J Oral Res
research in oral sciences

ORIGINAL ARTICLE

ASSESSMENT OF ATTRIBUTES FOR CHOOSING A DENTAL CENTER IN TRUJILLO, PERU: PATIENTS *VERSUS* DENTISTS

Valoración de los atributos para la elección de un centro odontológico en Trujillo, Perú: pacientes *versus* odontólogos

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ABSTRACT

Objective: To determine the difference between patients and dentists regarding the assessment of attributes for choosing a dental center in Trujillo, Peru.

Materials and Methods: A comparative cross-sectional observational study was conducted involving a sample of 162 dentists and 162 patients from the Trujillo province in Peru. The data was collected through a virtual questionnaire, validated by experts, and assessed for reliability. Statistical analysis was performed using the U-Mann Whitney and Spearman correlation tests, with a significance level set at 5%.

Results: Patients, in comparison to dentists, demonstrated a greater preference for selecting a dental center where the practitioner is a recognized specialist (p<0.001). Similarly, patients showed a preference for centers offering expedited appointments, advanced technology, and equipment, providing affordable and flexible payment options, free consultations, and having convenient parking and comfortable facilities (p<0.05). Conversely, dentists perceived that the most valued attribute by patients is the recommendation of the dentist (p=0.031).

Conclusions: When choosing a dental center, patients prima-rily value attributes related to both the professional responsible for care and administrative management. Conversely, dentists consider the main factor influencing a patient's choice of dental center to be recommendations of the dentist. Valoración de los atributos para la elección de un centro odontológico en Trujillo, Perú: pacientes *versus* odontólogos

Keywords: Dentist-patient relations; Dental offices; Dental practice management; Health services administration; Biosecurity; Peru.

RESUMEN

Objetivo: Determinar la diferencia entre pacientes y odontólogos con respecto a la valoración de atributos para la elección de un centro odontológico en Trujillo.

Materiales y Métodos: Se realizó un estudio observacional transversal comparativo con una muestra de 162 odontólogos y 162 pacientes de la provincia Trujillo (Perú). La data fue recogida a través de un cuestionario virtual, sometido a validación por expertos y prueba de confiabilidad. El análisis estadístico se realizó mediante las pruebas U-Mann Whitney y correlación de Spearman, considerando un nivel de significancia del 5%.

Resultado: Los pacientes, con respecto a los odontólogos, mostraron mayor valoración para la elección del centro odontológico cuando el profesional es especialista y reconocido (p<0.001); así mismo, cuando se le brindan citas rápidas, se usa tecnología y equipamiento adecuados, se brindan facilidades de pago con precios bajos y consultas gratuitas, y el centro cuenta con estacionamiento y espacios cómodos (p<0.05). Por su parte, los odontólogos consideran que el atributo más valorado por los pacientes es que el profesional sea recomendado (p=0.031).

Conclusión: Para la elección del centro odontológico, los pacientes valoraron en mayor medida los atributos relacionados al profesional responsable de la atención y la gestión administrativa. Por otro lado, los odontólogos consideraron preferentemente que el atributo principal para la elección del centro odontológico por parte del paciente es que el odontólogo haya sido recomendado.

Palabras Clave: Relaciones dentista-paciente; Consultorios odontológicos; Administración de la práctica odontológica; Administración de los servicios de salud; Bioseguridad; Perú.

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CITE AS: Carranza-Fernández KM, Asmat-Abanto ÁS, Espejo-Carrera RE. *Assessment of attributes for choosing a dental center in Trujillo, Peru: patients versus dentists.* J Oral Res. 2024; 13(1):122-135. doi:10.17126/joralres.2024.011

Received: June 30, 2023.
Accepted: January 30, 2024.
Published online: May 10, 2024.

ISSN Print 0719-2460
ISSN Online 0719-2479

INTRODUCTION

Patients' selection of a dentist is influenced by multiple factors or attributes,[1] and the doctor-patient relationship is crucial to the delivery of health services.[2,3] Traditionally, this relationship was perceived as one between a healer and a sick individual. However, it is now understood as an interaction between a care provider and a service user. From this perspective, the user evaluates a number of attributes before making decisions regarding their healthcare provider.[4,5,6]

Research indicates that some patients choose their dentists based on traditional criteria.[7,8] On the other hand, dental surgeons also value the attributes that they consider important for the patients when selecting a dental office. Consequently, the healthcare industry has begun to explore and better understand factors related to patient satisfaction.[9,10] Today, patients seek care not only for health-related factors, but also for non-health-related ones, which are recognized as key elements in shaping service design.[11]
Some studies have found that among the attributes chosen by patients were their past experiences, communication skills of the dentist, and the dentist's personal appearance.[12] Other studies, focused on the behavior of each of these characteristics, report that the most significant difference between patient and dentist expectations mainly centers on communication.[13] Additionally, emerging research, although very limited yet, examines the impact of social networks on promoting dental practice, recognizing their integration into modern life.[14]

Currently, patients' opinion wields significant influence over the outcome of their care,[15-17] as supported by various studies. While patients agree on specific attributes of dental surgeons, it is uncertain whether dentists are aware of or align with these perceptions. Ideally, incorporating both perspectives could enhance the quality of care provided.

The factors influencing a patient's selection of a dental office have arguably become more complex. Consequently, choosing a dentist or dental center may be influenced by various factors. This study aims to determine whether there is a difference between patients and dentists regarding the evaluation of attributes for choosing a dental center in Trujillo, (La Libertad Region, Peru). By identifying these differences, the evidence-based findings obtained can contribute to carry out strategic actions geared towards genuinely enhancing the quality of the dental care experience.

MATERIALS AND METHODS

This study adopts a comparative cross-sectional observational design and was conducted in the Trujillo province, La Libertad region, Peru, between May and June 2022. Data collection involved distributing a questionnaire virtually via email and WhatsApp.

The study recruited subjects from the PNP Trujillo Dirtepol LL Polyclinic, which operates within the public sector, offering primary care. However, for more complex and specialized treatments, patients are compelled to seek assistance from private healthcare providers. Consequently, these individuals possess firsthand experience with both public and private dental care, providing a comprehensive understanding of dental services in Trujillo, a city representative of northern Peru. On the other hand, as of December 2021, 2,124 dental surgeons had been registered in the Colegio Odontológico de Peru, La Libertad Region (COPRELL), which is a mandatory credential for practicing the profession.

The sample consisted of 162 patients and 162 dentists, calculated using the proportion comparison formula. Data from a pilot study was used for the calculation, employing the parameters: α=0.010, 1-α/2=0.995, Z1-α/2=2.576, β=0.1, 1-β=0.9, Z1-β=1.282, p1=0.613 (percentage of satisfied dentists), p2=0.400 (percentage of satisfied patients), and mean prevalence (p=0.507). Dentists were selected using the simple random probabilistic method with replacement, while patients were selected non-probabilistically for convenience.

Patients aged 18 years and above undergoing treatment across different departments of the polyclinic were eligible for inclusion, with exclusions applied to those who declined participation, failed to complete the questionnaire, were illiterate, or had a mental disorder. Dentists registered with COPRELL were eligible for inclusion, with exclusions for those who declined participation or failed to complete the questionnaire.

The selected subjects were informed about the research objectives and invited to join the study. Upon acceptance, they were provided with a virtual informed consent form to review and agree to. Subsequently, they completed a questionnaire consisting of two sections. The first part collected general data, including the respondent's role (patient or dentist), age group, gender, dentist's years of professional practice or experience, and patients' educational level.

The second part comprised a form with 29 questions, prepared by the researchers, focusing on evaluation criteria. This section included 4 items for assessing the treating dentist, 8 items for evaluating the care provided by the dental center staff, and 17 items regarding the dental center's administrative management. Response options were structured on a Likert-type scale with 5 choices: *"Not at all important," "A little important," "Neither important nor unimportant," "Important,"* and *"Absolutely important."* The questionnaire underwent validation by five experts who independently assessed each item for wording, content, congruence, and relevance. It achieved a final Aiken V coefficient of 1.00, indicating strong validation. Additionally, reliability analysis yielded a Cronbach's Alpha value of 0.914 for dental surgeons and 0.975 for patients. This study was approved by the Faculty of Human Medicine (R.D. No. 1517-2021-FMEHU-UPAO) and the Bioethics Committee (Res. No. 0090-2022-UPAO) of the Universidad Privada Antenor Orrego, as well as from the managing board of the Polyclinic.

The collected data were analyzed using the statistical program SPSS Statistics 22.0 (IBM, Armonk, NY, USA), and the findings were organized in tables according to the research objectives. To assess the difference in patients' and dental surgeons' evaluations of attributes for selecting a dental center in La Libertad, Mann-Whitney U tests and Spearman correlation were employed, with a significance level set at 5%.

RESULTS

The present study was conducted on a sample of 324 participants, comprising 162 dental surgeons (99 males and 63 females, with a mean age of 37.5 and SD=5.3) and 162 patients (70 males and 92 females, with a mean age of 27.3 and SD=7.2).

As shown in Table 1, patients exhibited higher ratings in attributes related to the characteristics of the dentist responsible for care, particularly emphasizing the importance of the dentist having a specialty (mean=4.44; $p<0.001$). Patients also assigned higher scores to 13 out of 17 items related to administrative management, with equipment receiving the highest rating (mean=4.48; $p<0.001$). Conversely, dentists per-

ISSN Print 0719-2460 - ISSN Online 0719-2479.

ceived the dentist's recommendation as the most decisive factor influencing choice (p = 0.031).

As shown in Table 2, the evaluation of attributes between patients and dentists based on age range reveals significant differences. Both young and adult patients displayed a stronger preference for specialist dentists (p=0.033) and (p<0.001) respectively. Additionally, only adult patients showed a higher score or inclination towards recognition on social networks (p=0.001). Concerning administrative management, both young and adult patients emphasized the importance of low prices (p<0.001) and free consultations (p<0.001 and p=0.07, respectively).

However, adult patients prioritized assistive technology (p=0.006), equipment (p=0.007), and control of vital functions (p=0.009) to a greater extent compared to adult dentists. In addition, parking availability (p=0.009) held more significance for young patients, while ma-ximum biosafety (p=0.018) was prioritized by young dentists. Notably, there were no older adult patients included in the study during the recruitment period.

Table 1. Comparison of the assessment of patients and dental surgeons regarding attributes for choosing a dental center in Trujillo (La Libertad, Peru; 2022).

Attributes for the selection		Dentists (n = 162)		Patients (n = 162)		
		Mean	SD	Mean	SD	*p*-value
Dentist responsible for care	Having a specialty in the field	4.006	0.94	4.44	0.96	< 0.001
	Being recommended	4.031	0.85	3.80	0.94	0.031
	Recognized on social networks	2.660	1.07	3.30	1.07	< 0.001
	Age of the dentist (young or older)	2.889	1.04	2.96	1.16	0.783
Dental center staff	Honesty	4.630	0.57	4.48	0.91	0.658
	Empathy	4.475	0.63	4.46	0.92	0.150
	Kindness	4.346	0.69	4.31	0.95	0.373
	Reliability	4.494	0.70	4.48	0.88	0.410
	Technical skills	4.537	0.63	4.49	0.89	0.419
	Quick provision of treatments	4.000	0.75	4.08	1.00	0.066
	Seamless collaboration	4.265	0.68	4.32	0.88	0.073
	Timely care	4.346	0.66	4.35	0.91	0.209
Administrative management of the dental center	Provide appointments quickly	4.031	0.76	4.17	0.93	0.012
	First floor location	3.519	1.11	3.79	1.12	0.021
	Assistive technology	3.981	0.79	4.29	0.89	< 0.001
	Equipment	4.272	0.61	4.48	0.89	< 0.001
	Guarantee of treatments	4.506	0.59	4.51	0.85	0.124
	Flexible payment options	3.969	0.81	4.12	0.97	0.010
	Cable TV and internet connection	3.210	1.12	3.36	1.14	0.284
	Located close to home/work	2.790	1.07	3.10	1.15	0.028
	Low prices on treatments	2.815	1.03	3.55	1.08	< 0.001
	Free consultations	2.142	1.14	3.10	1.32	< 0.001
	Parking availability	2.747	1.08	3.19	1.17	0.001
	Comfort	4.006	0.73	4.12	0.97	0.015
	Large and open rooms	3.704	1.01	4.02	1.04	0.001
	Maximum biosafety	4.636	0.65	4.54	0.85	0.533
	Monitoring of vital functions	3.920	0.94	4.31	0.87	< 0.001
	Good hygiene	4.710	0.52	4.62	0.83	0.829
	Office with special equipment	4.315	0.81	4.45	0.87	0.039

SD: Standard Deviation.

Table 2. Assessment attributes in the choice of a dental center by patients and dental surgeons in Trujillo (La Libertad, Peru; 2022), according to age group.

Attributes for the selection		Young (18 - 29 years)		p-value*	Adult (30 - 59 years)		p-value*	Senior
		Dentist n = 24 Mean (SD)	Patient n = 126 Mean (SD)		C. Dentist n = 135 Mean (SD)	Patient n = 36 Mean (SD)		Dentist n = 3 Mean (SD)
Dentist responsible for care	Having a specialty in the field	4.1 (1.0)	4.4 (0.9)	0.033	4.0 (0.9)	4.5 (1.1)	<0.001	2.3 (2.3)
	Being recommended	4.1 (0.7)	3.8 (0.9)	0.179	4.0 (0.9)	3.9 (1.0)	0.726	4.3 (0.6)
	Recognized on social networks	3.0 (1.0)	3.3 (1.1)	0.126	2.6 (1.1)	3.4 (1.1)	0.001	2.3 (1.2)
	Age of the dentist (young or older)	2.8 (1.0)	3.0 (1.1)	0.764	2.9 (1.0)	2.9 (1.2)	0.964	2.3 (1.5)
Dental center staff	Honesty	4.8 (0.5)	4.5 (0.9)	0.197	4.6 (0.6)	4.4 (1.1)	0.806	4.3 (0.6)
	Empathy	4.6 (0.6)	4.5 (0.9)	0.906	4.5 (0.6)	4.3 (1.1)	0.998	4.3 (0.6)
	Kindness	4.5 (0.6)	4.4 (0.9)	0.631	4.3 (0.7)	4.1 (1.0)	0.727	4.3 (0.6)
	Reliability	4.8 (0.5)	4.5 (0.8)	0.181	4.5 (0.7)	4.4 (1.0)	0.827	4.3 (0.6)
	Technical skills	4.8 (0.5)	4.5 (0.8)	0.273	4.5 (0.6)	4.3 (1.1)	0.950	4.3 (0.6)
	Quick provision of treatments	4.0 (0.8)	4.1 (1.0)	0.498	4.0 (0.7)	4.1 (1.1)	0.220	4.0 (1.0)
	Seamless collaboration	4.4 (0.7)	4.4 (0.8)	0.995	4.2 (0.7)	4.2 (1.1)	0.482	4.0 (1.0)
	Timely care	4.3 (0.7)	4.3 (0.9)	0.384	4.3 (0.7)	4.3 (1.0)	0.284	4.7 (0.6)
Administrative management of the dental center	Quick appointments	4.1 (0.7)	4.2 (0.9)	0.243	4.0 (0.8)	3.9 (1.1)	0.626	4.3 (1.2)
	First floor location	3.8 (1.0)	3.8 (1.0)	0.780	3.5 (1.1)	3.7 (1.4)	0.149	2.3 (1.5)
	Assistive technology	4.0 (0.9)	4.3 (0.8)	0.067	4.0 (0.8)	4.2 (1.1)	0.006	4.0 (1.0)
	Equipment	4.4 (0.7)	4.5 (0.8)	0.208	4.3 (0.6)	4.4 (1.1)	0.007	4.3 (0.6)
	Guarantee of treatments	4.5 (0.7)	4.5 (0.8)	0.661	4.5 (0.6)	4.4 (1.1)	0.113	4.3 (0.6)
	Flexible payment options	4.2 (0.7)	4.2 (0.9)	0.820	3.9 (0.8)	3.9 (1.2)	0.292	4.3 (1.2)
	Cable TV and internet connection	3.4 (1.3)	3.4 (1.1)	0.983	3.2 (1.1)	3.3 (1.4)	0.876	2.3 (1.2)
	Located close to home/ work	2.9 (1.2)	3.1 (1.1)	0.356	2.8 (1.0)	3.0 (1.2)	0.540	1.0 (0.0)
	Low prices on treatments	2.5 (1.3)	3.5 (1.1)	<0.001	2.9 (1.0)	3.6 (1.2)	<0.001	3.0 (1.7)
	Free consultations	1.8 (1.1)	3.2 (1.3)	<0.001	2.2 (1.1)	2.9 (1.4)	0.007	2.3 (1.5)
	Parking availability	2.5 (1.3)	3.2 (1.2)	0.009	2.8 (1.0)	3.1 (1.2)	0.320	1.3 (0.6)
	Comfort	4.4 (0.6)	4.2 (0.9)	0.704	4.0 (0.7)	3.8 (1.0)	0.857	3.3 (1.5)
	Large and open rooms	4.1 (0.9)	4.1 (1.0)	0.991	3.7 (1.0)	3.9 (1.1)	0.097	2.7 (2.1)
	Maximum biosafety	4.9 (0.4)	4.5 (0.8)	0.018	4.6 (0.7)	4.5 (1.0)	0.505	4.3 (1.2)
	Monitoring of vital functions	4.3 (0.6)	4.3 (0.8)	0.630	3.9 (1.0)	4.3 (1.0)	0.009	3.7 (1.5)
	Good hygiene	4.9 (0.4)	4.7 (0.8)	0.089	4.7 (0.5)	4.5 (1.0)	0.728	4.3 (0.6)
	Office with special equipment	4.5 (0.7)	4.5 (0.8)	0.846	4.3 (0.8)	4.4 (1.0)	0.074	4.0 (1.0)

SD: Standard Deviation. ***:**Mann-Whitney U test.

ISSN Print 0719-2460 - ISSN Online 0719-2479.

Table 3. Assessment attributes in the choice of a dental center by patients and dental surgeons in Trujillo (La Libertad, Peru; 2022), according to gender.

Attributes for the selection		Male		*p*-value*	Female		*p*-value*
		Dentist n = 99 Mean (SD)	Patient n = 70 Mean (SD)		Dentist n = 63 Mean (SD)	Patient n = 92 Mean (SD)	
Dentist responsible for care	Having a specialty in the field	3.9 (1.0)	4.4 (1.1)	< 0.001	4.1 (0.9)	4.5 (0.9)	0.003
	Being recommended	3.9 (0.9)	3.8 (1.0)	0.579	4.2 (0.7)	3.8 (0.9)	0.007
	Recognized on social networks	2.5 (1.1)	3.4 (1.2)	< 0.001	2.9 (1.0)	3.2 (1.0)	0.013
	If the dentist is young or older	3.0 (1.1)	3.0 (1.3)	0.929	2.7 (1.0)	2.9 (1.1)	0.259
Dental center staff	Honesty	4.6 (0.6)	4.3 (1.1)	0.183	4.7 (0.5)	4.6 (0.8)	0.742
	Empathy	4.4 (0.6)	4.3 (1.1)	0.991	4.5 (0.6)	4.6 (0.8)	0.153
	Kindness	4.3 (0.7)	4.2 (1.1)	0.862	4.4 (0.6)	4.4 (0.8)	0.550
	Reliability	4.5 (0.7)	4.3 (1.0)	0.430	4.5 (0.6)	4.6 (0.8)	0.085
	Technical skills	4.5 (0.6)	4.4 (1.0)	0.674	4.5 (0.6)	4.6 (0.8)	0.155
	Quick provision of treatments	3.9 (0.7)	4.0 (1.1)	0.187	4.1 (0.7)	4.2 (0.9)	0.528
	Seamless collaboration	4.2 (0.7)	4.2 (0.9)	0.372	4.3 (0.7)	4.4 (0.8)	0.263
	Timely care	4.3 (0.7)	4.3 (1.0)	0.193	4.4 (0.6)	4.4 (0.8)	0.987
Administrative management of the dental center	Quick appointments	4.0 (0.7)	4.1 (1.0)	0.074	4.0 (0.8)	4.2 (0.8)	0.123
	First floor location	3.5 (1.1)	3.7 (1.3)	0.112	3.5 (1.1)	3.8 (1.0)	0.113
	Assistive technology	4.0 (0.8)	4.2 (1.0)	0.015	3.9 (0.8)	4.4 (0.8)	< 0.001
	Equipment	4.2 (0.6)	4.3 (1.1)	0.011	4.3 (0.6)	4.6 (0.7)	0.001
	Guarantee of treatments	4.5 (0.6)	4.3 (1.0)	0.765	4.5 (0.6)	4.7 (0.7)	0.031
	Flexible payment options	3.9 (0.8)	4.0 (1.1)	0.192	4.0 (0.8)	4.2 (0.8)	0.071
	Cable TV and internet connection	3.2 (1.1)	3.4 (1.3)	0.547	3.2 (1.2)	3.4 (1.0)	0.327
	Located close to home/work	2.8 (1.0)	3.1 (1.3)	0.123	2.8 (1.1)	3.1 (1.0)	0.108
	Low prices on treatments	2.8 (1.0)	3.5 (1.2)	< 0.001	2.9 (1.0)	3.6 (1.0)	< 0.001
	Free consultations	2.1 (1.2)	3.2 (1.4)	< 0.001	2.2 (1.1)	3.0 (1.3)	< 0.001
	Parking availability	2.9 (1.0)	3.3 (1.1)	0.017	2.6 (1.1)	3.1 (1.2)	0.008
	Comfort	4.0 (0.7)	4.0 (1.1)	0.351	4.0 (0.7)	4.2 (0.9)	0.035
	Large and open rooms	3.6 (1.0)	3.9 (1.2)	0.032	3.8 (1.0)	4.1 (0.9)	0.068
	Maximum biosafety	4.6 (0.7)	4.4 (1.0)	0.142	4.6 (0.6)	4.7 (0.7)	0.678
	Monitoring of vital functions	3.8 (0.9)	4.2 (1.0)	0.002	4.1 (1.0)	4.4 (0.7)	0.035
	Good hygiene	4.7 (0.5)	4.5 (1.0)	0.518	4.7 (0.5)	4.7 (0.7)	0.554
	Office with special equipment	4.3 (0.8)	4.3 (1.0)	0.754	4.3 (0.8)	4.6 (0.7)	0.036

SD: Standard Deviation. ***:**Mann-Whitney U test.

Table 4. Assessment attributes in the choice of a dental center by patients and dental surgeons in Trujillo (La Libertad, Peru; 2022), according to age group.

Attributes for the selection		Professional experience				
		1 to 2 years[a] n = 5 Mean (SD)	3 to 4 years[b] n = 17 Mean (SD)	5 to 6 years[c] n = 115 Mean (SD)	7 years or more[d] n = 115 Mean (SD)	*p*-value*
Dentist responsible for care	Having a specialty in the field	3.8 (1.1)	4.2 (0.8)	3.9 (1.0)	4.0 (0.9)	0.663
	Being recommended	3.8 (0.8)	4.0 (0.7)	4.2 (0.7)	4.0 (0.9)	0.720
	Recognized on social networks	3.2 (1.1)	2.9 (0.9)	2.8 (1.2)	2.6 (1.1)	0.335
	If the dentist is young or older	2.4 (0.9)	2.7 (0.8)	3.1 (1.2)	2.9 (1.1)	0.428
Dental center staff	Honesty	4.4 (0.9)	4.8 (0.4)	4.6 (0.5)	4.6 (0.6)	0.743
	Empathy	4.4 (0.9)	4.8 (0.4)	4.4 (0.8)	4.4 (0.6)	0.251
	Kindness	4.4 (0.9)	4.5 (0.6)	4.5 (0.7)	4.3 (0.7)	0.410
	Reliability	4.6 (0.9)	4.6 (0.6)	4.6 (0.7)	4.5 (0.7)	0.805
	Technical skills	4.4 (0.9)	4.8 (0.6)	4.5 (0.6)	4.5 (0.6)	0.313
	Quick provision of treatments	4.0 (0.7)	4.0 (0.8)	4.2 (0.7)	4.0 (0.7)	0.459
	Seamless collaboration	4.2 (0.8)	4.2 (0.8)	4.4 (0.6)	4.3 (0.7)	0.969
	Timely care	4.2 (0.8)	4.4 (0.7)	4.4 (0.5)	4.3 (0.7)	0.977
Administrative management of the dental center	Quick appointments	4.2 (0.8)	3.9 (0.7)	4.1 (0.6)	4.0 (0.8)	0.689
	First floor location	4.2 (0.8)	3.8 (1.1)	3.6 (1.3)	3.4 (1.2)	0.234
	Assistive technology	4.2 (0.8)	3.9 (0.9)	4.0 (0.9)	4.0 (0.9)	0.820
	Equipment	4.4 (0.9)	4.3 (0.7)	4.3 (0.6)	4.3 (0.6)	0.872
	Guarantee of treatments	4.4 (0.9)	4.4 (0.6)	4.5 (0.5)	4.5 (0.6)	0.645
	Flexible payment options	4.4 (0.9)	4.1 (0.7)	4.2 (0.6)	3.9 (0.8)	0.196
	Cable TV and internet connection	3.4 (1.1)	3.3 (1.2)	3.6 (1.3)	3.1 (1.1)	0.285
	Located close to home/work	2.2 (0.4)	3.2 (1.0)	2.8 (1.3)	2.8 (1.1)	0.238
	Low prices on treatments	2.8 (1.3)	2.6 (1.1)	2.8 (1.1)	2.8 (1.0)	0.881
	Free consultations	1.6 (0.5)	1.7c (1.2)	2.6 (1.3)	2.1 (1.1)	0.042
	Parking availability	2.4 (1.5)	2.7 (1.2)	3.0 (1.3)	2.7 (1.0)	0.611
	Comfort	4.2 (0.8)	4.4d (0.6)	4.2 (0.8)	3.9 (0.8)	0.043
	Large and open rooms	3.4 (1.3)	4.2 (0.6)	3.9 (1.1)	3.6 (1.1)	0.125
	Maximum biosafety	4.6 (0.9)	4.9 (0.3)	4.6 (0.8)	4.6 (0.7)	0.369
	Monitoring of vital functions	4.4 (0.9)	4.5c,d (0.6)	3.8 (1.1)	3.8 (1.0)	0.013
	Good hygiene	4.6 (0.9)	4.9 (0.3)	4.7 (0.5)	4.7 (0.5)	0.530
	Office with special equipment	4.6 (0.9)	4.6 (0.6)	4.2 (0.9)	4.3 (0.9)	0.170

SD: Standard Deviation. ***:**Kruskal Wallis test. Superscripts indicate significant difference between groups (Mann-Whitney U).

ISSN Print 0719-2460 - ISSN Online 0719-2479.

Table 5. Assessment attributes in the choice of a dental center by patients in Trujillo (La Libertad, Peru; 2022), according to the educational level of the patients.

Attributes for the selection		Secondary ed. (n=11)		Higher ed. (n=150)		
		Mean	S.D	Mean	S.D	*p*-value*
Dentist responsible for care	Having a specialty in the field	4.36	1.433	4.44	0.923	0.064
	Being recommended	3.18	1.250	3.84	0.905	0.907
	Recognized on social networks	3.09	1.136	3.31	1.062	0.169
	If the dentist is young or older	2.55	1.572	2.97	1.117	0.041
Dental center staff	Honesty	4.18	1.401	4.50	0.873	0.089
	Empathy	4.00	1.732	4.49	0.833	0.010
	Kindness	4.00	1.549	4.33	0.895	0.050
	Reliability	4.18	1.601	4.50	0.809	0.144
	Technical skills	4.09	1.375	4.52	0.849	0.355
	Quick provision of treatments	3.91	1.578	4.09	0.948	0.022
	Seamless collaboration	4.18	1.401	4.33	0.839	0.035
	Timely care	4.18	1.401	4.35	0.868	0.152
Administrative management of the dental center	Quick appointments	3.64	1.433	4.20	0.875	0.290
	First floor location	3.27	1.348	3.82	1.093	0.526
	Assistive technology	4.09	1.375	4.30	0.849	0.459
	Equipment	4.09	1.578	4.50	0.817	0.030
	Guarantee of treatments	4.09	1.578	4.53	0.774	0.076
	Flexible payment options	4.00	1.342	4.13	0.943	0.040
	Cable TV and internet connection	2.55	1.293	3.41	1.100	0.956
	Located close to home/work	2.45	1.572	3.13	1.097	0.863
	Low prices on treatments	3.00	1.549	3.58	1.025	0.183
	Free consultations	2.91	1.640	3.10	1.294	0.319
	Parking availability	3.09	1.375	3.18	1.153	0.127
	Comfort	4.09	1.375	4.12	0.941	0.070
	Large and open rooms	3.82	1.401	4.03	1.013	0.016
	Maximum biosafety	4.27	1.618	4.56	0.773	0.313
	Monitoring of vital functions	4.00	1.612	4.33	0.791	0.001
	Good hygiene	4.27	1.618	4.65	0.743	0.104
	Office with special equipment	4.09	1.578	4.47	0.800	0.018

SD: Standard Deviation. ***:**Mann-Whitney U test.

Table 3 presents a comparison between patients and dentists based on gender. Both male and female patients placed higher importance on the dentist's specialty (p<0.001 and p=0.003, respectively) and recognition on social networks (p<0.001 and p=0.013, respectively) compared to their corresponding dentists.

Additionally, female dentists attributed greater importance to professional recommendations (p=0.007). Concerning administrative management, both male and female patients rated the use of assistive technology (p=0.015 and p<0.001, respectively), equipment (p=0.011 and p=0.001, respectively), affordable treatment prices (p<0.001), free consultations (p<0.001), availability of parking (p=0.017 and p=0.008, respectively), and monitoring of vital functions during consultations (p=0.002 and p=0.035, respectively) more highly than their corresponding dentists.

Moreover, female patients placed greater significance on treatment guarantees than female dentists (p=0.031), as well as on comfort (p=0.035) and specialized equipment. Conversely, male patients valued care in spacious facilities more than male dentists (p=0.032).

As described in Table 4, dentists with 5 to 6 years of professional experience assigned greater importance to free consultations in dental centers (p=0.042). Conversely, those with 3 to 4 years of experience deemed comfort to be more important (p=0.043), along with the significance of monitoring vital signs during care (p=0.013).

As shown in Table 5, patients with higher levels of education tended to assign greater importance to the age of the professional (p=0.041), their empathy during care (p=0.010), quick provision of treatments (p=0.022), seamless staff collaboration (p=0.035), adequate equipment at the center (p=0.030), availability of special equipment (p=0.018), provision of flexible payment options (p=0.040), presence of large and open spaces for care (p=0.016), and monitoring of the patient's vital functions (p=0.001). It is noteworthy that only one patient with a primary educational level was initially included in the study and thus not accounted for in the results.

DISCUSSION

Effective administrative management in dental centers should incorporate strategies aimed at both attracting and retaining patients while prioritizing dental treatments aligned with patient preferences.[1,17]

Recognizing that dentists and patients likely hold divergent views regarding the *"ideal dentist,"* it becomes imperative for dental care to prioritize patient preferences alongside clinical outcomes.[19] Consequently, understanding and analyzing the assessments patients provide regarding various aspects of their dental care emerges as crucial.[15-17]

The findings of this study indicated that patients primarily prioritize the dentist's specialization and the quality of the equipment at the dental center. This finding aligns with Tâncu *et al.,*[1] study, which highlighted the importance of using state-of-the-art devices and the reputation of the professional. Similarly, Alsaeed *et al.,*[17] emphasized the importance of the dentist's reputation and clinical standing or rank in selecting a dental center. This similarity may stem from the studies being conducted within populations sharing similar age ranges and sociocultural backgrounds.

Furthermore, Nitschke *et al.,*[18] and Felgner *et al.,*[19] noted that patients value innovative dental equipment, adequate infrastructure, and comfort in the waiting room. These insights underscore crucial strengths that every dental office should consider implementing.[15]

In the study, patients prioritized the professional's recognition on social networks, whereas dentists emphasized personal recommendations. However, Nitschke *et al.,*[20] suggest that the impact of social networks might be less significant for patients compared to recommendations about the professional and the impression formed during the first consultation. Nonetheless, it is essential to recognize that social networks offer opportunities to enhance marketing effectiveness and enable direct interaction between dentists and patients.[21]

Both young and adult patients share a preference for dentists who specialize in their fields, offer low-cost treatments, and provide free consultations. However, according to Nitschke *et al.,*[20] as patients' age increases, the dentist's professional experience becomes more crucial in their decision-making process. Additionally, cost played a significant role specifically in the decisions of young male patients.
Adult patients, on the other hand, placed higher

ISSN Print 0719-2460 - ISSN Online 0719-2479.

importance on the dentist's presence on social networks and the incorporation of technology, equipment, and vital function monitoring in their practice. Parmar *et al.,*[21] suggest that patients often seek opinions and information about professionals before scheduling appointments.

For instance, platforms, like LinkedIn, allow dentists to showcase their educational background, work experience, and expertise. Given their concern about general health, especially in light of potential comorbidities, it is understandable that adult patients value the monitoring of vital signs during consultations. Parking availability holds greater importance for young patients, whereas young dentists prioritize maximum biosafety standards, indicating an increasing awareness among professionals about promoting adequate sterilization and disinfection practices in dentistry,[22-24] possibly accentuated by their experience with the COVID-19 pandemic.

Female patients tend to prioritize certain attributes differently from female dentists, such as treatment guarantees, comfort during procedures, and the availability of specialized equipment in the office. Conversely, the only attribute highly valued by female dentists was being recommended as a professional, suggesting a potential emphasis on the dentist-patient interaction.[25] It is crucial for dentists to develop affective skills that allow them to build bonds with patients, contributing to professional recommendations. Studies by Lamprecht *et al.,*[27] and Nitschke *et al.,*[20] highlight that female pa-tients prioritize the psychosocial skills of the dentist when selecting one, with Van Groenestijn *et al.,*[28] even emphasizing the importance of peace of mind over professional competence. Conversely, for males, the quality of treatment holds greater importance.[20]

It was also found that professionals with more years of experience tended to assign higher importance to free consultations, whereas younger professionals placed greater value on factors like patient comfort and the ability to monitor vital functions. This may be attributed to current training methods focused on educating health professionals in customer experience. Consequently, older dentists might still adhere to outdated notions of competing solely on price rather than emphasizing the value of their services.

When examining patients' educational backgrounds, those with higher levels of education tend to place greater emphasis on various factors when selecting dental professionals and centers for their care. These include the age of the professional, their level of empathy during treatment, that treatments are carried out quickly, the smooth collaboration among staff members, well-equipped facilities, flexible payment options, spacious and welcoming care environments, and the monitoring of vital functions during treatment. Regarding care spaces, Alsaeed *et al.,*[17] reported that patients prefer dental offices with specific designs. It is reasonable to anticipate that patients with higher educational backgrounds will exhibit more discerning preferences in their choices of dental professionals and centers responsible for their care.

The study findings reveal differences in how patients and dentists evaluate attributes when selecting a dental office. To mitigate sampling bias, dentists were chosen through simple random sampling, while patients were selected via non-probabilistic convenience sampling, with efforts made to ensure that the included patients closely mirrored those seeking dental care on the northern coast of Peru.

However, certain limitations exist, such as the omission of socioeconomic status and related

factors, as well as the absence of multivariate analysis, which could have enriched the study. Nevertheless, the results offer an initial insight into the dynamics of dental office selection on the northern Peruvian coast. It is advisable to conduct longitudinal studies in similar South American cities and compare their findings with those of this research.

CONCLUSION

In the studied population, patients attributed greater significance than dentists to several factors when choosing a dental center. These factors encompass the dentist's specialization, their reputable work, prompt appoint-ment availability, quality infrastructure, up-to-date equipment, treatment-related promotions, flexible payment options, and regular systemic evaluations during appointments.

Conversely, dentists predominantly perceived patients' selection of a care center as primarily influenced by recommendations regarding the professional who would be treating them.

ISSN Print 0719-2460 - ISSN Online 0719-2479.

CONFLICT OF INTERESTS

There is no conflict of interest.

ETHICS APPROVAL

This study was approved by the Faculty of Human Medicine (R.D. No. 1517-2021-FMEHU-UPAO) and the Bioethics Committee (Res. No. 0090-2022-UPAO) of the Universidad Privada Antenor Orrego, as well as from the managing board of the Polyclinic.

FUNDING

The authors declare that this work was self-financed.

AUTHORS' CONTRIBUTIONS

Carranza-Fernández K: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Validation; Visualization; Writing - original draft; Writing - review & editing.

Asmat-Abanto AS: Conceptualization; Methodology; Project administration; Supervision; Validation; Visualization; Writing - original draft; Writing - review & editing.

Espejo-Carrera R: Methodology; Writing - review & editing. All authors actively participated in the discussion of the findings of the manuscript and have reviewed and approved the final version of the manuscript.

ACKNOWLEDGEMENTS

None.

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PUBLISHER'S NOTE

All statements expressed in this article are those of the authors alone and do not necessarily represent those of the publisher, editors, and reviewers.

PEER REVIEW

This manuscript was evaluated by the editors of the journal and reviewed by at least two peers in a double-blind process.

PLAGIARISM SOFTWARE

This manuscript was analyzed Compilatio plagiarism detector software. Analysis report of document ID. cdf00d5328011caf4b7932ff67419903a175f262

ISSN Print 0719-2460 - ISSN Online 0719-2479.
https://www.joralres.com/index.php/JOralRes/issue/archive

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