

Evaluation of patient anxiety level and patient decision-making in selecting dental services

¹Daya Srinivasan, ²A. K. Shanmugaavel, ³Arthi Lakshmi, ⁴Deepthi Bolla, ⁵Annam George, ⁶V. Ranjith Akshay Seshadri

¹*Professor and Head, Department of Pediatric and Preventive Dentistry, Chettinad Dental College and Research Institute, Kelambakkam, Chennai, India*

^{2,3,4}*Reader, Department of Pediatric and Preventive Dentistry, Chettinad Dental College and Research Institute, Kelambakkam, Chennai, India*

^{5,6}*Senior Lecturer, Department of Pediatric and Preventive Dentistry, Chettinad Dental College and Research Institute, Kelambakkam, Chennai, India*

Abstract

This study aimed to assess the patient decision-making process regarding dental visits and evaluate patient perceptions in selecting dental services/clinics. A cross-sectional study was conducted on 624 patients attending the Dental Outpatient Department from February 2023 to March 2023. A questionnaire consisting of 15 questions covering various aspects of patient perception was administered to willing participants. Questions were framed in both English and vernacular languages, focusing on patient perspectives, expectations, decision-making, anxiety reduction, and suggestions for future dental practices. The study revealed key insights into patient behavior: 87% sought opinions from others regarding dental treatment, 50% visited the dentist only when a problem arose, and 51.5% relied on friends and peers for treatment information. Factors influencing clinic choice included proximity (41%), procedure quality (43.5%), and popularity (38%). Brand image (35.5%) and pricing (29%) were significant in purchasing dental products. Patient anxiety was reduced when procedures were explained thoroughly (57.5%) and restorations lasted long (34%). Recommendations for dental clinics were based on treatment quality (62%) and dentist honesty (45%). Understanding patient decision-making processes are vital for dental practitioners. Clear communication, quality care, and honesty are crucial in building patient trust and satisfaction. Dentists should address patient concerns honestly and provide assurances regarding treatment outcomes to meet patient expectations effectively.

Keywords: Anxiety, healthcare, professional, Patient.

Full length article *Corresponding Author, e-mail: dayaswathi@gmail.com

Doi # <https://doi.org/10.62877/28-IJCBS-24-25-19-28>

1. Introduction

A human behavior is highly influenced by the positive or negative consequences that follow it [1]. A dentist's ability to provide various treatment alternatives effectively is aided by possessing a thorough awareness of the patient's decision-making process. To meet the patient's dental demands, it is crucial to comprehend the dynamics of the patient's growing perceptions. Modern-day practice is evolving, with patients verifying all information via electronic media before visiting a dentist. The healthcare professional should be aware of the patient's thought process in advance to provide better treatment.

The decision-making process runs through a five-stage process and determines the patient's behavior [2,3,4]. The stages of the decision-making process are problem recognition, pre-purchase information search, and evaluation of alternatives, purchase decision, post-purchase outcome, and reactions. The individual perceives the problem only when it arises in the patient's present state. The problem could also be recognized when an individual requires a better choice or is willing to experiment with the new product. When an information search is made about a product or practice, the advantages, limitations, and alternate options are explored. A trial visit/purchase is done

when a service or product is not known. A satisfied patient only will revisit the same dental service. If the services provided by the dentist exceed the expectation level, the patient feels satisfied and it induces a positive feeling inside them [5]. If the services provided by the dentists just meet the expectation level, the patient might have a neutral feeling. If the services provided by the dentist do not meet up to the expectation level, the patient will feel dissatisfied inducing a negative feeling inside them. The study aimed to evaluate the patient decision-making process for a dental visit and to assess the perceptions of patients towards choosing a dental service/clinic.

2. Materials and methods

The cross-sectional study was conducted on a convenience sample size of 624 patients (G power –one tailed: proportion-difference from constant proportion: with an anticipated prevalence at 15% and power 95% and 5% level of significance) who attended the Dental Outpatient Department from February 2023 to March 2023 on patients who are willing to participate in the study. Before the start of the study, the study was approved by the Institutional Human Ethics committee (IHEC-II/0310/23). The questionnaire consisted of 15 questions, regarding the perception of the patient in choosing a dental service/clinic that was given to patients attending the dental clinic. The questions were framed both in English and vernacular language and were given to the patients attending the clinic. The questionnaire had five subheadings- 1. patient perspective towards dental treatment, 2. Patient expectations and choice of the dental clinic, 3. patient decision-making on buying a dental product, 4. patient anxiety and dentist communication, and 5. Future of Dental Practice. The inclusion criteria included patients above the age of 18 years who can read and write and who were willing to participate in the study. The exclusion criterion included those who are illiterate and not willing to participate in the study (Figure 1).

3. Results

The results of the questionnaire study were tabulated and expressed as a percentage. Graph-1 depicts the patient's perspective toward dental treatment. 87% percent stated that they would get the opinion of others, 50% stated that they visit the dentist only if there is a problem, and 51.5% stated they know various treatment options only through friends and peers. Graph-2 represents patient expectations and choice of the dental clinic. The proximity of the clinic to the patient's residence (41%), the popularity of the clinic (38%), the Quality of the procedure (43.5%) ambience (7.5%) were choices in choosing a dental clinic. Graph-3 represents the decision on buying a dental product. Buying a dental product was based on brand image (35.5%), and pricing (29%). advertisements in social media (58.5%), longevity of product (51%) and product satisfaction (74.5%). Graph-4 represents ways to reduce patient anxiety and enhance communication by the dentist. Patients felt their anxiety reduced when the dentist explained the procedure completely before commencing (57.5%) and when the restoration lasted long (34%). Graph 5 represents the suggestion of dental practice by patients. 62% suggested they will recommend the clinic to others based on the

quality of treatment, the dentist being truthful (45 %) (Figure 2).

4. Discussion

The questionnaire was framed to know the thought process of the patient in selecting a product or choosing a dental clinic. This would help us to understand the perception of the patient towards dentistry in a better way. The questions regarding patients' perspectives towards dental treatment identify the problem recognition aspect by the patient (Figure 3). Most of the patients react only when a problem arises or affects their routine. This indicates that the majority are unaware of their dental problem. Awareness of dental problems and the availability of dental treatments has to be promoted at all levels of prevention. Need recognition is most often a crucial step by the patient in seeking treatment [6]. A patient having crowded teeth can oneself feel the need for getting treated for a malocclusion. This is internal-driven motivation. They can be also motivated by parents or peers for getting dental treatment, which is external-driven motivation. A child might have multiple carious teeth but a parent approaching the dentist when there has been pain or a presenting complaint represents the category of actual state change. A parent approaching a dentist as soon as decay is found is a proactive parent who would be willing to participate in caries preventive programs for the child. An individual could feel the need based on a psychological or an emotional connection. Psychological needs occur due to emotional feelings whereas functional or physical needs are a result of necessity. A child wanting to buy a toothbrush because of a favorite cartoon sticker that has on the toothbrush has a psychological need (Figure 4). The patient who wants to replace his missing anterior tooth has a functional need for esthetic, speech, and mastication. Problem recognition is an important step as it outlines whether the patient is motivated by oneself or forced by someone else. In a Pedodontic setup, most of the treatments are governed by the parent's participatory role. Parents, who perceive the child has got a dental issue would motivate and take the child for further dental treatment. The desired state can arise when a patient comes across a better treatment. A parent of a very anxious child preferring a sedation procedure over a regular chair side dental procedure understands the advantage of the anxiolytic effect of the procedure on the child [7,8]. A child wanting to break a non-nutritive sucking habit recognizes the rakes as a way to break the habit, rather than a punishment (Figure 5). This desired change brings an effective stoppage of deleterious habits. Expectations on the choice of dental clinic reveal that patients prefer quality care around their locality [9]. Choosing a dental product is related to the brand image, and pricing [10]. Previous experience influences choosing toothpaste and brush [11]. A toothpaste brand in public is selected through, sale offers price, availability, packaging, quality, brand, flavor, and inputs by family and friends [11-13]. The patient's first usage of a product is a trial purchase. Manufacturers more often introduce trial purchases to elicit a favorable customer response so that repeat purchases would be made [6]. A product when used in the trial process is bought/used again only when the patient is satisfied. This indicates that the expectations of the patient have been met.

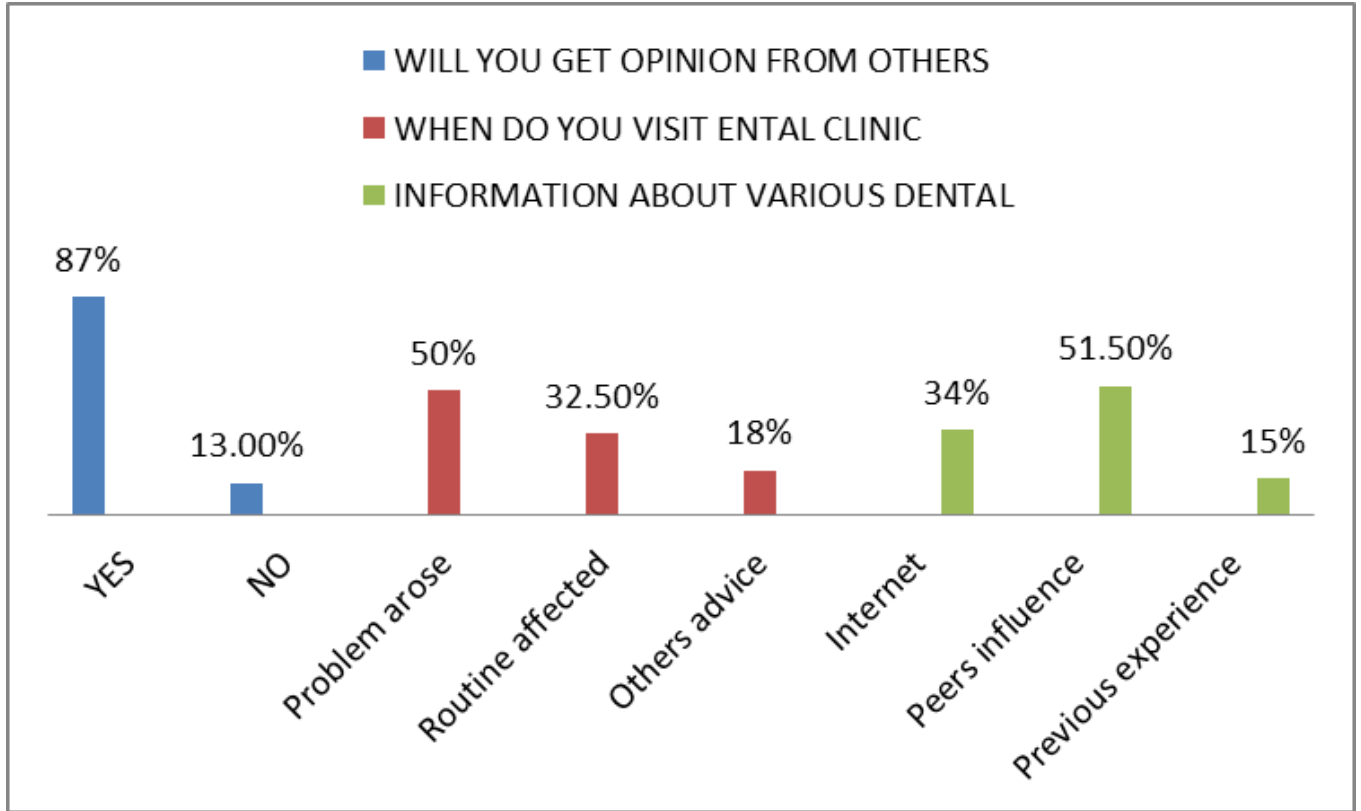


Figure 1: Patient Perspectives towards dental treatment

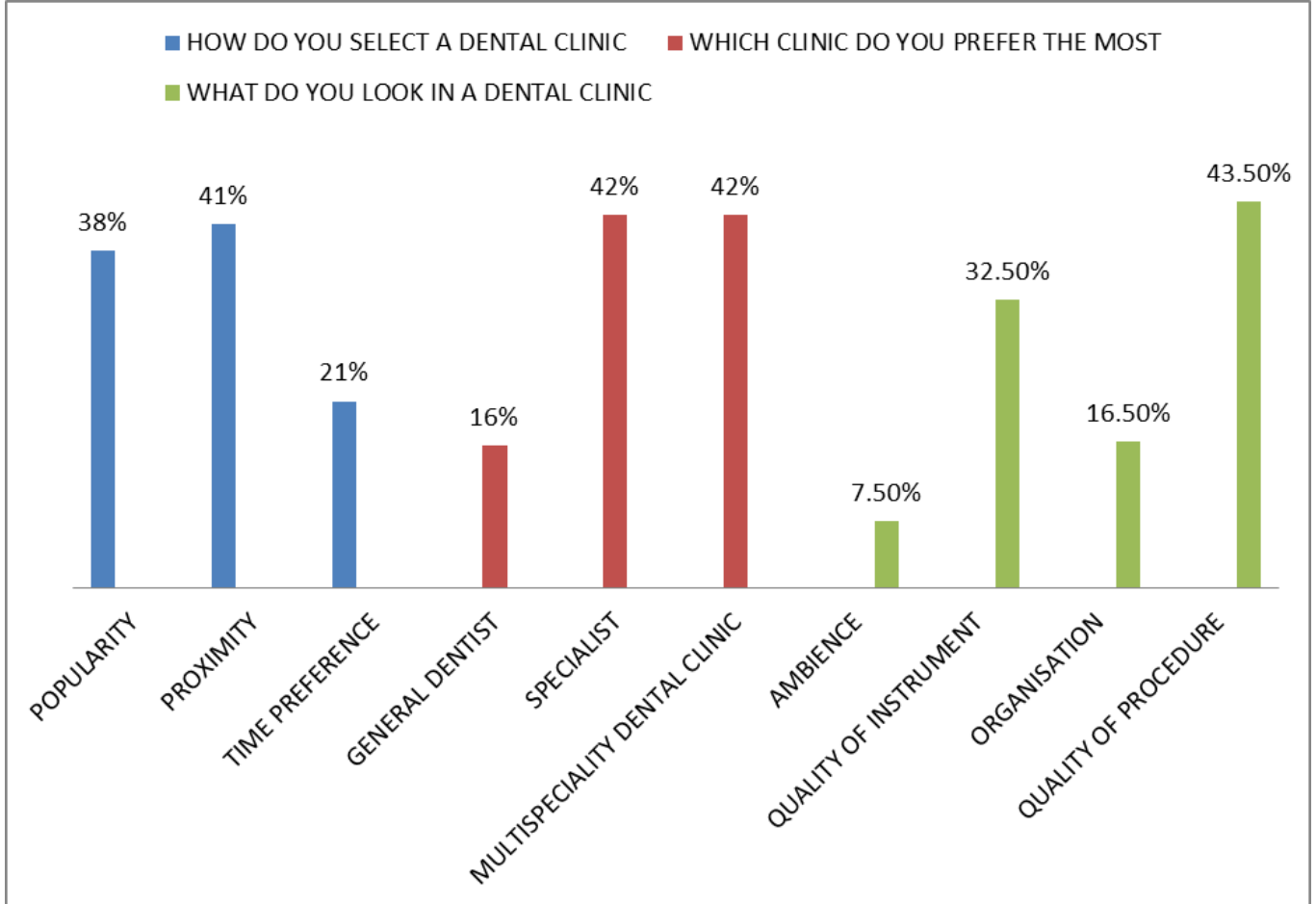


Figure 2: Patient expectations and choices of dental clinic

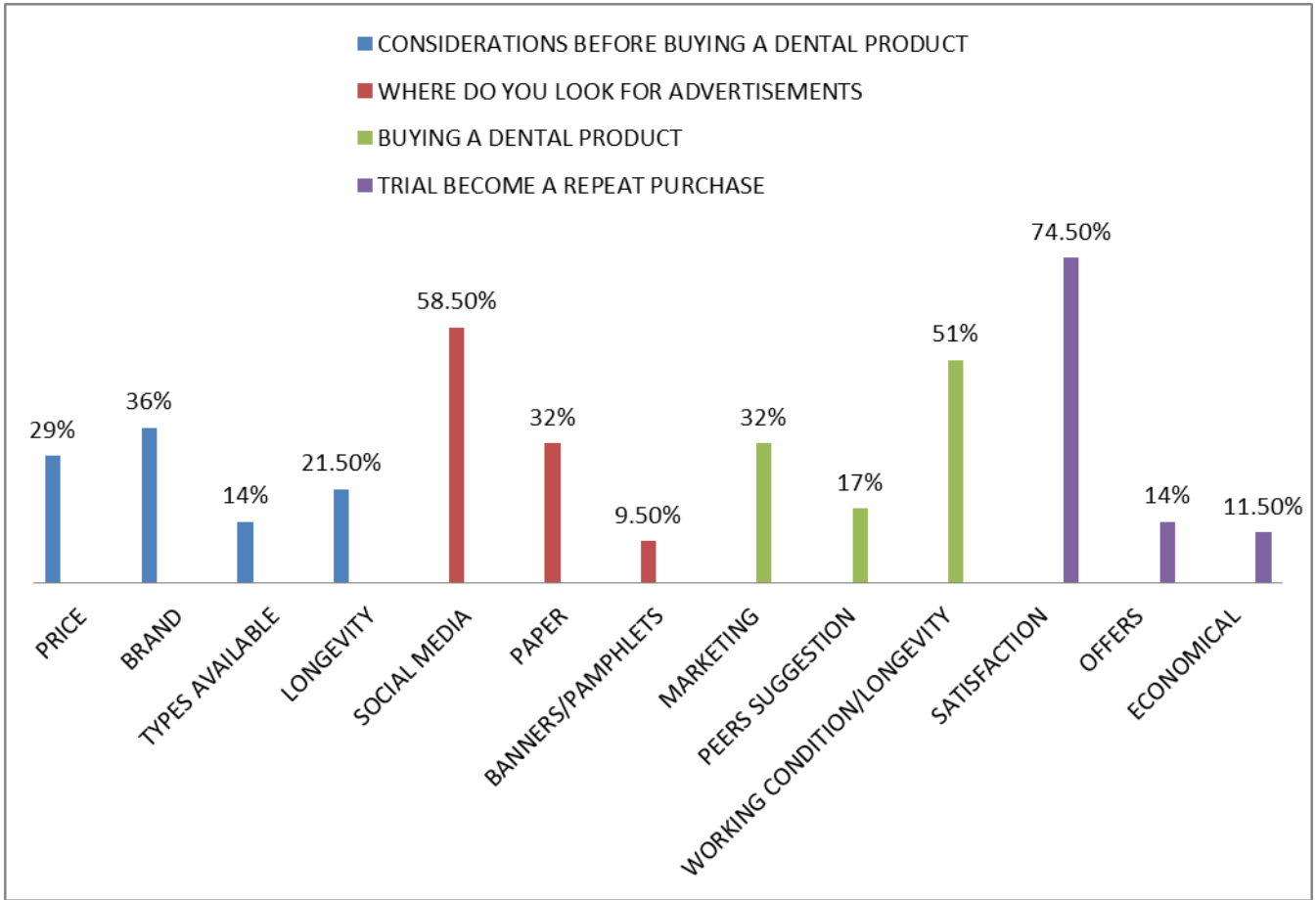


Figure 3: Decision on buying a dental product

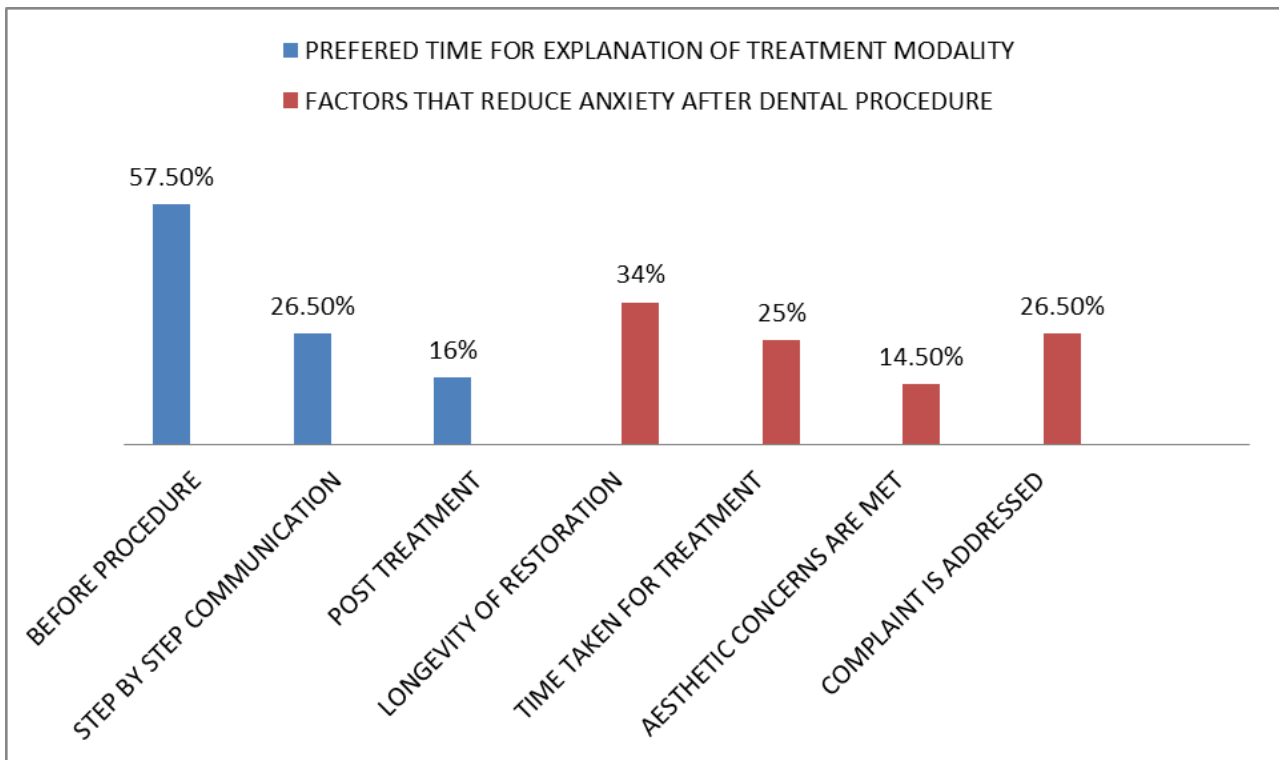


Figure 4: Patient anxiety and dentist communication

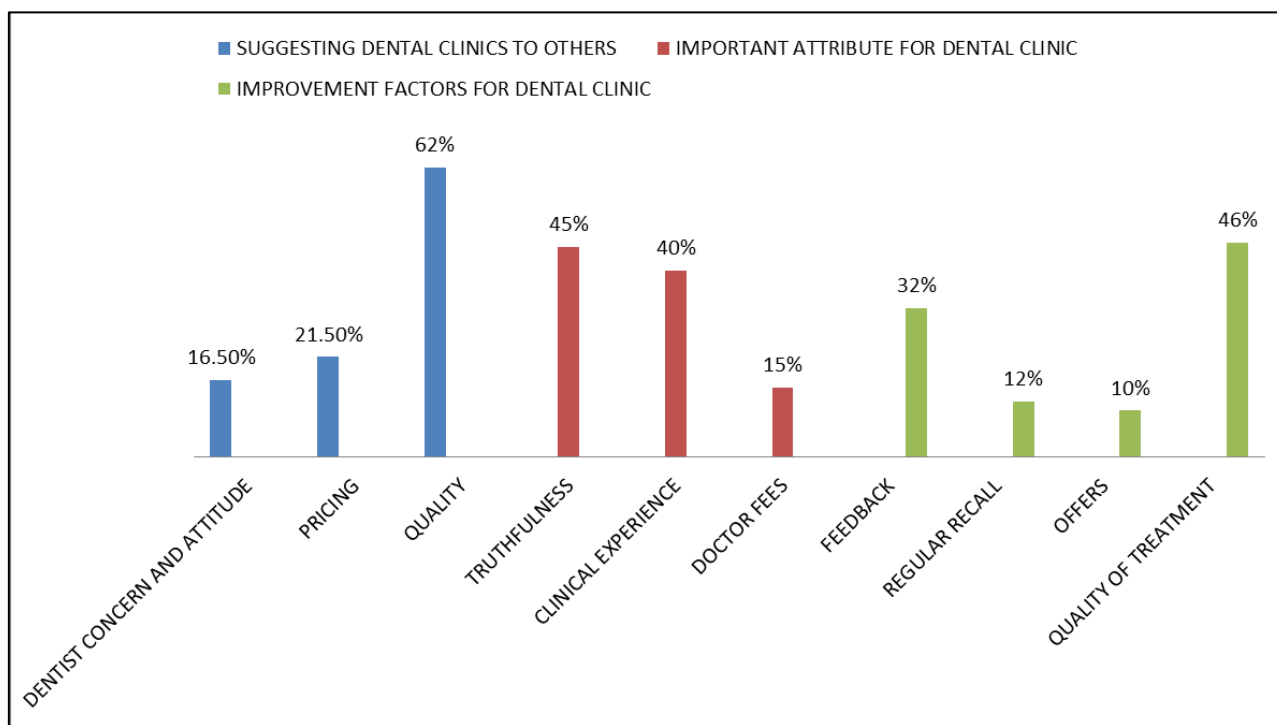


Figure 5: Future of dental practice

A marketer introducing offers/discounts targets the pocket-friendly approach toward the customer. In the present study, by evaluation of patient decision making process, selection of a dental clinic by the patient is dependent more upon proximity rather than popularity. Hospitals and clinics use social media platforms to market their practice [14,15]. Dental clinics are more often not evenly distributed in a given region. They are more concentrated near the marketplace or transport terminals where there are more congregations of people. According to the present study, recommending a dental clinic to another person is more dependent on the quality of dental care provided than the pricing of the treatment or the dentist's concern and attitude. Other patient testimonials that are given on the clinic website influence patients in choosing a clinic. Patients need guidance in choosing dental treatment and oral health care products [16,17]. Anxiety disorders are one of the most common mental illnesses in children. error-related negativity (ERN) as a biomarker can predict the onset of anxiety disorders [18]. Children with anxiety disorders can be managed with hypnosis or use of medications such as Benzodiazepines, selective serotonin reuptake inhibitors (SSRIs) [19].

5. Conclusion

Dental Practice or a product needs to be strategically positioned and promoted. Dentists should clearly explain the problem and the required treatment modality before commencing the treatment procedure. This helps in gaining the patient's trust and cooperation throughout the treatment. Previous experience and hearsay experience by others influence the choice of selecting type of treatment by the patient. Clinical skills of the dental practitioner and truthfulness are important attributes for the

success of any dental practitioner. The dentist is liable under Consumer Protection Act if patient expectations fall short of the outcome. A patient's concern may be reduced if they are given assurances about the durability of a restoration, prosthesis, or the length of time required for orthodontic therapy. The needs and worries of the patient must be handled honestly and sympathetically.

References

- [1] S.E. AR, N. Nagappan, D. Senthil, K. Jayanthi, V. Dhanalakshmi, R. Sowmyasree, B. Narayanan. (2021). Paediatric dentists' knowledge of behavioural management principles in Tamil Nadu, India. *European journal of paediatric dentistry*. 22(1): 75-79. 10.23804/ejpd.2021.22.01.14.
- [2] M.D. Bunn (1993). Taxonomy of buying decision approaches. *The Journal of Marketing*. 1:38-56.
- [3] D.I. Hawkins., R.J. Best., K.A. Coney (1995). *Consumer behavior: Implication for marketing strategy*. Chicago, Irwin. 477-81.
- [4] W.K. Darley, C. Blankson, D.J. Luethge. (2010). Toward an integrated framework for online consumer behavior and decision making process: A review. *Psychology & marketing*. 27(2): 94-116.
- [5] M.-I. Ungureanu, F. Mocean. (2015). What do patients take into account when they choose their dentist? Implications for quality improvement. *Patient preference and adherence*. 1715-1720.
- [6] D. Srinivasan, B. Shivi, S. Mahfooza (2018). Patient decision making process in a dental environment. *International journal of scientific research*. 7(5):36-7.

- [7] F. AlQhtani, S. Pani. (2019). Parental anxiety associated with children undergoing dental treatment. *European journal of paediatric dentistry*. 20(4): 285-289.
- [8] L. Al Zoubi, J. Schmoeckel, M. Mustafa Ali, M. Alkilzy, C. Splieth. (2019). Parental acceptance of advanced behaviour management techniques in normal treatment and in emergency situations used in paediatric dentistry. *European Archives of Paediatric Dentistry*. 20: 319-323.
- [9] A.J. Righolt, G. Sidorenkov, C.M. Faggion Jr, S. Listl, D. Duijster. (2019). Quality measures for dental care: a systematic review. *Community dentistry and oral epidemiology*. 47(1): 12-23.
- [10] L. Gray, L. McNeill, W. Yi, A. Zvonereva, P. Brunton, L. Mei. (2021). The “business” of dentistry: Consumers’(patients’) criteria in the selection and evaluation of dental services. *PLoS One*. 16(8): e0253517.
- [11] G. Vani, N. Panchanatham. (2010). Toothpaste Brands “A Study of consumer behavior in Bangalore city. *Journal of Economics and Behavioral studies*. 1(1): 27-39.
- [12] O. Opeodu, S. Gbadebo. (2017). Factors influencing choice of oral hygiene products by dental patients in a Nigerian teaching hospital. *Annals of Ibadan postgraduate medicine*. 15(1): 51-56.
- [13] V. Dani. (2013). Buying behavior of toothpaste in Urban India: A study on Pune city. *Pacific Business Review International*. 5(11): 48.
- [14] O.H. Alkadhi, N.K. Aleissa, M.K. Almoharib, S.A. Buquayyid. (2020). Influence of Social Media on the Patients for Choosing the Dental Clinic-A Cross-sectional Survey. *Journal of Clinical & Diagnostic Research*. 14(1).
- [15] N. Ajwa, S. Al Mohsen, A. Kuwail, E. Al Osaif. (2018). The impact of using social media networks on dental treatment marketing in Saudi Arabia: the practitioners and patient’s perspectives. *Journal of Oral Health and Dental Science*. 1(1): 1.
- [16] S. Alshahrani, A. Alshuaibi, M. Alkhaldi, P. Koppolu (2021). Perception and Knowledge of Patients from Different Regions in the Kingdom of Saudi Arabia towards Oral Hygiene and Oral Hygiene Aids. *Healthcare (Basel)*.;9(5):592.
- [17] M.T. Rajeh. (2022). Gender differences in oral health knowledge and practices among adults in Jeddah, Saudi Arabia. *Clinical, Cosmetic and Investigational Dentistry*. 235-244.
- [18] A. Meyer. (2017). A biomarker of anxiety in children and adolescents: A review focusing on the error-related negativity (ERN) and anxiety across development. *Developmental cognitive neuroscience*. 27: 58-68.
- [19] G.A. Bushnell, S.N. Compton, S.B. Dusetzina, B.N. Gaynes, M.A. Brookhart, J.T. Walkup, M.A. Rynn, T. Stürmer. (2018). Treating pediatric anxiety: Initial use of SSRIs and other anti-anxiety prescription medications. *The Journal of clinical psychiatry*. 79(1).