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Risk Assessment of Diabetes Using Diabetes Mellitus Risk Assessment form among Population of Kothanavadi Village Chamarajanagra District

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Abstract:-

- ***Aims & Objectives:***

The goal of the research study is to perform the risk assessment for diabetic mellitus using diabetic risk assessment form among the population of Kothanavadi Village, Chamarajanagar District.

- ***Methods:***

To evaluate the diabetes mellitus risk assessment, a descriptive study approach was employed. The information from the samples was gathered using a modified diabetic assessment template. 132 samples were chosen for the investigation, which was conducted in the village of Kothanavadi using a non-probability convenient sampling strategy. To get the necessary information, a modified diabetic assessment form was utilised. Descriptive analysis was used to analyse data.

- ***Result:***

The study result revealed that among 132 samples 78 (59.9%) were having low risk of DM, 42(31.81%) slightly elevated risk, 9(6.81%) were at moderate risk and 3 (2.27%) of the samples were at high risk of getting DM

- ***Interpretation and Conclusion:***

The study revealed that majority of the population were at low risk of getting DM and only 2% were at high risk of getting DM.

Keywords:- *Diabetic Mellitus; Risk Assessment Form.*

I. INTRODUCTION

An excessively high blood sugar (glucose) level results in diabetes. It arises when the pancreas produces insufficient or no insulin, or when the body is not utilising insulin as it should. People of all ages are affected by diabetes. All types of diabetes are treatable with medicine and lifestyle modifications, although the majority are chronic (lifelong).[1]

Type 1 and type 2 diabetes are chronic diabetes diseases. Prediabetes and gestational diabetes are two diabetes disorders that may be treated. When blood sugar levels are greater than usual, prediabetes develops. However, the blood sugar isn't elevated enough to qualify as diabetes. Furthermore, if preventative measures are not implemented, prediabetes might progress to diabetes.[2]

Diabetes-related long-term consequences appear gradually. Diabetes problems have the potential to become incapacitating or even fatal over time. In actuality, type 2 diabetes can develop from prediabetes. Potential side effects include cardiovascular illness, diabetes-related nerve damage, kidney damage, eye, foot, skin, oral health issues, hearing loss, Alzheimer's disease, and diabetes-related depression.[3]

Eating healthy foods, such as those that are higher in fibre, fruits, vegetables, and whole grains, and lower in fat and calories, will help maintain blood glucose levels. Diabetic Mellitus can be avoided by increasing physical activity, such as going for a daily brisk walk, maintaining a healthy weight, and adopting healthy exercise habits.[4]

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II. NEED FOR THE STUDY

The most recent data, estimates, and numbers about the effects of diabetes worldwide can be found in the IDF Diabetes Atlas. In 2021, 1 in 10 adults, or 537 million, had diabetes. By 2045, there will be 783 million people on this list, up from 643 million in 2030.Approximately 240 million persons (or 1 in 2; 44%) who have diabetes go undiagnosed. Type 2 diabetes affects most of them. Over three-quarters of diabetics reside in low- and middle-income nations. Adults with type 2 diabetes are more likely to develop than 541 million people. Over 1.2 million kids and teenagers (ages 0 to 19) have type 1 diabetes. In 2021, diabetes claimed 6.7 million lives.In 2021, diabetes was the cause of at least $966 billion in medical expenses, or 9% of the total amount spent on healthcare worldwide. Hyperglycemia, or elevated blood glucose, during pregnancy affects 1 in 6 live births, or 21 million babies.[5]

The metabolic non-communicable disease health report of India was the subject of a study carried out as part of the ICMR-INDIAB national cross-sectional study (icmr-indiab-17). A total of 113,043 people (79,506 from rural and 33,537 from urban regions) took part in the ICMR-INDIAB survey between October 18, 2008, and December 17, 2020, according to the study's findings. Among 107,119 people, the weighted overall prevalence of diabetes was 11·4% (95% CI 10·2–12·5; 10 151), while the weighted prevalence of prediabetes was 15·3% (13·9–16·6; 15 496 of 107,119 people). With the exception of prediabetes, all metabolic NCDs were more common in urban than rural regions. Less than 1 represented the ratio of diabetes to prediabetes in certain states with poor human development indices.[6]

➢ *Objectives:*
- To assess risk for diabetes using diabetes mellitus risk assessment form.

➢ *Hypotheses:*
- H_1: There is a risk of diabetes mellitus among population of kothanavadi village, chamarajanagar district.

III. MATERIALS AND METHODS USED

➢ *Sources of Data:*
Study was conducted in Kothanavadi Village, Chamarajanagar District.

➢ *Demographic Variable:*
Demographic variables in the study were gender, age, occupation, life style, body mass index and family history.

➢ *Research Design*
The research design used in this study is descriptive designs.

➢ *Research Setting*
Study was conducted Kothanavadi Village, Chamarajanagar District.

➢ *Population*
In these study villagers of Kothanavadi Village, Chamarajanagar District were the population.

➢ *Sampling:*

- *Sample Size*
The sample size was 132 villagers of Kothanavadi Village, Chamarajanagar District.

- *Sampling Technique:*
Non probability convenient sampling technique was used to collect the data.

➢ *Sampling Criteria:*

- *Inclusion criteria:*
✓ Individuals who attended health camp on diabetic mellitus.
✓ Individuals who were willing to participate in the study.

- *Exclusion criteria:*
✓ Individuals who were already diagnosed with diabetic mellitus and are in treatment.

➢ *Instruments Used:*

- *Description of the tool:*
✓ Section 1: Demographic variables.
✓ Section 2: Diabetic risk assessment form.

➢ *Organization of the Findings:*

The analysis of the data were organized and presented as follows:

- *Section A: Description of demographic variables.*

- *Section B: Findings of diabetic risk assessment form.*

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- *Section A: Description of Demographic Variables.*

Table 1: Description of Demographic Variable.

Sr. No	Demographic Variables	Frequency	Percentage
1	**Gender**		
	Male	52	39.4%
	Female	80	60.60%
2.	**Age**		
	Under 45yrs	20	15.2%
	45-54yrs	25	18.9%
	55-64yrs	26	19.7%
	Above 64yrs	61	46.2%
3.	**Occupation**		
	Private employee	130	98.5%
	Government employee	2	1.5%
4.	**Life style**		
	Highly active	45	34.10
	Moderately active	57	43.18
	Less active	30	22.72
5.	**Body mass index**		
	Lower than 25kg/m^2	109	82.6%
	25-30kg/m^2	22	16.7%
	Higher than 30 kg/m^2	1	0.7%
6.	**Family history**		
	Yes	4	3.03
	No	128	96.97

Table 1 showed that, out of 132 samples, 80 (60.60%) and 52 (39.4%) of the samples were female. The majority of them were older than 64, and the least number (18.9%) were in the 45–54 age range. Just 2 (1.5%) of them worked for the government, while the majority, 130 (98.5%), were private employees. 30 people (22.72%) were less active than 57 (43.18%) who were moderately active. Only 1 (0.7%) had a BMI higher than 30 kg/m2, whereas 109 (82.6%) had a BMI lower than 25 kg/m2. Of those, 128 (96.97%) had no family history of DM, and only 4 (3.03%) did.

➢ *Section B: Findings of diabetic risk assessment form.*

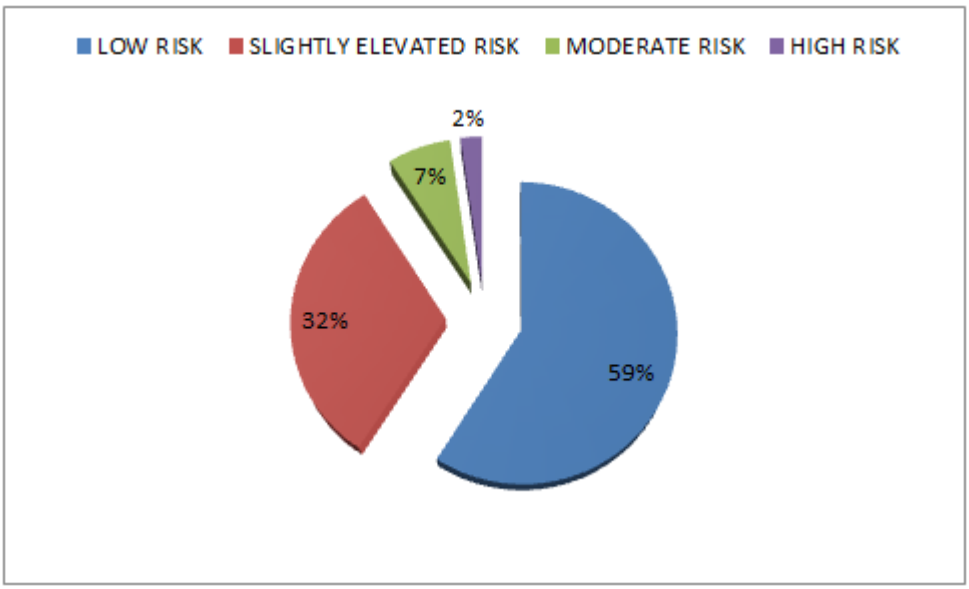

Fig 1: Distribution of Samples According to Risk Assessment

Fig 1 showed that among 132 samples 78 (59.9%) were having low risk of DM, 42(31.81%) slightly elevated risk, 9(6.81%) were at moderate risk and 3 (2.27%) of the samples were at high risk of acquiring DM

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IV. CONCLUSION

Diabetes is a long-term medical problem. Uncontrolled blood sugar levels can result in consequences such as amputation of a lower leg, heart attack, stroke, blindness, and renal failure. Early detection, adherence to a balanced diet, frequent exercise, and screenings can all help avoid this consequence. The goal of this study was to determine the population of Kothanavadi village's risk of developing diabetes mellitus. This information could assist people lead healthier lives. They came to the conclusion that:

- The study revealed that majority of the population were at low risk of getting DM and only 2% were at high risk of getting DM.

RECOMMENDATIONS

On the basis of findings of the study the following recommendations were made.

- A similar study can be replicated on a larger sample with different demographiccharacters.
- A Similar study can be conducted using other diabetic risk assessment scale.
- A correlation study can be conducted with selected demographic variables and risk assessment score.

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