Patient's Experience, Attitude, and Satisfaction toward the Use of a Digital Intraoral Camera in a Dental Screening Campaign

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ABSTRACT

Aim and objective: To evaluate the patient's previous experience, attitude, and satisfaction toward the use of a digital intraoral camera in a dental camp.

Materials and methods: This study was conducted on visitors at the oral health awareness campaign, who had undergone oral health screening with the help of a digital intraoral camera. This study was conducted with the help of a questionnaire survey to ascertain their previous experience, attitude, and satisfaction toward the use of a digital intraoral camera in a dental setting.

Results: As a matter of easing the communication with the dentist, 92% opined that the use of intraoral cameras helps in easing the communication with the dentist. For deciding on the treatment plan, 93% have an opinion that a digital intraoral camera helps them in understanding the treatment options suggested by the dentist and to select the best treatment option for them. Regarding their satisfaction of the respondents toward the intraoral camera, n (%) 56.55 of them opined that they were very satisfied while n (%) 32.74 of them were satisfied and n (%) 10.71 were neutral in their opinion.

Conclusion: Based on these results, it can be concluded that most of the people were very satisfied with the use of a digital intraoral camera in the dental clinic setting as an aid toward understanding their present oral health status. It also helps them in understanding the treatment plan that the dental surgeon has suggested and helps them in communicating with the dentist.

Keywords: Dental campaign, Digital intraoral camera, Satisfaction.

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INTRODUCTION

The use of a digital intraoral camera has made significant input in dental treatment. It allows the dentist and the patient to get a close-up look at areas of special interest in the patient's mouth. A previous study by Forgie and others reported that the use of an intraoral camera in general dental practice is increasing rapidly.¹ When we can "see" a defective filling on a monitor, it becomes apparent what needs to be done. It then expanded almost to be used in several clinical specialties.² The biggest hurdle is the patient's acceptance of treatment is that they often do not understand the dental condition affecting them. With an intraoral digital camera, patient education is simplified by being able to help the patient see what the dental professional see.³ The intraoral camera can be very useful in detailing what needs to be done to alter, change, or enhance your smile using various procedures in cosmetic dentistry.⁴ It can also show the level of personal oral care that a patient has used. With the intraoral camera, any areas that may have been missed during brushing or flossing are much easier to see than with a mirror and the naked eye. When conditions, such as, periodontal problems are caught in their earliest stages, less invasive corrective treatment is possible. It easily and accurately allows the doctor to monitor and enhance what cannot be seen with the naked eye.⁵ One promising new method for the detection of dental caries is the use of magnifying visual aids. Magnification applies to all tooth surfaces, and several authors have reported its use for caries diagnosis and restorative treatment decision-making.⁶⁻⁸ An intraoral camera can be used as a tool that provides magnification of the oral cavity.⁹

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There is nothing better than having both the doctor and the patient on the same page and understand what needs to be done. These photographs help you make an informed decision on how you would like to proceed with your dental treatment. The intraoral camera is a video camera that can be placed in the mouth is approximately the size of the dental handpiece. This camera can take a video or a series of still photographs of the area allows displaying the images on a computer monitor. The images can be saved and discussed with the patient. This exciting technology provides the knowledge needed to make important dental decisions. The patient can now participate in his own dental care; no more hidden treatment and no unknowns to deal with during dental visits. It needs advanced and expensive technological devices and software that enables the supervisor to have a precise method of evaluation that is repeatable and applicable in different types of work and different fields of dentistry. It is even reported that an

intraoral camera can be used in the assessment of student work, during their clinical postings.¹⁰

The present study is to evaluate the patient's previous experience, attitude, and satisfaction toward the use of an intraoral camera in a dental camp.

MATERIALS AND METHODS

This study was conducted on visitors who had undergone oral health screening with a digital intraoral camera in the oral health awareness campaign organized by the AIMST Dental Students Association in Sungai Petani, Kedah, Malaysia on February 22 to 24, 2016. To ascertain the patient's previous experience, attitude, and satisfaction toward the use of a digital intraoral camera, a questionnaire was developed and pretested for use. Data were collected using a self-administered patient questionnaire. Two hundred and fifty questionnaire forms were distributed among patients who came for the oral awareness campaign and did their oral screening with the help of an intraoral camera. After a brief explanation of the study, patients were asked to complete a short questionnaire.

Collected data were entered into Microsoft excel software and all the descriptive statistical analysis were done.

RESULTS

Questionnaires were distributed to 250 patients who had undergone oral health screening with a digital intraoral camera in the oral health awareness campaign organized by the AIMST Dental Students Association in Sungai Petani, Kedah, Malaysia on February 22 to 24, 2013. One hundred and sixty-eight questionnaires were returned with a response rate of n (%) 67.2. Seven incomplete questioners were excluded from the data analysis.

As a means of measuring the patient's experience, subjects were asked "Have you seen your oral cavity using a digital intraoral camera?". For this first question, n (%) 39.29 of subjects responded

Table 1: Patient's previous experience (%) with an intraoral camera

Yes	No
n (%)	n (%)
66 (39.29)	102 (60.71)

Fig. 1: Patient's previous experience with an intraoral camera

affirmatively while n (%) 60.71 responded negatively (Table 1 and Fig. 1).

For the second question about the use of digital intraoral camera improving the communication with a dentist in the clinical situation, n (%) 92.26 of the respondents indicated that it improves the communication with the dentist while n (%) 3.57 of them answered negatively and n (%) 4.16 conveyed that there is no difference in the communication (Table 2 and Fig. 2).

For the question of does it give more explanation of your oral cavity comparatively, n (%) 95.24 of the respondents opined yes while n (%) 2.38 of the respondents said no and other remaining n (%) 2.38 said it does not make a difference (Table 3 and Fig. 3).

For the fourth question of does it help you to decide better on your treatment, n (%) 93.45 of the respondents answered affirmatively while n (%) 1.78 answered negatively and n (%) 4.76 said it does not make a difference (Table 4 and Fig. 4).

Regarding their satisfaction of the respondents toward the intraoral camera, n (%) 56.55 of them opined that they were very satisfied while n (%) 32.74 of them were satisfied and n (%) 10.71 were neutral in their opinion. None of the respondents responded to this question as satisfaction poor or very poor (Table 5 and Fig. 5).

To the question of whether they think that, an intraoral camera should be there in every dental clinic n (%) 94.05 answered affirmatively and n (%) 5.95 answered negatively (Table 6 and Fig. 6).

Regarding the comparison of satisfaction level of those who had previous experience with the digital intraoral camera to those who had it for the first time, among those who had the experience

Table 2: Intraoral camera helps patient in communicating with the dentist

Yes	No	No difference
n (%)	n (%)	n (%)
155 (92.26)	6 (3.57)	7 (4.16)

Table 3: Patient's opinion on whether intraoral camera helps in getting more explanation of oral cavity

Yes	No	No difference
n (%)	n (%)	n (%)
160 (95.24)	4 (2.38)	4 (2.38)

Fig. 2: Patients opinion on intraoral camera providing help in communicating with the dentist

Fig. 3: Patients opinion on intraoral camera providing explanation of the oral cavity

Table 4: Patient's opinion on whether intraoral camera helps in a decision on the treatment plan

Yes	No	No difference
<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
157 (93.45)	3 (1.78)	8 (4.76)

Fig. 5: Patients opinion on intraoral camera providing help in the decision making on the treatment plan

Table 6: Patient's suggestion on installing an intraoral camera in dental clinics

Yes	No
<i>n</i> (%)	<i>n</i> (%)
158 (94.05)	10 (5.95)

Fig. 4: Patients satisfaction with the use of intraoral camera

Table 5: Patient's satisfaction with an intraoral camera

Very satisfied	Satisfied	Neutral	Poor	Very poor
<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
95 (56.55)	55 (32.74)	18 (10.71)	0 (0)	0 (0)

with intraoral camera *n* (%) 56.06 opined that they were very satisfied, *n* (%) 34.84 were satisfied, and *n* (%) 9.09 were neutral in their opinion. Among those who never had an experience with an intraoral camera, *n* (%) 56.86 of them responded very satisfied, *n* (%) 31.37 responded satisfied while *n* (%) 11.76 had a neutral opinion. Among these two groups, none of the respondents responded

Fig. 6: Patients suggestion on installing intraoral camera in a dental clinic

poor or very poor to question the satisfaction toward the use of an intraoral camera. Among these two groups, *n* (%) 89.28 were either very satisfied or satisfied with the use of an intraoral camera in dentistry (Table 7).

CONCLUSION AND RECOMMENDATIONS

Based on these results, it can be concluded that most of the people were very satisfied with the use of a digital intraoral camera in the dental clinic setting as an aid toward understanding their present oral health status. It also helps them in understanding the treatment plan that the dental surgeon has suggested and helps in communicating with the dentist. So as per the conclusions from our present study, we recommend that every dental clinic should

Table 7: Comparison of satisfaction level of the first time user with those who had previous experience with IOC

	<i>Very satisfied</i>	<i>Satisfied</i>	<i>Neutral</i>	<i>Poor</i>	<i>Very poor</i>
	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Previous experience	37 (56.06)	23 (34.84)	6 (9.09)	0 (0)	0 (0)
No previous experience	58 (56.86)	32 (31.37)	12 (11.76)	0 (0)	0 (0)

try to have an intraoral camera in their armamentarium, as it will be a great help for them in patient education.

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