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Public Preferences, Perceptions, and Awareness amongst Disclosure of Dental Professional Error in Riyadh, Saudi Arabia

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Abstract

Aim: To investigate public preferences, perceptions, and awareness amongst disclosure of dental professional error in Riyadh, Saudi Arabia.

Background: Medical errors, such as flawed practices of omission, commission, planning, and execution, are unsuccessful processes which may essentially result in adverse outcomes to the patients and their families, frequently occur in the practice of dentistry. However, studies regarding dental errors in dentistry are rarely conducted.

Objective: The study aims to determine 1) Which medical error to disclose to patients? 2) Who should disclose medical error to patients? and 3) Association between preference of dental error disclosure and who to disclose dental errors, and participants' demographics.

Materials and Methods: A sample of 655 dental patients were recruited from government and private institutions in Riyadh, in the period from August 2015 to January 2016. Data were collected via survey questionnaires consisting 6 demographic questions and 5 questions regarding dental errors. Chi-square goodness-of-fit tests, Chi-square tests of independence, and logistic regressions were employed for data analysis.

Results: Participants preferred to be informed about the dental errors regardless of the severity of the errors and have the dentist who committed the dental error disclose the information. Also, after experiencing dental errors, only around one-fourth of the participants would still accept the dental care from the same doctor and majority of the participants would feel scared after being disclosed with a dental error. There was a statistically significant relationship between preference of dental error disclosure, and gender, employment status, and education level. There was a statistically significant relationship between who to disclose the dental error, and nationality, gender, employment status, and education level.

Conclusion: The feedback from the participants provide the opportunities for the dentists and dental management to get a more in depth understanding of the patients' preferences regarding dental errors. In the light of the results of the study, dentists should be encouraged to disclose dental errors.

Keywords: *Medical errors; Patient safety; Dental practice; Error disclosure; Saudi Arabia*

Introduction

Patient safety has been one of the inherited concerns in dental practice, and alerts and recommendations have been given out on pharmaceutical products, dental materials and clinical procedures of dental practice [1]. Patient safety is "the reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum" [2]. Medical errors, such as flawed practices of omission, commission, planning, and execution, are unsuccessful processes which may essentially result in adverse outcomes to the patients and their families, frequently occur in the practice of dentistry [3]. However, studies regarding dental errors in dentistry are rarely conducted [3]. This may be due to the limited repercussion on patient health, as well as the great dispersion of clinical records [3]. The errors in dental care may be of a human origin (in which a professional reaches an erroneous decision or provides a deficient treatment), but in most cases, their occurrence is, to a great degree, dependent upon system factors contributing to adverse effects that may end up causing harm to patients [4].

When an error or mistake occurs, the most common dilemma, faced by dentists and dental assistants, is whether to disclose or not to disclose the error to the patient [5]. Medical research findings reveal that patients are keen to know about any errors that may cause them harm [5]. The patient's bill of rights also demands to have full disclosure of an error. Several studies reported that patients do verbalize that such disclosures would enhance their trust in their physicians' honesty and would reassure them that they are receiving complete information about their overall care [6,7,8,9,10]. In addition, it was interesting to note that patients believed that human are not perfect, they might do errors, and "human nature" might lead health care workers to hide errors from patients [6]. After the disclosure of errors, patients may experience emotional, financial or physical pain [8,11,12]. Also, patients may fear more errors, are annoyed at delays to their recovery, and are aggravated that the errors could have been prevented [8]. Additionally, following the error disclosure, guilt feelings are common for injured patient as they may criticize themselves for not being careful enough to protect themselves [10,13]. Furthermore, patients who have been influenced by the errors might fear revenge from health care workers for constantly inquiring about the errors [13].

As dental practice handle potentially dangerous pharmaceuticals and dental procedures are becoming more aggressive, dental practice must actively become more involved in the global trend towards patient safety. It is clear that greater effort needs to be expended to manage the occurrence of dental errors, as a matter of importance for public health. Therefore, in order to understand public preferences, perceptions, and awareness amongst disclosure of dental professional error in Riyadh, Saudi Arabia, the following research questions are investigated in this study:

- Which medical error to disclose to patients?
- Who should disclose medical error to patients?
- Association between 1) Preference of dental error disclosure and 2) Who to disclose dental errors, and participants' demographics.

The answers to these questions may provide critical information contributing to better management of dental errors, based on public preferences, perceptions, and awareness amongst disclosure of dental professional error in Riyadh, Saudi Arabia. Furthermore, the findings may be of international significance, for the members of National Dental Associations, dental educators, and national, regional and international dental organizations, to help improve the knowledge, understanding and awareness of dental professionals regarding their ethical responsibility to disclose their mistakes.

Materials and Methods

A cross-sectional survey design was employed for this present study. A sample of 655 dental patients was recruited from government and private institutions in Riyadh, in the period from August 2015 to January 2016. Patients under the age of 18 years old were excluded. This study was conducted in compliance with ICH-GCP Ethical Standards. Ethical clearance from the Institutional Review Board of King Abdullah International Medical Research Centre, Riyadh, Saudi Arabia, was taken prior to the study (Research Protocol #RSS 15/045). All respondents provided verbal or electronic consent.

After receiving the ethical approval, a mixed mode of data collection was utilized including convenience and cluster sampling. The convenience sample was based on respondents recruited using Twitter, an online social media site. The cluster sample included respondents who were recruited proportionally from medical cities and dental colleges in Riyadh, classified into five regions (Central, North, East, West and South). A link was posted using the Twitter account created to recruit participants and to advertise the survey, with a shorter version of the study's URL generated to fit within Twitter's 140-characters limit. Requests were sent to both individuals and organizations to retweet the survey link. All eligible participants were asked to complete the online questionnaire through electronic devices generated using Google forms as the platform. This platform facilitated secure, anonymous data collection and ensured confidentiality. Exclusion of duplicates was conducted by reviewing the IP addresses of the respondents.

Instrumentation

The survey questionnaire consists of two sections. The first section of the survey questionnaire includes 6 demographic questions regarding participants' nationality, gender, age, occupation, educational level, and experience with dental errors. The second section of the survey questionnaire consists of the following 5 questions regarding dental errors:

- Q1(preference of dental error disclosure): 1 = Not to be informed, 2 = To be informed if it caused a major harm, 3 = To be informed if it caused at least a moderate harm, 4 = To be informed if it caused any harm, and 5 = To be informed even if it did not cause any harm.
- Q2 (who to disclose dental errors): 1 = A dental assistant in the clinic, 2 = The dentist who committed the dental error, 3 = The division head of the dental specialist who committed the dental error, 4 = The patient's relation of the dental service, and 5 = The chairman of dental department.
- Q3 (reaction after being disclosed of a dental error): 1 = Complain, 2 = Acceptance, and 3 = Ask doctor to fix it.
- Q4 (attitude towards a dentist who made an error): 1 = Avoid him immediately and go to another, 2 =Avoid him after fixing the error, 3 = Accept that mistakes are normal and continue with same doctor, and 4 = Change the hospital (go to private clinic).
- Q5 (feeling after being disclosed with a dental error): 1 = Fear if there was pain, 2 = Fear even if no pain, and 3 = No fear at all.

Statistical Analysis

Frequency tables were used to summarize the survey data. For questions regarding dental errors, chi-square goodness-of-fit tests with p-values computed by the Monte Carlo method [14,15] were used to determine whether or not frequencies of a number of response categories have occurred equally frequently (i.e., whether or not the responses were chosen by participants of the survey equally likely).

Chi-square tests of independence with p-values computed by the Monte Carlo method [14,15] were used to determine if there was an association between 1) dental error to be disclosed and 2) who to disclose dental errors, and each of the respondents' demographics independently, where the original response categories for dental error to be disclosed and who to disclose dental errors were used in the analysis.

For preference of dental error disclosure, the responses were dichotomized into two categories, not to be informed vs.to be informed. For who to disclose dental errors, the responses were dichotomized into two categories, the dentist committed the dental error vs. others. Since the outcome variables (dental error to be disclosed and who to disclose dental errors) were binary, multiple logistic regressions for binary responses were used to determine if there was an association between the outcome variables (preference of dental error disclosure and who to disclose dental errors) and the predictors, i.e., respondents' demographics, including nationality, gender, age, occupation, educational level, and experience with dental errors, simultaneously. The odds ratio estimates and the corresponding 95% confidence intervals were computed to quantify the magnitude of the association between the outcome variables and the predictors.

For all tests, p-values less than 0.05 indicated significance. All analyses were conducted using SPSS version 23 (Armonk, NY: IBM Corp.).

Results

A total of 655 participants have participated in the survey of the study. 2 participants did not complete the survey and were excluded from the data analysis. Thus, the final sample size was 653. All 653 participants have answered all the survey questions, with no missing responses found during the process of data analysis. Table 1 shows the demographics of the participants. Majority of the participants were Saudi (86.5%) and female (69.7%), and had a college degree (75.3%). Nearly 40% (37.8%) of the participants were under the age of 30. Almost half of the participants (46.2%) were unemployed. Slightly over half of the participants (52.1%) had never experienced dental errors.

Demographics		N (%)
Nationality	Saudi	565 (86.5)
	Non-Saudi	88 (13.5)
Gender	Male	198 (30.3)
	Female	455 (69.7)
Age	Less than 30	247 (37.8)
	30-39	146 (22.4)
	40-49	124 (19.0)
	50-59	101 (15.5)
	Above 60	35 (5.4)
Occupation	Military	7 (1.1)
	Civilian	344 (52.7)
	Unemployed	302 (46.2)
Education	Primary school	5 (0.8)
	Intermediate school	32 (4.9)
	Secondary school	124 (19.0)
	University	492 (75.3)
Experience with dental errors	Direct personal experience, recovered	256 (39.2)
	Direct personal experience, not recovered	57 (8.7)
	No experience	340 (52.1)

Table 1: *Demographics.*

Note: Total N = 653.

Which medical error to disclose to patients and who should disclose medical error to patients?

The responses of the 5 questions regarding dental errors, including, Preference of dental error disclosure (Q1), who to disclose dental errors (Q2), reaction after being disclosed of a dental error (Q3), attitude towards a dentist who made an error (Q4), and feeling after being disclosed with a dental error (Q5), are summarized in Table 2. The results of the chi-square goodness-of-fit tests indicated that the responses were not equally likely chosen by participants of the survey ($p < 0.05$). As shown in Table 2 (Q1), 93.3% (95% CI:91.4%-95.2%) of the participants preferred to be informed of the dental errors with either major harm, moderate harm, any harm, or no harm. Regarding who should disclose the dental errors (Table 2, Q2), 83.5% (95% CI: 80.7%-86.3%) of the participants preferred to have the dentist who committed the dental error disclose the information. Majority of the participants' reaction after being disclosed of a dental error (Table 2, Q3) was to ask doctor to fix it (81.5%, 95% CI: 78.5%-84.5%). After experiencing dental errors, only 25.4% (95% CI: 22.1%-28.7%) of the participants would still accept the dental care from the same doctor (Table 2, Q4). 82.2% (95% CI: 79.3%-85.1%) of the participants would feel scared after being disclosed with a dental error (Table 2, Q5).

	Frequency counts (%) of the responses					
	1	**2**	**3**	**4**	**5**	**p**
Q1	44 (6.7)	105 (16.1)	39 (6.0)	191 (29.2)	274 (42.0)	0.000*
Q2	15 (2.3)	545 (83.5)	47 (7.2)	7 (1.1)	39 (6.0)	0.000*
Q3	92 (14.1)	29 (4.4)	532 (81.5)	NA	NA	0.000*
Q4	246 (37.7)	162 (24.8)	166 (25.4)	79 (12.1)	NA	0.000*
Q5	287 (44.0)	250 (38.3)	116 (17.8)	NA	NA	0.000*

Table 2: *Responses of questions regarding dental errors.*

*Note: NA = Not applicable. p = p-value of chi-square goodness-of-fit test. * indicates significance at the 0.05 level. For Q1(preference of dental error disclosure): 1 = Not to be informed, 2 = To be informed if it caused a major harm, 3 = To be informed if it caused at least a moderate harm, 4 = To be informed if it caused any harm, and 5 = To be informed even if it did not cause any harm. For Q2 (who to disclose dental errors): 1 = A dental assistant in the clinic, 2 = The dentist who committed the dental error, 3 = The division head of the dental specialist who committed the dental error, 4 = The patient's relation of the dental service, and 5 = The chairman of dental department. For Q3 (reaction after being disclosed of a dental error): 1 = Complain, 2 = Acceptance, and 3 = Ask doctor to fix it. For Q4 (attitude towards a dentist who made an error): 1 = Avoid him immediately and go to another, 2 =Avoid him after fixing the error, 3 = Accept that mistakes are normal and continue with same doctor, and 4 = Change the hospital (go to private clinic). For Q5 (feeling after being disclosed with a dental error): 1 = Fear if there was pain, 2 = Fear even if no pain, and 3 = No fear at all.*

Association between 1) preference of dental error disclosure and 2) who to disclose dental errors, and participants' demographics

In this section, the analysis results of the association between 1) preference of dental error disclosure and 2) who to disclose dental errors, and participants' demographics are presented. Note that for the purpose of the analysis, some categories of the demographics were combined. The new categories for the demographics are as follows: 1) Nationality (Saudi vs. Non-Saudi), 2) Gender (Male vs. Female), 3) Age (Less than 30, 30-39, 40-49, and above 50), 4) Occupation (Employed vs. Unemployed), 5) Education (University vs. Others), 6) Experience with dental errors (Direct personal experience vs. No experience).

Table 3 shows the two-way table of preference of dental error disclosure and demographics. Table 4 shows the two-way table of who to disclose dental errors and demographics. There was an association between preference of dental error disclosure and each of the de-

mographic factors independently ($p < 0.05$, Table 3). There was an association between the responses of who to disclose dental errors and 4 of the demographic factors independently, including nationality, gender, age, and education ($p < 0.05$, Table 4). However, there was no association between who to disclose dental errors and, occupation and experience with dental errors ($p > 0.05$, Table 4).

The results of the multiple logistic regressions with the two outcome variables of interest (1) Preference of dental error disclosure (2 levels: to be informed vs. not to be informed) and 2) Who to disclose dental errors (2 levels: the dentist committed the dental error vs. others)) and the six predictors (nationality, gender, age, occupation, education, and experience with dental errors) are presented in Table 5. There was a statistically significant relationship between preference of dental error disclosure and, gender ($p = 0.006$), occupation ($p = 0.007$), and education ($p = 0.007$). In particular, males (OR = 0.378, 95% CI: 0.190-0.752) and participants with employment (OR = 0.314, 95% CI: 0.135-0.730) were less likely to have a preference of being informed about the dental errors than female and participants with no employment. Participants with a university degree (OR = 2.984, 95% CI: 1.343-6.632) were more likely to have a preference of being informed about the dental errors than participants with other degrees. There was no statistically significant relationship between preference of dental error disclosure and, nationality, age, and experience with dental errors.

		Frequency counts (%) of the responses					
Variable		**1**	**2**	**3**	**4**	**5**	**p**
Nationality	Saudi	36 (6.4)	82 (14.5)	35 (6.2)	166 (29.4)	246 (43.5)	0.038*
	Non-Saudi	8 (9.1)	23 (26.1)	4 (4.5)	25 (28.4)	28 (31.8)	
Gender	Male	25 (12.6)	50 (25.3)	7 (3.5)	41 (20.7)	75 (37.9)	0.000*
	Female	19 (4.2)	55 (12.1)	32 (7.0)	150 (33.0)	199 (43.7)	
Age	Less than 30	25 (10.1)	35 (14.2)	13 (5.3)	72 (29.1)	102 (41.3)	0.001*
	30-39	2 (1.4)	29 (19.9)	5 (3.4)	43 (29.5)	67 (45.9)	
	40-49	13 (10.5)	26 (21.0)	6 (4.8)	36 (29.0)	43 (34.7)	
	Above 50	4 (2.9)	15 (11.0)	15 (11.0)	40 (29.4)	62 (45.6)	
Occupation	Employed	30 (8.5)	66 (18.8)	15 (4.3)	104 (29.6)	136 (38.7)	0.011*
	Unemployed	14 (4.6)	39 (12.9)	24 (7.9)	87 (28.8)	138 (45.7)	
Education	University	28 (5.7)	81 (16.5)	22 (4.5)	149 (30.3)	212 (43.1)	0.014*
	Others	16 (9.9)	24 (14.9)	17 (10.6)	42 (26.1)	62 (38.5)	
Experience with dental errors	Direct personal experience	18 (5.8)	50 (16.0)	30 (9.6)	89 (28.4)	126 (40.3)	0.004*
	No experience	26 (7.6)	55 (16.2)	9 (2.6)	102 (30.0)	148 (43.5)	

Table 3: *Two-way table of preference of dental error disclosure and demographics.*

*Note: p = p-value of chi-square test of independence. * indicates significance at the 0.05 level. For Q1(preference of dental error disclosure): 1 = Not to be informed, 2 = To be informed if it caused a major harm, 3 = To be informed if it caused at least a moderate harm, 4 = To be informed if t caused any harm, and 5 = To be informed even if it did not cause any harm.*

There was a statistically significant relationship between who to disclose dental errors and, nationality ($p = 0.000$), gender ($p = 0.000$), occupation ($p = 0.005$), and education ($p = 0.001$). In particular, Saudi (OR = 0.174, 95% CI: 0.066-0.458) and male participants (OR = 0.187, 95% CI: 0.113-0.309) were less likely to have a preference of having the dentist who committed the dental error to disclose the dental error than Non-Saudi and female participants. On the other hands, participants with an employment (OR = 2.191, 95% CI: 1.274-3.768) and a university degree (OR = 2.416, 95% CI: 1.431-4.081) were more likely to have a preference of having the dentist who

committed the dental error to disclose the dental error than participants with no employment and with other degrees. There was no statistically significant relationship between who to disclose dental errors and, age and experience with dental errors.

		Frequency counts (%) of the responses					
Variable		**1**	**2**	**3**	**4**	**5**	**p**
Nationality	Saudi	15 (2.7)	462 (81.8)	47 (8.3)	7 (1.2)	34 (6.0)	0.021*
	Non-Saudi	0	83 (94.3)	0	0	5 (5.7)	
Gender	Male	13 (6.6)	137 (69.2)	21 (10.6)	7 (3.5)	20 (10.1)	0.000*
	Female	2 (0.4)	408 (89.7)	26 (5.7)	0	19 (4.2)	
Age	Less than 30	11 (4.5)	191 (77.3)	27 (10.9)	2 (0.8)	16 (6.5)	0.002*
	30-39	0	126 (86.3)	4 (2.7)	3 (2.1)	13 (8.9)	
	40-49	2 (1.6)	110 (88.7)	10 (8.1)	0	2 (1.6)	
	Above 50	2 (1.5)	118 (86.8)	6 (4.4)	2 (1.5)	8 (5.9)	
Occupation	Employed	6 (2.0)	242 (80.1)	30 (9.9)	2 (0.7)	22 (7.3)	0.051
	Unemployed	9 (2.6)	303 (86.3)	17 (4.8)	5 (1.4)	17 (4.8)	
Education	University	13 (2.6)	424 (86.2)	22 (4.5)	4 (0.8)	29 (5.9)	0.000*
	Others	2 (1.2)	121 (75.2)	25 (15.5)	3 (1.9)	10 (6.2)	
Experience with dental errors	Direct personal experience	9 (2.9)	263 (84.0)	21 (6.7)	2 (0.6)	18 (5.8)	0.710
	No experience	6 (1.8)	282 (82.9)	26 (7.6)	5 (1.5)	21 (6.2)	

Table 4: *Two-way table of who to disclose dental errors and demographics.*

*Note: p = p-value of chi-square test of independence. * indicates significance at the 0.05 level. For Q2 (who to disclose dental errors): 1 = A dental assistant in the clinic, 2 = The dentist who committed the dental error, 3 = The division head of the dental specialist who committed the dental error, 4 = The patient's relation of the dental service, and 5 = The chairman of dental department.*

		Dental error to be disclosed		Who to disclose dental errors	
Variable		**Odds ratio (95% CI)**	**p**	**Odds ratio (95% CI)**	**p**
Nationality	Saudi	1.561 (0.648, 3.759)	0.321	0.174 (0.066, 0.458)	0.000*
	Non-Saudi	Ref		Ref	
Gender	Male	0.378 (0.190, 0.752)	0.006*	0.187 (0.113, 0.309)	0.000*
	Female	Ref		Ref	
Age	Less than 30	0.338 (0.112, 1.105)	0.053	0.653 (0.351, 1.218)	0.180
	30-39	3.192 (0.558, 18.250)	0.192	0.723 (0.345, 1.512)	0.388
	40-49	0.331 (0.103, 1.065)	0.064	1.168 (0.532, 2.565)	0.699
	Above 50	Ref		Ref	
Occupation	Employed	0.314 (0.135, 0.730)	0.007*	2.191 (1.274, 3.768)	0.005*
	Unemployed	Ref		Ref	

Education	University	2.984 (1.343, 6.632)	0.007*	2.416 (1.431, 4.081)	0.001*
	Others	Ref		Ref	
Experience with dental errors	Direct personal experience	1.192 (0.614, 2.315)	0.603	1.075 (0.682, 1.695)	0.754
	No experience	Ref		Ref	

Table 5: *Results of multiple logistic regressions.*

*Note: For dental error to be disclosed, probability modeled was "To be informed". For who to disclose dental errors, probability modeled was "the dentist who committed the dental error". Ref: reference group. p: p-value of the Wald chi-square test. * indicates significance at the 0.05 level.*

Discussion

The aim of this study was to survey public preferences, perceptions, and awareness amongst disclosure of dental professional error in Riyadh, Saudi Arabia. The study intended to answer the following questions: 1) Which medical error to disclose to patients? and 2) Who should disclose medical error to patients? The study also intended to determine the association between 1) dental error to be disclosed and 2) who to disclose dental errors, and patients' demographics. Majority of the participants in this study were Saudi (86.5%) and female (69.7%), and had a college degree (75.3%). 37.8% of the participants were under the age of 30, 46.2% were unemployed, and 52.1%had never experienced dental errors. The strengths of the study include a large sample size, a high response rate, and utilization of cluster sample to recruit respondents proportionally from medical cities and dental colleges in 5 regions of Riyadh, and thus enhance the generalization of the results. One limitation of the study is that it did not further investigate the effects of the severity of medical errors – participants were simply dichotomized as having direct experience of dental errors and having no experience of dental errors.

Consistent with previous studies [8,16,17,18,19], the results of the study showed that the majority of respondents (93.3%) preferred to be informed about the dental errors regardless of the severity of the errors (major harm, moderate harm, any harm, or no harm). This is an indicator that the respondents with different demographic background in Riyadh have displayed a certain degree of concern regarding the quality of treatment offered by the dentists.

The study also revealed that majority of the participants (83.5%)preferred to have the dentist who committed the dental error disclose the information. It suggested that participants believed that medical error disclosure should be conducted as much as possible by those originally involved inpatient care [16,20] and that physicians should be initiative, assume responsibility for the care they have offered and personally communicate any errors with their patients [21,22]. Yet, in reality, only around one-third of the respondents who experienced ME were reportedly informed by the involved healthcare provider as showed in a US national survey [23].

Nonetheless, after experiencing dental errors, only 25.4% of the participants would still accept the dental care from the same doctor and 82.2% of the participants would feel scared after being disclosed with a dental error. Previous studies attributed these reactions of patients experiencing medical errors to their lacking the required communication skills and experiencing emotional turmoil [24,25]. However, we think that oral health literacy of the patients, communication skills of the professional who disclosed the error, rapport between dental care provider and patient and nature of dental error might affect the reactions displayed by the patients.

This may be due to the fact that the patients experiencing medical errors may be lacking the required communication skills and still experiencing emotional turmoil [24,25].

This may be due to the fact that the patients experiencing medical errors may be lacking the required communication skills and still experiencing emotional turmoil [24,25].

The study also intended to determine if there was an association between (1) Preference of dental error disclosure, and 2) Who to disclose dental errors and the six predictors of interest, including nationality, gender, age, occupation, education, and experience with dental errors. The study results suggest that males and participants with employment were less likely to have a preference of being informed about the dental errors than females and participants with no employment. However, participants with a university degree were more likely to have a preference of being informed about the dental errors than participants with other degrees. The study showed there was no statistically significant relationship between the preference of dental error disclosure and, nationality, age, and experience with dental errors. The analysis results of the study partially agreed with the findings of [26], where the study findings indicated that males were less likely to have a preference of being informed about the dental errors than females; however, [26] has suggested that there was no statistically significant relationship between preference of dental error disclosure and education level.

Regarding the relationship between who to disclose dental errors and demographic factors, the study showed that Saudi and male participants were less likely to have a preference of having *the dentist who committed the dental error* to disclose the dental error than Non-Saudi and female participants. On the other hands, participants with an employment and a university degree were more likely to have a preference of having the dentist who committed the dental error to disclose the dental error than participants with no employment and with other degrees. There was no statistically significant relationship between the response of who to disclose dental errors and, age and experience with dental errors. Similar to the findings of preference of dental error disclosure, the analysis results of the study partially agreed with the findings of [26], where the study findings indicated that males were less likely to have a preference of having *the dentist who committed the dental error* to disclose the dental error than females; however, there was no statistically significant relationship between who to disclose dental errors and, nationality and education level as indicated by [26].

Conclusion

This current study intended to survey public preferences, perceptions, and awareness amongst disclosure of dental professional error in Riyadh, Saudi Arabia. The results of the study revealed that participants preferred to be informed about the dental errors regardless of the severity of the errors and have the dentist who committed the dental error disclose the information. Also, after experiencing dental errors, only around one-fourth of the participants would still accept the dental care from the same doctor and majority of the participants would feel scared after being disclosed with a dental error. The results suggest that males, participants with employment, and participants without a university degree, were less likely to have a preference of being informed about the dental. The study showed there was no statistically significant relationship between the preference of dental error disclosure and, nationality, age, and experience with dental errors. Finally, the study showed that Saudi participants, male participants, participants without a university degree, and participants without employment, were less likely to have a preference of having the dentist who committed the dental error to disclose the dental error. There was no statistically significant relationship between the response of who to disclose dental errors and, age and experience with dental errors.

The feedback from the participants provides an opportunity for the oral health care providers and administrators to get a more in depth understanding of the patients' preferences regarding dental errors. It can also be used to assist in guiding and refining the guidelines and protocols of dental error disclosure process. In the light of the results of the study, dentists should be encouraged to disclose dental errors. By doing so, it may narrow the gap of communication between dentists and patients and it may also improve the efficiency of dental management for dealing with dental error disclosures. Ultimately, patients' needs would be better accommodated and higher level of patient satisfaction would be achieved.

Conflict of Interest

The authors have no known conflicts of interest associated with this study that could have influenced its outcome.

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Volume 5 Issue 1 September 2016