

## Original Article

# Assessment of the qualification and performance of the assistants working in the private dental clinics in Bilaspur, Chhattisgarh

### ABSTRACT

**Background:** A qualified dental assistant is expected to have proper knowledge in, various treatment procedures, handling instruments, infection control and health hazards. The present survey has been conducted to assess the qualification and performances of the assistants working in different dental clinics.

**Materials and Methods:** A questionnaire survey was conducted among the assistants working in 22 dental clinics in Bilaspur, Chhattisgarh.

**Results:** Only one clinic had a qualified Dental Hygienist and the other assistants working in other clinics were lacking professional degrees. Around 91% were involved in mixing restorative materials, 32% were involved in taking radiographs, 45.5% were not immunized for Hepatitis B and 19.2% of them have no knowledge about transmission of diseases like AIDS.

**Conclusion:** The present study shows almost all the assistants working in private dental clinics were not qualified with professional degrees. The dental surgeons should be much more concerned in recruiting only qualified dental auxiliaries.

**Keywords:** Dental assistant, dental clinics, hazard, qualification

### INTRODUCTION

The concept of four-handed dentistry came into use when the complex dental procedures made a dental surgeon feel the need of an assistant to deal with the instruments, as well as the patient.<sup>[1]</sup> Slack and Burt described dental auxiliary as a person appointed by a dentist to render dental care without himself/herself possessing a dental degree.<sup>[2]</sup> With time, a qualified auxiliary became a necessity for the dental practice and various professional degrees for dental auxiliary came into existence in different countries: dental hygienist (1906) in the USA, the dental nurse (1921) in New Zealand, and dental therapist (1979) in the United Kingdom.<sup>[3-6]</sup> In India, currently, the following qualifications are available for a dental assistant: dental hygienist, dental laboratory technician, and dental operating room assistant.<sup>[5]</sup>

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A qualified dental assistant not only helps a dental surgeon during any procedure but also can perform a variety of duties

**H. B. ANNAPOORNA<sup>1</sup>, DIPAYAN DATTA<sup>2</sup>, GRACE TARA PAUL<sup>3</sup>, NIHARIKA RAI<sup>4</sup>, SONIA SHARMA<sup>5</sup>, SHWETA KOHLI<sup>6</sup>**


<sup>1</sup>Professor and Head, <sup>2</sup>Assistant Professor, Department of Public Health Dentistry, Triveni Institute of Dental Sciences, Hospital and Research Centre, <sup>4</sup>Reader, <sup>5</sup>Assistant Professor, Department of Pediatric and Preventive Dentistry, Triveni Institute of Dental Sciences, Hospital and Research Centre, <sup>5</sup>Assistant Professor, Department of Orthodontics and Dentofacial Orthopedics, Triveni Institute of Dental Sciences, Hospital and Research Centre, Bilaspur, Chhattisgarh, <sup>3</sup>Professor, Department of Periodontics, Mahatma Gandhi Postgraduate Institute of Dental Sciences, Puducherry, India

**Address for correspondence:** Dr. Dipayan Datta, Department of Public Health Dentistry, Triveni Institute of Dental Sciences, Hospital and Research Centre, Bilaspur, Chhattisgarh, India.  
E-mail: [datta.dipayan2@gmail.com](mailto:datta.dipayan2@gmail.com)

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regarding the patients' care in the dental facility. He/she is expected to have proper knowledge in, various treatment procedures, handling instruments, infection control, and health hazards.<sup>[7]</sup> In this context, the present survey has been conducted to assess the qualification and performances of the assistants working in different dental clinics in Bilaspur city, Chhattisgarh.

## MATERIALS AND METHODS

A total of 22 private dental clinics in Bilaspur were surveyed. Ethical approval was obtained from the institutional review board. Informed consents were obtained from both the doctor and the assistant.

The instrument for the study was a comprehensive close-ended questionnaire. The questionnaire was initially prepared in English and then translated into Hindi. The first part of the questionnaire covered the type of duties the assistants performed in the clinic and the second part covered the awareness of the health hazards in clinical setting. The validity of the questionnaire was confirmed by a panel of oral health experts.

## RESULTS

Of the 22 private dental clinics, only one had a qualified dental hygienist and the remaining clinics had assistants who did not have any formal training or professional degree. All the basic dental treatments are undertaken in the clinics [Table 1]. The assistants were reported to perform various works such as reception of the patients, pouring cast, fabrication of dentures, mixing the restorative material, taking radiographs, and autoclaving; the dental hygienist only was reported to perform oral prophylaxis [Table 2]. More number of assistants was involved in the reception of the patients, pouring cast, mixing the restorative material, and autoclaving than the fabrication of dentures and taking radiographs [Figure 1].

In the context of the awareness of health hazards, many of the assistants were found to have knowledge about the complications involved with the procedures, personal immunization for hepatitis B, harmful effects of radiation, ways of transmission of acquired immune deficiency syndrome (AIDS) and hepatitis, using protective wear while handling things before, during, and after treatment, and disinfecting himself/herself after treatment [Table 3]. Awareness of the complications involved with the procedures, ways of transmission of AIDS and hepatitis, using protective wear while handling things before, during, and after treatment, and disinfecting himself/herself after

treatment was higher than that of personal immunization for hepatitis B and harmful effects of radiation among them [Figure 2].

## DISCUSSION

Dentistry can be a boon to the common human only when it is accessible and affordable. These two can easily happen when there are at least dental auxiliaries available if not the dentists themselves. This study has been conducted to check the quality of the auxiliaries working in the private clinics as they play a key role in delivering quality care.

Surprisingly, an alarming level of only 4.5% of the total assistants employed was qualified and the rest did not have any professional training. Among the duties rendered, 95.5% of them were involved in the reception of the patients and 95.5% poured the cast. Pouring cast though sounds not a difficult job, the presence of undercuts and air bubble in a cast prepared

**Table 1: Types of treatment procedures undertaken in the clinics**

Treatment procedures undertaken	Yes	No
Oral prophylaxis	22	0
Dental extractions and surgeries	22	0
Conservative and endodontic treatment	22	0
Prosthetic treatment	22	0
Orthodontic treatment	22	0

**Table 2: Types of duties assigned to the assistants**

Duties	Yes	No
Reception of the patients	21	1
Pouring cast	21	1
Fabrication of dentures	5	17
Mixing the restorative material	20	2
Taking radiographs	7	15
Autoclaving	22	0
Oral prophylaxis	1	21

**Table 3: Awareness of the health hazards among the assistants**

Question number	Questions	Answers	
		Yes	No
1	Are you made aware of the complications involved with the procedures	16	6
2	Have you been immunized for hepatitis B?	12	10
3	Are you aware of the harmful effects of radiation?	11	11
4	Are you aware of the ways of transmission of AIDS and hepatitis?	18	4
5	Do you have the habit of using protective wear while handling things before, during, and after treatment?	19	3
6	Are you in the habit of disinfecting yourself after treatment?	22	0

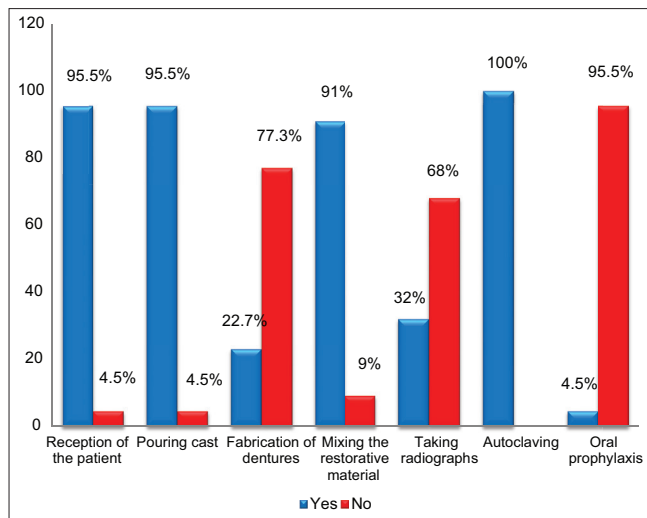


Figure 1: Distribution of responsibilities given to the assistants

by an unqualified assistant can lead to problems in denture fabrication.<sup>[8]</sup> Even 22.7% of them were reported to fabricate dentures that again can lead to problematic denture delivery. Around 91% were involved in mixing restorative materials. Without proper knowledge about the materials as well as the procedure, handling with them can compromise their retention and strength in the oral cavity.<sup>[9]</sup> Moreover, 32% of the assistants were found to be given the responsibility of taking radiographs lacking professional training. This may result in compromised quality of the radiograph with repetition of the procedure and increased risk of radiation hazards to the patients, assistants, and the surrounding people [Figure 1].<sup>[10]</sup>

Figure 2 suggests that 27.3% of the assistants are exposing themselves to various physical and chemical hazards during the procedures for not being aware of the procedural complications. 45.5% were not immunized for hepatitis B exposing their vulnerability to nosocomial infection. At the same time, 19.2% of them have no knowledge about the various ways of transmission of diseases such as AIDS and hepatitis B. 13.3% used no protective wears which should be a serious concern as ethically a doctor cannot be risking any individual to contact infection. The only good thing was that all of them had the habit of disinfecting themselves after any treatment.<sup>[11-13]</sup>

## CONCLUSION

The presence of dental auxiliary in dental setting is extremely important for the doctors to deliver quality dental care. To assist the dental surgeon during treatment, the auxiliaries are expected to be qualified enough to render safety for the patients as well as themselves. The present study shows that almost all the assistants working in private dental clinics were not qualified with professional degrees. The dental surgeons should be much more concerned in recruiting only qualified

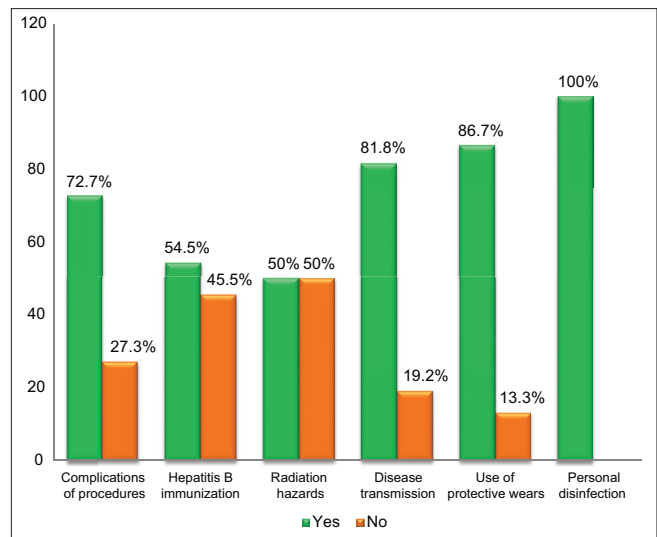


Figure 2: Levels of knowledge about health hazards among the assistants

dental auxiliaries. This can be enforced by the government only when strict policies are implemented.

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## Conflicts of interest

There are no conflicts of interest.

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