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DIABETES KNOWLEDGE AMONG THE SELECTED ADOLESCENT GIRLS (16 – 18 Years)

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ABSTRACT

Diabetes Mellitus is a silent disease and is now recognized as one of the fastest growing threats to public health in almost all countries of the world. The objective of the study is to know the diabetes knowledge among the selected Adolescent Girls. For the study 100 Adolescent Girls in the age group of 16 – 18 years were purposely selected by Purposive Random Sampling Method. An Interview Schedule as a tool was used for the study. To assess the knowledge on diabetes among the Adolescent Girls the scores were given. Majority (63%) of the Adolescent Girls obtained very poor scores (1-10). Thirty seven percent (37%) of the Adolescent Girls obtained poor scores (11-20). It was noticed that none of the Adolescent Girls scored above twenty out of fifty. This indicates their knowledge on diabetes was very poor. Hence, the study concludes, it is felt essential to give diabetic education to the Adolescents through various means about the importance of proper diet, healthy life style and exercise can help to pave the way to control the diabetes in future.

Keywords – *Adolescent Girls, Diabetes Education, Diabetes Mellitus, Knowledge, Nutrition Education*

INTRODUCTION

Health is an important factor in the content of human resource development which place a vital role in improving the quality of human being. The World Health Organisation (WHO) states that health is a state of complete physical, mental, social well being and not merely the absence of disease or infirmity.

In recent decades the disease pattern have been changing because of socio economic developments. Low income countries have been moving into the middle income category, where as a consequence of increased life expectancy, reduced fertility, industrialization and a shift from rural to urban living, the age and health problems of population have been altering while continuing to cope with illness linked to poverty these countries have to tackle increasing incidences of injuries and non-communicable diseases such as diabetes, cardiovascular diseases, cancer etc.

Among the non-communicable diseases diabetes is a silent disease and now recognized as one of the fastest growing threats to public health in almost all countries of the world. Diabetes is a syndrome caused by the imbalance between insulin supply and demand in which the blood glucose level ranges above 120 gm/dl in the fasting blood sugar estimation. The rapid transition of food choices from heritage results in excess consumption of calories, saturated fats, low intake of fibre, coupled with sedentary life style has made India to take the lead on the world's diabetic championship.

In ancient times physical labour was a predominant one for majority of the people. Hence, diabetes was a rich men disease of those with no physical work. The modern life style has reduced the physical labour of women. So, now women also suffer from diabetes to a considerable extent like men. At present children also suffer from diabetes. The World Health Organisation (WHO) has declared India as the "Diabetic Capital of the World". Every year, over four million people die from diabetes and tens of millions more suffer disabling and life-threatening complications such as heart attack, stroke, kidney failure, blindness and amputation. Diabetes is also implicated in and has negative consequences for certain infectious diseases, other non-communicable diseases (NCDs) and for mental health.

The prevalence of diabetes has risen dramatically during recent decades, and it's now a serious global health burden. It has been estimated that world prevalence of diabetes is 366 million people in 2011 and the number is set to increase up to 522 million people by 2030. Globally, an estimated 463 million adults are living with diabetes, according to the latest 2019 data from the International Diabetes Federation. Diabetes prevalence is increasing rapidly; previous 2017 estimates put the number at 425 million people living with diabetes. The number is projected to almost double by 2030.

Diabetes results in high healthcare costs, loss of labour productivity and decreased rates of economic growth. The World Economic Forum has consistently identified NCDs (including diabetes) as a global risk for business and communities. The losses in national income from largely preventable deaths from diabetes, heart disease and stroke are enormous; between 2005-2015, those losses are estimated to reach USD 558 billion in China, USD 303 billion in Russia and USD 237 billion in India.

Early death is only one component of lost income and many people with diabetes suffer potentially avoidable disabling complications which prevent them from working. This represents a substantial loss to the economy and in countries where there is no social protection, can push families into poverty and rob children of opportunities for healthy nutrition, education and future employment. So, while no country is immune to diabetes, the most immediate challenge lies in low and middle income countries where three out of four people with diabetes now live and where the onset of diabetes has shifted down a generation, increasingly affecting people in their most productive years.

Diabetes can be triggered by events in the womb with the children of mothers who are under or over nourished during pregnancy at greater risk of diabetes in later life. Diabetes in pregnancy also increases the risk of morbidity and mortality for both the mother and infant. As caregivers, women and girls face additional burdens and may lose educational, economic and social opportunities when caring for family members with diabetes.

By 2030, one is twenty adults over 20 years old is expected to have severe vision-loss which could be slashed by more than 50% if sight saving laser therapies are implemented in a timely manner. Early detection of liver and kidney disease could improve kidney function in many sufferers by 70%. An improved system of foot care would virtually eliminate cases of lower limb amputation completely.

Diabetes can affect nearly every organ system in the body. Diabetes related complications are coronary artery disease, peripheral vascular disease, stroke, neuropathy, dental ailments, amputation, retinopathy, nephropathy, skin diseases etc. People with diabetes are 25 times more likely to develop blindness, 17 times more likely to develop kidney disease, 30-40 times more likely to undergo amputation, 2-4 times more likely to develop myocardial infarction and twice as likely to suffer a stroke than non-diabetics. Women with diabetes are at a greater risk and those over 55 years are 7 times more likely to have heart disease. Heart disease is more diffused in diabetics who are also more prone to silent heart attacks as they experience no pain associated with an attack because of diabetic neuropathy. The possible complications make diabetes a dreaded disease.

Diabetes can be a debilitating disease, but it can be prevented entirely by a few simple methods and managed through diet and exercise, eliminating the painful shots of insulin and the fear of insulin dependence. The India has the largest national population of adolescents followed by China, United States, Indonesia and Pakistan. The Adolescents are the direct reproducers of future generations, the health of adolescents influences not only their own growth, but also the health of the future population.

Today most of the Adolescent community is leading a sedentary life style and following faulty dietary habits which lead to ill health and they are prone to diseases like diabetes, heart diseases and obesity in future.

The Adolescence should be well knowledgeable on diabetes will helps to modifying their food habits and life style to prevent diabetes and other metabolic disorders in future. This situation intended to made the

researcher to take up this research study and to find out whether these targeted group have enough knowledge on diabetes.

1.1 Objective of the Study

The objective of the study is to know the knowledge on diabetes among the selected Adolescent Girls.

METHODOLOGY

2.1 Selection of the Study Area

The study was conducted in Athoor Block of Dindigul District, Tamil Nadu. The Dindigul District consist of 14 Blocks. The Athoor Block is one among the 14 Blocks. It has 26 panchayats distributed in 23 Revenue villages. The total population of the Block is 1,07,752 (Male: 53,507, Female: 54,245) (Ref: Census of India, 2011). In Athoor Block three villages namely Athoor, N.Panchampatti and Perumalkovilpatti was selected for this study.

The basic criteria for selection of these areas was familiarity, accessibility and there was no much research on diabetes have been carried out. More over these areas are approachable for the conduct of the research and the willingness of the people to participate in the study.

2.2 Selection of the Samples

For this study Hundred (100) Adolescent Girls in the age group of 16 – 18 years were purposely selected by Purposive Random Sampling Method from the three villages namely Athoor, N.Panchampatti and Perumalkovilpatti in Athoor Block. The following table indicates the selection of samples for the study from the selected three villages.

Table 1: Selection of the Samples

S.No.	Name of the Village	No. of Adolescent Girls
1.	Athoor	30
2.	N.Panjampatti	49
3.	Perumalkovilpatti	21
Total		100

2.3 Formulation of the Interview Schedule

An Interview Schedule as a tool was used for the present study to collect the information required for the study. According to Jellifee (1999) an instrument is not given directly to the respondent but it is filled in by an Interviewer who reads the question to the respondent and the required information is collected through face to face communication.

In order to collect the required data an Interview Schedule was framed and the same was pre-tested among 10 Adolescent Girls who were not part of the final sample. The optimum time needed for collecting the information has determined. The vagueness and ambiguity has removed. On the basis of experience gained in pre-testing, the final schedule was framed and same was used for collecting the data from the selected Adolescent Girls. Two separate tools were constructed to elicit the information from the selected adolescents.

2.3.1 Interview Schedule-I

The Interview Schedule – I was used for collecting the data from the Adolescent Girls on socio economic profile (age, education, occupation) and opinion about diabetes education and sources of information on diabetes.

2.3.2 Interview Schedule-II

The Interview Schedule - II was used to collect the data on awareness on diabetes and its prevention from the Adolescent Girls. The awareness on diabetes and its prevention of the Adolescent Girls were assessed by administering a set of 50 questions related to diabetes and its prevention such as prevalence, characteristics,

diagnosis, normal blood glucose levels, types, etiological factors, symptoms, complications and management. To assess the awareness on diabetes among the Adolescent Girls the scores were given. The maximum scores were fifty. The scores obtained were classified in to five groups as: 1-10 (Very Poor), 11-20 (Poor), 21-30 (Fair), 31-40 (Good) and above 40 (Very Good).

2.4 Analysis of the Data

The data was analyzed using the Statistical Package of Social Sciences (SPSS 16.0) programme. The statistical measure i.e. simple percentage was used in the analysis and inferences were drawn.

RESULTS AND DISCUSSION

Table 2: Age Range of the Adolescent Girls

Age Range (in years)	Number	Percentage
16	30	30.0
17	37	37.0
18	33	33.0
Total	100	100.0

Among the selected Adolescents thirty percent (30%) of the them were belonged to in the age group of 16 years, thirty seven percent (37%) of them were in the age group of 17 years and thirty three percent (33%) of them were in the age group of 18 years.

Table 3: Educational Status of the Adolescent Girls

Educational Status	Number	Percentage
Illiterate	3	3.0
Primary Level	15	15.0
Middle School Level	19	19.0
High School Level	15	15.0
Studying +1	14	14.0
Studying +2	19	19.0
Studying College	15	15.0
Total	100	100.0

Among the selected Adolescents nearly half of the Adolescents (48%) were falls under the category of student population. Three percent (3%) of them were illiterates. Around Fifteen percent (15%) of the Adolescents had education only up to primary level. Nineteen percent (19%) and fifteen percent (15%) of the Adolescents had education up to middle and high school level respectively.

Table 4: Occupation of the Adolescent Girls

Occupation	Number	Percentage
Agriculture Coolie	7	7.0
Coolie	9	9.0
Business	1	1.0
Private Sector	23	23.0
Jobless	12	12.0
Studying	48	48.0
Total	100	100.0

Among the working Adolescents (40%), majority (98%) of the Adolescents were working as coolies and working in the private sector such as spinning mills, dyeing units, departmental stores, stationary stores etc.

Table 5: Sources of Information on Diabetes

Sources	Number (N=100)*	Percentage
Physicians	14	14.0
Television	45	45.0
Radio	35	35.0
News paper	20	20.0
ANM	22	22.0

*****Multiple responses

Among the Adolescent Girls **forty five percent (45%)**, thirty five percent (35%) and twenty percent (20%) reported that they got the information on Diabetes through mass media such as **Television**, Radio and Newspaper respectively. Fourteen percent (14%) and twenty two percent (22%) of them reported that they got the information from Physicians and ANM (Auxiliary Nurse Midwife) respectively.

A similar finding has been reported by Cryer et al. (2010) the television is the major source of information to reach the viewers about the diabetes. Through television they had known about the symptoms of diabetes and its diagnosis.

Adolescent's Opinion About Diabetes Education:

All Adolescents (100%) those who were selected for this research study expressed they didn't attend any diabetes education camp and the diabetes education is most important for diabetics as well as their family members, because it will help

- to plan and prepare foods for diabetics,
- to take care of the diabetics and
- to prevent from complications.

Table 6: Diabetes Knowledge Scores of the Adolescent Girls

S.No.	Knowledge Scores	Adolescent Girls	
		Number	Percentage
1.	1 – 10 (Very Poor)	63	63.0
2.	11 – 20 (Poor)	37	37.0
3.	21 – 30 (Fair)	---	---
4.	31 – 40 (Good)	---	---
5.	> 40 (Very Good)	---	---
Total		100	100.0

- Nearly two third **(63%)** of the Adolescent Girls obtained **very poor scores (1-10).**
- Thirty seven percent **(37%)** of the Adolescent Girls obtained **poor scores (11-20).**

Among the selected Adolescent Girls all (100%) of the Adolescents obtained very poor (1-10) and poor scores (11-20). It was noticed that none of the Adolescents scored above twenty. This indicates their awareness on diabetes and its prevention was very poor.

CONCLUSION

Young generations are the future pillars, citizens and parents of our country and they have to break up many shackles to come up in their life. The young minds are like a fertile soil, in which whatever sown grows out well. The adolescents can be educated by creating awareness through various means about the importance of proper diet, healthy life style and exercise can help to pave the way to control the diabetes in future.

Diabetes education for Adolescents plays an important role in preventing diabetes and motivating them in the development of healthy habits and attitudes. The findings of this research study may help to plan

nutrition education for the adolescents and also it may be recommended to the policy makers to implement the nutrition component in the regular curriculum from the lower classes to the higher classes which could aid in preventing the life threatening diabetes and its complications among the family in future.

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