

# Dentists' Perceptions of The Meaning and Promotion Patient Safety – A Qualitative Study

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## Abstract

Objectives: Little is known about dentists' perception of patient safety even though they have an important role in mediating patient safety. This qualitative study explored Malaysian dentists' perceptions of patient safety. Methods: Participants were purposively sampled according to sex and sector of service. Snowball sampling, in which existing participants were asked to introduce their colleagues, was used to enhance recruitment. Unstructured 45-minute in-depth interviews were recorded with 15 dentists. The interviews were transcribed and analyzed using the Framework method, in which transcribed data was systematically sifted and indexed according to themes. Results: Three main themes emerged: (i) Under Perceptions of concept and definition of patient safety, participants reported widely varied views, from the occurrence of any sort of untoward incident being considered harmful to a major adverse event has occurred; (ii) Under Management of patient safety, some dentists thought that regulations and guidelines were useful, whereas others believed that it depended on the individual dentist's values and ethics; (iii) Under Promotion of patient safety, most dentists would appear to view education and training, especially at the undergraduate level, to be important in promoting patient safety. Conclusions: Without some familiarity, if not consensus, with the general context of patient safety, efforts to promote patient safety are likely to be faced with skepticism and disrespect. Positive attitudes toward patient safety need to be honed within the context of a positive safety culture within dental schools. Ethics and professionalism must underpin the development of a safety culture and training in patient safety promotion.

*Key Words:* Patient safety, Dental education, Qualitative study

## Introduction

Patient safety is considered an important aspect of healthcare quality, alongside patient experience and effectiveness of care [1]. In all areas of healthcare, dentistry included, the quality of patient care, especially patient safety, must be placed above all other aims [2]. In order to promote patient safety through strategies that reduce harm caused to patients, it is important to understand the causation of errors in patient care [3].

Compromises to patient safety in dentistry include injuries to patients and even deaths, as a result of device malfunctions, clinician errors and system failures [4]. More than half of injuries in relation to dental procedures or diagnostics have been assessed as severe, posing severe risk or causing permanent or long-lasting harm to patients [5,6] and as many as 632 causes of 882 injuries have been identified, ranging from "aspiration and ingestion", "wrong-site, wrong-procedure, wrong-patient errors" to "death due to cardiac arrest" and "jaw fatigue from lengthy procedures" [7]. However, some researchers have argued that the scope that such injuries pose as a public health problem is poorly understood because of poor documentation in patients' records [8,9], a culture of non-reporting [10], and inefficient or inaccurate data collection methodologies [11,12]. The general perception is that primary care delivery is a relatively low-risk endeavor that is far less likely to result in patient harm [13]. The scarcity of publications on patient safety in the dental literature would suggest a substantial need for more research [14].

Very little is known about dentists' perception of patient safety. Dentists' perceptions of patient safety are important because they shape attitudes and practices around managing and promoting patient safety. This qualitative study aimed to explore dentists' perceptions of how patient safety was

defined, their views on how PSIs should be managed, and impressions on how patient safety may be promoted. The qualitative research approach provides the opportunity to ask multiple research questions to understand patient safety and its unsolved issues.

## Materials and Methods

### Design

This was a qualitative study using unstructured in-depth interviews [15] with individual dentists registered to practice in Malaysia. The phenomenological approach was used to explore the meaning of the phenomenon of patient safety incidents to government and private dentists. This allowed participants to describe their perceptions and experiences of patient safety, and what these meant to them.

### Sampling

Purposive sampling was used to recruit 16 registered dentists in order to fulfill the sampling grid below [16]. Participants were characterized by sex and sector of service. Statistical representativeness was not sought, but a wide range of different perspectives was intended. This was to ensure that not any one viewpoint was presented as if it represents the sole truth about patient safety. Potential participants were initially identified through personal contacts. Therefore, two government and two private dentists were initially identified from contacts of a research team member (AP). Through these interviewees, further contacts were identified through the Snowball sampling technique where participants were asked to introduce their colleagues for the purpose of the study [17]. Participants were invited through email with a study information sheet that contained the aim and methods of the research. Appointments were made with dentists who agreed

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to participate for in-depth interviews. Confidentiality was assured and written consent was taken.

### Data collection

Two male researchers (BKSC,DZJS) conducted the interviews from July through to December 2015. Both were final year undergraduate dental students who were trained in data collection by an experienced qualitative researcher (AP), who also accompanied the interviewers to interviews with one government and one private dentist for the purpose of training and supervision.

The following questions guide was used:

- What does patient safety mean to you?
- Do you feel that patient safety is an issue of concern in dentistry?
- What are your views on the current management of patient safety in Malaysia?
- Do you think enough has been done to prevent patient safety incidents?
- What more can we do to improve our current patient safety standards?

Most of the interviews were carried out in the dentists' offices or in nearby coffee shops where the noise levels were low. The interviews lasted 38 – 62 minutes, averaging at 50 minutes. Each participant was interviewed until data saturation was achieved. The interviews were audio recorded. No one else was present during the interviews. No repeat interviews were carried out.

### Data analysis

All interviews were transcribed and analyzed using the Framework method [18]. Systematic sifting, indexing and charting of the transcribed data were conducted according to key issues and themes. An Excel spreadsheet was used to record the transcribed data of each subject in one column. These were then read by the two interviewers independently and salient comments were extracted into a second column of the same spreadsheet. Both interviewers discussed the salient comments identified from each transcript before agreeing to index them in a third column to arrive at a thematic framework. The thematic framework was repeatedly refined as more transcripts were analyzed. Refinement was completed when all researchers agreed upon the thematic framework.

## Results

Of 23 subjects approached, 15 were finally recruited; nine were from the private sector and six from the government sector. From the private sector, five were male and four female, whereas from the government sector, one was male and five were female. The reasons for refusal were usually related to time and interest. Salient comments from the participants are presented to demonstrate the themes developed from the findings. Each comment is tagged with the sex of the participant and the sector of employment, e.g. M-PS indicates male-private sector and F-GS indicates female-government sector.

### Perceptions of concept and definition of patient safety

Dentists' perceptions of patient safety varied substantially, with some dentists reporting that the occurrence of any sort of untoward incident on the patient should be considered harmful, "... I take patient safety in that sense in a wide sense. Anything that happens that is an unwanted incident for the patient. . ." (F-GS), and recognition that all dental treatment carries a certain degree of risk, "These things can happen, so is that a safety issue or patients have to accept that there are some complications involved?" (M-PS), highlighting that ...patient safety...it's a life or death issue...can get HIV, okay or Hepatitis B or C" (F-GS).

Others commented that patient safety is only compromised when a major adverse event has occurred, e.g. "... most of dentistry actually does not endanger patients. Very seldom does a patient die because of a dental treatment..." (M-PS) or "One thing about teeth is that people really don't die from teeth. . . So I don't know how much of a safety issue it is." (M-PS).

Examples of PSIs that the dentists gave ranged from re-using disposable materials, "...dentist re-used LA again and again until the cartridge was finished..." (M-PS) to actually harming patients, "...wrong teeth extracted...nerve blocks going wrong...implants placed in the wrong place..." (M-PS).

### Management of patient safety

There were differing views on how patient safety should and can be managed. Some dentists thought that regulations and guidelines were useful, whereas others believed that the management of patient safety depended on the individual dentist's values and ethics. For example, when asked about the management of patient safety, one dentist reported that the measures that have been put in place to manage patient safety are sufficient, "In the government sector the regulation is good enough. Like I said we have audits. That's why we have audits every year." (F-GS). However, this view was not shared by all as another dentist expressed that rules and regulations are not worth the resources needed to enforce them, "... every time you write a compulsory rule... you are actually disrespecting people (dentists) ... who is going to enforce it? ... money, time, energy ... is it worth it?" (M-PS).

Some dentists reported that initiatives to manage patient safety have to come from the dentists themselves, "I think it depends very much on individual practitioners as opposed to certain rules and regulations. . ." (F-PS) and "... there is always a guideline but whether you want to follow it or not, no one knows." (M-PS). One dentist pointed out that being ethical is crucial to providing safer dental care but it boils down to the willingness of the dentist to apply it, "As a dentist, we are guided by ethics ... So whether we want to follow the ethics or not, I think it's up to you ... It's very personal." (M-PS). Another dentist noted, "...We all know what we should and should not do...It's all about ethics...." (F-PS).

## Promotion of patient safety

Most dentists interviewed would appear to view education and training to important in promoting patient safety, "The first and best way is to educate and train ... raise up people to be ... disciplined and responsible ..." (F-GS) and "When you're training as an undergraduate or a postgraduate, there should be an emphasis on this thing (patient safety)." (F-PS). Legislations were reported to be insufficient, but instead teaching ethical behaviors could benefit patient safety, "We must behave correctly. I think that's very important ... Legislation is one thing, but ethics ... must be taught in the first year ..." (F-GS). Similarly, another dentist expressed the importance of education and training to improve patient safety as opposed to rules and regulations, "Rules will never solve the problem. Its education and training that will solve the problem"(M-PS).

One dentist noted that that there are variations in patient safety knowledge among fresh dental graduates, arguing for the importance of a standardized patient safety curriculum, "... the thing I notice is the knowledge of dentists... where they graduated from ... that really makes a big difference ... some can handle every patient... Some learn in a long while." (F-PS).

## Discussion

The key findings of this study were those dentists' perceptions of the concepts and definition of patient safety varies widely, as well as their attitudes towards its management. While some dentists felt that all dental care carried some degree of risk and any untoward incident should be considered a compromise to patient safety, others did not consider that dental care is a risky business as it very rarely leads to harm or death. The role of guidelines and regulations in managing patient safety was cited by some as helpful in managing patient safety, but by others as being ineffective and costly. Instead, some dentists believed that attitudes, values and ethics were keys to managing patient safety.

Disparity in perceptions of patient safety has been previously reported among healthcare providers [19,20] as well as general dentists, such as their attitudes about rubber dam use, leading to substantial discordance between presumed standard of care and actual practice [21]. In radiation protection, perceptions on the scope that radiological procedures pose as a risk to patient safety would appear to vary widely, for example, surveys of Korean [22] and Iranian dentists [23] have reported that most do not practice radiation protection procedures that would be required to minimize exposure to unnecessary radiation for patients and dental professionals. In a survey of National Dental Associations (NDAs) of the FDI (World Dental Federation) on the attitudes of dentists to the issues of patient safety and risk management, the researchers concluded that more efforts are needed to improve the knowledge, understanding and awareness of dentists regarding the broad context and relatively 'new' culture of patient safety [24]. However, dentists have also been reported to be well versed in the concept of patient safety and are keen to implement evidence based tools and/or interventions designed to improve safety for their patients [25]. The finding that Malaysian dentists express a broad

range of views on and attitudes toward patient safety is consistent with the bulk of published research literature on patient safety. Health care practitioners and health care organizations must be more familiar with the general context of patient safety, engage in efforts to implement patient safety measures in daily practice and establish a patient safety culture [26] in order to promote patient safety in health care.

The findings of the present study would suggest the view that some dentists do not believe guidelines and regulations are useful in promoting patient safety, but that attitudes towards ethical and safe practice are more important. This is consistent with reports that compliance with guidelines, such as for infection control, among dentists is often poor [27-29]. Another example of the management of patient safety is the guidelines on the use of the rubber dam in endodontic practice. It is recognized that rubber dam use reduces microbial contamination and the potential for patient swallowing or inhaling irrigant, hand-files, infected tooth debris [30]. However, the proportion of general dentists not using rubber dams would appear to range from 10 to 90% [31].

Whilst guidelines exist to promote patient safety, efforts are needed to promote positive attitudes towards compliance with these guidelines. Findings from the present study would suggest that education and training in ethical and professional behaviours around patient safety would pave the way to safe practice. Safe, patient-centered care has been reported to be directly influenced by the quality of education that health professions students receive [32]. Some researchers have suggested that training the next generation of dentists to effectively manage adverse events should have an important place in the curriculum [33,34]. Dental schools, as trainers of future generations of dentists, should begin to review their patient safety program within their teaching clinics, as well as inspire additional research in best practices for patient safety [35]. For curricular content, the World Health Organization has published a patient safety curriculum guide that is recommended for all health professions training [36], although instructions in patient safety in the health professions curricula have been increasingly reported [33,37-39]. In addition, teaching clinics' state of safety culture should be examined, and ways in which they can nurture mutual trust, shared views of the importance of safety, and confidence in the efficacy of preventive measures need to be identified [34].

## Conclusion

There are some limitations to this study. First, the results cannot be generalizable to all dentists as the aim was to explore diverse views on patient safety. Our sampling grid was designed to ensure we obtained views from dentists serving the government and the private sector, and representing male and female dentists. Although we did not fulfil the expected numbers, we did have representation that met our stratified criteria. The findings of the present study should be considered within these limitations. Nonetheless they do highlight the diverse perceptions and attitudes around patient safety. Without some familiarity, if not consensus, with the general context of patient safety, then efforts to promote patient safety are likely to be faced with skepticism and disrespect. In the first instance, positive attitudes toward

patient safety need to be honed, and honed within the context of a positive safety culture within dental schools. Ethics and professionalism must underpin the development of a safety culture and training in promotion of patient safety in the dental curriculum.

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