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RESEARCH ARTICLE

DIABETIC PATIENTS KNOWLEDGE, ATTITUDE AND PRACTICE TOWARD PERIODONTAL HEALTH.

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Abstract

This paper provides the results of analysis of total, sectoral-specific, and spatial-specific multipliers and flow-on effects in Sumatera Island economy. The model employed was Inter-Regional Input-Output Model (IRIOM) developed using new hybrid procedures with special attention on Island economy. Data used for model were updated Indonesian data for the year of 2015. The results show that firstly, the important sectors of Java Island economy could be based on total multipliers and flow-on effects of output, income and employment. Secondly, important economic sectors could be based on sector-specific multipliers effects; multipliers that occurred in own sector and other sectors. Thirdly, important economic sectors could be based on spatial-specific multipliers; multipliers that occurred both in own region and other regions. Fourthly, important economic sectors could be based on spatial distribution of flow-on; flow-on effects that occurred in own region as well as in other regions.

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Introduction:-

Diabetes Mellitus (DM), the commonest endocrine disorder. Oral diseases are common in diabetics as compared to non-diabetic's individuals. Despite the global acknowledgment of the risk of Diabetes Mellitus, diabetic patients' knowledge and attitude toward their increased risk for oral health has not been fully deal with. Oral hygiene behaviour and seeking oral health care depends on a number of factors. Lack of knowledge about dental health and conforming to better oral hygiene is among the causes for non-adherence to oral hygiene practices, economical limitations, lack of services and lack of proper counselling.

Diabetes Mellitus refers to a group of common metabolic disorders that share the phenotype of sustained hyperglycaemia affecting almost all tissues in the body including those in the oral cavity. It is associated with

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aberrations in carbohydrate, fat, and protein metabolism, and results of numerous chronic complications, comprising of microvascular, macrovascular, and neuropathic disorders (4).

Aims and objectives:-

The aim of this study is to gather baseline information on knowledge, attitude, and practices of diabetic patients regarding their oral health with the view of enhancing dental health education for them, which will help in updating their knowledge about the disease and the various oral complications and to assess their attitudes and practices toward sustaining good oral health through proper oral hygiene and regular dental check-ups.

Material and Method:-

This study was a cross-sectional Analytic of 416 diabetic patients visiting the Prince Abdulaziz Bin Majed Diabetic Centre (PABMDC). Eligible participants will be confirmed diabetes mellitus patients who can read and write.

A questionnaire will be designed to assess the knowledge, attitude, and practices of diabetic patients along with corresponding demographic variables.

Questionnaire questions were carefully selected from relevant published reports in international journals. The questionnaire questions will be related to participants' nationality, age and gender, Type and duration of diabetes, and their awareness for systemic and oral diseases as complications associated with diabetes

The questionnaire will be piloted in 416 patients to determine its validity.

Result:-

The majority of the subjects were Saudis 99.6%, 99.8% and diagnosed with diabetes more than 6 months ago, 62.9% male and 37.1% female with mean age of 44.91 (Table 8). 31.4% of the subjects visited the dentist in the past 12 months for fillings, 2.9% for C&B, 23.1% for restorations, 48.8% for checkup, 18.5% for RCT, 18.7% for periodontal therapy, 11.6% for dental extractions and 9% for other reasons (Table 1). And the majority of them said that Tooth brushing & toothpaste is their oral hygiene method (Table 3). 7.9% of the subjects never brush their teeth (Table 4) and 46.6% said that tooth brushing is their Health promotion priority (Table 6), 18.2% of the subjects said that the reason for not visiting the dentist more often is the difficulty in scheduling an appointment, 38% said because of high coast, 24.4% said because they forgot, 23.1% because they don't like their dentist, 28.8 because of anxiety 26.4% because of transport problems and 12.1% because they can't leave work (Table 2).

Vast majority of the subjects have gingival bleeding 99.6% (Table 5). 50.8% think diabetic more prone to oral diseases (Table 7). 50.5% of the subjects have been told by their physician about the oral problems related to diabetes (Table 9), moreover 49.2% of them think that their oral problems are because of diabetes (Table 10).

Table 1: visited a dentist visit at least once in the previous 12 months

Have you visited a dentist visit at least once in the previous 12 months																
	Fillings		C&B		Restoration		Checkup		RCT		Dental extraction		Periodontal therapy		Other	
	Freq uency	%	Freq uency	%	Freq uency	%	Freq uency	%	Freq uency	%	Freq uency	%	Freq uency	%	Freq uency	%
Y es	143	31.4	95	22.8	105	25.3	222	53.4	84	20.2	53	12.7	85	20.4	41	9.8
N o	312	75.6	360	87.2	350	84.7	233	56.2	371	89.8	402	96.7	370	89.1	414	99.2

Table 2:- reason(s) for NOT visiting the dentist

What is/are the reason(s) for NOT visiting the dentist more often																
	Difficulty in scheduling appointment		costs		Forgot		Don't like my dentist		Fear or anxiety		Transportation problems		I can't leave work		Other	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Yes	83	18.2	173	38.0	111	24.4	105	23.1	131	28.8	120	26.4	55	12.1	30	6.6
No	372	81.8	282	62.0	344	75.6	350	76.9	324	71.2	335	73.6	400	87.9	425	93.4

Table 3:- oral hygiene method

What is your oral hygiene method											
	Tooth brushing & toothpaste		Use of dental floss at least once a week		Use of dental floss at least once a day		Miswak		Use of sticks		
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	
Yes	313	68.8	87	19.1	93	20.4	114	25.1	42	9.2	
No	142	31.2	368	80.9	362	79.6	341	74.9	413	90.8	

Table 4:- Frequency of tooth brushing

How many time do you brush your teeth		
	Frequency	%
Never	36	7.9
Once a day	131	28.8
Twice a day	161	35.4
Three times a day	68	14.9
four times a day	26	5.7
More than four times a day	33	7.3

Table 5:- Gingival bleeding

Does your gingivae bleed		
	Frequency	%
yes	453	99.6
no	2	.4

Table 6:- Health promotion priorities

What are your health promotion priorities which have been done in the past year								
	Healthy diet		Brush teeth regularly		Visit a dentist regularly		Visit a doctor regularly	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Yes	128	28.1	212	46.6	122	26.8	55	12.1
No	327	71.9	243	53.4	333	73.2	400	87.9

Table 7:- Health promotion priorities

Is a diabetic more prone to oral diseases		
	Frequency	%
yes	231	50.8
no	178	39.1
Don't know	46	10.1

Table 8:- Age

Age	12	16	17	18	19	20	21	22	23	24	25	29	30	31	32	33	34	39	41	42	43	44	45	46	47	50	51	52	53	54	55	56	57	60	62	63	64	65	67	73	74	75	76	78	85
Frequency	5	1	2	4	3	4	6	14	4	2	6	2	9	4	7	10	65	5	1	5	17	6	36	3	2	5	1	9	16	22	8	13	8	5	3	14	19	29	19	1	3	1	10	5	4
%	1.1	0.2	0.4	0.9	0.7	1.1	3.3	9.9	0.4	1.3	0.5	2.2	0.9	1.5	2.2	14.3	1.1	0.1	1.3	3.7	1.7	7.9	0.7	0.4	1.1	0.2	3.5	4.8	1.8	2.9	1.1	0.3	4.2	6.4	4.2	4.2	0.2	0.7	0.2	2.2	1.1	0.1	0.1		

Table 9:- Told by physician about the oral problems related to diabetes

Did your physician tell you about the oral problems related to diabetes		
	Frequency	%
yes	230	50.5
no	183	40.2
Don't know	42	9.2

Table 10:- Do you think that your dental/oral problems are because of diabetes

Do you think that your dental/oral problems are because of diabetes		
	Frequency	%
yes	224	49.2
no	157	34.5
Don't know	74	16.3

Discussion:-

This cross sectional analytic study of 456 diabetic patients visiting Prince Abdulaziz Bin Majed Diabetic Center (PMBADC) located in Al Madinah, Saudi Arabia. Dent Hyg said that 78.7% of the subject visited a dentist for check-up in the past 12 months and 22.2% brush their teeth twice a day and 73.6% never use dental floss, 80% visited a physician in the past year and 12.6% visited a dentist (1). While Diabetes Res ClinPract. Said 42.7% of participants reported visiting a dentist for a regular check-up, and 58.6% went to see a dentist last year. Of the participants, 95.3% brushed teeth at least once a day and 61.2% brushed at least twice a day; 34.9% flossed their teeth at least once a day and 35.3% never flossed (2).

In present study 48.8% of the subject visited a dentist for check-up in the past 12 months and 35.4% brush their teeth twice a day and 79.6% never use dental floss, 12.1% visited a physician in the past year and 26.8% visited a dentist and 28.8% brushed teeth at least once a day and 20.4% flossed their teeth at least once a day.

Limitations:-

We acknowledge that the sample in this study is a convenience sample which may or may not represent the diabetes population. Nevertheless, it should be noted that oral health behaviors in the present study are similar to those reported in the literature (3). There are some potential limitations in this study that should be considered when interpreting the results. First, since the study was an analytical cross-sectional study, therefore, no direct relationship between variables and outcomes can be proved. A second limitation is the potential reporting bias associated with the self-administered questionnaire with the possibility that subjects tend to over-report compliance. Also, to get some participants respond was difficult especially diabetics who are not registered in (PMBADC). Another potential limitation is the use of a lot of close-ended questions (i.e. yes/no/don't know) in the oral health knowledge test may allow participants to guess the correct answer.

Conclusion:-

The subjects are well aware about their diabetic Bot/ADC

Conditions and the oral effects of diabetes, on the other hand, they have near to the ground attitude and practice (behavior) toward systemic and oral health.

Recommendations:-

Health professionals have the opportunity to educate patients with diabetes about oral manifestations (e.g., dry mouth) and complications (e.g., periodontitis and oral candidiasis) of diabetes and to promote proper oral health behaviors. They should provide appropriate special oral care information and advice concerns related to dental hygiene. In addition to the routine education of patients with diabetes about the importance of proper oral hygiene and receiving regular professional dental care, health professionals should educate patients more about oral complications related to diabetes and measures that can be taken to prevent these oral complications such as avoiding tobacco use.

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