Factor Collaboration (NCD-RisC). (2024). *Worldwide trends in diabetes prevalence and treatment from 1990 to 2022: A pooled analysis of 1108 population-representative studies with 141 million participants. Lancet, 404(10467), 2077–2093. https://doi.org/10.1016/S0140-6736(24)02317-1*

Saeedi, P., Petersohn, I., Salpea, P., Malanda, B., Karuranga, S., Unwin, N., ... Williams, R. (2019). *Global and regional diabetes prevalence estimates for 2019 and projections for 2030 and 2045: Results from the International Diabetes Federation Diabetes Atlas, 9th edition. Diabetes Research and Clinical Practice, 157, Article 107843. https://doi.org/10.1016/j.diabres.2019.107843*

Joshi, R., Malla, R., Bhattarai, M. D., & Shrestha, D. B. (2017). *Prevalence of gestational diabetes mellitus in overweight pregnant women in urban antenatal clinic at 24-28 weeks of gestation. Medical Journal of Shree Birendra Hospital, 17(2), 55–62. https://doi.org/10.3126/mjsbh.v16i2.17854*

Tang, S. S., Zhao, X. F., An, X. D., Sun, W. J., Kang, X. M., Sun, Y. T., Lian, F. M. (2025). *Classification and identification of risk factors for type 2 diabetes. World Journal of Diabetes, 16(2), Article 100371. https://doi.org/10.4239/wjd.v16.i2.100371*

Donthula, G., & Daigavane, S. (2024). *Diabetes mellitus and neurovascular pathology: A comprehensive review of retinal and brain lesions. Cureus, 16(10), e70611. https://doi.org/10.7759/cureus.70611*

Shrestha, N., Karki, K., Poudyal, A., Aryal, K. K., Mahato, N. K., Gautam, N., Kc, D., Gyanwali, P., Dhimal, M., & Jha, A. K. (2022). *Prevalence of diabetes mellitus and associated risk factors in Nepal: Findings from a nationwide population-based survey. BMJ Open, 12(2), e060750. https://doi.org/10.1136/bmjopen-2022-060750*

Guariguata, L., Whiting, D. R., Hambleton, I., Beagley, J., Linnenkamp, U., & Shaw, J. E. (2014). *Global estimates of diabetes prevalence for 2013 and projections for 2035. Diabetes Research and Clinical Practice, 103(2), 137-149. https://doi.org/10.1016/j.diabres.2013.11.002*

Shrestha, D. B., Budhathoki, P., Sedhai, Y. R., Marahatta, A., Lamichhane, S., Nepal, S., Adhikari, A., Poudel, A., Nepal, S., & Atreya, A. (2021). *Type 2 diabetes mellitus in Nepal from 2000 to 2020: A systematic review and meta-analysis. F1000Research, 10, 543. https://doi.org/10.12688/f1000research.53970.2*

Shrestha, U. K., Singh, D. L., & Bhattarai, M. D. (2006). *The prevalence of hypertension and diabetes defined by fasting and 2-h plasma glucose criteria in urban Nepal. Diabetic Medicine, 23(10), 1130–1135. https://doi.org/10.1111/j.1464-5491.2006.01953.x*

Shrestha, N., Mishra, S. R., Ghimire, S., Gyawali, B., & Mehata, S. (2020). *Burden of diabetes and prediabetes in Nepal: A systematic review and meta-analysis. Diabetes Therapy, 11(9), 1935–1946. https://doi.org/10.1007/s13300-020-00884-0*

Sastre, M. T. M., Sorum, P. C., Kpanake, L., & Mullet, E. (2023). *Judging the possibility of the onset of diabetes mellitus type 2 from reported behavioral changes and from family history. Clinical Diabetes and Endocrinology, 9(1), Article 1. https://doi.org/10.1186/s40842-022-00147-w*

International diabetes federation, 2024 *https://idf.org/our-network/regions-and-members/south-east-asia/members/nepal/*