

Regularly using some chemical agents which cause household air pollution (like aroma candles or air fresheners) and the rare use of air purifiers are associated with the high frequency of respiratory symptoms in students. Additionally, among the examined students, exposure to second hand smoke and low frequency of outdoor exercises also had a significant effect on respiratory health. It is possible to assume, that the level of indoor air pollution has significant impact on respiratory health of students.

LITERATURE

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RISK FACTORS OF TYPE 2 DIABETES MELLITUS IN INDIAN POPULATION OF DIFFERENT AGE GROUPS

Introduction

According to World Health Organization, diabetes mellitus is a chronic, metabolic disease characterized by elevated levels of blood glucose, which can cause serious health complications, such as damage to the heart, blood vessels, eyes, kidneys, and nerves. About 422 million people worldwide have diabetes, and 1.5 million deaths are directly attributed to diabetes each year [1]. There are three main types of diabetes: type 1, type 2, and gestational diabetes. Type 1 diabetes mostly occurs in children and adolescents, while type 2 diabetes is mostly seen in adults [2].

Type 2 diabetes is a chronic disease resulting from a complex inheritance-environment interaction. Genetic, environmental, and metabolic risk factors are interrelated and contribute to its development. Genetics and family history of diabetes mellitus, age, obesity, unhealthy diet and physical inactivity identify those individuals at highest risk [3, 4].

In the past three decades the prevalence of type 2 diabetes has risen dramatically in all countries. Type 2 diabetes is mostly seen in adults, but it is increasing in adolescents due to the rising level of obesity, low physical activity and unhealthy diet [2]. In India it is estimated that 77 million people above the age of 18 years are suffering from diabetes (type 2). The reasons of the high percentage of diabetes patients in India is the lack of dietary diversity, dependence on high carbohydrates and processed foods, lack of physical activity and possibly environmental risks. [5]. Analyzing the prevalence of risk factors of type 2 diabetes in Indians can be helpful in developing the measures for effective prevention of this disease.

Goal

This study aimed to evaluate the risks factors of type 2 diabetes mellitus in different age groups among Indians according to their lifestyle.

Material and methods of research

A cross-sectional study was conducted in a convenience sample among Indian people, using a questionnaire designed to measure the risk of type 2 diabetes mellitus among Indian population. The questionnaire was made in Google forms; it consisted of 11 questions regarding their lifestyle as well as their knowledge on heredity of diabetes in their family. The participants who had diabetes already were excluded along with children under 18 years old. We calculated the results by comparing different age groups of those who have participated in this survey.

The results of the research and their discussion

110 people of different age groups of India have participated in this study, of which 48 participants belonged to 18–30 age group, 29 participants were from 30–40 age group, and 33 participants were from 40–55 age group. Among them 54 (49%) were males and 56 (51%) were females. The risk factors included in this survey are body mass index (BMI), meal schedule, the level of physical activity, inclusion healthy diet in their lifestyle, did they ever been found to have high glucose level in any case (such as during pregnancy, illness or health examination), and the heredity status of diabetes in their families. The results of analyzing of risk factors in different age groups are presented in the table 1. The data are presented as absolute and relative (% calculated from the amount of participants in the age group) amount of participants having the certain risk factor.

Table 1 – Risk factors of type 2 diabetes mellitus in different age groups

Risk factors	Age groups		
	18–30 years (n=48)	30–40 years (n=29)	40–55 years (n=33)
Increased BMI (more than 25)	16 (33 %)	11 (38%)	21 (64%)
Low intake of fruits and vegetables in meal (not daily)	22 (46%)	9 (31%)	11 (33%)
Low physical activity (exercise <3 times in a week)	25 (52%)	10 (34%)	10 (30%)
Ever been found to have high blood glucose (during pregnancy, health examination, etc.)	4 (8%)	2 (7%)	4 (12%)
Heredity (having diabetes cases in their families)	25 (52%)	14 (48%)	18 (55%)

In the first age group (18–30 years old) 33% of the participants of this group have increased BMI higher than normal. Among the participants of the second age group (30–40 years old) there are 38% of people with increased BMI and among people of the third age group (40–55 years old) there are 64% who have increased BMI. In the case of inclusion of fruits and vegetables in diet interestingly 46% participants of the first group, 31% of the second and 33% of the third age groups don't include them in their diet daily.

In the case of physical activity 52% from the first, 34% from the second and 30% from the third age groups are engaging less than 3 times in a week in physical activity. In the next factor 8%, 7% and 12 % of people in the first, second and third groups respectively have ever been found to have high blood glucose (during pregnancy, illness or health examination)

Coming to heredity 52% in the first age group, 48% in the second age group and 55% in the third age group have found diabetes in their families and relatives.

According to the results presented in the table 1, the frequency of such a risk factor as heredity was almost equal in all age groups, and approximately half of all participants in each group had diabetes cases in their families. Among the other factors in the first age group the most frequent risk factor was low physical activity, while in the second and in the third age groups the increased BMI was the predominant risk factor. Also in the first age group the percentage of participants who had the diet with low intake of fruits and vegetables in meal was higher than in other age groups.

In the present study also the analysis of type 2 diabetes risk factors according to the gender of participants was performed, and the results are presented in the table 2.

Table 2 – Risk factors of type 2 diabetes mellitus among males and females

Risk factors	Males (n=54)	Females (n=56)
Increased BMI (more than 25)	23 (43%)	25 (45%)
Low intake of fruits and vegetables in meal (not daily)	22 (41%)	20 (36%)
Low physical activity (exercise <3 times in a week)	18 (33%)	27(48%)
Ever been found to have high blood glucose (during pregnancy, health examination, etc.)	4 (7%)	6 (11%)

According to the results presented in the table 2, among the examined participants 43% of males and 45% of females have increased BMI higher than normal. Also 41% of men and 36% of women don't include fruits and vegetables in diet their diet daily. The percentage of men who have ever been found to have high blood glucose is 7% and for women – 11%. Considering such risk factor as low physical activity, the percentage of females who are engaging less than 3 times in a week in physical activity is 48%, while the amount of males having this risk factor, is only 33%. Thus, such risk factor as low physical activity has the greatest difference in frequency among the groups of males and females.

Conclusion

As a result of the study, the risk factors of type 2 diabetes mellitus in different age groups of Indian population were analyzed. It was found that with age, the frequency of such risk factor as high body mass index is increased, while the percentage of people having such risk factors as low physical activity and unhealthy diet is decreased. Analyzing the gender differences, low physical activity is the predominant risk factor for the group of females, while for the group of males it is the increased body mass index.

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PREVALENCE OF DISEASES IN DIFFERENT NATIONS

Introduction

In an increasingly interconnected world, understanding the prevalence of diseases across different nations is paramount for global health initiatives. Epidemiological studies provide crucial insights into the distribution and burden of diseases, enabling policymakers and healthcare professionals to formulate targeted interventions.