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Knowledge, attitude and practice of foot care in people with type 2 diabetes

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ABSTRACT

Background

Diabetes mellitus is a chronic condition that affects the way the body process blood sugar (glucose). One important complication of DM are the foot problems; these complications constitute an increasing public health problem and most of the people with type 2 Diabetes are prone to develop foot ulcer and amputation if they do not have correct foot care practice. As there is very less knowledge and awareness of diabetes and its complications in Indian population, hence there is need for better knowledge, positive attitude and best practices regarding diabetes and its complications. Hence the scale is constructed to assess the knowledge, attitude and practice in type-2 diabetic people.

Method

Ethical clearance was taken from institutional ethical committee. The aims and objectives of research were explained and willing participants were included in the study after the written consent was obtained.

Results

Knowledge – The mean value found out on the score obtained on the scale was 6.276 out of the maximum value 16 and standard deviation of 3.927 was seen on the sample size 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.0140 which is extremely significant. And T value is found out 8.606 with 28 degrees of freedom.

Attitude- The mean value found out on score obtained on the scale was 8.900 out of the maximum value 16 and standard deviation of 3.507 was seen on the sample of 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.0086 which is extremely significant. And the T value is found out 13.899 with 29 degrees of freedom. **Practices**- The mean value found out on score obtained on the scale was 7.100 out of maximum value 15 and standard deviation is 3.119 was seen on the sample of 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.10 which is extremely significant. And the T value is found out 12.158 with 29 degrees of freedom.

Conclusion

The study concluded that highlighted the gaps in their knowledge, attitude and practice.

Keywords: Diabetes, diabetes type 2, knowledge, attitude, practices

INTRODUCTION

Diabetes mellitus (DM) is a group of metabolic diseases featured by hyperglycemia happening from defects in insulin secretion, insulin action or both.¹ In development of diabetes some pathogenic processes are involved. These varies from autoimmune tearing down of the cells of the pancreas with consequent insulin deficiency to abnormalities that effect in resistance to insulin action.¹

The risks of disorders in the musculoskeletal, hepatic and digestive systems may increase by other complications T2DM , as well as incidence of some cancer could be increased by cognitive function and mental health disorders, for instance, those of the liver, pancreas and endometrium Several key comorbidities, such as non-alcoholic fatty liver disease, obstructive sleep apnea and depression, are associated with T2DM bi-directionally, and such interrelationships are at least partially caused by obesity.²

Two broad groups are defined for the causes of abnormal hyperglycemia according to the site of the primary fault- Those in which the primary fault is so situated as to impair the direct line of carbohydrate metabolism: and those in which initially there appears to be no such impairment but rather an incapacity to store ingested carbohydrate as fat or glycogen.³ In the first group are placed primary deficiency of insulin and inhibition of insulin consequent on over function of the anterior pituitary gland. In the same group would be placed any interference with the chain of intracellular carbohydrate oxidation-e.g., hyperglycemia of experimental thiamine deficiency. The abnormal hyperglycemia of those obese diabetics comes in second group.³

- Knowledge: It is the awareness of the community about diabetes mellitus.⁴
- Attitude: The way a community thinks and behaves toward DM.⁴
- Practice: The habitual community involvement to prevent DM.⁴

Knowledge plays a very important role in any upcoming disease development and its early precautions and detection. For DM patients' positive knowledge, attitude and practice (KAP) are important.⁵ Understanding and mastery of diabetes can prevent the imminent chronic comorbidities of DM, which impact significantly on the quality of life of the diabetic patients where elements of KAP are

interrelated and dependent on each other. Knowledge can help people to assess their risk of diabetes, inspire them to take proper treatment and care, and motivate them to take charge of their disease for their lifetime.⁵

The necessity for greater consciousness regarding precautions, diagnosis, risk factor control and disease. Participants living with diabetes must know KAP level to aid in future development of programs and techniques for better health education.⁵

Knowledge plays a pivotal role in development, early prevention and detection of any future disease. Many sufferers only become aware of having the disease after developing one of the complications because diabetes is a silent disease, general understanding of diabetes can help in earlier detection of the disease and fewer complications.⁶ Adequate knowledge on DM can be helpful to prevent the chronic comorbidities of DM, that has a significant impact on the quality of life of diabetic patients. Having the knowledge can aid people to calculate their risk of diabetes, inspire them to seek out correct and proper treatment and care while motivating them to take charge of their health. Positive KAP is important for DM patients.⁶ KAP elements are inter-related and dependent on each other. It is believed that people's attitude to health and their uptake of health services, including health education services, are strongly affected by their knowledge, culture and beliefs. Thus, effective control of T2DM is possible only with sufficient knowledge, positive attitude and good practices.⁶ It is also assumed that people with good knowledge of diabetes had good attitudes and practices.⁶

METHODOLOGY

A knowledge, attitude and practice questionnaire were developed and ethical approval was taken for the same from Tilak Maharashtra Vidyapeeth. Face validity of the scale was done. Hence it was implemented on a small population to check for the consistency of the questions. The visit was arranged to diabetes centers and hospitals in Pune. The aim objective and method of study was explained to the patients. The patients were selected according to the inclusion and exclusion criteria. The knowledge attitude and practices questionnaire were distributed to the patients and thoroughly explained. Questionnaire having three components in which 10 questions each, response was obtained. After that the obtained response was analyzed using SPSS software and statistical analysis was done.

RESULTS

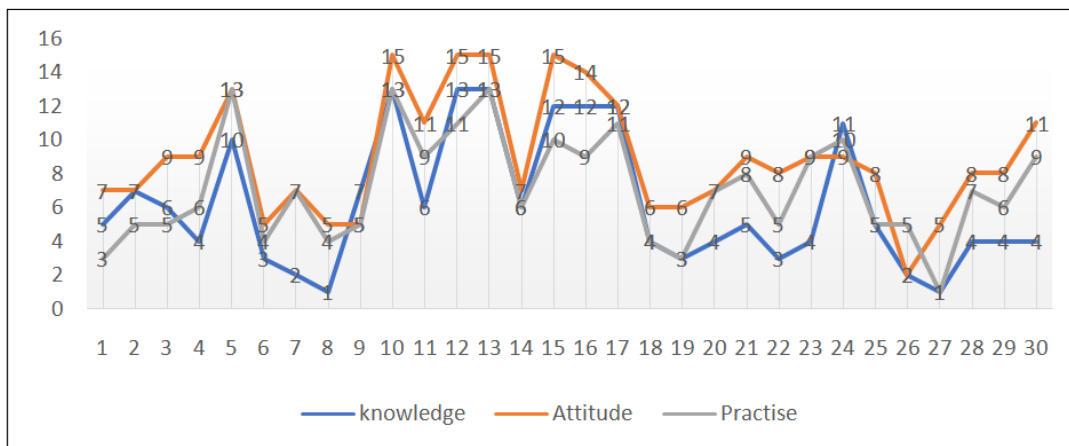


Fig:1 Knowledge, Attitude and Practice

Knowledge – The mean value found out on the score obtained on the scale was 6.276 out of the maximum value 16 and standard deviation of 3.927 was seen on the sample size 30. According to the Kolmogorov-Smirnov distance (KS) test the P value is 0.0140 which is extremely significant. And T value is found out 8.606 with 28 degrees of freedom. **Attitude**- The mean value found out on score obtained on the scale was 8.900 out of the maximum value 16 and standard deviation of 3.507 was seen on the sample of 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.0086 which is extremely significant. And the T value is found out 13.899 with 29 degrees of freedom. **Practices**- The mean value found out on score obtained on the scale was 7.100 out of maximum value 15 and standard deviation is 3.119 was seen on the sample of 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.10 which is extremely significant. And the T value is found out 12.158 with 29 degrees of freedom.

DISCUSSION

Diabetes mellitus (DM) is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion, insulin action or both. Several pathogenic processes are involved in the development of diabetes. These range from autoimmune destruction of the cells of the pancreas with consequent insulin deficiency to abnormalities that result in resistance to insulin action.⁷

- Knowledge: It is the awareness of the community about diabetes mellitus.¹⁸

- Attitude: The way a community thinks and behaves toward DM.⁸
- Practice: The habitual community involvement to prevent DM.⁸

As there is very less knowledge and awareness of diabetes and its complications in Indian population, hence there is need for better knowledge, positive attitude and best practices regarding diabetes and its complications.

Hence the scale is constructed to assess the knowledge, attitude and practice in type-2 diabetic people.

Knowledge plays a vital role in any future disease development and its early prevention and detection. Positive knowledge, attitude and practice (KAP) are important for DM patients. Elements of KAP are interrelated and dependent on each other Knowledge of diabetes can prevent the imminent chronic comorbidities of DM, which impact significantly on the quality of life of the diabetic patients. Information can help people to assess their risk of diabetes, motivate them to seek proper treatment and care, and inspire them to take charge of their disease for their lifetime.⁹

Self-care of is important in diabetes- daily foot self-inspection may permit earlier detection and treatment of foot lesion, reducing the risk of infection and lower limb amputation. We are assessing the basic knowledge, attitude practice. Based upon the inclusion and exclusion criteria a sample size 30 was selected and there is 13 males and 17 females. 30 people have diabetes mellitus was seen. The scale given to the patients and it was self-reported questionnaire. The patient reported prior with consent form then the result

is obtained. And the statistical analysis was done using SPSS software.

It was found out that Knowledge – The mean value found out on the score obtained on the scale was 6.276 out of the maximum value 16 and standard deviation of 3.927 was seen on the sample size 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.0140 which is extremely significant. And T value is found out 8.606 with 28 degrees of freedom. Attitude- The mean value found out on score obtained on the scale was 8.900 out of the maximum value 16 and standard deviation of 3.507 was seen on the sample of 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.0086 which is extremely significant. And the T value is found out 13.899 with 29 degrees of freedom. Practices- The mean value found out on score obtained on the scale was 7.100 out of maximum value 15 and standard

deviation is 3.119 was seen on the sample of 30. According to the Kolmogorov- Smirnov distance (KS) test the P value is 0.10 which is extremely significant. And the T value is found out 12.158 with 29 degrees of freedom.

Diabetic foot has a devastating outcome like pain, ulceration, chronic infections and amputation, which significantly reduces an individual's functional independence. Many foot problems are preventable with appropriate management strategies and, therefore, there is a need for standardized care and access to foot care specialist services

The result of this study has highlighted the gaps in their knowledge and practice and underscores the urgent need for a patient friendly educational intervention coupled with regular physician reinforcement to reduce the risk of diabetic foot ulcer and amputation.

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