



Evaluation of the Practice of Patient Centered Care among Saudi Dentists in Central Region of Saudi Arabia: A Cross-sectional Study

Reham AL Jasser*

Assistant Professor, Department of Periodontics and Community Dentistry, College of Dentistry, King Saud University, Riyadh, Saudi Arabia

ABSTRACT

Introduction: The development of the healthcare industry has laid significant attention towards the provision of patient centered care for satisfactory treatment outcomes.

Aim: This study aims to assess the practice of patient-centered care among dentists in Saudi Arabia, while analyzing the influence of gender and years of experience on their ability to conduct proper patient-centered care among their patients.

Materials and methods: Cross-sectional study was conducted among dentists practicing in Riyadh, Saudi Arabia. Questionnaires, consisting of Patient-Practitioner Orientation Scale (PPOS) and demographic details, were electronically mailed to 272 study participants for data collection. Independent sample t-test and one-way analysis of variance followed by the post-hoc test was undertaken.

Results: Findings indicated females as more patient-centered than males, with a total PPOS scores (3.11 ± 0.57 vs. 3.06 ± 0.50), $p=0.037$ and in the sharing subscale (3.24 ± 0.78) vs. (3.13 ± 0.59) $t(270)=1.36$, $p=0.001$. There were significant differences in both sharing subscale [$F(4,267)=6.70$, $p=0.000$] and the overall PPOS score [$F(4, 267)=4.26$, $p=0.002$] with regard to years of dental practice. Dentists with less than 1 year of dental practice had significantly less PPOS scores compared to the other three groups.

Discussion: The level of patient centered care in Riyadh was found to be low in comparison to other regions. **Conclusion:** Therefore, it is suggested to improve the practice of patient centered approach for successful outcomes and patient's satisfaction.

Key words: PPOS, Dentistry, Patient-centered care, Saudi Arabia

HOW TO CITE THIS ARTICLE: Reham AL Jasser, Evaluation of the Practice of Patient Centered Care among Saudi Dentists in Central Region of Saudi Arabia: A Cross-sectional Study, J Res Med Dent Sci, 2020, 8(2):05-10.

Corresponding author: Assistant Professor. Reham AL Jasser

e-mail ✉: raljasser@ksu.edu.sa

Received: 29/01/2020

Accepted: 27/02/2020

INTRODUCTION

Safety and improvements in patient's health serve as the integral aspects of the quality healthcare services. Components such as; timely care, proper treatment guidance, along with the treatment interventions provided through patient's centered approach serve as the integral part of the quality care services [1]. In the field of dentistry, services that are provided through patient's centered approach are recognized as the fundamental dimensions of quality treatment. Such a service stimulates patient's satisfaction

leading towards improved treatment outcomes [2].

According to the Institute of Medicine (IOM), patient-centered care is referred as "Providing care that is respectful of and responsive to, individual patient preferences, needs and values, and ensuring that patient values guide all clinical decisions [3]. This type of care includes healthcare practices that are meaningful or valuable for patients. It further includes listening to and informing patients about the developments undertaken during their healthcare process. Al Muammar, et al. [4] described patient centered care as the amalgamation of eight different dimensions, as highlighted by the Picker institute. These dimensions include; i) Respect for patient's needs, values and preferences

ii) Coordination with respect to healthcare integrations iii) Patient's ease followed by physical comfort iv) Communicating, and educating patients with respect to their problem or disease v) Eliminating the emotions of anxiety and fear through constant support vi) Family and friends involvement vii) Continuity and transition viii) Patient's access to care [5-6].

In the recent time, studies [2,4,6] have provided greater support to patient centered care, as the idea is connected to high level compliance of patients with treatment procedures leading towards positive treatment outcomes and timely recovery from the disease [4]. However, in the view of Walji, et al. [7] patient centered care is more focused towards the treatment methods and interventions provided with respect to the nature of disease rather than centering focus towards patient's individual characteristics. Since patients and dentists invest long time while expecting the effective results through quality treatment, it is emphasized to follow the patient's centered approach as it results in high level of patient's satisfaction [2]. Al-Madi et al. [8] provided an important stance in this regard. According to the study, the educational institutions of Saudi Arabia are now providing special considerations towards the changes in educational curriculum of dentistry. The study further outlined that educational curriculum must be effective enough, where young dentists must be aware of usefulness of patient centered care and leadership attributes essential for the effective treatment outcomes.

The study of Al Agili, et al. [9] revealed that young population of Saudi Arabia has should greater prevalence of dental problems, leading towards the increased burden of oral disease. In such circumstances, dentists in Saudi Arabia are expected to be highly skilled in providing high quality care, treatment plan, and instructions, based on their knowledge, skills, and experience, to achieve the best dental treatment outcomes. Patient's perspective during the dental visit is critical here, which is often missed by the dental professionals. Another study [10] indicated that use of technology during the dental treatment is of critical value, as it stimulates maximum patient centeredness, quality of care leading towards the reduction in healthcare cost [11]. Despite of the growing interest of researchers

regarding the concept of patient centered care, a little information is provided for the existing conditions of dental treatments. In addition, the growing prevalence of dental problems among Saudi population makes it critical to present a proper evaluation regarding the current practices of patient-centered care among dentists, along with its proper utilization during dental visits. The idea is crucial to increase dental treatment outcomes and patient satisfaction. Considering this, the present study aims to:

1. Assess the practice of patient-centered care among dentists in Saudi Arabia, and
2. Analyze the influence of gender and years of experience on dentist ability to conduct proper patient-centered care to their patients.

The study is of greater significance specifically for Saudi dentists as it will help them in providing a proper understanding of the current modes of treatment along with the level of contribution provided by the existing approach. The study is of further value for patients in providing the necessary education regarding the value of patient centered approach in the present era. Finally, academicians belonging to the field of study may highly benefit from this study to assess the existing practices of patient centered care along with the influence of involved variables.

METHODS

IRB approval number

The research was approved by the Institutional Committee of Research Ethics at the King Saud University, Riyadh, Saudi Arabia (NF 4263).

Research Project No. E-19-3638.

Design and population

This study follows a cross-sectional, descriptive, correlational study design, where a self-reported survey, and modified Patient-Practitioner Orientation Scale (PPOS) was quantitatively assessed [12]. The targeted population included dentists that are fresh or experienced dentists that are currently practicing in Riyadh, Saudi Arabia. Sample size of the study was determined by G Power software, where a confidence level was set at 95%, a power level of 80% was set with a moderate effect size. However, to avoid a low response rate, which may affect the sample size,

a larger sample i.e. 300 dentists were recruited leading towards a final sample of 272 dentists.

The Patient-Practitioner Orientation Scale (PPOS)

PPOS was used to measure whether the practitioner leans toward patient-centered care or disease/doctor-centered care [12,13]. PPOS is divided into two sections, the sharing and caring subscales. The sharing subscale measures how important the practitioner feels. The scale is important to share power and information with patient while involving them in treatment decisions. The caring subscale measures the extent to which the practitioner considers their patient's emotions and thus aims for a more holistic approach to patient care, with the patient rather than the disease being the focus of attention. The PPOS has been previously validated for use in a health care setting, [14,15] as well as in the dental environment [16-18].

A modified validated PPOS in English version was used in this study. The original PPOS [18-20] is a self-administered paper-pencil instrument that contains eighteen statements regarding various aspects of doctor-patient relationship and communication. The responder expresses his or her level of agreement with each item on a six-point Likert scale; from strongly agree to strongly disagree. Most of the items are expressed in dentist-centered terms and hence scored directly from 1 to 6, while items 9, 13, and 17 are patient-centered statements and, hence, are scored in reverse. The scale has two subscales of nine items each. The "sharing" subscale contains nine statements (items 1, 4, 5, 8, 9, 10, 12, 15, and 18) describing the extent to which the respondent believes that the patient should receive information and be involved in decision-making.

The rest of the items constitute the "caring" subscale, which rates the extent to which the patient's expectations, feelings, and lifestyle are considered important in the treatment process. To adapt the instrument for the dental practice, following changes were made to the original instrument. Item 3, which reads "the most important part of the standard medical visit is the physical examination," was rephrased as "The most important part of the standard dental visit is the intra-oral and extra-oral examination." In items 3 and 4, the word "medical" was substituted with "dental". In items

1, 5, 6, 7, 9, 11, 12, 15, and 17, the word "doctor" was replaced by "dentist" and in 4 and 16; the words "medical condition" and "illness" were replaced by "dental condition," respectively. Finally, in items 2 and 18 the word "dental" was added with no modification to the original question. Completion time is approximately 10 minutes.

Scoring method

Scores were reported as mean scores to allow dentists' responses to be used even if one or two scale items are deleted. One total mean score can be calculated for the 18 items, and two subscale scores can also be calculated. The total score ranges from "patient-centered" to "dentist-centered" or "disease-centered." The higher the score, the more patient-centered the orientation.

Subscale scores

I. Sharing scores: reflect the extent to which the respondent believes that:

- a) Dentists and patients should share power and control on a relatively equal basis.
- b) Dentists should share as much information with their patients as possible.

Related items: 1, 4, 5, 8, 9, 10, 12, 15, & 18.

II. Caring refers to the extent that respondents believe that:

- a) Caring about emotions and good interpersonal relations is a key aspect of the medical and dental encounter.
- b) Dentists should care about the patient as a person, rather than as a dental condition.

Related items: 2, 3, 6, 7, 11, 13, 14, 16, & 17.

A 6-point scale was laid out from left to right as "strongly disagree" to "strongly agree." Strongly disagree (far left) was scored 6, and strongly agree (far right) was scored 1. Three items (9, 13, and 17) were reverse worded, and scoring needed to be reversed. Therefore, a high score indicated an orientation toward patient-centeredness.

Ethical considerations

The protocol used in this series was approved by the Institutional Committee of Research Ethics at the College of Dentistry Research Center, King Saud University, Riyadh, Saudi Arabia (E-193638). Permissions for data collection were

granted by the institutional review board at King Saud University. However, requirement for patient consent was eliminated as the names of study participants were replaced by numeric codes to ensure confidentiality. The purpose and procedures involved in this study were explained in a cover letter, followed by a copy of informed consent form, which emphasized the right to self-determination, confidentiality and anonymity, benefits, and risks of the study.

Data entry and statistical analysis

Data entry was performed using SPSS version 24.0 (IBM, Armonk, NY, USA), and cross-verified by two independent operators. Descriptive statistics (frequencies, percentages, mean (M) and standard deviations [SDs]) was computed to characterize the study sample. The summary statistics was calculated for each item, for the sharing and caring subscales, and for PPOS as a whole. The D’Agostino and Pearson omnibus test was used to test the normality of distribution of the analyzed data. The independent sample t-test was used for gender-based comparisons. Differences within age groups, as well as years of experience were evaluated with one-way analysis of variance (ANOVA) followed by the post-hoc test. The alpha level for all tests was kept at 0.05 for level of significance.

RESULTS

A return of 272 usable forms out of total 300 forms corresponds to a response rate of 90.66%. According to the findings of Table 1, majority of the participants were males (N=148, 54.40%) in contrast to females (N=124, 45.60%). Majority respondents i.e. (N=122, 44.90%) fall in the age group between 25 to 34 years. Findings in relation to years of dental practice indicate that most of the participants were reported to have ≥ 10 years of dental practice (N=106, 39.00%). While, the least reported dental practice experience was less than one year (N=26, 9.60%).

Analysis of the gender-based differences using independent samples t-test revealed statistically significantly higher sharing subscale among female dentists (3.24 ± 0.78) in comparison to males (3.13 ± 0.59) with a statistically significant value of p=0.001. On the other hand, there was no statistically significant difference in either the caring subscale or overall scale. Nonetheless, females were more patient-centered than males (3.11 ± 0.57 vs. 3.06 ± 0.50), p=0.037 (Table 2).

Other findings are related to the Post-hoc comparisons using the Tukey HSD test. Findings of Table 3 indicate that the mean score for sharing subscale in dentists with less than 1 year of dental practice (M=2.56, SD=0.47), was

Table 1: Distribution of participants by gender, age, and years of dental practice.

	Frequency (N)	Percentage (%)	PPOS score Mean (SD)
Gender			
Male	148	54.4	3.06 (0.50)
Female	124	45.6	3.11 (0.57)
Age (Years)			
18-24	6	2.2	2.94 (0.26)
25-34	122	44.9	2.99 (0.55)
35-44	54	19.9	3.14 (0.47)
45-54	52	19.1	3.14 (0.57)
55-64	38	14	3.25 (0.51)
Years in Dental Practice (Years)			
Less than 1 year	26	9.6	2.72 (0.38)
1-3 years	37	13.6	3.03 (0.54)
3-5 years	39	14.3	3.22 (0.53)
5-10 years	64	23.5	3.08 (0.53)
10 years or more	106	39	3.14 (0.54)
Total	272	100	

Table 2: Total and subscale PPOS mean scores by gender using independent sample t-test.

Gender	Total PPOS	Sharing	Caring
Male	3.06 (0.50)	3.13 (0.59)	2.99 (0.59)
Female	3.11 (0.57)*	3.24 (0.78)*	2.99 (0.55)
p-value	0.037*	0.001*	0.828

*Statistically significant (p<0.05)

Table 3: Total and subscale PPOS mean scores by years in dental practice using post-Hoc Turkey test.

Years of Dental Practice	PPOS	Sharing	Caring
Less than 1 year	2.72 (0.38)*	2.56 (0.47)*	2.88 (0.46)
At least 1 year but less than 3 years	3.03 (0.54)	3.13 (0.65)	2.82 (0.57)
At least 3 years but less than 5 years	3.22 (0.53)	3.29 (0.59)	3.14 (0.60)
At least 5 years but less than 10 years	3.08 (0.53)	3.26 (0.80)	2.91 (0.48)
10 years or more	3.14 (0.54)	3.26 (0.64)	3.03 (0.63)
p- value	0.002*	0.000*	0.194

*PPOS: Patient-practitioner orientation scale

significantly less than the other three groups. This also applied to the overall PPOS score for the same group ($M=2.72$, $SD=0.38$). However, no significant difference was shown between the other groups in any of the subscales. Altogether, these results suggest that dentist with less than 1 year of practice were significantly less patient-centered than dentists practicing for a longer period ($p=0.002$). This was also significant for the sharing subscale of the same group ($p=0.000$). The differences for other comparisons were not statistically significant at $p<0.05$ (Table 3).

DISCUSSION

The present study evaluated the practice of patient-centered care among Saudi dentists in Riyadh, Saudi Arabia. The mean PPOS score observed in the present study was 3.08 ± 0.53 . This represents a lower score than those reported by other comparable studies conducted in different regions. A study conducted among medical physicians in Nigeria showed a mean PPOS score of 3.98 [18], while other studies in the United States of America reported a score of 4.80 [19] and 4.97 in Malaysia in a similar population [20]. In India, comparison of other studies revealed mean scores of 3.38 and 4.66 among postgraduate orthodontic [16] and medical [21] students, respectively. This shows that the orientation of doctors toward patient care in clinical practice, followed a doctor-centered approach, which was traditionally called paternalistic role orientation. Parsons [22] described this approach as “an asymmetrical relationship in which the doctor occupies the dominant position by virtue of his or her specialist knowledge and the patient merely cooperates”. The study conducted by Scambler, et al. [23] outlined that patient catered approach in the field of dentistry is followed at an initial level where patients is provided with necessary information about the disease, followed by their choice of treatment.

In this study, female gender was significantly associated with patient-centered attitudes. A similar finding was revealed in other studies [19,21], where mean PPOS scores were significantly higher among females. Only two studies [18,16], revealed that the mean PPOS score was slightly higher among females with no significant difference compared to their male colleagues. In the present study, female dentists had a higher mean score than males in the two dimensions of “sharing” and “caring”, with significant difference observed in the sharing subscale than in the overall PPOS score. In all other studies, mean scores were higher among males in the caring and sharing subscale, with significant difference in the sharing, as seen in a study conducted in Brazil [21]. However, studies conducted in America [19], Brazil [21], and India [16] showed significant differences in the caring subscale between gender. This may be because female dentists use the patient-centered approach when communicating with patients by using more encouraging talks, emotional talks, and in soliciting for patients input in decision-making about the patients’ management [24].

Dentists with more years of practice showed higher PPOS score than those with less than 1 year of dental practice (fresh graduates). Similar findings were observed in a study in Nigeria [18]. In the American study [19], the mean sharing scores of the newer and older clinicians were similar, and physicians with an intermediate duration of practice (11–20 years) had the highest PPOS score. Thus, with increase in years of practice, dentists gain experience in several clinical situations, which modifies their patient’s communication skills, making them more patient-centered in their approach. Several limitations were pointed out in the present study such as; the measurement of PPOS in only one region of Saudi Arabia, which makes the generalizability of the results to the whole region impossible, and the relatively small sample size.

CONCLUSION

This study provides an in-depth analysis the practice of patient centered care in Saudi Arabia, while analyzing the influence of gender and years of experience on the ability of dentists in following the given approach. According to the findings, female gender and increased years of dental practice were significantly associated with patient-centered-approach. Patient-centered approach is least practiced in Saudi Arabia specifically in the field of dentistry and it is highly recommended to enhance patient outcomes and satisfaction. This give rise to the need of further multicentric studies to delineate the effective methods for improved patient-centered orientation in dentistry from early years of clinical practice.

REFERENCES

- Al-Surimi K, AlAyadi H, Salam M. Female dental students perceptions of patient safety culture: a cross sectional study at a Middle Eastern setting. *BMC Med Educ* 2018; 18:301.
- Taibah SM. Dental professionalism and influencing factors: Patient's perception. *Patient Prefer Adherence* 2018; 12:16491658.
- Lee H, Chalmers NI, Brow A, et al. Person-centered care model in dentistry. *BMC Oral Health*. 2018; 18:198.
- Al Muammar AM, Ahmed Z, Aldahmash AM. Paradigm shift in healthcare through technology and patient-centeredness. *Int Arch Public Health Community Med*. 2018; 2:1-15.
- <https://network9.esrd.ipro.org/wp-content/uploads/sites/5/2016/01/Appendix-D-8-dimensions.pdf>
- Alrawiai S, Asimakopoulou K, Scambler S. Dentists perceptions of a practical model of patient-centred care: Providing information and choice in a dental consultation. *Psychol Health Med*. 2019; 24:1090-1099.
- Walji MF, Karimbux NY, Spielman AI. Person-centered care: Opportunities and challenges for academic dental institutions and programs. *J Dent Educ* 2017; 81:1265-1272.
- Al-Madi EM, AlShiddi M, Al-Saleh S, et al. Developing a dental curriculum for the 21st century in a new dental school in Saudi Arabia. *J Dent Educ*. 2018; 82:591-601.
- Al Agili DE, Farsi NJ. Need for dental care drives utilisation of dental services among children in Saudi Arabia. *Int Dent J* 2020; 70:1-11.
- DePasse JW, Chen CE, Sawyer A, et al. Academic medical centers as digital health catalysts. *Healthc* 2014; 2:173-176.
- Al Kuwaiti A, Al Muhanna FA, Al Amri S. Implementation of digital health technology at academic medical centers in Saudi Arabia. *Oman Med J* 2018; 33:367.
- Krupat E, Rosenkranz SL, Yeager CM, et al. The practice orientations of physicians and patients: The effect of doctor-patient congruence on satisfaction. *Patient Educ Couns* 2000; 39:49-59.
- Krupat E, Putnam SM, Yeager C. The fit between doctors and patients: Can it be measured. *J Gen Intern Med* 1996; 11:134.
- Haidet P, Dains JE, Paterniti DA, et al. Medical student attitudes toward the doctor-patient relationship. *Med Educ* 2002; 36:568-574.
- Street RL, Krupat E, Bell RA, et al. Beliefs about control in the physician-patient relationship. *J Gen Intern Med* 2003; 18:609-616.
- Madhan B, Rajpurohit AS, Gayathri H. Attitudes of postgraduate orthodontic students in India towards patient-centered care. *J Dent Educ* 2011; 75:107-114.
- Beattie A, Durham J, Harvey J, et al. Does empathy change in first-year dental students? *Eur J Dent Educ* 2012; 16:111-116.
- Abiola T, Udofia O, Abdullahi A. Patient-doctor relationship: The practice orientation of doctors in Kano. *Niger J Clin Pract* 2014; 17:241-247.
- Krupat E, Rosenkranz SL, Yeager CM, et al. The practice orientations of physicians and patients: The effect of doctor-patient congruence on satisfaction. *Patient Educ Couns* 2000; 39:49-59.
- Chan CMH, Azman WA. Attitudes and role orientations on doctor patient fit and patient satisfaction in cancer care. *Singapore Med J* 2012; 53:52-56.
- Ribeiro MMF, Krupat E, Amaral CFS. Brazilian medical student's attitudes towards patient-centered care. *Med Teach* 2007; 29:204-208.
- <https://www.abebooks.co.uk/9780702029011/Sociology-Applied-Medicine-6e-Scambler-0702029017/plp>
- Scambler S, Gupta A, Asimakopoulou K. Patient-centred care-what is it and how is it practised in the dental surgery? *Health Expect* 2015; 18:2549-2558.
- Weisman CS, Teitelbaum MA. Physician gender and the physician patient relationship: Recent evidence and relevant questions. *Soc Sci Med* 1985; 20:1119-1127.