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Level of Trust in Dental Health Care Service in Riyadh City, Kingdom of Saudi Arabia

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ABSTRACT

Objectives: Aim of this study was to determine the levels of trust in dental health care service in Riyadh City, Kingdom of Saudi Arabia & the elements affecting trust.

Methods: The patients were interviewed while they were completing the questionnaires, to evaluate the clarity of the contents and to answer any relevant questions. The confidentiality of the patient was respected and anonymity is guaranteed.

Results: Trust increased with increasing age of the survived person, female's total trust score was less compared to males and as the education level increased the level of trust score decreased. As the family income and social status increased the total trust increased. Trust score was higher in non-insured subjects compared to insured subjects and the people who are not suffering from long-term dental problems had higher trust level compared to ones with long-term dental problems.

Conclusion: Extending and promoting the dental care in primary health institutions and appropriate referrals to advanced dental care centers will improve the trust of patients, improve utilization of resources & result in better dental care. The results of this study suggest that there is a need for further research to better understand and improve the trust of patients in dentists. Wider population-based study throughout the country may help to understand the effect of gender, age and education on patient's trust in the Saudi dental care system & can also assess the reliability of the results of this study.

Key words: Health care, Dentist, Trust, Patient

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INTRODUCTION

Dentist-patient interaction plays an important role in imparting the best quality service possible to the patients. The importance of this bond cannot be overemphasized. Patients expect their doctors to act in best interest of the patients. They trust doctors to provide impartial information regarding the diagnosis, best treatment available, side effects of the treatment, and long-term effects of the treatment. It acts as the elementary foundation on which informed consent is based.

Various codes of conduct from the Hippocratic Oath to contemporary biomedical codes of ethics have been adopted to protect the sacredness of the patient-dentist trust. Patient's trust in doctors may significantly diminish as they begin doubting that doctors might act in their own interest instead of the best interest of patients [1]. Reduction in the patient trust is linked with the reduced doctor-patient reciprocation, poor clinical relationships that display reduced coherence, fewer adherences to recommendations, poor self-reported health, and inappropriate use of health care services [2].

A sense of trust alleviates a patient's interactions with the dentist, gives a better feeling of contentment with the provided dental services. Also, trust increases patient's oral health awareness. A small number of studies have unswervingly evaluated trust, factors that encompass the notion were reviewed in order to advocate methods to augment trust in patient care [3].

Providing legit information in understandable terms, lay language helps in building trust. It empowers patients to meaningful involvement in choices relating to the care. Professionalism and communication skills are essential components in building up a successful dental career [4-6].

The quality of services provided by the dental team builds up the trust between patients and dentist. The patient trust added the regularity of the patient's visits and follow up conformity and contentment [4,7]. Patients are becoming more educated, complicated, and challenging [4,8].

Health care service in Saudi Arabia is given a prime importance by the government. Quantity and quality are both focuses on improvement. Health care service in Saudi Arabia is provided by the Ministry of Health (60%), other government healthcare sectors (20%) and private sector (20%) [1,9]. In 1980 Saudi Arabia adopted the World Health Organization (WHO) 'health for all' approach and confirmed Public Health Care (PHC) as a keystone to attain that target [10,11]. As one of the most important strategies of the Ministry of Health (MOH), the country has adjusted the health care system according to the declaration of alma data at the international conference on PHC [12,13]. Yet, basic oral health care still falls short of patient prospect in the country.

The most observed dental problem is dental caries in primary and permanent teeth [10,14]. There is a rising need for better oral health care in Saudi Arabia. People are seeking routine oral health checkups as a result of increasing awareness. According to health statistics annual book, there are 2,408 dental clinics located in primary health centers, hospitals and some individual dental clinics providing dental care services in the country [4,5]. There are also portable dental clinics that provide similar services [5].

Trust in a dentist-patient relationship is based on confidentiality, respect for patients' choices and decisions made are in the patient's best interest. Communication skills of the dentist are very important in gaining trust [15]. Dentists need to communicate lots of information with patients to help them to make informed decisions that are best suited. This confidence aids in reducing patient apprehension and fear of dental treatments. Milgrom and colleagues argued that the foundation of psychological management of dental anxiety is for the dentist to build a trusting relationship with the patient [16].

A study comparing public trust in healthcare in three different countries-Germany, The Netherlands, and England and Wales revealed that respondents from England and Wales trusted their dentists more but Germans were significantly less trusting [17]. People with lower levels of trust or who have an unsatisfactory dental visit may be inclined to change dentists until they find one with whom they feel comfortable. A study by Graham et al. found that US adults with low trust in physicians and dentists are 54% less likely to have a regular dentist [18]. Similarly, an Australian study found that approximately one-third of people surveyed had changed dentists in the last 2 years, but only 15% had changed because of dissatisfaction with the care provided by the previous dentist [19]. Lack of patient trust is associated with the less doctor-patient interaction, poor clinical relationships that exhibit less continuity, reduced adherence to recommendations, worse self-reported health, and reduced utilization of health care services.

Considering the importance of trust in dentistry, there is a requirement to gauge what 'trust in healthcare' means and how patients trust their dentists. This study was conducted to explore the levels of trust in dental health care services in Riyadh city, Saudi Arabia to determine what needs to be done to increase patient's trust in dental care in Saudi Arabia.

MATERIALS AND METHODS

The study was conducted in patients visiting public and private dental clinics. Prior approvals from Head/director of the clinic were obtained. Written informed consent was obtained from each patient participating in the study. Participants were selected from the reception. The participants were required to fill the surveys in the presence of a primary researcher and interviewed simultaneously. The Sociodemographic determinants of the study are listed in Table 1. The questionnaire used for the study had four parts: Dental education system, Commercialization in the dental health care system, rules and regulations, and patient-

Table 1: Sociodemographic determinants.

Category	Determinant
Sex	Female
	Male
Marital status	Single (never married)
	Married
Educational qualifications	Primary Education
	Secondary Education
	Bachelor's or equivalent level
	Master's, Ph.D. or equivalent level
	No educational qualification
Nationality	Saudi
	Non- Saudi
Social Class based on family income	Upper Income Class (10000SR to 20000SR)
	Middle Income Class (5000 SR to 10000SR)
	Lower Income Class (<5000SR)
Private health insurance	No
	Yes
Long-term dental problem	Yes
	No
Health condition over the last 12 months	Excellent (no presence of a limiting long-standing illness, and health status)
	Good (<3 hospital visits)
	Fair (>3 hospital visits)
	Poor (presence of a limiting long-standing illness, and health status)
	Don't know

Table: 2 Questionnaire: Levels of trust in dental health care service.

Sl. No.	Questions	Answers	
	The good dental education system for improving patient trust		
1	Do you think there is a relation between trust in the dental health service and the educational system?	Yes	No
2	Do you trust the dental education system in Riyadh, SÁ?	Yes	No
3	Do you think the educational system focus on the trust of the patient in the dental health care service?	Yes	No
4	Do you think the dental practitioner focus on the factor of trust in the dental care system?	Yes	No
5	Do you think the dental health care service is improving in the factor of trust?	Yes	No
6	Do you think that dentists who are educated abroad are more trustworthy?	Yes	No
	Commercialization in the dental health care system		
1	Do you trust the commercial part of the dental health care service?	Yes	No
2	Do you think fees can be a factor that affects your trust in the dental health care?	Yes	No
3	Relation to the fee charged, do you trust the governmental dental care service?	Yes	No
4	Do you think that the fees of the privet sector are exaggerated?	Yes	No
5	In most of the time do your payments equal the service?	Yes	No
6	Do you think the more you pay the better service you will receive?	Yes	No
	Rules and regulation for dental health care		
1	Do you trust the rules and regulations both in the privet and the public sector regarding your dental service?	Yes	No
2	Do you think that the rules and regulations raise the level of your trust in the treatment?	Yes	No
3	Do you think the rules and the regulations should change?	Yes	No
4	Do you think the rules are more into the doctor's side?	Yes	No
5	Do you think the rules are more into the patient's side?	Yes	No
6	Do you think the rules are more on foreign dentists than the locals?	Yes	No
	Patient-oriented service		
1	Do you trust that the patient is the first priority in the dental care service?	Yes	No
2	Do you think it's a patient based service?	Yes	No
3	Do you think the patient can access the service easily?	Yes	No
4	Do the present system of the service, provide what the patient needs?	Yes	No
5	Can a patient be a point in a future change in the service?	Yes	No
6	Does Health Insurance Company cover for all basic dental problems?	Yes	No

oriented service (Table 2). Patients were required to answer the questions related to each part in Yes or No. Confidentiality and identity of the patients were maintained in the study.

Study population

Total 1550 subjects were selected randomly from both public and private dental clinics of 5 different areas in Riyadh City (Middle, South, North, and East and West regions). Assuming 60% of the patients to participate in this study and a power of 80% with a 5% level of significance, the minimum required sample size was estimated to be 950.

Inclusion criteria

Healthy oriented male and female subjects, who had a dental treatment experience and who knew about health insurance were included in the study.

Exclusion criteria

Patients who refused to participate or to sign informed consent, who did not match to the inclusion criteria, and patients with psychological behavioral problems were excluded from the study.

Statistical analysis

The Statistical Package for the Social Sciences (SPSS for Windows, version 20.0) (SPSS Inc., Chicago, IL, USA) was used for statistical analysis. Regression analysis was done and the level of significance was set at $P<0.05$.

RESULTS

There were 1550 participants in the study. The Sociodemographic features of the participants are presented in Table 3. All the participants completed the survey questionnaire. The total trust score was found to be 8.595 (SD= ± 1.802), 35.814%. The descriptive trust scores are given in Table 4.

Statistical analysis revealed that male participants, participants who were not insured, participants who were not suffering from long term dental problems, and participants in better health condition over the last 12 months had more trust in the dental services. Likewise, trust score increased with an increase in participant age, and family income/social status. On the other hand, with an increase in educational qualification, trust decreased.

Table: 3 Sociodemographic features of the participants.

Category	Determinant	N (%)
Sex	Male	1243 (80.2)
	Female	307 (19.8)
Marital status	Single (never married)	621 (40.1)
	Married	929 (59.9)
Educational qualifications	Primary Education	-
	Secondary Education	304 (19.6)
	Bachelor's or equivalent level	784 (50.6)
	Master's, Ph.D. or equivalent level	462 (29.8
	No educational qualification	-
Nationality	Saudi	1083 (69.9)
	Non- Saudi	467 (30.1)
Social Class based on family income	Upper Income Class (10000SR to 20000SR)	312 (20.1)
	Middle Income Class (5000 SR to 10000SR)	933 (60.2)
	Lower Income Class (<5000SR)	305 (19.7)
Private health insurance	Yes	627 (40.5)
	No	923 (59.5
Long-term dental problem	Yes	461 (29.7)
	No	1089 (70.3
Health condition over the last 12 months	Excellent (no presence of a limiting long-standing illness, and health status)	312 (20.1)
	Good (<3 hospital visits)	309 (19.9)
	Fair (>3 hospital visits)	616 (39.7)
	Poor (presence of a limiting long-standing illness, and health status)	154 (9.9)
	Don't know	159 (10.3)

Table 4: Descriptive trust scores.

	N	Mean	Standard Deviation
TOTAL (Good dental education system in improving patient trust) score	1550	2.092	0.942
PERCENT (Good dental education system for improving patient trust) score	1550	34.881	15.7
TOTAL (Commercialization in the dental health care system) score	1550	2.698	0.781
PERCENT (Commercialization in the dental health care system) score	1550	44.978	13.026
TOTAL (Rules and regulation for dental health care) score	1550	1.802	1.082
PERCENT (Rules and regulation for dental health care) score	1550	30.043	18.034
TOTAL (Patient-oriented service) score	1550	2.001	0.63
PERCENT (Patient-oriented service) score	1550	33.354	10.51
Total Trust Score	1550	8.595	1.802
Percentage Trust Score	1550	35.814	7.51

DISCUSSION

Dentist-patient interaction is crucial for dentistry and an integral element of quality care. The dentist needs to work as a trusted partner to provide quality care. Our study presents the evidence for how the public trust in dental care vacillates by examining the multi-facts of trust in the dental care system of Riyadh City, Saudi Arabia. Sociodemographic factors like age, educational background, and socioeconomic status impact trust. This study showed that trust in dental care increases as age increases ($p<0.001$) in contrast to the results by Lynne chase et al. and Reisine et al. which showed a positive relationship between the age and the level of trust [20,21]. Also, we found that the female's total score was less compared to male. However, this difference might be due to the difference in the male to female ratio in this study. In this study, 80% of the participants were male and 19.8% female. However, similar to the study findings of Muneera AI-Osimy, there was no difference in the trust levels of Saudi and non-Saudi participants [22].

Consistent with Shen and Listl, as the family income and social status, increased the total trust increased ($p<0.001$) [12]. The researchers have shown that social class and education are positively related to patients' assessments of overall health care trust [13,23]. Therefore, like social class and education increases, the percentage of patients trust increases. Epidemiological studies in dentistry have also shown that clinical oral health status and the sociodemographic factors are interrelated [22]. Clinical factors are also expected to be the most important variables explaining patients' perceptions of their oral health. Age, sex, social class, and education are expected to mediate the effects of clinical factors on patient perceptions.

A 1989 analysis of a comprehensive, nationally representative data set from the National Health Interview Survey showed that utilization of dental care is strongly related to gender, race, education level, income, and dental insurance coverage.18 Our study had a mixture of participants with different educational level (Table 3) and displayed a statistically significant relationship between education and the trust score. As the education level of the participants increased the total trust score decreased. We think that this trust score may be due to the knowledge of the health system and alternative choices available to the participants with higher education. While the non-educated participants or the participants with no higher education might not know the other choices available or they do not have sufficient knowledge about the health care system and alternatives.

The non-insured participants in this study reported higher total trust compared to insured participants. Although other researchers had contrasting results showing that trust was related to choices available in selecting health insurer, the past dispute with the health insurer. These factors had a negative impact showing lower trust in their health insurance providers. Hence a good, patient-oriented health insurance may increase the trust of insured subjects [24].

The participants with a long-term dental problem had a total trust score of -0.969 and participants with excellent health condition over the last 12 months was 1.998. This indicates that participants not suffering from long-term dental problems have more total trust compared to participants suffering from long-term dental problems. Also, consistent with Hierarchical Organizational Structure management studies, participants with better health condition over the

past 12 months had more total trust compared to participants with poor oral conditions [25].

The circumstantial determinants like the type of institution-government or private, cost of dental services, insurance etc., influence the level of trust [26]. Calnan and Sanford, observe that level of trust in participants varied and participants dissatisfied with National Health Service either as a result of political beliefs or direct experiences are more likely opened to private health services [27]. But Alshahrani and Raheel observed that 7% of the people chosen a private dental health care plan and rest believed in the governmental services [28].

The most appalling observation was that most of the participants (80%) find dentist qualified abroad more trustworthy. About 79.9% of participants relate their trust to the dentist's educational qualification. This finding implies that dental education must prepare the dentists to function in the changing environment, develop with the technology and improve in technical and soft skill to handle patients efficiently.

Our study also included the cost factor which turns out to be a very important consideration as 90.1% of the participants agreed that cost affects the trust and 80% of the participants believe that fees of the private sector were exaggerated. While the questions "In most of the time do your payments equal the service?" and “Do you think the more you pay the better service you will receive?” received very low scores. These findings suggest that financial implications play an important role in trust. The cost of the service and the actual service patients receive should achieve an optimal relation in order to gain the trust.

A low trust score on both the rules and regulation on private and government sector (10.3%) and a high percentage on changing the rules and regulations shows that current rules and regulations are not increasing the level of trust. Also, the patient-oriented service-related questions gained a low score which emphasizes the need of the changing the approach of providing dental service.

The scenario in dental care service is with emerging technology, extent of the service reach, level of patients' understanding and expectation. Hence that service providers need to be well equipped with education, training, and skill set to face the challenges. Technical proficiency, critical thinking, ethical and professional values are much needed to engage key influencers and develop a strategy to develop high standards for individual patients care and the public at large.

CONCLUSION

This study emphasizes the need for further research for a better understanding of the trust of patients in dental care service to improve it. Adopting management skills may help to understand the effect of gender, age, and education on patient’s trust in the Saudi health care system.

An extensive system can be beneficial to address the all aspects of dental care like infection control, forensic, criminal or social record, and health insurance, credentials of the dentist, rules, and regulations, monitor Cost and improve patient engagement.

CONFLICT OF INTEREST

Author declares that there is no conflict of interest.

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