ORIGINAL ARTICLE

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Influence of sources of diabetes related information on awareness among Pokhara residents of Nepal

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Abstract

Background

Diabetes is a major public health problem in the world. It is now found that it imposes a heavy disease burden in both developed and developing countries. The objective of this study was to find out the relationship between the source of information regarding diabetes mellitus and its awareness among the residents of Pokhara valley, Nepal.

Methods

It was a cross-sectional study conducted in Pokhara, Nepal from January to March 2017. The survey was conducted using a predesigned questionnaire. The tools used were demographic proforma and knowledge questionnaire on Diabetes mellitus.

Results

40.8% of the participants were of age 20-44yrs and 52.5% of them were male. Majority of them were Hindu (81.7%) and most of the participants belonged to Brahmin ethnicity (53.3%). 50.8% had nuclear family and 87.5.6% of the participants were literate. Majority of the participants were employed (70.8%). Most of them had a monthly family income of NRs.20, 001 and above (63.3%).Majority of them were non diabetic (83.3%).There was a statistically significant relationship between awareness and source of information regarding diabetes mellitus ($p<0.05$).

Conclusion

Awareness was found more in participants where healthcare workers were the source of information. Therefore, Nepal government and the related organizations have to gear up community based interventional programmes to increase awareness regarding Diabetes.

Key words

Awareness, Diabetes mellitus, Nepal

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diabetes related information awareness

Background

Diabetes is progressively common in several countries and has been a potential risk factor for several diseases which lead to death [1, 2]. Diabetes patients have two-fold excess risk for a wide range of vascular diseases [2, 3]. Diabetes consequences can be avoided or delayed with physical activity, medication, diet and regular screening and treatment for complications [1-4].

Several clinical trials have reported that there is a possibility to prevent the onset of diabetes in many individuals at high risk [5, 6]. Community-based interventional programmes can prevent diabetes. So, It is better to expand diabetes prevention services [7]. The objective of this study was to find out the relationship between the source of information regarding diabetes mellitus and its awareness among the residents of Pokhara valley, Nepal.

Material and Methods

Study design, participants

This was a cross sectional questionnaire based study carried out at Pokhara, Kaski, Nepal.

Study Period

This study was conducted between 1st January 2017 to 1st March 2017.

Response Rate

Out of 500 participants 480 completed the questionnaire completely.

Questionnaire design

The questionnaire consisted of the information regarding demographic proforma, and awareness questionnaire on Diabetes mellitus. Awareness in this study was defined as understanding of information regarding diabetes on 16 items in the questionnaire.

Validity of the Questionnaire

Questionnaire validation test reported a Cronbach Alpha of 0.72.

Inclusion criteria

Those who are willing to participate, all age group and sex.

Exclusion criteria

Those who are not willing to participate.

Sample size calculation

Preceding to the study, from the review and literature it is found that knowledge [good+ average] of diabetes among the residents of Nepal from a small cross-sectional study was 80%. P=80%, Q=20%, Allowable Error5%. Required sample size for 95% CI was 109. We got adequate sample size of 480 [8, 9].

Outcome variable

The main outcome variable was the awareness regarding diabetes mellitus.

Explanatory variables

Factors which were taken into consideration were demographic factors and sources of information regarding diabetes mellitus.

Ethical committee approval

Ethics approval was obtained prior to the commencement of the study from the Institutional Research and Ethics Committee of Manipal College of Medical Sciences, Pokhara, Nepal. Completed questionnaires were collected on the same day. Participants were given a choice to decide whether to participate in the study or not.

Data management and statistical analysis

The data were analyzed using Epi Info version 7.2, Division of Health Informatics & Surveillance (DHIS), Center for Surveillance, Epidemiology & Laboratory Services (CSELS).Centers for Disease Control and Prevention, 1600 Clifton Road Atlanta, GA30329-4027, USA. Chi square test was used to find out the relationship between different variables. $p<0.05$ was considered as statistically significant..

Results

Data presented in Table 1 shows that 40.8% of the participants were of age 20-44yrs and 52.5% of them were male. Majority of them were Hindu (81.7%) and most of the participants belonged to Brahmin ethnicity (53.3%). 50.8% had nuclear family and87.5.6% of the participants were literate. Majority of the participants were employed (70.8%). Most of them had a monthly family income of NRs.20, 001 and above (63.3%).Majority of them were non diabetic (83.3%).

Table 2 depicts that there was a statistically significant relationship between Knowledge and source of information regarding diabetes mellitus ($p<0.05$).

Discussion

Evidence from this study revealed that the knowledge regarding diabetes were inconsistent with source of information. Awareness was more among the people who

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diabetes related information awareness

had known about this from healthcare workers followed by family and friends.

Table 1:Socio demographic characteristics

Sample characteristics	Frequency	Percentage
Age		
20-44yrs	196	40.8
45-64yrs	132	27.5
65-74yrs	116	24.2
>75yrs	36	7.5
Gender		
Female	228	47.5
Male	252	52.5
Religion		
Hindu	392	81.7
Buddhist	64	13.3
Christian	24	5.0
Ethnicity		
Brahmin	256	53.3
Chhetri	52	10.8
Newar	92	19.2
Others	80	16.7
Type of family		
Nuclear	244	50.8
Joint	236	49.2
Level of education		
Illiterate	60	12.5
Literate	420	87.5
Employment status		
Employed	340	70.8
Unemployed	140	29.2
Family income		
20,000 and below	176	36.7
NRs.20,001 & above	304	63.3
Health status		
Diabetic	80	16.7
Non diabetic	400	83.3

Table2:Comparison of awareness and source of information

Variables		Knowledge			P value
		Poor	Average	good	
Diabetes	NO	90 (22.5)	280 (70)	30 (7.5)	0.0025*
	YES	30 (37.5)	40 (50)	10 (12.5)	
Source of Knowledge					
Family/ Friends	NO	60 (21.4)	180 (64.3)	40 (14.3)	0.0001*
	YES	60 (30)	140 (70)	0 (0)	
Healthcare workers	NO	120 (31.6)	260 (68.4)	0 (0)	0.0001*
	YES	0 (0)	60 (60)	40 (40)	
Mass media	NO	100 (27)	230 (62.2)	40 (10.8)	0.0001*
	YES	20 (18.2)	90 (81.8)	0 (0)	
Others	NO	80 (20)	280 (70)	40 (10)	0.0001*
	YES	40 (50)	40 (50)	0 (0)	

*P<0.01 statistically significant

Another study from Oman showed that 61% of the students favored healthcare professional to provide the information regarding diabetes, but contrary to our study common source of information were mass media [10]. Similar to our study, Health Information National Trends Survey in USA reported that 62.4% of the adults were in favor of physicians as a trusted information source. Health care professionals talks and seminars should be recommended as an effective source to improve diabetes-related awareness among the residents of Pokhara valley of Nepal [11].

Conclusion

Awareness regarding diabetes was inconsistent with the source of information. Most of the participants were in favor of physicians as a trusted information source. Therefore, Nepal government and the related organizations have to gear up community based interventional programmes to increase good knowledge regarding Diabetes.

Limitations & future scope of the study

The main drawback is the non - probability sampling technique.

Competing interests

The authors do not have any conflict of interest arising from the study.

Authors' contribution

BS, BR, RE, AS and IB designed the questionnaire, interpreted the data, drafted the manuscript, and revised it. BS conceived of the study with AS, and BS acquired & interpreted the data and revised the manuscript. BS took part in data analysis, interpreted the data, and revised the manuscript.

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References

1. Danaei G, Finucane MM, Lu Y, Singh GM, Cowan MJ, Paciorek CJ, *et al.* National, regional, and global trends in fasting plasma glucose and diabetes prevalence since 1980: systematic analysis of health examination surveys and epidemiological studies

ISSN 2321-5291
Medical Science 2017; Dec., Vol-5(4):44-47
diabetes related information awareness

with 370 country-years and 2.7 million participants. Lancet 2011; 378:31-40.

2. Rao Kondapally Seshasai S, Kaptoge S, Thompson A, Di Angelantonio E, Gao P, Sarwar N. The Emerging Risk Factors Collaboration. Diabetes mellitus, fasting glucose, and risk of cause-specific death. N Engl J Med 2011;364:829-41.
3. Emerging Risk Factors Collaboration1, Sarwar N, Gao P, Seshasai SR, Gobin R, Kaptoge S *et al.* Diabetes mellitus, fasting blood glucose concentration, and risk of vascular disease: a collaborative meta-analysis of 102 prospective studies. Lancet 2010;375: 2215-22.
4. Yusuf S, Islam S, Chow CK, Rangarajan S, Dagenais G, Diaz R *et al*. Use of secondary prevention drugs for cardiovascular disease in the community in highincome, middle-income, and low-income countries (the PURE study): a prospective epidemiological survey. Lancet 2011;378:1231-43
5. Knowler WC, Barrett-Connor E, Fowler SE, et al; Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med 2002;346:393–403
6. Tuomilehto J, Lindstrom J, Eriksson JG, et al; ¨Finnish Diabetes Prevention Study Group. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. N Engl J Med 2001;344:1343–1350
7. Fradkin JE, Roberts BT, Rodgers GP. What's preventing us from preventing type 2 diabetes? N Engl J Med 2012;367:1177–1179.
8. ChaurasiaN,Thapa B, Patil BH, Khandekar K, Angolkar M, Narasannavar A, Wantamutte AS, Karikatti SS. Knowledge of Urban Population Regarding Diabetes Mellitus and its Complication: A Community Based Study. Journal of Nobel Medical College. 2014;3(1):62-65.
9. Sathian B, Sreedharan J, Banerjee I, Roy B. Simple sample size calculator for medical research: a necessary tool for the researchers. Medical Science. 2014;2:141-4.
10. Al-Mahrooqi B, Al-Hadhrami R, Al-Amri A, Al-Tamimi S, Al-Shidhani A, Al-Lawati H, et al. Self-reported knowledge of diabetes among high school students in Al-Amerat and Quriyat, Muscat Governate, Oman. Sultan QaboosUniv Med J 2013;13:392–8.
11. Hesse BW, Nelson DE, Kreps GL, Croyle RT, Arora NK, Rimer BK, *et al*. Trust and sources of health information: the impact of the Internet and its implications for healthcare providers: findings from the first Health Information National Trends Survey. Arch Intern Med 2005;165:2618–24.