

**MSDP (MARKET SURVEY FOR DENTAL PRACTICE): FACTORS AFFECTING  
PATIENT'S PERCEPTION FOR DENTAL TREATMENT SERVICES**

**Running title - Market survey for dental practice**

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**Abstract**

**Background** - Healthcare industry in the recent times has been implementing efficient marketing strategies to generate revenue. There exists a large marketplace for this, however there's lack of literature which will facilitate the dentist to cater patients and grow their practice. Marketing strategies help to demographically analyze the prospective consumers, their concerns and acceptable methods like quality services, infrastructure, communication skills etc.

**Methodology** - A total of thirty questions were framed for the dental patients and response was measured on the seven -point Likert's scale. Attributes based on extensive literature review included quality of treatment, confidence in dentist, knowledge and skill of the dentist, accessibility of the services, duration of treatment, pricing of the treatment, communication skills of the dentist etc.

**Result** - A total sample comprised of three hundred patient's. In the present study the reliability of the tool was measured using Cronbach's alpha. The Cronbach's alpha value for the questionnaire was .868 which is considered to be a good value for internal consistency. Content validity refers to the degree of relevance for the research tool used for evaluation. The values for the questionnaire was S-CVI = 30.236 which was in the acceptable range.

**Conclusion** - The dental health care services have evolved and has established its role from curative to preventive therapy. The market is wide and open although it needs more detailed exploration to understand the consumer and MSDP can be an effective tool for the same.

**Keywords** - Dental Marketing, MSDP, Dental Health, Patient Awareness

**INTRODUCTION**

Healthcare industry has picked up in the recent times and has been implementing efficient marketing strategies to generate revenue. In market-oriented systems providing health care

facilities the service quality has been a way of differentiation between different health service providers. (Headley et al., 1993). Though Dentistry holds a very important place in the healthcare sector nonetheless it's at the stage of infancy as far as the marketing of this service is concerned. There exists a large marketplace for this explicit service however there's lack of literature specializing in the strategies which will facilitate the dentist to cater patients and grow their practice and in turn improve patient's quality of life.

Health services are primarily a way of facilitating the life of the patients by delivering good treatment to the patient's and improving their life quality. The conception of health marketing is related to ever-changing behavior of the buyer, be it in encouraging higher uptake habits or to lifestyle modifications. Owing to the character of treatment in dentistry the seven P's can play completely different role. The most necessary consideration of the marketing is the accomplishment of harmoniousness between the seven elements (Mohammed et al ; 2013). Most dentists acknowledge the importance of product and people, however very few are able to readily manage the rest 5 'Ps' to achieve patient's satisfaction and long term relationship. *For authentic marketing practices it is essential to understand what the patient needs and then finding a solution that will satisfy the patient as well as make profits for the dentists.*

Another characteristic of the dental services is that every service is completely different depending on the characteristic of the treatment and the expertise of the dentist. Moreover there are several variables affecting the service delivery and final outcome of the treatment. ( Ameri & Fiorini , 2014 ) Hence , It's troublesome to measure the services quality easily and to establish quality standards (Choi et al ; 2004 ). The published literature indicates that quality of services offered by the dentist has a strong impact on the satisfaction level of patients .

Consumer-focused health service delivery is attributed to the patient's role in evaluating the standard of service delivered to them (Dagger & Sweeney, 2007). Today, consumers are taking a lot of control over their health issues. They invest a lot of time in finding and obtaining data. Sadly, the trust factor in health authorities and establishments has declined in the last years in the eyes of the patients. So, patients are having a tendency to move towards the net looking for data (Henwood, F et al; 2003).

Marketing strategies helps to demographically analyze the prospective consumers, their concerns and acceptable methods like quality services, infrastructure, communication skills etc. to draw them to the organization. ( Willis, Ozturk & Chandra, 2015) Kotler defines the marketing mix as “the set of tools that the firm uses to pursue its objectives within the target market”. It had been suggested for extending 4Ps to 7Ps for the services adding three components to the normal model. These activities are classified as seven 'Ps', particularly Product, People, Place, Price, Packaging, Promotion, Processes. (Lovelock, 2001).

“Product” represents the core element. Therefore it is essential to build the core product which is the knowledge of the subject and specific skills that are gained through continuous updating of knowledge. A patient strives continuously for quality service particularly in case of health care. Patients that are satisfied with services tell four others, while those who are discontented with a

service tell a minimum of ten others regarding their negative experiences hence word of mouth plays an important role in healthcare.

The “Place” in health care service is primarily concerned with physical, time and promotional access. Location plays an important role and includes factors like accessibility, handiness of transport, parking, steps, and even ramps and lifts for the patients. ( Sreenivas, T.et al., 2013).The “Promotion” strategy includes advertising their services and developing relationship with the customer. (Shimp, 2000). There is a need to develop substantial data that explains in detail the role of services like creating data brochures, pamphlets.

The 'Packaging' of the service refers to the service offered to the patients in terms of its style, method and quality. For instance, packaging includes furnishings, layout, signage, background music in the reception and treatment areas of the clinics. It additionally includes tangible clues such as employee’s dress, nametags and therefore the stationary utilized in the service. Packaging contributes to the image of the service, notably in making the all necessary 'first impressions'.

“Processes” includes strategies that are related to procedures followed at the clinic, mechanism of consultation and flow of activities by that a service is nonheritable. Method selections radically have an effect on how a service is rendered to customers. (Kotler, 2011) These non-clinical processes of the service touching consumers play a very important role, however most frequently they're being neglected as a part of marketing strategies. For instance, ways by that patient are queued, appointment time, handling of schedule, similarly, accounting procedures.

“Price’ is the fee charged for dental services. The payment structure that the service sets, the mode within which payment is anticipated and the pricing flexibility, procedures all contribute to the marketing strategy. (Palmer, 2001) It have been recommended that pricing is the sole factor that generates revenue for the organization, whereas rest of the factors are associated with expenditure. The dental market is witnessing a replacement era, the age of the empowered consumers who not solely has access to data but are taking active role in their treatment decisions (Mahadewi, E,et.al .2020) (Thomas, 2008). Today’s consumers are expecting to receive the treatment facility closer to their residence , the treatment protocols scheduled as per their work patterns and at the same time achieving the best quality service at minimum price. ( Kyambalesa.H, 2000), (Rapert & Babakus,1996).

## **METHODOLOGY**

The research instrument used for the present study was a questionnaire for the patient’s seeking dental services. The attributes identified through literature review were part of the questions used in the questionnaire. The questions were framed in English and the content of the questions were well defined to be easily understood by the respondents. A total of thirty questions were framed for the dental patients. Each response was measured on the seven -point Likert’s scale. Before conducting the research, the respondents were well explained about the purpose of the research. The confidentiality of the participants was kept, and the participants could withdraw or can refuse at any stage of the study. Ethical Clearance for the above was obtained from the ethical committee.

Attributes based on extensive literature review included the diverse parameters like quality of treatment, confidence in dentist, knowledge and skill of the dentist, accessibility and distance of the services, duration of treatment, availability of public transport, safety of the patient, pricing of the treatment, communication skills of the dentist, pricing flexibility, junior staff skills etc. The reliability of the questionnaires was established using Cronbach's alpha which a measure of the internal consistency and the content validity was established through scale content validity index (S-CVI) .

## RESULTS

A total sample comprised of three hundred patient's. A detailed demographic analysis was done in order to see the variability of the sample being chosen for the study. The gender percentage of the patient's seeking treatment was 48 % males and 52% females. 70% of the patients were graduates, about 79% of the patient's has availed dental treatment services between one to six months of duration and 80% of them have an annual income between 5 to 10 lacs. 29% of the patient's were home makers and the type of centers they visited were largely belonging to the private sector, the government sector comprising only about 11.3 %.

**Table no 1 : Mean value , Standard deviation and Variance for set of questions administered to Patients**

| Mean     | Variance | Std. Deviation | N of Items |
|----------|----------|----------------|------------|
| 128.3677 | 192.968  | 13.86412       | 30         |

The sample size taken was 300 which was adequate for the research as indicated by the table below.

**Table no 2 : KMO and Bartlett's Test for the Data**

|                                                        |                    |           |
|--------------------------------------------------------|--------------------|-----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.899 |                    |           |
| Bartlett's Test of Sphericity                          | Approx. Chi-Square | 7741.388  |
|                                                        | Df                 | 550       |
|                                                        | Sig.               | < 0.0001* |

\*p-value < 0.05, statistically significant

## Reliability of MSDP

It is essential to establish the reliability of the tool used for data collection. In the present study the reliability of the tool was measured using Cronbach's alpha which is a measure of the internal consistency. The internal consistency means how well a set of items are closely related to each other and are effective in measuring the variables the tool is intended to measure. The

intercorrelation is maximized when all the items are measuring the similar construct. The total sample evaluated was 300. The Cronbach's alpha value for the questionnaire was .868 (total number of items 30) which is considered to be a good value for internal consistency.

**Table no 3 : Reliability of Questionnaire**

| Responses        | N          | %     |
|------------------|------------|-------|
| Valid            | 300        | 100.0 |
| Total            | 300        | 100.0 |
| Cronbach's Alpha | N of Items |       |
| .868             | 30         |       |

### Content Validity of MSDP

Content validity refers to the degree of relevance for the research tool used for evaluation. It is recommended to establish the content validity for all the elements of the tool or the questionnaire in order to obtain the correct scores and interpretations. ( Sireci, [1998](#))

The content validity was established for the questionnaires by getting the review from the experts in the field. A total of 6 experts from the domain of dentistry were selected with minimum of 10 years of experience in the field. Thirty questions were individually rated by the six experts on a scale of one to four . I-CVI was then calculated for every question as the number of experts giving a rating of either 3 or 4, divided by the total number of experts. The values for the questionnaire was S-CVI = 30.236. The validity value for the questionnaire was in the acceptable range.

### DISCUSSION

The healthcare industry has its own uniqueness, the compulsive need makes the patient's more vigilant in choosing the best out of all and hence the dentist needs to obtain the desired qualification preferably a specialization degree and should constantly update themselves about the recent advances in their field and apply them in their practice. Providing quality of treatment in best possible ways should be the priority of the dentist. Patients evaluate the treatment in terms of the value of money and hence the right treatment which is specific to every patient should be delivered . (Bahadori, M. et,al. 2015 )

The marketing strategies will improve the ability of the dentists for effectively altering the perception of the patients. Spending effective time with the patient will enable altering the opinion of the patient and will help to convince them for availing the services and advocates the development of patient's loyalty. It is patient's own disease or disability that controls the need and demand of healthcare services. Hence, a good communication ability and a creating a positive attitude at each stage will facilitate a happy patient. ( Akbar, F. H.et, al 2019 )

Due to current paradigm shift in the demand it will be of great interest for the dentist to direct the patients for the services. The dentist needs to position themselves as quality care providers also focusing on the enhancement of their staff skills. It is important to sway the opinions of the patients by creative implementation of front-line services. The behavior of the supporting staff and their skills both contribute to the success of the treatment. Providing pricing flexibility to the patient not only inculcate a level of confidence in them but also help them to deal with the financial burden of the treatment. (Khan, M. H. 2020).

MSDP is as an effective tool for understanding the perception and needs of the patients availing dental services. It can be effectively utilized by the practicing dentists for identifying the gaps existing between their delivered services and patients expectations. Although , the sample size taken in the present study was adequate enough to generate quantitative inferences, the study was restricted to the population in Delhi/NCR. Further researchers may use MSDP to analyse the subjects belonging to diverse sociocultural backgrounds.

## **CONCLUSION**

The dental health care services have evolved in the recent years and has established its role from curative to preventive therapy in all its segments impacting the patient's perspectives. The market is wide and open although it need more detailed exploration to understand the consumer and MSDP can be an effective tool for the same.

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