

Knowledge Attitude and Practices of Denture Wearer in the Walled City of Lahore

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ABSTRACT

Objective: To determine knowledge, attitude and practices of the denture wearer about perception of their teeth loss, any complaints about prosthesis and hygienic practices for their denture among general population.

Study Design: Descriptive / cross-sectional study

Place and Duration of Study: This study was conducted at the Alimeran Shifa Khana, Mochi Gate Walled City Lahore from 15th October 2016 to 15th October 2017.

Materials and Methods: This study comprised of 142 partially or complete edentulous patients. A structured questionnaire was used to collect data after consent.

Results: Majority of the respondents were 47.25% in the age group 41-60 years and 54.9% were male, 52.2% respondents had 8 years or less than 8 years education. Dental caries was the major cause of teeth loss and 79.6% respondents did not ask about the cause of their teeth loss. Majority 80.3% clean their denture daily, and 33.8% put their denture in water at night. Chi square test for demographic variables and the reasons of the tooth loss statistical significant results were found with the age (p 0.001), gender (p 0.000), monthly family income (p 0.000), and with the profession (p 0.000). Similarly statistical significant variables were age (p 0.000), employed history (p 0.018), and dentist guidance to patient to remove denture and putting denture in water at night (p 0.00).

Conclusion: A proper instructions and frequent follow up of Denture wearer is recommended as per principle of prosthodontics.

Key Words: Knowledge; Attitude; Practices; Denture Oral Hygiene; General Population

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INTRODUCTION

Teeth loss increases with increasing age.¹ Dental caries and periodontal problems are the major causes of tooth loss.² Different studies also shows the lack of public awareness about the oral health.³ Particularly living either within the old walled city or from the urban and rural areas of country.⁴ The edentulous individuals are considered physically impaired⁵ as consequences of dental diseases result in poor quality of life. Conventional removable partial denture (RPD) and complete dentures (CD) are most commonly used prosthesis to restore missing teeth and resorbed alveolar ridges. Tooth loss can have problems in mastication, phonetics and esthetics. Missing teeth can be replaced by removable partial dentures (RPDs), teeth-supported

bridges, and implant supported prostheses.⁶ Acrylic RPD are associated with several complaints such as difficulty in insertion and removal, difficulty in speech, mastication, and aesthetic issues.⁷

Most of patients do not satisfy with removable dentures.⁶ One of the factors in success of complete dentures is thorough oral and denture hygiene. These instructions are most important for the denture wearers for the maintenance of the prosthesis and oral health.⁸ Such attitudes of the patient are a potential waste of their financial resource and deteriorate their health further.⁴ Patient's education and compliance both are necessary for the success of the prosthesis. Although there is practice to give instructions to the patient but some of the patients do not carefully follow the instructions.⁹

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted on 142 partially or complete edentulous patients from Mochi Gate Walled City, Lahore Pakistan from 15th October 2016 to 15th October 2017. All those patients who were wearing removable partial or complete denture and data recorded from self-administrated questionnaire, data was analysed using SPSS 21 Cleaning practices and denture removal practices were computed to a single output (dependent) variable.

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RESULTS

Table No.1: Sociodemographic characteristics of denture wearer (n=142)

Demographic characteristics	No.	%
Age		
20-40	43	30.3
41-60	67	47.2
61-80	32	22.5
Gender		
Male	78	54.9
Female	64	45.1
Education		
No	35	24.6
< 8 years	42	29.6
9-10 years	38	26.8
11-12 years	11	7.7
13-14 years	8	5.6
Master or > 16 years education	8	5.6
Financial Status		
< Rs. 15000.	83	58.5
Rs. 15001-50000.	59	41.5
>50000	0	0
Profession		
Labourer	52	36.6
Unemployed	36	25.4
Employed	54	38

Table No.2: Knowledge attitude and practices of denture wearer (n=142)

Question	No.	%
Perceived reasons of tooth/teeth loss?		
Mobility	55	38.7
Khore	87	61.3
Did you ask your dentist about the reasons of your lost tooth/teeth		
Yes	29	20.4
No	113	79.6
Did you ask your dentist about the treatment of your lost tooth/teeth		
Yes	71	50.0
No	71	50.0
Do you think extraction was the only remedy of damage teeth/tooth		
Yes	74	52.1
No	68	47.9
Did your family/friend/colleague guide you to remove tooth whenever you felt pain		
Yes	75	52.8
No	67	47.2
At the time of your tooth extraction did your dentist guide you to replace your teeth/tooth		
Yes	48	33.8
No	94	66.2
Did your Dentist guide you about the different		

types of artificial teeth/tooth		
Yes	95	66.9
No	47	33.1
Do you clean your teeth with water?		
Yes	114	80.3
No	28	19.7
Do you clean your with water, tooth paste and tooth brush		
Yes	74	52.1
No	68	47.9
Do you clean your with water, soap and tooth brush		
Yes	31	21.8
No	111	78.2
With water and cleansing solutions or tablets		
Yes	5	3.5
No	137	96.5
Do you remove your denture at night?		
Yes	118	83.1
No	24	16.9
Do you put your denture in water?		
Yes	48	33.8
No	94	66.2
Did your dentist told you to put your denture in water at night		
Yes	44	30.9
No	90	63.4
Do not remember	8	5.6
Did your Dentist told you to remove your denture at night?		
Yes	44	30.9
No	83	58.5
Do not remember	15	10.6
Do you know 24 hours wearing of denture can damage to your underlying tissues in the mouth?		
Yes	49	34.5
No	93	65.5
Do you think sometimes your denture make you uncomfortable in front of peoples/ in social gatherings?		
Yes	74	52.1
No	68	47.9
Practices of Denture wearer by computing		
No	24	16.9
Yes	118	83.1

Majority of the respondents were 47.25% in the age group 41-60 years and 54.9% were male, 52.2% respondents had 8 years or less than 8 years education. Dental caries was the major cause of teeth loss and 79.6% respondents did not ask about the cause of their teeth loss. Majority 80.3% clean their denture daily, and 33.8% put their denture in water at night. Chi square test for demographic variables and the reasons of the tooth loss statistical significant results were found with the age (p 0.001), gender (p 0.000), monthly family

Table No.3: Complains with the prosthesis among denture wearer (n=142)

Question	No.	%
Complain with your artificial teeth/tooth		
Yes	121	85.2
No	21	14.8
Pain		
Yes	41	28.9
No	101	71.1
Food Impaction		
Yes	74	52.1
No	68	47.9
Halitosis		
Yes	70	49.3
No	72	50.7
Color		
Yes	53	37.3
No	89	62.7
Phonetics problems		
Yes	33	23.2
No	109	76.8
problems in shape, size of your artificial teeth		
Yes	48	33.8
No	94	66.2

Table No.4: Association of tooth loss and sociodemographic factors among denture wearer (n=142)

Education of denture wearer	Reason of tooth loss			Chi-Square test	P-Value
	Periodontal	Dental caries	Total		
Age					
20-40	8	35	43	15.02	0.001
41-60	27	40	67		
61-80	20	12	32		
Gender					
Male	15	63	78	27.73	0.00
Female	40	24	64		
Educatio n					
Illiterate	20	20	40	3.310	0.191
Middle pass	24	42	66		
> Middle pass	12	25	36		
Income					
<15000	47	36	83	26.954	0.00
15001-50000	8	51	59		
Above 50001	0	0	0		
Profession					
Labourer	16	36	52	15.958	0.000
Unem-ployed	24	12	36		
Emplo-yed	15	39	54		

Table No.5: Cross tabulation between denture practices and sociodemographic variables among denture wearer (n=142)

Independe nt variable	Practice			Chi-Square test	P-Value
	No	Yes	Total		
Age					
20-40	8	35	43	15.457	0.000
41-60	4	63	67		
61-80	12	20	32		
Gender					
Male	12	66	78	0.283	0.594
Female	12	52	64		
Education					
Illiterate	3	32	35	2.295	0.193
Literate	21	86	107		
Income					
<15000	16	67	83	0.803	0370
15001-50000	8	51	59		
Profession					
Unemploy ed	20	68	88	5.592	0.018
Employed	4	50	54		
Did your dentist told you to put your denture in water at night					
No	-	44	44	12.592	0.000
Yes	24	74	98		
Did your Dentist told you to remove your denture at night?					
No	-	44	44	12.592	0.000
Yes	24	74	98		
Do you know 24 hours wearing of denture can damage to your underlying tissues in the mouth?					
No	12	62	74	.052	.820
Yes	12	56	68		

income (p 0.000), and with the profession (p 0.000). Similarly statistical significant variables were age (p 0.000), employed history (p 0.018), and dentist guidance to patient to remove denture and putting denture in water at night (p 0.00).

DISCUSSION

Teeth loss is a public health issue, knowledge about its causation, prevention and available treatment option depends upon health seeking behaviour, regular visit to dentist and socioeconomic status of the individual.¹⁰ In the current study, major cause of tooth loss was dental caries 61.3%, and periodontal disease 38.7% whereas Hugo et al¹¹ and Takala et al¹² also reported them major determinant of teeth loss. Almost 52.8% said that family members and colleagues suggested them for extraction. Agerberg and Carisser reported that major reason of the teeth loss was health seeking behaviour.^{13, 14}

Result of another study shows that 90% denture wearer immersed their dentures in water. Around 55% said that they did not get instruction for the cleaning of denture. About 46% cleaned their denture more than two times per day, whereas 39% were found to clean twice a day and only 15% once a day. Regarding the method of cleaning denture the most common method was found to be with water 45%, with brush and water 40%, water and salt 9%, brush and paste 5%, and finally, brush and solution 1%. More than half of the patients 51% used denture cleansers; however in the current study only 3.5% cleans with denture cleansers.¹⁵

In another study, 52.8% responded cleaned oral tissue daily, 10.2% reported lack of knowledge about cleaning method and 13.2% did not remove denture at night. There was a significant gender based difference for denture cleaning method.¹⁶ Memon et al¹⁷ in Hyderabad Pakistan revealed that 62% patients received instruction from dentist about the cleaning of dentures. Most of the patients 58% were using water and tooth brush for denture cleaning as compared to this study 52.1% clean with tooth paste and brush, only 21.8% respondents clean with soap and brush. But only 10% patients were using other substances like hypochlorite and commercially available cleansing tablets whereas in this study only 3.5%. In that study 62% patients were soaking their dentures in water while in the present study only 33.8% put the denture in water remaining people said they did not told to put denture in the water. In their findings 48% denture wearer were used to wear denture at night while in our study 83.1% were used to remove denture at night. However instructions given by the dentist regarding the removal of denture and putting it in the water at night were statistically significant, p value 0.001 and 0.000 in Memon's and our study respectively.

Ahmad et al¹⁸ conducted a study in Nishter Institute of Dentistry Multan on 85 denture wearers and reported that significant association for education level (P value 0.001) and type of denture (P value 0.014). However in this study statistical significant variables were age (p 0.000), employed history (p 0.018), and dentist guidance to patient to remove denture and keeping their denture in water at night (p 0.000) when chi square test was applied between practices of denture cleanliness, removal of denture at night and sociodemographic variables. In Ahmad's study it was found that 16.5% patients did not remove their dentures before sleeping, only 14 % RPD wearer did not soak their denture at night and only 10.6% patients soaked their dentures in denture cleansing tablets/solution as a method of denture hygiene maintenance.²⁴

Azad et al¹⁹ reported that 65% participants used to clean their dentures almost once a day, majority of the patients maintained denture hygiene with water only 50% whereas many subjects cleaned it with a combination of soap and toothbrush with water 22% followed by water and cleansing tablets 8%; on the other hand in this study 80.3% respondents cleaned their teeth daily, 52.1 % cleaned with tooth paste and

brush, only 21.8% respondents cleaned with soap & brush. Only 3.5% cleaned with the cleaning solution. Shingli et al²⁰ reported 94.7% patients were used to clean their dentures with a tooth brush, 5.3% used denture brush and 3.6% used denture cleansers, however these results are different from the finding of our study.

The most common method of denture cleaning was using water and brush 61.1% in Kosuru's²¹, 58.3% in Patel et al²² and in this study 52.1%; which is more when compared with studies reported by, Dikbas²³ 3.84%, Peracinet al²⁴ 3.7%, Azadet al¹⁹ 22%, Polyzois²⁵ 10.3%, Sahaet al²⁶ 47% and Apratimet al²⁷ 31.3%. Cakan et al²⁸ reported that according to the 49% dentist did not inform them about the maintenance of the denture however in the current study 58.45% patient reported similar findings. In Cakan et al²⁸ and current study brushing was the most frequent cleaning method 57.6% and 52.1% respectively. In Cakan et al²⁸ study almost 53.1% patients did not remove their dentures at night which is very high to the finding of the present study 16.9%. Aljabri et al²⁹ and Akeel³⁰ reported aesthetic as a most common problem with the RPD followed by pain, however in our study most common problem with RPD was food deposition, followed by halitosis, aesthetic, discomfort and speaking.

CONCLUSION

The dentist's professional responsibility regarding patient counselling was not satisfactory and most of the respondents had some problems with their prosthesis such as food impaction and debris under denture, alteration of its colour, difficulty in daily wear, halitosis and perceived speaking problems. Awareness among denture wearers regarding denture hygienic practices and its proper care, and other instructions regarding oral health tissue and follow-up required toward for maximum advantages of the prosthesis and its success.

Author's Contribution:

Concept & Design of Study:	Faiz Rasul
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