

AWARENESS ABOUT DIABETES AMONG ADOLESCENTS OF MANGALORE, SOUTH INDIA

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Abstract :

Introduction: India continues to be the diabetic capital of the world. According to the WHO report, India today heads the world with 32 million patients and this number is projected to increase to 79.4 million by the year 2030. Diabetes has become a great economic challenge as it drains between 5-25% of family income of an average Indian.

Aims & Objectives: To study the awareness of diabetes among the adolescents.

Materials and Method: Community based cross-sectional study. We collected data from 600 adolescents of age group 16-18years. A questionnaire consisting of questions that were based on the knowledge, awareness and practices regarding the risk factors of Diabetes were prepared. Students from 4 pre-university colleges in Mangalore, Dakshina Kannada district, were selected as the study group

Results: 88.5% were aware of diabetes. According to 48.33% consumption of sweets only was a risk factor. 5.5% were aware that diabetes runs in families . 78.33 % were aware that diabetes can affect any age group and 73% knew about the increasing rate of diabetes in India. 72.16 % were sure that diabetes can be prevented and 25.5% said it was possible to completely cure .46% were under a misconception that a vaccine is present for diabetes and only 57.83% were aware of that diabetes can cause complications.

Keywords: awareness of diabetes, awareness of complications, prevention of diabetes

Introduction:

India continues to be the diabetic capital of the world. According to the WHO report, India today heads the world with 32 million patients and this number is projected to increase to 79.4 million by the year 2030. Diabetes has become a great economic challenge as it drains between 5-25% of family income of an average Indian. Recent survey indicates that diabetes now affects a staggering 10-15% of urban population and 5-8% of rural population. Several regions the country are still under developed and people

have several myths and beliefs regarding the disease. With increasing urbanization, many people are adopting unhealthy western lifestyles with reduced physical activity, sedentary lifestyle and

excessive intake of calories^[2]. This contributes to obesity which is a risk factor for development of diabetes^[2]. We are seeing an increasing incidence of type 2 diabetes in the young as a result of obesity^[2]. It is important to know about the awareness level of this condition as knowledge is a critical component of behavioral change^[2]. Once awareness is created people are more likely to participate in prevention and control activities^[2]. This study, therefore, set out to establish the awareness of diabetes among adolescents in Mangalore.

Aims & Objectives:

To study the awareness of diabetes among the adolescents.

Materials and Method:

Study technique: Community based cross-sectional study.
Study Sample: Taking into consideration 10% of the adolescents having knowledge about diabetes using

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formula, $n=4pq/L^2$; where, $p=10\%$, $q=1-p$, $L=3\%$. With a confidence interval of 97% & power of the study being 80%, we get a sample of 400. Considering few unfilled proformas, 20% excess sample was decided i.e. 480 adolescents. We collected data from 600 adolescents of age group 16-18years.

Methodology:

A questionnaire consisting of questions that were based on the knowledge, awareness and practices regarding the risk factors of Diabetes were prepared. Students from 4 pre-university colleges in Mangalore, Dakshina Kannada district, were selected as the study group. Only students willing to participate in the study were included. The questionnaire was to be filled anonymously. The questions being in English, an oral translation in the local language was given. Sufficient time was given to the students to complete the questionnaire. The data obtained were compiled manually and the results were tabulated.

Results:

88.5% were aware of diabetes while 11.5% were not aware. According to 48.33% consumption of sweets only was a risk factor and 8.66% thought mental stress was a risk factor. 78.33 % were aware that diabetes can affect any age group and 73% knew about the increasing rate of diabetes in india while 23% didn't know about it. 15.5 % didn't know whether diabetes can be prevented while 72.16 % were sure that it can be prevented. 24.66% didn't know whether there was a cure for diabetes while 25.5% said it was possible to completely cure and 49.83% said it was not possible to completely cure diabetes. 46% were under a misconception that a vaccine is present for diabetes. Only 57.83% were aware of that diabetes can cause complications.

Table 1: Awareness table

| | Yes | No | Don't know |
|------------------------------|--------|--------|------------|
| Awareness about diabetes | 88% | 11.5% | - |
| Increase in rate of diabetes | 73% | 4% | 23% |
| Complications of diabetes | 57.83% | 14% | 28.16% |
| Prevention of diabetes | 72.16% | 12.33% | 15.5% |
| Vaccine for diabetes | 46% | 23% | 31% |
| Complete cure of diabetes | 25.5% | 49.83% | 24.66% |
| Susceptibility to diabetes | 16.9% | 11.8% | - |

Table 2: Risk factors

| | Yes | No |
|-----------------------------|--------|--------|
| Consuming sweets | 48.33% | 51.67% |
| Smoking | 4.33% | 95.67% |
| Family history | 5.5% | 94.5% |
| Obesity | 5.33% | 94.67% |
| Mental stress | 8.66% | 91.34% |
| Alcohol | 4.66% | 95.34% |
| Decreased physical activity | 7.33% | 92.67% |

Discussion:

This is one of the rare studies done among pre –university students regarding the awareness of diabetes mellitus. Knowledge about knowing diabetes among 600 students was 531 i.e. 88% of students were aware about diabetes and study done in Kolar awareness was only 50.8%^[1]. In certain urban parts Pakistan knowledge of diabetes was 43% and the global score was 30%. As our research was confined to educational institutes only awareness had been more. About 72% of students were of the opinion that incidence of diabetes is increasing these days. In Chennai^[3] it was found that 74.1% were of the opinion that diabetes was increasing. In our study 57.83% were aware of the complications to other organs, unlike our study other studies done in Chennai^[3] revealed that only 19% were aware of the complications. The 44% of students believed consumption of sweets alone was cause for diabetes, whereas 22.2% in Chennai^[3] believed that excessive sweets caused diabetes. This may be due to misinformation about diabetes from the family members and myth. In our study 18.33% of students were of the opinion that diabetes occurred at old age while in similar studies conducted in Kolar^[1] 30.17% were of the opinion that it occurs in old age. Since earlier study^[1] was a study of rural area majority were under the misconception that diabetes occurs in old age. 78.33% of the students in our study were of the opinion that it occurs in any age. Around 72.16% felt that it could be prevented whereas 91% of cases in studies done in Singapore felt that diabetes could be prevented. It is alarming to know that 46.16% believed that there is a vaccine for diabetes but earlier study done in Singapore showed that 76.2% were aware that there is no vaccine. The possibility of Singapore being a developed country the knowledge scored better in that area. High percentage of

students in our study felt that there is a vaccine. This is because they are not fully aware about the chief aspects of diabetes and also misinformed. It is again important to see that 25.5% of the adolescents were of the opinion that diabetes is completely curable and 24.65% did not know. In studies done in Greece ^[4] 77% knew that diabetes is incurable while 14% believed that it is an easily curable disease. This implicates the level of knowledge in developed countries is much higher than our country. This study revealed us that even though the adolescents knew about diabetes there was a lot of misconception about the disease and the risk factor knowledge which is very

important was also poor.

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Conclusion :

Majority of the adolescents in the study knew about diabetes but had misconceptions on vaccine and treatment. There was also no proper knowledge about the risk factors associated with diabetes.

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