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Research Article

"Adaptations in Oral Health Services During the Covid-19 Pandemic in Major Dental Hospitals and By Dental Practioners of Patna: A Grounded Theory and Collaborative Research"

Dr. Rachna Raj[1], Dr. (Professor and head) Minti Kumari[2], Dr. (Professor and head) Vikas Vaibhav[3*]

[1]PhD Scholar, Aryabhatt Knowledge University, Patna, Bihar, Email - rachna.raj09@gmail.com, Phone numbers: 07765958149
[2]MDS, Dept of Public Health Dentistry, Patna Dental College and Hospital, Patna, Bihar
[3*]MDS, Dept. of Prosthodontics, Principal, Rahui Dental College and Hospital, Bihar Sharif, Nalanda, Bihar

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ABSTRACT

The aim of this study was to analyze oral health actions in Dental Practioners, dental PG students and oral health technicians and assistants, In Major Dental Hospitals Of Patna during the COVID-19. The first sample group consisted of 14 professionals from Major Dental Hospitals (dental PG students, oral health technicians, and oral health assistants), and the second group consisted of five, Dental Practitioners of Patna adding together 19 participants. Subsequently, collaborative research was performed, and was applied to analyze adaptations acquired by them in respect to COVID-19. The study provides a framework for analyzing actions for coping with the pandemic regarding oral health services. Actions were identified in all dimensions of the model: acceptance of COVID-19 vaccine; Knowledge for biosafety care standards; Participation in training program for COVID-19; quarantine activity. The oral health care management framework can serve as a reference for redesigning oral health actions and services in dental hospitals and clinics during the COVID-19 pandemic, in a broader perspective.

Keywords: Covid-19, Oral health, Dental Practioner, Dental PG students, Oral health technicians and assistants

INTRODUCTION

The COVID-19 pandemic had a direct impact on the planning and delivery of oral health services, dental education programs, and on dentistry industry.[1-3]
The Sars-Cov-2 virus can spread directly through inhalation or mucous membrane exposure to infected droplets in dental clinics, or indirectly through contaminated surfaces. Aerosols are produced in dental clinics where dental treatments are conducted due to direct or indirect transmission, as well as the fact that a significant number of asymptomatic people can disseminate the virus.
Since there is a recognized high risk of disease transmission in these areas, stringent infection control procedures must be implemented to prevent the potential for cross-infection between patients and oral health providers.[1,4]
Government legislation and numerous scholarly publications (articles, guidelines) have been released that provide advice for biosafety in oral healthcare services.[5,6,7]
Due to the suspension of elective care and the limitation of medical operations to emergency care, access to oral healthcare services was drastically reduced at the start of the pandemic.[8]Therefore, a system that responds to circumstances that raise people's risk or vulnerability to diseases and illnesses is necessary for the efficient management of healthcare.

MATERIALS AND METHODS

This cross sectional study was conducted in two stages in one of the major dental colleges of Patna, with a qualitative approach.
Dental PG students in Major Dental Hospitals Of Patna, oral health technicians, oral health assistants and Dental practitioners of Patna with experience and knowledge in oral health care management were invited to participate in the composition of sample groups.
The first sample group consisted of 14 professionals from Major Dental Hospitals (dental PG students, oral health technicians, and oral health assistants), and the second group consisted of five, Dental practitioners of Patna adding together 19 participants.

The informed written consent was taken from the participants.
The first stage of study dealt with the development of a theoretical-empirical model on the significance of oral healthcare management based on Grounded Theory Method (GTM), in the Straussian perspective[9] taken to address the COVID-19 pandemic.
To develop the theoretical model, data was collected through semi-structured interviews and questionnaire from the individual participants from, at a time and place chosen by the participant.
In the second stage, joint research was carried out with participants along with (data collection and analysis) and dissemination of results[10], in which the model on oral healthcare management was applied with written analysis of the records then currently present regarding the actions taken to manage the COVID-19 pandemic.
Relationships were established, between the answers provided by the participants among the categories, considering the components of the Strauss and Corbin paradigmatic model[11]: in relation to cause, intervening conditions, action strategies and consequence of Covid-19 as the main components.
Structured systematic analysis[9] was performed, and an in depth analysis of the questionnaire was done, according to the answers given by the participants, using the coding strategy (open, axial, and selective).

Inclusion criteria- Practicing dentist, dental PG students, oral health technicians, and oral health assistants from Major Dental Hospitals Of Patna, who were willing to participate in the study.

Exclusion criteria- Individuals not willing to participate in the interview and questionnaire

RESULT:

Table 1:
Describes the group wise distribution of the participants.

Table 1: Group Wise Distribution of Participants

s. no.	Sample Group	No. of Participants
1	Dental PG students, oral health technicians, oral health assistants	14
2	Dental Practioner's Of Patna	5

Table 2:
As a result of the first stage of the study, the theoretical-empirical model on oral healthcare management was composed of seven analytical categories, divided into five dimensions

Table 2: Dimensions And Category Of The Analytical Model With Code Examples For Oral Healthcare Management In Coping With The Pandemic Of Covid-19 In A Major Dental Hospital And Dental Clinics Of Patna 2021

Major Division for Analytical Model(Dimensions)	Sub-Division For Analytical Model(Category)	Codes example For Data Collection
Context	Guidelines from Major Govt. Dental hospital	1) Suspension of services due to risk . 2) Restriction for emergency treatments only
Cause	Inserting oral health in primary care	1) Search information to minimize impact of pandemic for dentist and his patient. 2) Creation of protocols as per need
Interposing Conditions	Promoting interdisciplinary actions	1) Participation of dentists and DHW to monitor suspected or confirmed cases in the COVID-19 screening center.
	Integrating teaching and	1) The importance of virtual teaching and communication between professors and

	service	students
Action Strategies	Ensuring access to oral healthcare	1) Care restricted to pregnant women and emergency care for patients with chronic illnesses.
	Organizing the work process	1)Professionals tested positive for COVID-19 were quarantined or not
Consequences	Performing actions in the field of dentistry	1) emergency treatments only 2) Acceptance of COVID-19 vaccine

1. The context of oral healthcare management

(a) Observing Guidelines from major Govt. Dental hospitals In The Pandemic

The obtained documents showed that this research model is in agreement with Guidelines of major Govt. Dental hospitals, with certain challenges faced in putting them into practice. In this suspension of actions and services due to the infection risk, limitation to dental services along with treatment for emergency cases only was included.

2. The Cause

(a) The insertion of oral health care in primary care

The documents data collected showed that, the physical layout of the Dental Clinics were modified as to maintain distance among visiting patients and staff, and the dental health teams were better integrated and supported by the medical and nursing teams, who started to handle other tasks at the major dental hospitals of Patna. Data analysis revealed different experiences according to the management and financing capacity of the dental clinics and major dental hospitals in this respect.

3. Interposing Conditions

(a) Promoting interdisciplinary actions of Oral healthcare services

The obtained documents showed that due to the pandemic, DHW team was integrated with specialists from various fields with common goals.

Techniques were used to restructure training so that DHW could work together to receive, screen, and monitor suspected or confirmed COVID-19 patients as well as provide care at screening facilities.

(b) Integrating Teaching and Service

The obtained documents showed that teaching-service combination was absent in internships and the undergraduate dental students reported that these activities had been suspended.

4. Action strategies for oral healthcare management:

(a) Ensuring Access To Oral Health Care

The obtained documents revealed that the pandemic significantly reduced patient's access to oral health services, due to the fact that optional dental care was suspended or restricted to pregnant women and emergency care for patients with chronic illnesses. Consultations with the Dentist and Dental hospitals were also initially suspended and restricted due to concern regarding aerosol-generating procedures leading to the spread of the virus. The services were later resumed partially and gradually, based upon the biosafety for users and professionals.

The documents also revealed the disproportion between Dental clinics, and incomplete oral health teams (i.e., no oral health assistant) which did not allow proper management of oral healthcare.

(b) Organizing the work place for the Pandemic

The obtained observed documents revealed that Dental health care workers who were tested positive for COVID-19 were quarantined.

The documents also revealed that measures to prevent crowding of users in waiting rooms and reduced contact between COVID-19 symptomatic and asymptomatic patients were also been taken.

5. The consequence of changes in routine of oral healthcare

(a) Performing actions in the field of dentistry

The obtained documents also revealed that Dental care was reorganized in response to the pandemic. There was a change in routines with focus on COVID-19 which included, previously screened urgent and emergency care, application of minimally invasive dentistry techniques, and reinforcement of strict biosafety protocols, with the acceptance of COVID-19 vaccine in large number.

DISCUSSION

This study analyzed a series of actions in the fight against the COVID-19 pandemic by promoting oral healthcare in dental clinics.
The model's structure made it possible to examine the information included in the documents for the dentist and dental health care workers regarding their services. Every model dimension identified methods to counteract the pandemic for the management of oral health care.
Our model identifies the performance and points out certain difficulties faced in their practical approach as per the instructions provided by major Govt. Dental hospitals, reflecting a conflict between intentions and realities in the organization of oral healthcare.

The literature has highlighted the fact that the pandemic acclaims to reconsider the work of Dentist and Dental health care workers.[12,13]
Restoring the preventive approach, risk of developing of oral diseases, and talking about these obstacles within the oral healthcare system are all necessary.
According to the literature, the Pandemic situation gives a chance to refocus dental practices on the preventative approach[14], reconsider dentistry's future, and talk about the shortcomings of the healthcare system.[2,14,15]
Our Study can be considered important as it demonstrates how the theoretical mentions and practical performance may be coordinated and how their actions can benefit the general public and the dentists.
The text discusses the impact of restricting dental care to urgent cases only. This restriction has led to decreased access to dental care. The sudden need to stop elective dental procedures highlighted the importance on individual clinical operations. To address this, priority measures were quickly implemented and documented in scientific literature, government documents, and global agreements. These measures successfully limited the spread of the virus and reduced the risk of occupational injury for dental care providers.[16,17]
The text emphasizes the importance of including dentists in the workforce during global health crises due to their training and skills. It highlights the challenges in integrating and coordinating oral healthcare across different levels of the healthcare system, which became more apparent during the COVID-19 pandemic.[18]
The effectiveness of healthcare systems in providing comprehensive care depends on their implementation and operation. Even before the pandemic, issues like inadequate personnel and management challenges affected oral healthcare quality and coordination.
The pandemic exacerbated difficulties in providing comprehensive dental care in private dental clinics and major dental hospitals, as well as in conducting educational and preventive health activities. Strategic use of online consultations in public oral health services has been well-documented and has become a key approach for restructuring remote dental care practices during the pandemic.[15,19,20]
The DHCW were also organized to provide information by phone, and text messages. In this way, guidelines on COVID-19, health in general (including oral health) and psychological guidelines for health professionals were fulfilled.[19,20]
The reduction of clinical work due to restrictions on clinical visits led to dentists becoming involved in actions going beyond clinical activities. For example, They also posted information on the topic on social networks and other media.[20]
There were certain restrictions in our study: firstly the choice of the dentist participating could have limited the results in various aspects so as to apply the results practically in a broader aspects
In order to improve models of this type, it is recommended that such researches should be done with more complete theoretical frameworks on oral healthcare management.

CONCLUSION

Our study identified measures to address the COVID-19 pandemic in most of the aspects of oral healthcare management model. These measures confirmed, highlighted, or revealed issues in the administration of oral health care. The lack of access to preventive measures and optional dental care resulted in a decrease in dental treatments and assurance of biosafety assistance. Loss of enthusiasm in the dental health workers and dentists was observed for the treatment of patients by adapting to the special services as instructed by the authorities. Redesigning the oral healthcare management for the benefit of oral health services at the local level during the COVID-19 pandemic like situations is the need of the hour.

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