Awareness about diabetes risk factors and prevention strategies among women of Punjab

By Pooja KANSRA [†]

Abstract. Diabetes is a huge challenge to country's health and economy. It has been widely debated that in order to reduce the incidence and consequences of diabetes, its awareness among the masses is pre-requisite. Thereby, in the present paper an attempt has been made to examine the awareness of the risk factors and preventive strategies of diabetes among women. The study was based on primary data collected from 200 women from Jalandhar. The analysis of the data has been made with the help of frequencies, percentages and weighted average score. It has been found that 96 percent of the women were aware of diabetes. However, only 42 percent, 30 percent, 22 percent, 13 percent and 29 percent were aware of prevention of diabetes, vaccine for diabetes, complete cure for diabetes and susceptibility of diabetes. These figures are compelling enough to stimulate government to decide to take corrective actions to address the awareness of diabetes among women. It was also found the awareness of the risk factors and preventive measures was low among the sampled respondents. Need of the hour is to create awareness of diabetes, risk factors and lifestyle changes which can prevent or delay diabetes.

Keywords. Awareness, Diabetes, Lifestyle changes, Preventive measures, Risk Factors.
JEL. I12, I10, I19.

1. Introduction

India continues to be the diabetic capital of the world (Holla *et al.,* 2014). The prevalence of diabetes is one of the major risk factor for death and diabetes has become a great economic challenge as it drains between 5-25 percent of family income of an average Indian (Lindstorm & Tuomihelto, 2003; Holla *et al.,* 2014). The WHO reports describes that over 19 percent of the world's diabetic population resides in India. This means that currently India has 35 million diabetic subjects, the number of which is projected to rise to 80 million by the year 2030 (Wild *et al.,* 2003; Vardhan *et al.,* 2011). With increasing urbanization, people in India are following western dietary habits, sedentary lifestyle, reduced physical activity, excessive intake of calories and exposed to psychosocial stress. This has resulted in an unprecedented rise of diabetes to epidemic proportions during the last few decades in our country (Unadike & Chineye, 2009).

Diabetes is a huge challenge to country's health and economy. Much more work still needs to be done to continue to improve outcomes and alleviate the burden on individuals, families and the community. Adoption of a healthy lifestyle, which requires both societal support and governmental leadership, is essential for the prevention of type-2 diabetes (Shaw *et al.,* 2012). Because of its chronic nature, the severity of its complications and the means required to control them, diabetes is a costly disease, not only for the affected individual and his/ her family, but also for the health authorities (Health Administrator, 2009). The costs of diabetes affect

[a†] Mittal School of Business, Lovely Professional University, Phagwara, Punjab, India.
☎. +
✉. pkansra@gmail.com

everyone, everywhere, but they are not only a financial problem. Intangible costs (pain, anxiety, inconvenience and generally lower quality of life etc.) also have great impact on the lives of patients and their families and are the most difficult to quantify (Health Administrator, 2009; Shaw *et al.,* 2012).

Diabetes involves three cost components such as direct medical and non-medical cost, indirect cost and intangible cost. Direct cost includes hospital inpatient care, physician inpatient care, physician outpatient care, diagnostic test, prescription of drugs and medical supplies (Hodgson & Meiners, 1982; Sam & Philip, 2009). Indirect cost includes productivity losses related to morbidity and mortality. Indirect costs usually accounts for a large proportion of total costs (Rascati, 2009). Intangible costs refer to patient's psychological pain, discomfort, anxiety and distress related to diabetes. Such costs are usually in the form of quality of life measures (Rascati, 2009). However, many governments and public health planners still remain largely unaware of the current magnitude, or more importantly, the future potential for increases in diabetes and its serious complications.

The objective of the present study is to examine the awareness of diabetes, risk factors and various preventive strategies among the women of Punjab.

2. Materials and methods

The present research was descriptive in nature. The study was based on primary data collected from 200 women from Jalandhar. The convenience sampling technique was used and the respondents were selected from the private and public hospitals. For the collection of data, a structured questionnaire had been prepared. The hospitals were selected by using random sampling. The survey had been conducted from March 2017 to May 2017. For the analysis of the data, weighted average score, percentage and frequency has been used.

3. Results

From the table 1, it was found that majority of the women belongs to 40-50 years followed by 50 years above, 30-40 years, 20-30 years and up to 20 years. It has been found that 85.5 percent of women were married and most of the women were higher education. Majority of the women were from service followed by self-employed, housewife and student.

Table 1. *Socio-Demographic Characteristics of the Participants*

Characteristics	Frequency	Percentage
Age		
Up to 20 years	15	7.5
20-30 years	30	15.0
30-40 years	32	16.0
40-50 years	71	35.5
50 years and above	52	26.0
Marital Status		
Married	171	85.5
Single	29	14.5
Education		
Illiterate	19	9.5
Primary	18	9.0
Secondary	23	11.5
Higher secondary	58	29.0
Graduate	29	14.5
Postgraduate	42	21.0
Others	11	5.5
Occupation		
Student	29	14.5
Self-employed	59	29.5
Service	64	32.0
Housewife	48	24.0

Source: Author's Calculation Based on Primary Data

Table 2, shows that 96 percent of the respondents were aware of the diabetes. However 42 percent, 30 percent, 22 percent, 13 percent, 29 percent were aware of complications, prevention, vaccine, complete cure and susceptibility of diabetes.

Table 2. *Awareness of Diabetes Related Issues*

Variables	Frequency	Percentage
Awareness of diabetes		
Yes	192	96.0
No	8	4.0
Awareness of complications of diabetes		
Yes	84	42
No	116	58
Awareness of prevention of diabetes		
Yes	60	30
No	140	70
Awareness of vaccine for diabetes		
Yes	44	22
No	156	78
Awareness of complete cure of diabetes		
Yes	26	13
No	174	87
Awareness of susceptibility to diabetes		
Yes	58	29
No	142	71

Source: Author's Calculation Based on Primary Data

Table 3, describes the respondent's perception towards the different life-style risk factors of diabetes. The perception factors have been measured with the help of weighted average score. The first risk factor identified by women were overweight/obesity followed by excessive fat in diet, excessive sugar consumption, genetic factors, age, low physical activity, increased cholesterol level, increased cholesterol level, increased blood pressure, highly stressful mental work, excess carbohydrates in diet and highly intense physical work and Smoking.

Table 3. *Weights and Ranks of Respondent's Perception of the Severity of Different Life Style Components as Risk Factors for Diabetes*

S. No.	Implications	Weighted Average Score (WAS)	Rank
1	Overweight/obesity	4.02	1
2	Excessive fat in diet	3.98	2
3	Excessive sugar consumption	3.96	3
4	Genetic factors	3.92	4
5	Rise of Age	3.88	5
6	Low physical activity	3.68	6
7	Increased cholesterol level	3.48	7
8	Increased blood pressure	3.26	8
9	Highly stressful mental work	3.20	9
10	Excess carbohydrates in diet	3.15	10
11	Highly intense physical work	3.02	11
12	Smoking	2.96	12

Source: Author's Calculation Based on Primary Data

The Table 4, given above presents perception of the women towards the prevention strategies. After comparing weighted average scores, it was found the first strategy for the prevention of diabetes among the women were the management of weight followed by regular exercise, balanced diet, quit smoking, limited proceed foods, limited alcohol intake, control of blood pressure, reduce your risk of cardiovascular disease and regular check-ups. This implies that although the women knew about the prevention strategies of diabetes but the order of awareness was clear among them.

Table 4. *Weights and Ranks of Respondent's Perception of the Preventive Strategies for Diabetes*

S.No.	Implications	Weighted Average Score (WAS)	Rank
1	Manage your weight	3.89	1
2	Exercise regularly	3.72	2
3	Eat a balanced, healthy diet	3.64	3
4	Quit smoking	3.45	4
5	Limit takeaway and processed foods	3.20	5
6	Limit your alcohol intake	3.10	6
7	Control your blood pressure	2.90	7
8	Reduce your risk of cardiovascular disease	2.52	8
9	Regular check-ups	2.13	9

Source: *Author's Calculation Based on Primary Data*

4. Conclusion

Thus, the study highlights the need for public education and mass media campaigns of awareness of diabetes and its complications. Majority of the women in the study knew about diabetes but had misconceptions on vaccine and treatment. There was also no clear knowledge about the risk factors and preventive strategies associated with diabetes. In order to reduce the economic burden of diabetes among the Indian masses need is to create awareness of diabetes through different ways such as distribution of pamphlets, manuals, advertisements in magazines, newspapers, T.V, radio. Along-with this health education of diabetes should be the part of curriculum in schools and colleges. Awareness programs should be designed on workplaces, public meetings, religious gatherings, schools, colleges and in women's organizations. As diabetes is a lifestyle related disease so along-with the above measures need is make people aware to prevent diabetes by changing dietary habits, increased physical activity, beliefs and behavior.

References

Health Administrator. (2009). Diabetes: The cost of diabetes in India. *Health Administrator*, 22(2), 110-112. doi. 10.1186/s12992-014-0080-x

Hodgson, T.A., & Meiners, M.R. (1982). Cost-of-illness methodology: A guide to current practices and procedures. *Milbank Mem Fund Q Health Soc*, 60(3), 429-462.

Holla, R., Prabhu, S., Shetty, S., Deshpande, S., Balla, S.K., Hegde, S., Soujanya, B.S., Harsha, R., & Kundapur, R. (2014). Awareness about diabetes among adolescents of Mangalore, South India. *NUJHS*, 4(2), 118-120.

Lindstorm, J., & Tuomihelto, J. (2003). The diabetes risk score-a practical tool to predict type-2 diabetes risk. *Diabetes Care*, 26(3), 725-731.

Rascati, K. (2009). Measuring and estimating costs. In: Essentials of pharmacoeconomics. *Philadelphia*, 250.

Sam, K.G., & Philip, MAKS. (2009). Pharmacoeconomics: Cost of illness studies. *HYGEIA*. 1(1), 464-9.

Segel, J.E. (2006). Cost-of-illness studies-a primer. In: Diabetes. *RTI-UNC Center of Excellence in Health Promotion Economics*, 1-39. [Retrieved from].

Shaw, J., & Diabetes Institute. (2012). Diabetes Research Foundation (JDRF).

Unadike, B.C., & Chineye, S. (2009). Knowledge, awareness and impact of diabetes among adolescents in Uyo, Nigeria. *African Journal of Diabetes Medicine*.

Vardhan, A., Prabha, M.R., Kotian, S.M, Saxena, N., Gupta, S. & Tripathy, A. (2011). The value of the Indian diabetes risk score as a tool for reducing the risk of diabetes among Indian medical students. *Journal of Clinical and Diagnostic Research*, 5(4), 718-720. doi. 10.7860/JCDR/2012/4264.2550

Wild, S., Roglic, G., & Green, A. (2004). Global prevalence of diabetes, estimates for the year 2000 and projections for 2030. *Diabetes Care*. 27(5), 1047-1053.