

## Original ARTICLE

### To assess knowledge among dentists about use of denture adhesive

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#### ABSTRACT

**Background:** Denture adhesives have a legitimate place in dental treatment. The present study was conducted to assess knowledge among dentists about use of denture adhesive. **Materials & Methods:** The present study was conducted on 280 general dental practitioners of both genders. A questionnaire was given to all dentists and their response was recorded. **Results:** Age group 21-30 years had 75 dentists, 31-40 years had 80 and 41-50 years had 60 and >50 years had 65 dentists. There were 150 males and 130 females. 165 dentists had experience of 10-20 years, 80 had 1-10 years and 35 had >20 year's experience. Denture adhesives are soluble in saliva, 150 thought that the use of dentures with incompletely removed old denture adhesives affect tissue health, 120 replied that improper use of denture adhesives cause denture stomatitis, 145 replied that excessive use of zinc containing denture adhesives cause neurological disease. The difference was significant ( $P < 0.05$ ). **Conclusion:** Authors found that most of the dentists had limited knowledge regarding denture adhesives.

**Key words:** Denture adhesives, Dental practitioners, knowledge

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**This article may be cited as:** Kumar D, Singh T. To assess knowledge among dentists about use of denture adhesive. HECS Int J Comm Health Med Res 2019; 5(4):105- 107.

#### INTRODUCTION

Aging is a universal process and a normal inevitable biologic phenomenon. Throughout the world, a demographic revolution is underway as the proportion of older people is growing faster than any other age group.<sup>1</sup> Man, from time immemorial, has tried to increase the life span and enhance his health from various scientific innovations. With discoveries in medical sciences and improvements in his social conditions, the average life span now in most parts of the world continues to increase.<sup>2</sup>

Denture adhesives have a legitimate place in prosthetic dental treatment. Denture adhesives benefit denture patients with improved fit, comfort, chewing ability and confidence if used properly. However, dentists are reluctant to prescribe them for fear that it indicates their failure to provide an adequate denture.<sup>3</sup> Actually the use of denture adhesives and their role in prosthodontics has been a conflicted topic, both in clinical practice and dental education. This conflicting viewpoint of dental professionals can be described as the traditional historical approach and the advocate approach.<sup>4</sup> According to the traditional

historical approach denture adhesives are not more than a poor substitute for proper fit, and the use of denture adhesives is related to poor clinical skills and a lack of prosthodontic practice. Dentists who support the advocate approach believe that when needed denture adhesives can facilitate clinical procedures of fabricating denture, patient satisfaction and acceptance.<sup>5</sup> The present study was conducted to assess knowledge among dentists about use of denture adhesive.

#### MATERIALS & METHODS

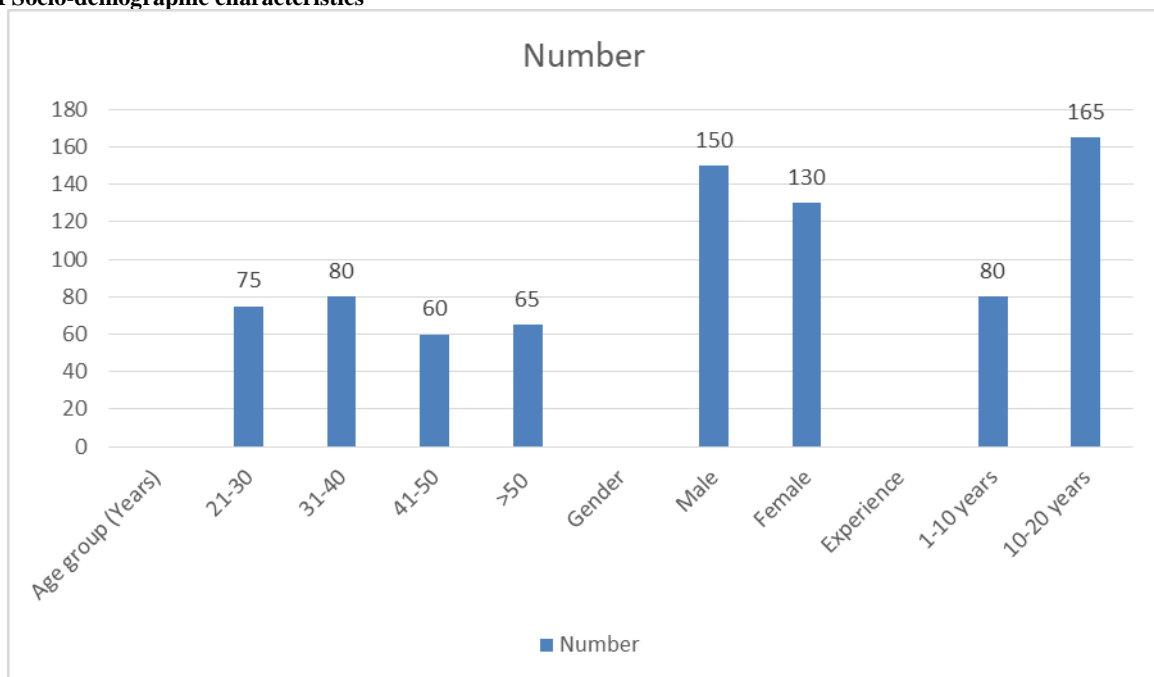
The present study was conducted with the aim of assessing the knowledge among dentists about use of denture adhesive. It comprised of 280 general dental practitioners of both genders. A self-framed questionnaire was given to all the dental practitioners. The entire questionnaire was given to personal meeting or through email. Data such as name, age, gender etc. was recorded. From the questionnaire which was delivered to all dentists and their response was recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

**RESULTS**

**Table I Socio-demographic characteristics**

Variables	Number	P value
<b>Age group (Years)</b>		
21-30	75	0.05
31-40	80	
41-50	60	
>50	65	
<b>Gender</b>		
Male	150	0.71
Female	130	
<b>Experience</b>		
1-10 years	80	0.01
10-20 years	165	
>20 years	35	

**Graph I Socio-demographic characteristics**



**Table II Knowledge on denture adhesives use**

Questionnaire	Number	P value
<b>Are denture adhesives soluble in saliva?</b>		
Yes	130	0.01
No	70	
Don't Know	80	
<b>Will the use of dentures with incompletely removed old denture adhesives affect tissue health?</b>		
Yes	150	0.02
No	40	
Don't Know	90	
<b>Can improper use of denture adhesives cause denture stomatitis?</b>		
Yes	120	0.04
No	60	
Don't Know	100	
<b>Can excessive use of zinc containing denture adhesives cause neurological disease?</b>		
Yes	145	0.01
No	55	
Don't Know	80	

Table II shows that 130 replied that denture adhesives are soluble in saliva, 150 thought that the use of dentures with incompletely removed old denture adhesives affect tissue health, 120 replied that improper use of denture adhesives cause denture stomatitis, 145 replied that excessive use of zinc containing denture adhesives cause neurological disease. The difference was significant ( $P < 0.05$ ).

## DISCUSSION

Denture adhesives were introduced in dentistry in the late 18<sup>th</sup> century. The first patent related to adhesives was issued in 1913, followed in the 1920s and 1930s. Studies investigated that the retention of complete dentures has been improved by using denture adhesive. Although denture adhesives are found beneficial by a wide range of edentulous patients, dental professionals have been slow to accept them as a material to enhance denture retention, stability and function. Although clinical studies have not shown damaging effects of denture adhesives to tissues, many dentists think that denture adhesives could increase the resorption of alveolar ridge and cause soft tissue hyperplasia. Due to increasing incidence of chronic residual ridge resorption and a consequent increase in unstable dentures because of prolongation of human life period, denture adhesives may be an effective adjunct to denture treatment and denture aftercare.<sup>6</sup>

Denture adhesives are found advantageous and satisfactory by a substantial proportion of edentulous patients in providing better retention of their dentures; more comfortable when chewing and speaking with DA than without. In addition, many denture wearers utilize DA as an over-the-counter approach to improve retention and stability but the use of these products is not wholly endorsed by the dental profession.<sup>7</sup> Despite considerable documentation advocating patients' use of adhesives, many dentists view adhesive usage as poor reflection of their clinical skills and prosthetic expertise or to provide retention to an ill-fitting prosthesis and even assumed to cause irritation to the denture bearing tissues in spite of clinical trials failing to prove the same. Many dentists also fear that DAs are causing increased residual ridge resorption (RRR) and soft tissue hyperplasia.<sup>8</sup> The present study was conducted to assess knowledge among dentists about use of denture adhesive.

In present study, age group 21-30 years had 75 dentists, 31-40 years had 80 and 41-50 years had 60 and >50 years had 65 dentists. There were 150 males and 130 females. 165 dentists had experience of 10-20 years, 80 had 1-10 years and 35 had >20 year's experience. Fakhri et al<sup>9</sup> conducted a study in which a questionnaire was mailed to 300 general dentists who were assigned with a random systematic sampling method from general dentists in Tehran. The questions were arranged in two parts of evaluating knowledge and attitude. In evaluation of knowledge, dentists were classified into groups of good, moderate, weak and lack of knowledge. In evaluation of attitude, dentists were classified into positive, moderate and negative groups. The study showed that 14%, 32% and 37% of the general dentists had respectively good, moderate and weak knowledge toward denture

adhesive while 16.3% had no knowledge about this material. In evaluation of attitude through dentists with positive and moderate knowledge toward denture adhesive, 9.3%, 71.3% and 19.4% had respectively positive, moderate and negative attitude toward denture adhesive. The  $\chi^2$  test showed a significant statistical relation between situation of knowledge and experiences of dentists.

We found that 130 replied that denture adhesives are soluble in saliva, 150 thought that the use of dentures with incompletely removed old denture adhesives affect tissue health, 120 replied that improper use of denture adhesives cause denture stomatitis, 145 replied that excessive use of zinc containing denture adhesives cause neurological disease.

Koksal et al<sup>10</sup> included 325 private dentists were surveyed through a questionnaire to investigate their attitudes towards denture adhesives. Cream type denture adhesives were preferred mostly, both for clinical use (55.7%) and for prescribing (70.6%). "Easy use" was the most indicated reason for both preferences of powder and cream type. 71.1% believed that denture adhesives were useful for improving denture retention and stability in patients with inadequate oral anatomy. 56.3% of dentists expressed that they used denture adhesives in their clinical practice. 41.8% stated they prescribed this material to their patients. 52.6% believed that advising a denture adhesive reveals a lack of dentist's professional skills.

## CONCLUSION

Authors found that most of the dentists had limited knowledge regarding denture adhesives.

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