

## DIFFERENCES IN AWARENESS OF DIABETES AMONG MALES AND FEMALES

Sunaina Jayachandran<sup>1</sup>, Shwetha Pradeep<sup>1</sup>, Tintu K.P.<sup>1</sup>, Shehanaz Shajahan<sup>1</sup>, Sheena Mathew<sup>1</sup>,  
Sushmitha D.J.<sup>1</sup>, Tejaswini Gowda<sup>1</sup>, Santhosh<sup>2</sup> & Rashmi Kundapur<sup>3</sup>

<sup>1</sup>MBBS Students (III Year), <sup>2</sup>Medico Social Worker, <sup>3</sup>Associate Professor, Department of Community Medicine,  
K.S. Hegde Medical Academy, Nitte University, Mangalore, INDIA.

Correspondence

Rashmi

Associate professor, Department of Community Medicine, K. S. Hegde Medical Academy, Nitte University  
Deralakatte, Mangalore - 575 018, Karnataka, India

Mobile : +91 98804 96567 E-mail : dr.rashmi.kundapur@gmail.com

### Abstract :

**Introduction :** Metabolic diseases dramatically affect life of men and women from infancy up to old age and are a major challenge for clinicians. Sex and gender affect screening and diagnosis of metabolic diseases as well as treatment strategies and outcome.

**Aims and Objectives :** To differentiate the knowledge of diabetes among both the gender and to study some practices like smoking, alcohol & exercise among males and females to avoid diabetes

**Materials and Methods :** Community based cross-sectional study. A questionnaire consisting of questions that were based on the knowledge, awareness and practices regarding the risk factors of Diabetes was prepared. Only students willing to participate in the study were included. The questionnaire was to be filled anonymously. We collected data from 600 adolescents of age group 16-18years out of which 364 were females and 236 were males.

**Results :** According to our study the results showed that 82.63% males and 92% females think that had knowledge about diabetes, 61.8% males, 52.2% females had knowledge about the increase in rates of diabetics. 61.8% males and 52.2% females had knowledge about complications. 70.7% males and 73% females had knowledge about prevention of diabetes. 27.1% males and 24.4% females think there is complete cure for diabetes. Only 16.97% males and 11.8% females thought that they were at increased risk of diabetes.

**Keywords :** Diabetes, difference in sex, awareness, female awareness, knowledge of diabetes

### Introduction :

Metabolic diseases dramatically affect life of men and women from infancy up to old age and are a major challenge for clinicians. Sex and gender affect screening and diagnosis of metabolic diseases as well as treatment strategies and outcome. Education, income and psychosocial factors relate to development of obesity and diabetes differently in men and women.

Males appear to be at greater risk of diabetes at younger age. Women are more often obese and less physically active, but may even have greater benefit from increased physical activity than males. A history of gestational diabetes or the presence

of PCOS or increased androgen levels in women, on the other hand the presence of erectile dysfunction or decreased testosterone levels in men are sex specific risk factors for diabetes development.

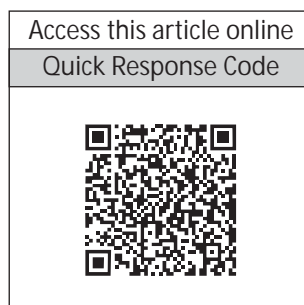
There is growing evidence that preventing the onset of diabetes can be achieved by adopting healthy lifestyle such as increased physical activity, modest weight reduction, healthy diet and pharmacological intervention.<sup>[1]</sup>

### Aims and Objectives:

1. To differentiate the knowledge of diabetes among both the gender.
2. To study some practices like smoking, alcohol & exercise among males and females to avoid diabetes.

### Materials and Methods :

**Study technique:** Community based cross-sectional study.



Study Sample: Taking into consideration 10% of the adolescents having knowledge about diabetes using 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 16-18 years out of which 364 were females and 236 were males.

Methodology:

A questionnaire consisting of questions that were based on the knowledge, awareness and practices regarding the risk factors of Diabetes was 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:

According to our study the results showed that 82.63% males and 92% females think that had knowledge about diabetes, 61.8% males, 52.2% females had knowledge about the increase in rates of diabetics. 61.8% males and 52.2% females had knowledge about complications. 70.7% males and 73% females had knowledge about prevention of diabetes. 27.1% males and 24.4% females think there is complete cure for diabetes. 5.5% males and 6.8% females were tested for diabetes. Only 16.97% males and 11.8% females thought that they were at increased risk of diabetes. Among the students, 2.1% males smoke. 4.6% males consume alcohol. 72.2% males and 41.2% females exercise regularly. On knowledge about age group affected among males, 75%, 3.30% and 20.7% were of the opinion that any age, young age, old age could be affected respectively. Among females, 80%, 2.74%, 16.75% were of the opinion that any age, young agenda old age could be affected respectively.

Fig 1 and 2 showing difference in opinion about risk factors leading to diabetes among males and females.

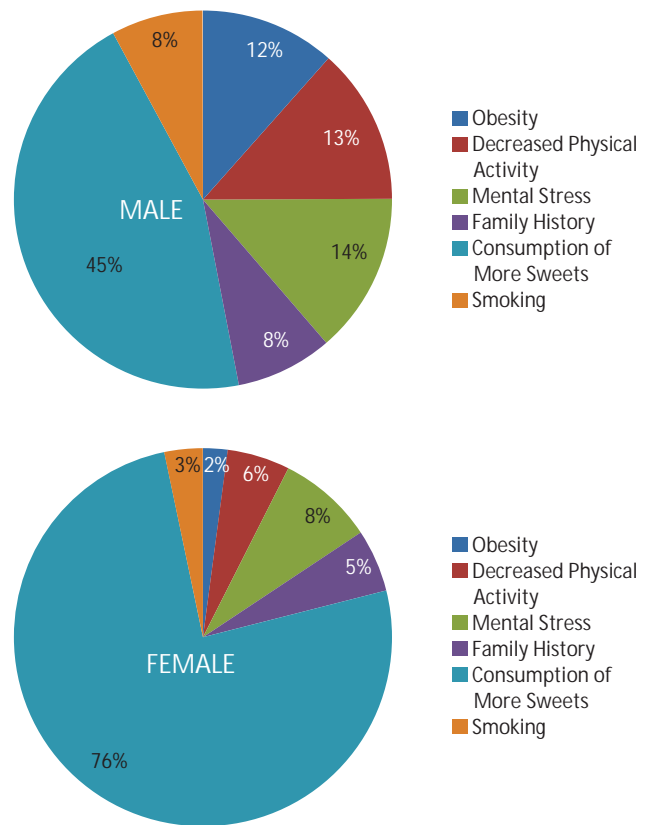


Fig 3 showing difference in opinion about various age group affected in diabetes among males and females.

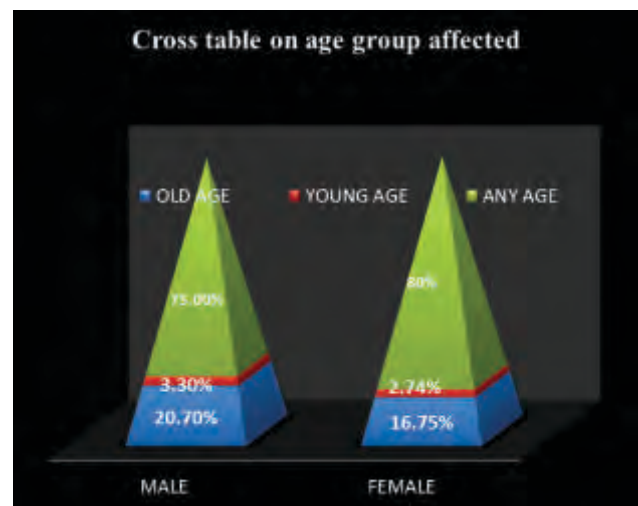


Table 1 : showing difference in awareness of diabetes among males and females

	MALE	FEMALE
Knowledge about diabetes	82.63%	92%
Increase in rate of diabetes	73.3%	72.25%
Complications of diabetes	61.8%	55.2%
Prevention of diabetes	70.7%	73%
Vaccine for diabetes	51.27%	42.8%
Complete cure of diabetes	27.1%	24.4%
Tested for diabetes	5.5%	6.8%
Susceptibility to diabetes	16.9%	11.8%

Table 2 : showing differences in some practices between males and females that leads to diabetes.

	MALE	FEMALE
SMOKING	2.1%	0%
ALCOHOL	4.66%	0%
EXERCISE	72.88%	41.2%

#### Discussion:

Very few studies have been conducted showing the differences in awareness of diabetes between males and females and the general population. According to Chennai Urban Rural Epidemiology (CURES-9) 77.6% of males were aware and 73.6% of females were aware.<sup>[2]</sup> According to the KAP study done on diabetes and diabetic retinopathy in the rural areas of India , Kerala ,we can see that out of 966 individuals,47% females were aware about the condition and 51% males were aware.<sup>[3]</sup> but we should also note the fact that even though more no of females were aware about the condition their knowledge about complications was limited. Similarly ,according to our study even though 92% females as compared to 82.63% males were aware of a condition known as diabetes ,results show that they seemed to lack knowledge about other aspects of this condition .This is evident from the fact that more males were aware of the increase in rates, complications, increased susceptibility to diabetes i.e., 61.8% males,52.2% females had knowledge about the increase in rates of diabetics .61.8% males and 52.2% females had knowledge about complications,20.7% males and .16.75% females thought that diabetes occurs in old age .In contrast 73% females as compared to 70.7% males thought diabetes could be prevented while.27.1% males and 24.4%

females think there is complete cure for diabetes proves that males are misinformed about diabetes cure and prevention. On knowledge about age group affected among males 75% males as compared to 80%female were of the opinion that any age could be affected .In this aspect also females are more knowledgeable than males. This could be due to misconception and misinformation among male .This could also be due to inappropriate teaching facilities in schools in india.5.5% males and 6.8% females were tested for diabetes. Only 16.97% males and 11.8% females thought that they were at increased risk of diabetes. Among the students,2.1% males smoke .4.6% males consume alcohol .This is not reliable data as they would not have revealed as it is considered as a social taboo and India being very orthodox.72.2% males and 41.2% females exercise regularly here females exercise less regularly than males because less importance is given for physical fitness for females.

#### Acknowledgement :

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#### Conclusion :

Majority of the females in the study knew about diabetes but had misconceptions on risk factors, vaccine and treatment. There was also no proper knowledge about the complications, age group affected in diabetes. Only few males consumed alcohol or smoked. Majority of males exercise regularly but females don't.

#### References:

1. Kautzky – willer A, Weitgasser R, Fasching P, Hoppichler F,Lechleitner M.Gender aspects in regard to clinical practice recommendations for pre diabetes and diabetes.Wien Klin Wochenschr.2012 december.
2. Deepa Mohan,Deepa Raj,CS Shanthirani,Manila Dutta,NC Unwin,A Kapur,V.Mohan;Awareness and Knowledge of Diabetes Mellitus in Chennai-The Chennai urban epidemiology study;JAPI,Volume 53,April 2005
3. PK Rani, R Raman, S Subramani, G Perumal, G Kumaramanickavel, T Sharma Sankara Nethralaya, Nungambakam, Chennai, India Knowledge of diabetes and diabetic retinopathy among rural populations in India, and the influence of knowledge of diabetic retinopathy on attitude and practice *Rural and Remote Health* 8: 838.