



EVALUATING THE EFFECT OF MOTIVATION ON THE PATIENT TO UNDERGO COMPREHENSIVE DENTAL CARE

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ABSTRACT

Background: There are many barriers which prevent the patient to undergo comprehensive dental care. In comprehensive care we not only think in terms of eliminating pain and infection but in terms of restoration of service able tooth to good functional form, replacement of missing teeth, maintenance care for control of early lesions so that the population may experience a lower prevalence of disease.

Aim: To evaluate the effect of motivation on the patient to undergo comprehensive dental care

Materials and methods: A clinical trial was conducted among 30 patients attending a teaching hospital in Bangalore city. On the first dental visit, patients were explained about all the findings. Perception towards comprehensive dental care was collected using questionnaire before and after motivation. Treatment for chief complaint was started or completed on the initial dental visit and was observed whether the patient will undergo treatment for all the findings in the oral cavity in the next 3 months.

Results: Out of 30 subjects, 4(13.3%) subjects underwent complete comprehensive treatment, 20(66.6%) subjects underwent other treatments along with chief complaint but not all the treatments and 6(20%) subjects underwent treatment only for chief complaint.

Conclusion: As most of the patients only opt for treatment for chief complaint in regular dental practice, by giving motivation, we can convince them to undergo at least few other required treatments along with chief complaint if not comprehensive treatment

KEYWORDS : comprehensive dental care, protection motivation theory, flip chart, dental attendance

INTRODUCTION:

Oral health has a significant impact on the quality of life, appearance, and self esteem of the people. Despite the recent advances in dentistry such as introduction of community water fluoridation programmes and improved oral hygiene practices, dental caries and periodontal disease remain two of the most prevalent chronic diseases. Oral conditions affect approximately 90% of the global population; from 1990 to 2010, the overall global oral disease burden increased by 46% on average. Given that these oral diseases are preventable and controllable to a large extent, improving public knowledge of appropriate preventive mechanisms would be pivotal in managing them.¹

The dental care must be driven by preventive and curative measures that can contribute to the population's oral health promotion.² Preventive dental visits help in the early detection and treatment of oral diseases. Comprehensive dental care is defined as the meeting of accumulated dental needs at the time a population group is taken into the programs and the detection and correction of new increments of dental disease on a semi-annual or other periodic basis.³ Issues like price, income, the distance a person had to travel to get care, and preference for preservation of teeth are treated as barriers in regular dental care. All these barriers prevent the patient to undergo comprehensive dental care.⁴ As a result patient usually undergoes treatment only for the chief complaint.

The increasing dental emergencies can be reduced by decreasing the dental neglect, which can be done by giving motivation to undergo comprehensive dental care. Several theories of human cognitive behaviour have been used to explain non compliance. The four main theories include the health belief model (HBM); the Transtheoretic model (TM); the theory of reasoned action/theory of planned behaviour (TRA); and the social-cognitive theory (SC). The

HBM focuses on an individual's perception of the threat from a health problem. The TM is concerned with an individual's readiness to change. The TRA focuses on an individual's intention to perform a behaviour. The SC incorporates intra-personal and inter personal factors and suggests that the benefits of behaviour must outweigh the costs. Leventhal have postulated that people's behaviour in response to an illness is determined by their representation of that illness. They propose that patients will only adhere to a treatment if they believe that this treatment will have a positive effect on their health.⁵

Few studies are there to prove that motivation can lead the patient to undergo comprehensive dental care. In this study Protection Motivation Theory based motivation was used to educate the patient about the importance of Oral health. The objectives of the present study are to evaluate the perception of the patient before and after motivation on comprehensive dental care and to evaluate the effect of motivation on the patient to undergo comprehensive dental care.

AIM OF THE STUDY:

To evaluate the effect of motivation on the patient to undergo comprehensive dental care

METHODOLOGY:

A Non randomized uncontrolled before and after clinical trial was conducted to evaluate the effect of motivation on the patient to undergo comprehensive dental care. The Subjects for the present study were patients attending a teaching hospital in Bangalore city. Prior to the start of the study, a protocol of the intended study was submitted to the Ethical Review Committee, K.L.E Society's institute of dental sciences, Bangalore and received ethical clearance to carry out the study. They were selected according to the eligibility criteria and included in the trial only by voluntary participation.

The study group comprised of 30 patients of age ≥ 18 years who visited to Outpatient Department (OPD) –Department of OMR Oral Medicine and Radiology, KLE Society's Institute of Dental Sciences. Non probability sampling was adopted for the study. Per day one patient who satisfied the inclusion criteria were included in the study until the sample size of 30 was achieved.

Patients with the chief complaint of dental caries and/or periodontal disease, patients of age 18 years or older and patients who gave consent were included in the study. Patients with the chief complaint of correction of mal-aligned teeth and/or replacement of missing teeth, Subjects with underlying systemic diseases, Subjects on medications and Uncooperative subjects were excluded from the study.

The duration of the study was 3 months from June 1st to August 31st 2018. Questionnaire was used to assess the perception of the patients before and after motivation. Questionnaire consisted of socio demographic features, and questions to know the perception of patient on comprehensive dental care like, whether it is the first dental visit of the patient, whether he thinks maintaining healthy mouth is his individual responsibility, whether he thinks it is required to visit a dentist periodically to maintain health of the mouth, whether he thinks there is a relation between oral and general health, whether he thinks and he is ready to get all the required treatments along with chief complaint, whether he is aware of the preventive treatments available for oral care and whether he is willing to know more about oral health.

Motivation was given by the investigator using flip chart and tooth model to show brushing technique (modified bass). The flip chart contained information regarding the benefits of comprehensive dental care, systemic and local effects of dental neglect, what are the different dental problems, how they look like, what happens if they are not treated, what are the preventive and therapeutic treatments available for them.

Patients with the chief complaint of dental caries or periodontal disease were included in the study. On the first dental visit, patients were explained about all the findings in their oral cavity using a face mirror. Socio demographic details of patients and their perception towards comprehensive dental care were collected using a self administered questionnaire in the same visit. Then Oral health education was given using a flip chart regarding the benefits of comprehensive dental care and various preventive and therapeutic procedures available for treating dental problems. After motivation, patient was given a questionnaire to know his perception about comprehensive dental care. Treatment for chief complaint was started on the initial dental visit and was observed whether the patient will be undergoing treatment for all the findings in the oral cavity in the next 3 months.

STATISTICAL ANALYSIS

Data was processed and analyzed using the SPSS software version 20; Test of significance used was Mc Nemar marginal Homogeneity test⁶ as this tests the significance of difference in categorical responses in repeated measurements (before vs. after an intervention) on a sample. Significance is assessed at 5% level of significance.

RESULTS:

Among 30 subjects, 6(20%) subjects underwent treatment only for chief complaint, 20(66.6%) subjects underwent treatment not only for chief complaint but also for other oral problems and 4(13.3%) subjects underwent entire comprehensive treatment.

Out of 30 subjects, before motivation 20(66.6%) subjects felt that there is relationship between oral and general health, 8(26.6%) subjects did not feel, 2(6.6%) subjects said that they don't know whether relationship exists or not. After motivation 28(93.3%) subjects felt that there is relationship and 2(6.6%) subjects said that

they don't know whether relationship exists or not. There is a significant difference in the response after motivation. (p=0.05)

Before motivation 8(26.6%) subjects said that lack of time was an obstacle for getting the treatment done, 10(33.3%) subjects said that lack of awareness was an obstacle, 6(20%) subjects said that distance from hospital to home was an obstacle and 6(20%) subjects said that cost was an obstacle. After motivation 2(6.6%) subjects said that lack of time was an obstacle for getting the treatment done, 2(6.6%) subjects said that lack of awareness was an obstacle, 6(20%) subjects said that distance from hospital to home was an obstacle, 4(13.3%) subjects said that cost was an obstacle and 16(53.3%) subjects said that nothing is an obstacle for getting the treatment done. There is a significant difference in the response after motivation. (p<0.01).

Out of 30 subjects, before motivation 6(20%) subjects were aware of the preventive treatments available for oral care and 24(80%) subjects were unaware. After motivation 28(93.3%) subjects were aware of the preventive treatments available for oral care and 2(6.6%) subjects were unaware. There is a significant difference in the response after motivation. (p<0.01).

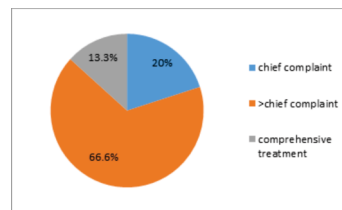


Figure 1: Distribution of subjects according to the treatment undertaken

TABLE 7: DIFFERENCE BETWEEN PRE AND POST RESPONSES

	Pre treatment (%)	Post treatment(%)	P value
11)Do you think there is relation between oral and general health?			
Yes	20(66.6)	28(93.3)	0.05
No	8(26.6)	-	
Don't know	2(6.6)	2(6.6)	
14)What are your obstacles for not getting the treatment done			
lack of time	8(26.6)	2(6.6)	<0.01
lack of awareness	10(33.3)	2(6.6)	
distance from hospital to home	6(20)	6(20)	
Cost	6(20)	4(13.3)	
No obstacles	-	16(53.3)	
15)Are you aware of the preventive treatments available for oral care			
Yes	6(20)	28(93.3)	<0.01
No	24(80)	2(6.6)	

DISCUSSION:

Some patients repeatedly cancel their appointments or discontinue their treatments at a certain point such as improvement of chief complaint and symptoms. This can be seen, in spite of some diseases need to be treated or incomplete treatments from professionals' viewpoint. In medical as well as dental settings, missed appointments and no shows, or treatment discontinuation will be adverse clinical outcome at many healthcare facilities, and cause to affect patients' health or to increase risk factors of recurrence.

The determinants as to appointment failures were classified into four factors by Oppenheim in 1969: process, patient, provider, and

environment in medical fields. The process includes the administrative elements: scheduling, office waiting time, and adjusting appointment interval. Patient factors mean communication problems: misunderstanding or forgetfulness for appointment date and time, preparing babysitters, language or cultural differences. Providers involve factors urging patients to keep their appointments continuously. Environment affecting appointment failures includes weather, time of day, and parking.

The past studies have suggested causes and solutions for missed appointments.^{7,14} The background of patients' forgetting for missed appointments may contain some elements such as individual value of teeth and treatments or preference, though forgetfulness is reported as the most frequent reason. So if the perception of patient can be changed regarding the importance of teeth and dental treatments, forgetfulness can be replaced by regular dental attendance which in-turn leads to healthy oral cavity and healthy body. Motivation can be helpful in changing the perception of the patients. Thus the present study aimed to evaluate the effect of motivation on patient to undergo comprehensive dental care.¹⁵

In the present study, protection motivation theory has been utilized in order to change the perception of the individuals regarding oral health and the importance of comprehensive dental care. In a study conducted by Leila Ghahremani et al¹⁶ educational intervention based on the protection motivation theory is highly effective in promoting malaria preventive behaviors..

So the following components are included in the flip chart to motivate the patient. the benefits of comprehensive dental care, systemic and local effects of dental neglect, what are the different dental problems, how they look like, what happens if they are not treated, what are the preventive and therapeutic treatments available for them. Among these components, systemic and local effects of dental neglect and what happens if oral diseases are not treated are given more emphasis. In a study conducted by Yuri WC et al¹, a Comprehensive Dental Care Protocol was used to evaluate its effect on oral health condition of Primary care users and they found it to be beneficial.

For the following questions: Do you think there is relation between oral and general health; What are your obstacles for not getting the treatment done; Are you aware of the preventive treatments available for oral care, there was significant difference in the response before and after motivation. Out of 30 subjects 4(13.3%) subjects underwent complete comprehensive treatment, 20(66.6%) subjects underwent other treatments along with chief complaint but not all the treatments and 6 (20%) subjects underwent treatment only for chief complaint.

In a study conducted by Yuri WC et al,¹ 20 received basic discharge, 6 remained under care, and 6 did not complete the established phases of the Comprehensive dental care. The combination of curative-restorative and preventive-promotional measures, as well control and periodic evaluation of the oral environment, represented the means to achieve basic discharge for users in this study. In this study financing was from Government, but for the present study no financial help was received by the subjects.

By undergoing comprehensive dental care patient can minimize the future expensive and time taking dental treatment. As most of the patients only opt for treatment for chief complaint in regular practice, by giving motivation, we can convince them to undergo at least few other required treatments if not comprehensive treatment.

CONCLUSION:

There was an improvement in the perception on oral health following the intervention i.e., motivation. Before motivation all the subjects mentioned one or the other reason as an obstacle for getting the comprehensive treatment. After motivation 53.3% subjects changed their perception and mentioned that nothing was

an obstacle. The difference was statistically significant. Before motivation, only 20% of the subjects were aware of the preventive treatments available for oral health, after motivation 93.3% of them became aware of the preventive treatments. The results of the present study demonstrated that motivation based on Protection Motivation Theory using flip chart helps to change the perception on comprehensive dental care and enables the patient to undergo other required oral treatments along with chief complaint

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