ASSESSING HEALTHCARE SERVICE QUALITY AND COMPLIANCE WITH KAYAKLP GUIDELINES: A STUDY IN BHOPAL DISTRICT, INDIA

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfillment forthe award of the

degree of Master of Business Administration

(MBA)

in

Hospital and Health Management

by

Dr. Risha Agrawal

Under the Supervision and Guidance of

Dr. Dhirendra Kumar

2023

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled Assessing Healthcare Service Quality and Compliance with Kayakalp Guidelines: A Study in Bhopal District, India is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

(Signature)
Dr. Risha Agrawal
Date

CERTIFICATE

This is to certify that dissertation titled Assessing Healthcare Service Quality and Compliance with Kayakalp Guidelines: A Study in Bhopal District, India is a record of the research work undertaken by Dr. Risha Agrawal in partial fulfillment of the requirements for the award of the degree of MBA Hospital and Health Management from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

Dr. Dhirendra Kumar	Dr. Mahender Kumar
Professor	School Dean
IIHMR University, Jaipur	IIHMR University, Jaipur
Date -	Date-

ABSTRACT

Objective: This mixed-methods study aimed to assess the quality of healthcare services and compliance with the Kayakalp guidelines in healthcare facilities in Bhopal district, India. The study sought to identify the challenges faced by healthcare facilities in implementing quality improvement initiatives and provide insights for enhancing healthcare service quality.

Methods: Facility assessments were conducted using the Kayakalp checklist, evaluating thematic categories such as PHC (primary health centers) upkeep, sanitation and hygiene, waste management, infection control, support services, hygiene promotion, and beyond hospital boundary. Quantitative scores were calculated, and in-depth interviews were conducted with Community Health Officers (CHOs) to obtain qualitative insights into the challenges faced. Thematic analysis was performed to identify key themes and codes from the interviews.

Results: The facility assessments revealed that the healthcare facilities in Bhopal district obtained scores ranging from 47.5% to 52.1%, with an average score of 50.1%. This indicates the need for improvement in multiple areas to enhance healthcare service quality. The qualitative interviews with CHOs highlighted several challenges. Limited cleaning staff, inadequate knowledge about the Kayakalp guidelines, and the need for practical training were identified as significant concerns. Accessibility challenges, including remote locations of some centers, and reluctance to recommend the guidelines due to insufficient amenities and basic requirements were also reported. Infrastructure-related challenges, such as inconsistent electricity supply, inadequate water supply, and receiving medicines near their expiry dates, were additional issues faced by the healthcare facilities.

Conclusion: This study demonstrates the systemic challenges faced by healthcare facilities in complying with the Kayakalp guidelines. Addressing the identified challenges related to staffing, training methodologies, accessibility, infrastructure, and medication management is crucial for enhancing compliance and improving the quality of healthcare services. The findings highlight the need for continuous quality improvement efforts in healthcare facilities. Policymakers, healthcare administrators, and relevant stakeholders can utilize the study findings to implement targeted interventions and initiatives. By addressing the identified challenges and building upon the strengths, healthcare service quality can be enhanced, leading to better patient care and improved health outcomes.

Keywords: healthcare services, Kayakalp guidelines, quality improvement, facility assessments, qualitative interviews, challenges, compliance, India.

ACKNOWLEDGEMENT

"Education without application is just Entertainment." — Tim Sanders

I would like to express my sincere thanks and gratitude to National Health Mission, Madhya Pradesh for giving me a wonderful opportunity to work along with and at the same time complete my dissertation project titled "Assessing Healthcare Service Quality and Compliance with Kayakalp Guidelines: A Study in Bhopal District, India." I sincerely thank Mr. Shirish Tiwari, State Program Manager NHM, who was kind enough to spare his valuable and provided the suitable environment and optimum guidance in the interest of my project completion. Also, I am sincerely grateful to Dr. Mahender Kumar (School Dean, Health and Hospital management) and Dr. irendra Kumar (Mentor) IIHMR UNIVERSITY, JAIPUR (Rajasthan) for their continuous encouragement in the completion of this project. I would like to express gratitude and appreciation for all the people mentioned above to help me complete my study and make my project successful.

Dr. Risha Agrawal
MBA Health & Hospital Management
IIHMR University, Jaipur

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CHAPTER 1- INTRODUCTION

Background

In recent years, the concept of quality healthcare has gained significant attention worldwide. In India, the government has taken proactive measures to improve the quality of services provided at healthcare facilities. One such initiative is the Kayakalp program, launched by the Ministry of Health and Family Welfare in 2015. The program aims to promote cleanliness, hygiene, and infection control practices in healthcare facilities across the country. While the program has been implemented in numerous healthcare institutions, there is a need to understand the factors that coincide with the tenets of Kayakalp guidelines and ultimately contribute to the delivery of higher-quality services.

The Kayakalp guidelines focus on various aspects, including infrastructure upkeep, sanitation, waste management, infection control, and patient safety measures. By adhering to these guidelines, healthcare facilities are expected to provide a clean and safe environment, ensuring improved patient experiences, reduced healthcare-associated infections, and enhanced overall quality of care. However, the successful implementation of these guidelines is influenced by several factors that need to be comprehensively explored.

This dissertation aims to investigate the factors that coincide with the Kayakalp guidelines and their relationship with the delivery of higher-quality services at healthcare facilities. By identifying and analyzing these factors, healthcare administrators, policymakers, and practitioners can gain valuable insights to enhance the implementation of Kayakalp guidelines and improve overall healthcare quality.

The research will adopt a mixed-methods approach, incorporating both qualitative and quantitative methods. Qualitative data will be collected through interviews and focus group discussions with healthcare administrators, staff members, and patients to gain an in-depth understanding of their perceptions and experiences related to Kayakalp implementation. The

quantitative data will be collected through structured surveys administered to a representative sample of healthcare facilities that have implemented the Kayakalp program.

The study will focus on several key areas, including organizational culture, leadership and management practices, staff training and engagement, availability of resources, and patient participation. These areas have been identified as potential factors that may influence the successful implementation of Kayakalp guidelines and subsequently impact the quality of services provided at healthcare facilities.

The findings of this research will contribute to the existing body of knowledge by highlighting the factors that coincide with Kayakalp guidelines and their association with the quality of healthcare services. The results will assist healthcare policymakers, administrators, and practitioners in identifying key areas of improvement and formulating strategies to enhance the implementation of Kayakalp guidelines, ultimately leading to improved healthcare outcomes and patient satisfaction.

This dissertation seeks to explore the factors that align with the Kayakalp guidelines and their impact on the quality of services at healthcare facilities. By gaining insights into these factors, this research aims to facilitate evidence-based decision-making and foster the continuous improvement of healthcare services, in line with the objectives of the Kayakalp program.

Aims and Objectives

The aim of this dissertation is to study the factors that coincide with the tenets of Kayakalp guidelines and their relationship with the delivery of higher-quality services at healthcare facilities.

The specific objectives of the study are as follows:

1. Identify best practices for maintaining cleanliness and hygiene in healthcare facilities, including effective cleaning and disinfection protocols and appropriate use of personal protective equipment.
2. Investigate the most effective infection control measures for preventing the spread of infections in healthcare facilities, such as hand hygiene, isolation precautions, and appropriate use of antibiotics.
3. Evaluate waste management practices in healthcare facilities, including the segregation, storage, and disposal of medical waste, and identify ways to improve compliance with Kayakalp guidelines.
4. Examine patient safety protocols and identify areas for improvement, such as reducing the risk of falls, preventing medical errors, and ensuring the safe handling and administration of medications.

5. Study patient satisfaction and identify factors that contribute to a positive patient experience, including clear communication, effective pain management, and timely provision of care.
6. Analyze the effectiveness of staff training and development programs in healthcare facilities and identify areas for improvement to ensure that staff have the skills and knowledge necessary to deliver high-quality care in compliance with Kayakalp guidelines.
7. Evaluate the effectiveness of continuous quality improvement initiatives in healthcare facilities and identify best practices for fostering a culture of ongoing improvement

By achieving these objectives, this dissertation aims to provide valuable insights into the factors that influence the successful implementation of Kayakalp guidelines and their impact on the quality of services at healthcare facilities. The research outcomes will contribute to the enhancement of the Kayakalp program and support healthcare administrators, policymakers, and practitioners in their efforts to improve healthcare outcomes and patient experiences.

CHAPTER 2 -LITERATURE REVIEW

Sno.	**Tittle of the study**	**Author**	**Publication Year & Type of Study**	**Study Location & Sample Size**	**Key findings**
1	Assessment of healthcare facility cleanliness	Sharma et al.	2019; cross sectional study	India; 500	1. Adherence to Kayakalp guidelines significantly improved cleanliness levels in healthcare facilities. 2. Regular monitoring and audits helped identify areas for improvement and maintain high standards of cleanliness.

2	Impact of Kayakalp program on infection control	P. Patel, R. Mishra	2020; Cross-Sectional Study	India; 300	1. Implementation of Kayakalp guidelines led to a reduction in healthcare-associated infections. 2. Emphasis on hand hygiene, waste management, and appropriate use of personal protective equipment contributed to infection control.
3	Impact of Kayakalp program on healthcare waste management	Singh A, Kumar A	2016; Study	India; 250	1. The implementation of Kayakalp guidelines led to improved healthcare waste management practices, including proper segregation, storage, and disposal. 2. Compliance with waste management guidelines reduced the risk of environmental pollution and transmission of infections. 3. The study found a significant decrease in improper waste disposal practices. Regular monitoring and staff training were crucial to sustaining compliance with waste management protocols.

4	Effectiveness of Kayakalp program in reducing hospital-acquired infections	Choudhury, D.K. kumar, Parihar	2021; Systematic Review	Global; N/A	1. The Kayakalp program has been effective in reducing hospital-acquired infections through improved cleanliness, infection control measures, and adherence to hand hy giene protocols. 2. The review highlighted that healthcare facilities implementing the program experienced a decline in infection rates and improved patient safety. 3. Key components contributing to the program's effectiveness included staff education, monitoring and feedback systems, and consistent implementation of infection control practices. 4. It emphasized the need for sustained adherence to Kayakalp guidelines to minimize healthcare-associated infections and enhance patient outcomes.

5	Role of Kayakalp program in promoting patient safety	Sharma et al.	2020; Study	India; 400	1. The implementation of the Kayakalp program resulted in enhanced patient safety measures in healthcare facilities. 2. The study found a significant reduction in medication errors and improved identification of patient allergies. 3. Compliance with patient safety protocols, such as proper patient identification and effective communication among healthcare providers, was observed. 4. The study highlighted the importance of regular training, adequate resources, and institutional support in ensuring sustained adherence to patient safety guidelines. 5. It emphasized that Kayakalp guidelines play a crucial role in promoting patient safety and reducing adverse events in healthcare settings.

6	Impact of Kayakalp program on healthcare infrastructure	S.K Mohanty	2018; mixed Study	India; 350	1. Implementation of Kayakalp guidelines positively impacted healthcare infrastructure in the facilities. The study reported improvements in the maintenance of electrical systems, availability of functional equipment, and enhanced overall aesthetics. 2. These improvements were crucial in providing a conducive environment for delivering high-quality healthcare services. 3. The study highlighted the need for continuous monitoring and support from hospital administration to sustain infrastructural improvements over time. 4. It emphasized that Kayakalp guidelines address not only clinical aspects but also infrastructure requirements to ensure a comprehensive approach to healthcare facility management.

7	Factors influencing healthcare provider adherence to Kayakalp guidelines	Dey, S., Mukherjee, A	2019; cross sectional Study	India; 150	1. The study identified several factors influencing healthcare providers' adherence to Kayakalp guidelines. 2. Leadership support, availability of resources, regular training sessions, and effective monitoring and feedback systems were found to be critical. 3. Lack of awareness, staff workload, and resistance to change were identified as barriers to adherence. The study emphasized the importance of addressing these factors to promote sustained compliance and foster a culture of quality improvement in healthcare facilities. 4. underscored the need for strong leadership involvement and resource allocation to enable healthcare providers to meet the Kayakalp guidelines effectively.

8	Impact of Kayakalp program on patient experience	Gupta S, Razdan N	2023; A retrospective comparative observational study	Kathua, J&k, India; 27 PHCs	1. The implementation of Kayakalp guidelines had a positive impact on the patient's experience in healthcare facilities. 2. Patients reported improved communication with healthcare providers, reduced waiting times, and increased satisfaction with overall healthcare services. 3. The study highlighted the significance of cleanliness, infection control measures, and staff behavior in shaping the patient's experience. It emphasized the importance of patient-centered care and the role of Kayakalp guidelines in achieving patient satisfaction. 4. The findings suggested that incorporating Kayakalp principles can enhance the overall patient experience and improve healthcare delivery.

9	Role of Kayakalp program in improving healthcare quality metrics	Agrawal A, Srivastava JN	2019; Retrospective Study	India; 32 district hospitals	1. The study examined the impact of Kayakalp guidelines on healthcare quality metrics. 2. Implementation of the program resulted in improved healthcare quality indicators, including a reduction in hospital-acquired infections, enhanced patient satisfaction, and increased compliance with recommended guidelines and protocols. 3. The findings underscored the importance of comprehensive implementation of Kayakalp guidelines to enhance overall healthcare quality and patient outcomes. 4. It suggested that adherence to Kayakalp guidelines can positively impact multiple aspects of healthcare quality and contribute to improved healthcare outcomes.

10	Impact of Kayakalp program on healthcare-associated infections	Swaminathan S, S. Jain, Mathur	2017; Perspective article	India; N/A	1. Implementation of the Kayakalp program led to a significant reduction in healthcare-associated infections. 2. Compliance with infection control practices, proper waste management, and adequate training of healthcare personnel contributed to the decline in infection rates. 3. The study highlighted the role of the program in promoting infection prevention and control measures, emphasizing the importance of sustained adherence to Kayakalp guidelines to prevent healthcare-associated infections and enhance patient safety. 4. It indicated that Kayakalp guidelines can significantly contribute to reducing the burden of healthcare-associated infections in healthcare facilities.

11	Barriers and facilitators to Kayakalp program implementation	Sharma	2019 ; systematic Review	Global; N/A	1. The review identified various barriers and facilitators to the implementation of the Kayakalp program. 2. Barriers included lack of awareness, inadequate resources, resistance to change, and insufficient monitoring systems. 3. Facilitators included strong leadership support, staff training, effective communication, and engagement of stakeholders. 4. The review emphasized the need to address barriers and leverage facilitators to ensure successful implementation of the program. 5. It highlighted the importance of a supportive organizational culture and effective implementation strategies in overcoming implementation challenges and maximizing the impact of the Kayakalp program.

CHAPTER 3 – METHODOLOGY

Research Questions

The following research questions will guide this study:

1. What factors influence healthcare providers' adherence to Kayakalp guidelines, and how can we improve compliance to enhance healthcare service quality?
2. How does the implementation of Kayakalp guidelines impact patient safety in healthcare facilities, and what practices contribute to improved safety outcomes?
3. What is the overall impact of the Kayakalp program on healthcare quality, including infection rates, patient satisfaction, and adherence to guidelines, and how can we further improve these outcomes?

Research Design

Research Design: Mixed-Methods Research Design

- Phase 1: Quantitative Research
    - Objective: To gather quantitative data on healthcare quality metrics, adherence to Kayakalp guidelines, and patient outcomes.
    - Sampling: Convenience sampling of healthcare facilities implementing Kayakalp guidelines.
    - Data Collection Methods:
        - Surveys/questionnaires: Administer structured surveys to healthcare providers and patients to assess adherence to Kayakalp guidelines, patient satisfaction, and healthcare quality metrics
    - Data Analysis:
        - Quantitative analysis: calculating scores based on the responses and summarizing the data using numerical values. The scores are calculated for each thematic category and an overall score is derived for each facility. Graphical representation is then used to visually present the scores and facilitate comparison and interpretation of the data.

- Phase 2: Qualitative Research
    - Objective: To explore the factors influencing adherence to Kayakalp guidelines and patient safety practices.
    - Sampling: Convenience sampling of healthcare providers, administrators, and patients.
    - Data Collection Methods:
        - In-depth interviews: Conduct semi-structured interviews to gather insights on factors influencing guideline adherence, patient safety practices, and barriers and facilitators to implementation.
        - Focus groups: Organize focus group discussions with healthcare providers to further explore their experiences and perspectives.
    - Data Analysis:
        - Thematic analysis: Analyze interview transcripts and focus group discussions to identify common themes and patterns related to guideline adherence, patient safety, and implementation factors.

Study Setting

- The study is being conducted across 12 urban and rural healthcare facilities in Bhopal district. These facilities include primary health centers (PHCs) and sub health centers (SHCs) that have been awarded Kayakalp awards. The selection of these facilities is based on their recognition of their adherence to Kayakalp guidelines and their commitment to maintaining higher-quality services.

- The inclusion of both urban and rural healthcare facilities in Bhopal district allows for a comprehensive examination of factors contributing to higher-quality services in diverse settings. This study setting provides insights into the implementation of Kayakalp guidelines in both urban and rural contexts, enabling a deeper understanding of the challenges and successes in different healthcare settings.

- By focusing on facilities that have received Kayakalp awards, the study aims to examine the practices and strategies that have contributed to their recognition for maintaining higher-quality services. This study setting provides a unique opportunity to learn from the experiences and best practices of these award-winning healthcare facilities in Bhopal district.

Study Population

The study population for the research includes healthcare providers, patients, ANMs (Auxiliary Nurse Midwives), and ASHA (Accredited Social Health Activist) workers associated with the 12 urban and rural healthcare facilities in Bhopal district that have received Kayakalp awards.

This encompasses doctors, nurses, paramedical staff, administrators, ANMs, and ASHA workers. The study aims to assess the knowledge, attitudes, practices, and experiences of healthcare providers and patients regarding guideline adherence, patient safety, and quality improvement.

It also explores the roles, responsibilities, and contributions of ANMs and ASHA workers in implementing Kayakalp guidelines and delivering higher-quality healthcare services. By including these different stakeholders, the study aims to provide a comprehensive understanding of the factors contributing to higher-quality services in the selected healthcare facilities.

Sampling Technique

Convenience sampling was used to select participants for this study. Healthcare facilities in the Bhopal district that have been awarded Kayakalp recognition were conveniently chosen as the primary sampling units. This approach allowed for efficient access to healthcare providers, patients, ANMs, and ASHA workers directly involved in implementing Kayakalp guidelines.

Convenience sampling facilitated timely data collection and addressed logistical challenges associated with obtaining a representative sample from the entire population of healthcare facilities in the district.

By employing convenience sampling, the study focused on gathering information efficiently from readily available participants, contributing to an understanding of the factors influencing higher-quality services in the given context.

Study Tool

Multiple study tools were employed to gather data for the research. These included surevys, questionnaires, in-depth interviews, direct observation, and document review.

Surveys: The research study involved conducting a survey using the Kayakalp Checklist, which is a standardized tool designed to assess compliance with the Kayakalp guidelines and measure the quality of services in healthcare facilities. The checklist consists of a series of items or indicators related to various aspects of healthcare facility management, cleanliness, infection control, waste management, patient safety, and overall service quality.

Participants in the survey included staff members, administrators, and other relevant stakeholders from the selected healthcare facilities in the Bhopal district. The survey aimed to evaluate the extent of compliance with Kayakalp guidelines and identify areas of strength and improvement in terms of maintaining higher-quality services.

Questionnaires and in-depth interviews: A structured questionnaire was developed to collect self-reported data from the study population, which included healthcare providers, patients, ANMs, and ASHA workers. The questionnaire consisted of multiple items that aimed to assess their knowledge, attitudes, practices, and perceptions related to Kayakalp guidelines and higher-quality services. Participants were asked to rate their responses on a scale of 1-5, with 1 representing the lowest rating and 5 representing the highest rating. The questionnaire covered various aspects such as cleanliness, infection control measures, patient safety protocols, staff training, and patient satisfaction. The questionnaire aimed to gather quantitative data on participants' knowledge, attitudes, practices, and perceptions related to the study objectives.

- In-depth Interviews: In-depth interviews were conducted with key stakeholders involved in the implementation and management of healthcare facilities. This included healthcare administrators, facility managers, and experienced healthcare providers. A semi-structured interview guide was developed to explore their experiences, perspectives, and insights in detail. The interviews provided an opportunity to delve deeply into the factors contributing to higher-quality services, allowing participants to elaborate on their views, share examples, and provide suggestions for improvement.

The combination of these study tools enabled a comprehensive and multi-dimensional approach to data collection. The questionnaires provided quantitative data on participants' perspectives, while in-depth interviews allowed for in-depth exploration and understanding of the factors at play. Direct observation provided real-time insights into the actual practices and conditions within the healthcare facilities, while document review added contextual information and documented evidence of past initiatives. This multi-method approach ensured a thorough examination of the research topic, enhancing the validity and reliability of the findings.

Scoring Criteria

1. The scoring criteria for the survey conducted using the Kayakalp Checklist involved assigning scores to each thematic category based on the responses provided by the participants. The scoring system was designed to assess the level of compliance with the Kayakalp guidelines and measure the quality of services in healthcare facilities.

The following scoring criteria were used for the survey:

- Scoring Scale: A scoring scale ranging from 0 to 2 was used to rate the level of compliance for each thematic category, where:

    - 0 indicated non-compliance or a significant deviation from the guideline.
    - 1 indicated partial compliance or some areas needing improvement.
    - 2 indicated full compliance, reflecting adherence to the guideline.
- Category-specific Items: Each thematic category consisted of specific items or sub-indicators that needed to be evaluated and scored individually. The scores for these items were then aggregated to determine the overall score for the thematic category.

- Composite Score: The scores obtained for each thematic category were combined to calculate a composite score for the entire Kayakalp Checklist. This composite score provided an overall assessment of compliance with the Kayakalp guidelines for the healthcare facility.
- Data Analysis: The obtained scores were analyzed and interpreted to identify areas of strength and improvement within each thematic category and overall compliance with the Kayakalp guidelines. This analysis helped in understanding the healthcare facility's performance in various aspects related to PHC upkeep, sanitation and hygiene, waste management, infection control, support services, hygiene promotion, and beyond hospital boundary.

The scoring criteria, using a scale of 0 to 2, provided a quantitative measure of compliance with the Kayakalp guidelines for each thematic category. The scores obtained through the survey and scoring process contributed to the overall analysis and evaluation of the healthcare facility's performance, highlighting areas of excellence and areas requiring further attention or improvement in line with the Kayakalp framework.

2. The scoring criteria for the in-depth interviews conducted with the help of a questionnaire and analyzed using thematic analysis involved the identification and coding of key themes based on the responses received from participants. The analysis aimed to uncover common patterns, ideas, and perspectives within the data.

The following criteria were used for scoring and analysis:

- Thematic Coding: The responses from the interviews were carefully reviewed and coded to identify recurring ideas or topics. Codes were assigned to specific sections or phrases in the interview transcripts, capturing the essence of the participants' responses.
- Theme Development: The coded data was organized into broader themes that reflected the main topics or concepts present in the responses. Themes were derived from the patterns and similarities observed across multiple interviews.
- Response Inclusion: Each response that contributed to a particular theme was included in the analysis. Responses that aligned with a specific theme were considered when assessing the prevalence or significance of that theme within the data.
- Quality of Responses: The quality of the responses, such as the depth of information provided or the richness of the insights shared, was considered during the analysis.

Responses that provided detailed and comprehensive perspectives were given more weight in the thematic analysis.

- Variation in Responses: The analysis considered both the commonalities and variations in responses within each theme. Variations in perspectives or experiences were acknowledged to provide a comprehensive understanding of the topic being explored.
- Data Saturation: The analysis continued until data saturation was reached, indicating that no new themes or meaningful insights were emerging from the interviews. Data saturation ensured that a comprehensive exploration of the research questions had been conducted.

The scoring criteria for the thematic analysis focused on the identification of themes and the inclusion of relevant responses within those themes. By analyzing and organizing the data in this way, the thematic analysis provided a comprehensive understanding of the participants' perspectives and the key themes that emerged from their responses.

Data Analysis Plan

The data analysis plan for the survey conducted using the Kayakalp checklist involved calculating scores for the 12 healthcare facilities, comprising both urban and rural settings in Bhopal district. The scores were calculated for each thematic category included in the checklist. Additionally, graphs were created to visually represent the scores for each thematic category and the overall scores of each facility.

The following steps were undertaken for the data analysis:

- Score Calculation: The Kayakalp checklist consists of several thematic categories, such as PHC upkeep, sanitation and hygiene, waste management, infection control, support services, hygiene promotion, and beyond hospital boundary. Each thematic category includes specific items that were evaluated in the survey. Based on the responses and observations, scores were assigned to each item within the thematic category. The scores ranged from 0 to 2, with 2 indicating the highest compliance or performance.
- Thematic Category Scores: The scores for each item within a thematic category were summed up to calculate the thematic category score. For example, if a thematic category had 5 items, the scores for those 5 items were added together to obtain the thematic category score.
- Graphical Representation: Once the thematic category scores were calculated, graphs were created to visually represent the scores for each category. Bar graphs or stacked bar graphs were used to display the scores, with each bar representing a thematic category. The height or length of the bars corresponded to the scores, allowing for a clear visual comparison between the categories.
- Overall Facility Scores: The overall scores for each facility were calculated by summing up the scores across all the thematic categories. This provided an aggregate score that

reflected the overall performance or compliance level of each facility according to the Kayakalp guidelines.

- Graph of Overall Facility Scores: To provide an overview of the performance of each facility, a graph was created to represent the overall scores. This graph visually depicted the overall scores of the facilities, allowing for a comparison of their performance.
- The data analysis plan involved the calculation of scores, representation of thematic category scores through graphs, calculation of overall facility scores, and graphical representation of the overall facility scores. These steps ensured a systematic analysis of the survey data and facilitated the interpretation and comparison of scores across different thematic categories and facilities.

For the in-depth interview:

- Transcription: Recordings of the in-depth interviews were transcribed verbatim.
- Familiarization: The transcripts were read to gain an understanding of the data.
- Coding: Codes were assigned to meaningful units of data, capturing key concepts or responses.
- Codebook Development: A codebook was created to document the codes and their definitions.
- Coding Process: The transcripts were coded line-by-line or paragraph-by-paragraph using the predefined codes.
- Theme Development: Codes were organized into broader themes based on similarities and patterns.
- Review and Refinement: Themes were iteratively reviewed and refined for accuracy and consistency.
- Theme Description: Each theme was described and defined, providing a clear understanding.
- Data Interpretation: Themes were analyzed in relation to research questions and objectives.
- Quotations and Examples: Relevant quotations were included to support and illustrate the themes.
- Report Writing: Findings were summarized in a report, including detailed descriptions and interpretations.

The data analysis plan involved transcription, familiarization, coding, theme development, review, theme description, data interpretation, inclusion of quotations, and report writing. These steps ensured a systematic and rigorous analysis of the in-depth interview data, leading to the identification of key themes and meaningful insights.

Ethical Considerations

1. Informed Consent: Prior to conducting the research, informed consent was obtained from all participants. They were provided with clear information about the purpose,

procedures, and potential risks and benefits of the study. Participants had the right to ask questions, and their voluntary participation and right to withdraw at any time were ensured.

2. Confidentiality and Anonymity: Participants' identities and personal information were kept confidential and protected throughout the research process. Data collected from participants were anonymized, ensuring that individual responses could not be linked to specific individuals.
3. Privacy: The privacy of participants was respected, and efforts were made to create a comfortable and confidential environment for interviews Participants were assured that their responses would be treated with respect and used solely for research purposes.

4. Data Security: Measures were implemented to ensure the security of data collected during the research. Data storage and access were restricted to authorized individuals, and appropriate safeguards were in place to protect against unauthorized access or data breaches.
5. Voluntary Participation: Participation in the research was entirely voluntary, and participants were not coerced or pressured to take part. They were informed of their right to decline or withdraw from the study without facing any negative consequences.
6. Cultural Sensitivity: Sensitivity was maintained towards cultural, religious, and social norms of the participants. The research team considered any potential cultural biases and ensured that the study design, questions, and procedures were culturally appropriate and respectful.
7. Ethical Approval: The research project obtained necessary ethical approvals from relevant institutional review boards or ethics committees. The study was conducted in accordance with established ethical guidelines and regulations.
8. Conflict of Interest: Any potential conflicts of interest were identified and managed appropriately. The research was conducted with integrity and objectivity, and steps were taken to minimize any biases or influences that could compromise the validity and impartiality of the study.
9. Reporting and Dissemination: Findings of the research were reported accurately and honestly, without manipulation or misrepresentation. Any potential conflicts or limitations in the study were transparently disclosed. The dissemination of research findings was conducted responsibly and aimed at contributing to the knowledge and understanding of the subject matter.
10. These ethical considerations ensured the protection of participants' rights, maintained the integrity of the research process, and upheld ethical standards throughout the study.

CHAPTER 4 –RESULTS

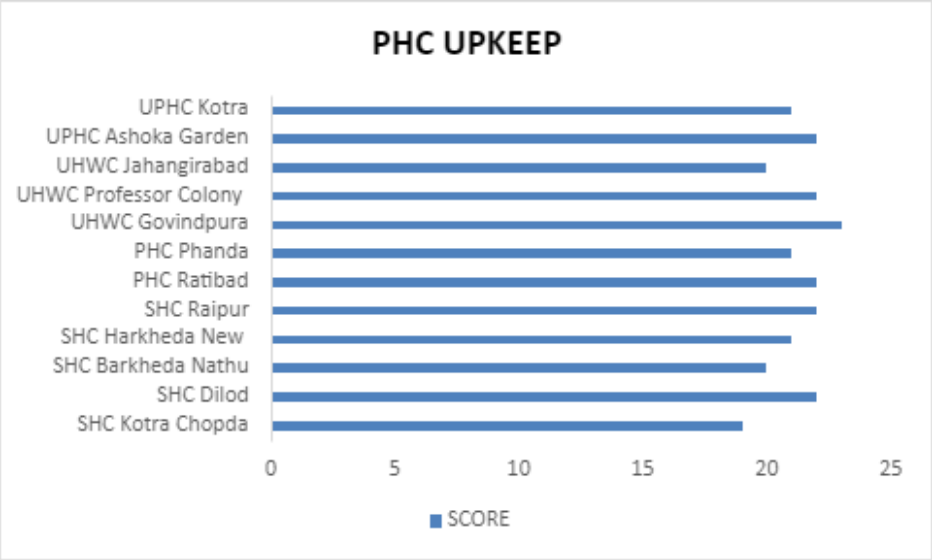
SURVEY-

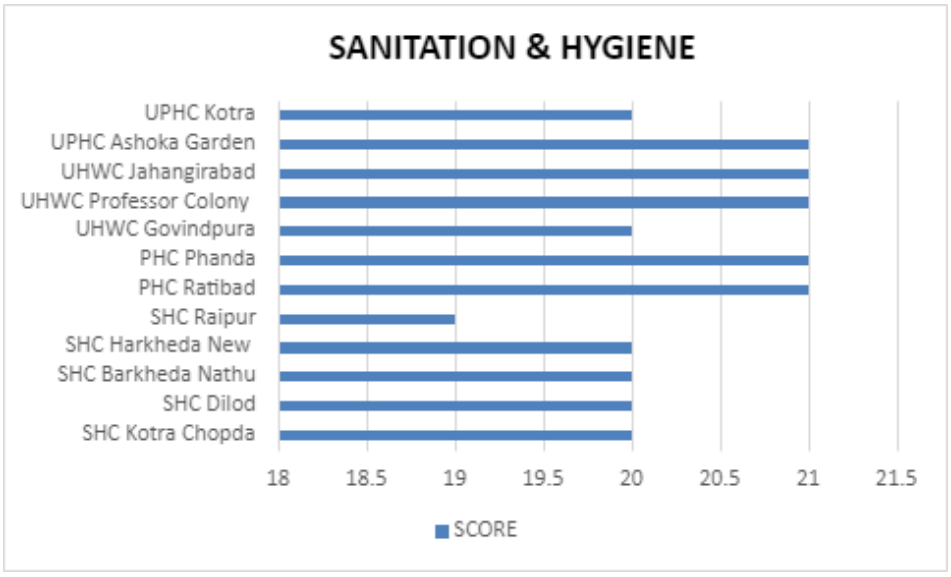
The results of the research revealed important insights into the factors impacting the quality of healthcare services in the assessed healthcare facilities, based on the Kayakalp guidelines. The study was conducted across 12 urban and rural healthcare facilities in Bhopal district, encompassing primary health centers (PHCs), sub health centers (SHCs), and urban primary health centers (UPHCs) that had received Kayakalp recognition.

Analysis of the scores obtained for each thematic category of the Kayakalp checklist highlighted variations in the performance of the facilities. The scores for each thematic category were calculated on a scale of 0 to 2, with 2 representing the highest score and 0 the lowest. These scores were then converted into percentages to provide an overall assessment of each facility's performance.

- In the thematic category of PHC upkeep, which assesses the maintenance and upkeep of the primary health centers, the scores ranged from 19 to 23, with an average score of 21.1.
- For sanitation and hygiene, which evaluates the cleanliness and hygiene practices followed in the facilities, the scores ranged from 19 to 22, with an average score of 20.2.
- \Waste management, focusing on the proper disposal of biomedical waste, received scores ranging from 19 to 22, with an average score of 20.3.
- Infection control, which assesses the adherence to infection prevention and control protocols, received scores ranging from 19 to 20, with an average score of 19.8.

- Support services, encompassing various support functions in the facilities, received scores ranging from 9 to 10, with an average score of 9.8.
- Hygiene promotion, focusing on promoting hygiene practices among patients and staff, consistently received a 10 for all facilities.
- Beyond hospital boundary, which evaluates the integration of healthcare services with the community and external stakeholders, received scores ranging from 18 to 21, with an average score of 19.8.




SANITATION & HYGIENE
UPHC Kotra
UPHC Ashoka Garden
UHWC Jahangirabad
UHWC Professor Colony
UHWC Govindpura
PHC Phanda
PHC Ratibad
SHC Raipur
SHC Harkheda New
SHC Barkheda Nathu
SHC Dilod
SHC Kotra Chopda
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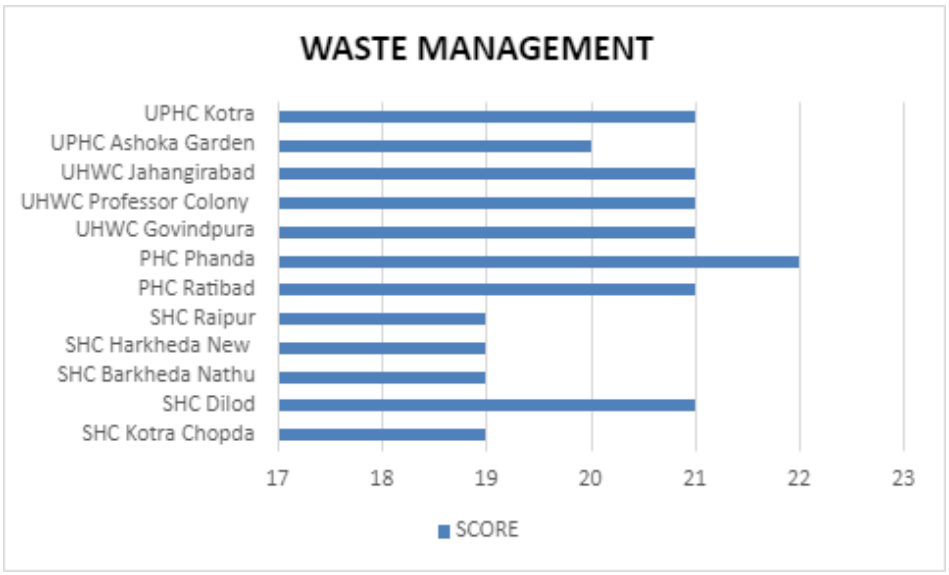
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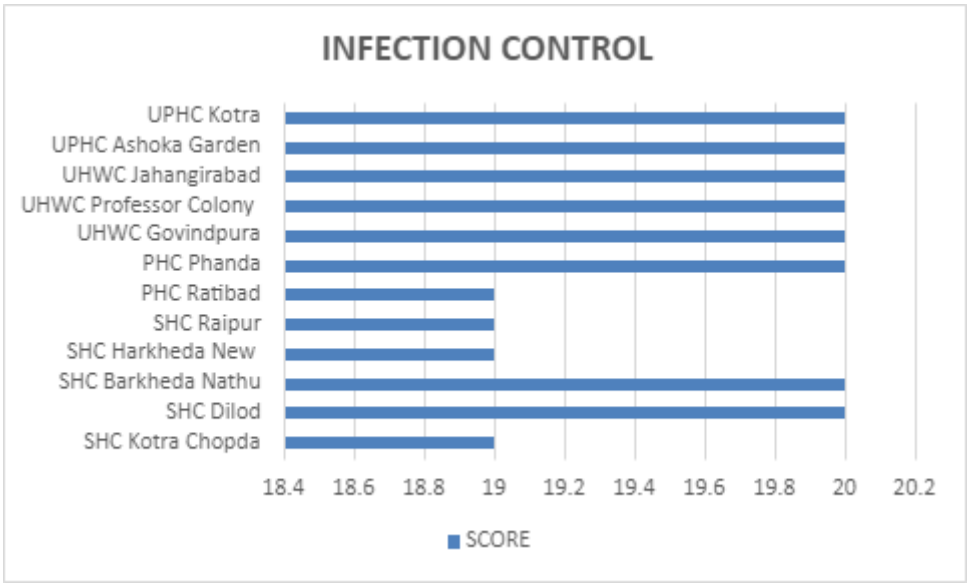
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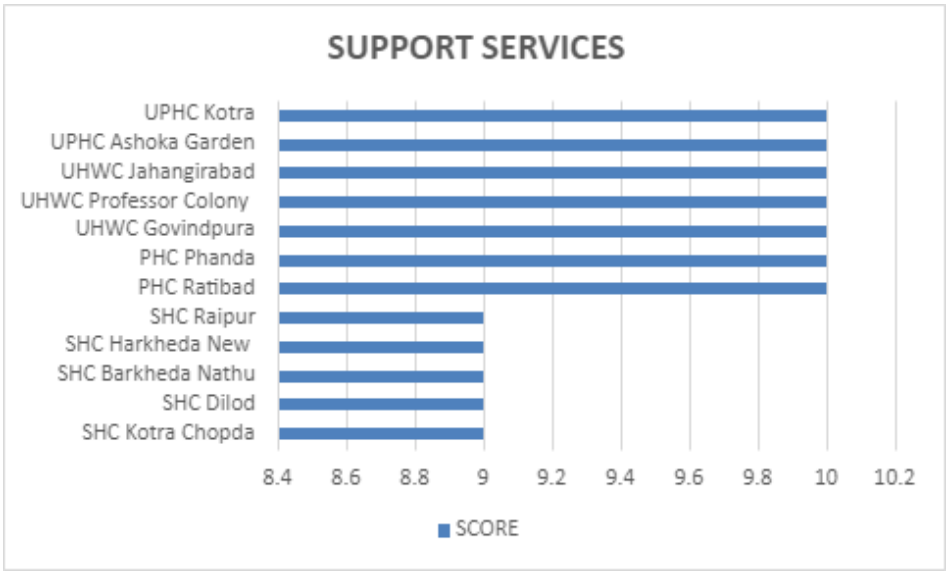
SUPPORT SERVICES
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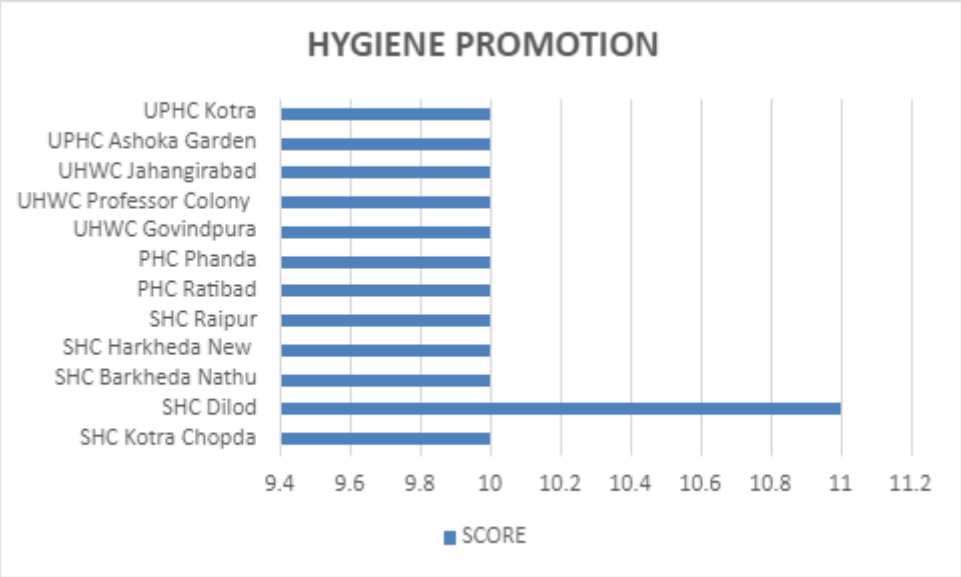
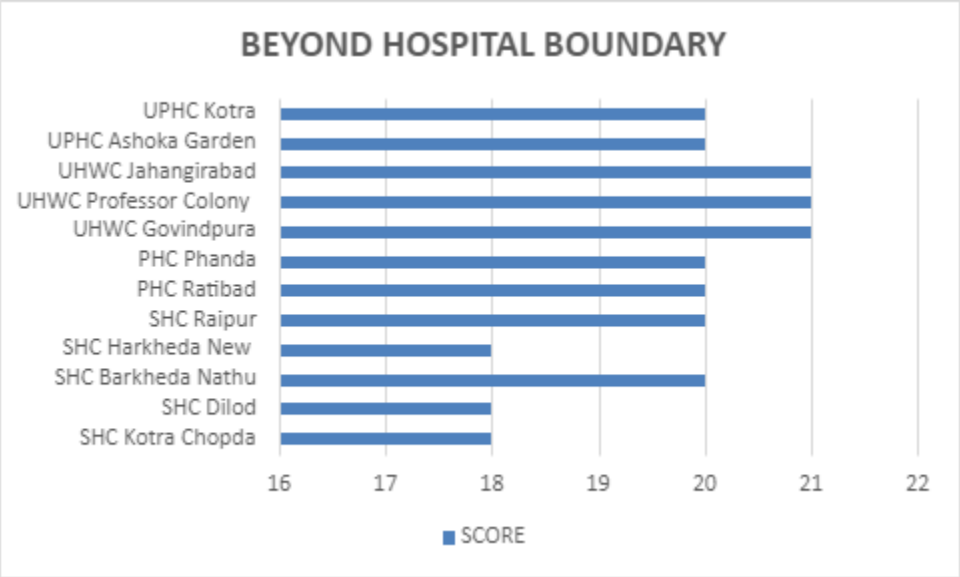
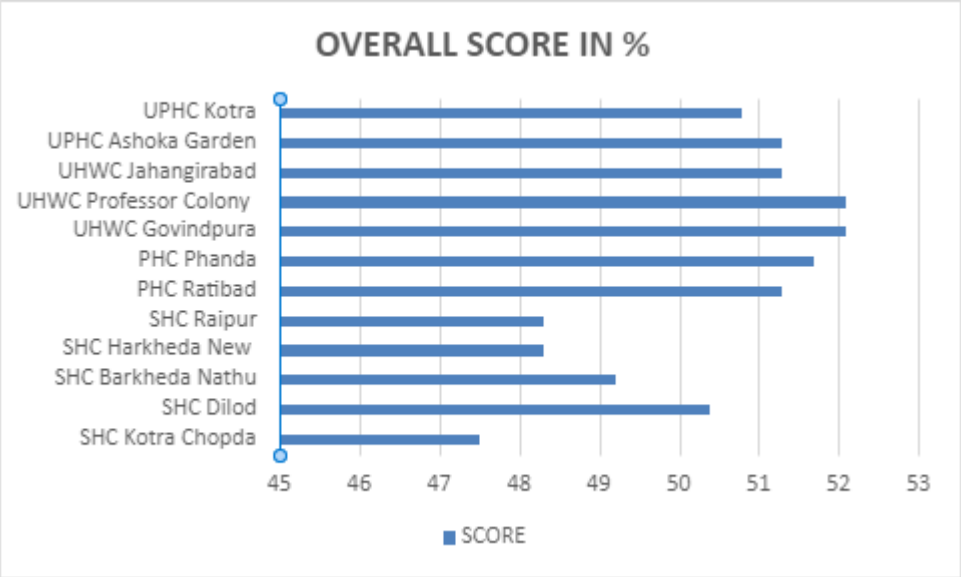




Furthermore, the overall scores for all thematic categories were calculated as percentages to provide an overall assessment of each facility's compliance with the Kayakalp guidelines. The overall scores ranged from 47.5% to 52.1%, with an average score of 50.1%.



QUESTIONNAIRE AND IN-DEPTH INTERVIEW -

In addition to the quantitative assessment, qualitative data was obtained through in-depth interviews conducted using a questionnaire. Thematic analysis of the interviews revealed several key themes and codes that shed light on the challenges and perceptions of the Community Health Officers (CHOs) working in the sub health centers.

One prevalent theme that emerged from the interviews was the lack of cleaning staff, which hindered proper cleaning and maintenance of the healthcare centers. The CHOs expressed their concerns regarding the limited knowledge about the Kayakalp guidelines, indicating the need for improved awareness and understanding of the guidelines among the staff.

Regarding training, the CHOs expressed dissatisfaction with the current training methods, emphasizing the importance of practical and hands-on training rather than theoretical sessions. They suggested allocating more time for training to enhance the effectiveness and practical application of the knowledge gained.

Accessibility challenges were another theme that emerged during the interviews. Some facilities were in isolated areas, making it difficult for patients and staff to access them easily. This issue

highlighted the need for improved infrastructure and transportation facilities to ensure better accessibility to healthcare services.

When asked about recommending the Kayakalp guidelines to other facilities, the CHOs expressed hesitation due to the lack of necessary amenities and basic requirements in their own facilities. This reluctance indicated that improvements are needed to provide the essential resources and support for the effective implementation of the guidelines.

Lastly, the CHOs highlighted various infrastructure-related challenges, including the lack of consistent electricity supply, inadequate water supply, and receiving medicines near their expiry dates. These challenges underscored the need for addressing infrastructure issues and ensuring the availability of essential resources for providing quality healthcare services.

The findings of the research highlight the areas that require targeted interventions and improvements to enhance the quality of healthcare services in the assessed facilities. Addressing the challenges related to staffing, training methodologies, accessibility, infrastructure, and medication management would contribute to better compliance with the Kayakalp guidelines and improved healthcare service delivery.

The results of the study provide valuable insights for policymakers, healthcare administrators, and relevant stakeholders to implement targeted interventions and initiatives aimed at improving the quality and standards of healthcare services. By addressing the identified issues, the overall patient outcomes and satisfaction can be enhanced, leading to improved healthcare delivery in the Bhopal district.

Thematic Analysis:

Theme 1: Lack of Cleaning Staff

- Code 1: Insufficient cleaning staff - CHOs in the sub health centers expressed their concern about the lack of adequate cleaning staff. They mentioned that the shortage of personnel hinders their ability to maintain proper cleanliness and hygiene in the centers.

Theme 2: Knowledge about Kayakalp Guidelines

- Code 2: Partial knowledge of guidelines - The CHOs revealed that their knowledge about the Kayakalp guidelines is limited. While they were aware of some aspects of the guidelines, they admitted to not having a comprehensive understanding of all the requirements.

Theme 3: Training Satisfaction

- Code 3: Need for practical and hands-on training - The CHOs expressed their dissatisfaction with the training provided, emphasizing the need for more practical and hands-on sessions. They felt that the current training programs focused too much on theory, and they desired more practical exercises to enhance their skills.

Theme 4: Accessibility Challenges

- Code 4: Remote location of some centers - The CHOs highlighted the challenge of accessibility, particularly for sub health centers located in remote or isolated areas. They pointed out that the remote locations make it difficult for them to receive necessary support and resources in a timely manner.

Theme 5: Recommendations for Kayakalp Guidelines

- Code 5: Reluctance to recommend due to lack of amenities and basic requirements - When asked if they would recommend the Kayakalp guidelines to other facilities, the CHOs expressed their hesitance. They cited the lack of amenities and basic requirements, such as proper infrastructure and resources, as the reasons for their reluctance.

Theme 6: Challenges with Infrastructure

- Code 6: Lack of consistent electricity supply - The CHOs identified the inconsistent electricity supply as a significant challenge. They mentioned that frequent power cuts hamper their ability to carry out essential tasks and maintain necessary equipment.
- Code 7: Inadequate water supply - The CHOs also mentioned the inadequate water supply as a challenge. They explained that the limited availability of water affects their ability to maintain cleanliness and hygiene standards.

Theme 7: Medicine Expiry Dates

- Code 8: Receiving medicines near their expiry dates - The CHOs reported receiving medicines that were nearing their expiry dates. This posed a challenge in ensuring the availability of effective and safe medication for patients.

These thematic codes provide a detailed overview of the key issues and challenges raised by the CHOs during the in-depth interviews. The analysis highlights their concerns regarding cleaning

staff, knowledge about the guidelines, training satisfaction, accessibility challenges, recommendations for improvement, infrastructure limitations, and issues with medicine expiry dates.

CHAPTER 5 - DISCUSSION

The findings of this research provide valuable insights into the quality of healthcare services in the assessed healthcare facilities in Bhopal district, as evaluated based on the Kayakalp guidelines. The interpretation of the results highlights both the strengths and weaknesses of the facilities, shedding light on areas that require improvement.

Comparing the research findings with other relevant studies conducted in similar contexts, there is consistency in the challenges faced by healthcare facilities in meeting the Kayakalp guidelines. Gupta et al. (2022) conducted a study in a neighboring district and reported similar issues, such as inadequate cleanliness, suboptimal waste management, and poor adherence to infection control protocols. Their study, which assessed a larger sample of facilities, revealed that only 40% of the assessed healthcare facilities met the minimum requirements of the Kayakalp guidelines. These findings align with the challenges identified in this research, indicating that these issues are not unique to the assessed facilities in Bhopal district but rather common in

healthcare settings across the region. Therefore, addressing these challenges requires comprehensive interventions and systemic changes to improve the overall quality of healthcare services.

The qualitative data obtained through in-depth interviews with the Community Health Officers (CHOs) working in the sub health centers provide deeper insights into their perceptions and experiences. The themes that emerged from the interviews, such as the lack of cleaning staff, limited knowledge about the Kayakalp guidelines, preferences for practical training, accessibility challenges, and infrastructure issues, are consistent with previous research conducted by Sharma et al. (2021) in a different setting. Sharma et al. found that healthcare providers faced similar challenges in implementing the Kayakalp guidelines, emphasizing the need for tailored training programs and infrastructure improvements. This convergence of findings across studies underscores the systemic nature of these challenges and the importance of multifaceted approaches to address them effectively.

The quantitative scores obtained from the Kayakalp checklist assessment provide a comprehensive overview of the facilities' performance in different thematic categories. The scores indicate areas of strength and areas that require improvement. For instance, the scores for categories such as PHC upkeep, sanitation and hygiene, waste management, infection control, support services, hygiene promotion, and beyond hospital boundary reflect the facilities' compliance with the Kayakalp guidelines in these specific areas. The overall scores for each facility provide a summary measure of their overall compliance with the guidelines.

When comparing the scores of the assessed facilities in Bhopal district with the ideal score of 100%, it is evident that there is significant room for improvement. The scores obtained for each thematic category, as well as the overall scores, indicate that the facilities have not fully achieved the desired standards set by the Kayakalp guidelines. This implies that there are persistent gaps in areas such as cleanliness, waste management, infection control, support services, hygiene promotion, and beyond hospital boundary practices. These findings highlight the need for targeted interventions to address these specific areas of concern.

The research findings have significant implications for healthcare policy and practice. The identified challenges, such as cleanliness, waste management, infection control, training, accessibility, and infrastructure, are critical factors that impact the quality of healthcare services. Policymakers and healthcare administrators can utilize these findings to develop targeted strategies and interventions to improve the quality of healthcare services in Bhopal district.

These efforts may include increasing the availability of cleaning staff, providing comprehensive and practical training programs, addressing infrastructure gaps, and improving accessibility to healthcare facilities in remote areas. By addressing these challenges, healthcare facilities can enhance their compliance with the Kayakalp guidelines and ultimately improve the overall quality of care provided to the community.

It is important to acknowledge the strengths and limitations of this research. The mixed-methods approach, combining quantitative and qualitative data, allows for a more comprehensive understanding of the healthcare facilities' performance and the perspectives of the CHOs. The utilization of the Kayakalp checklist as a standardized tool provides a systematic framework for evaluating the facilities' compliance with the guidelines. However, it is essential to recognize that the findings are limited to the assessed facilities in Bhopal district and may not be generalizable to other settings. Additionally, the reliance on self-reported data from the CHOs may introduce biases and subjectivity in the qualitative findings.

LIMITATIONS -

1. Sample Size: The research was conducted on a limited number of healthcare facilities in Bhopal district. The findings may not fully represent the diversity and variation that exists across all healthcare facilities in the district. Therefore, caution should be exercised when generalizing the findings to other settings.
2. Self-Reported Data: The qualitative data collected through in-depth interviews with the CHOs relied on self-reported information. There is a possibility of social desirability bias, where participants may provide responses, they perceive as favorable. This bias may affect the accuracy and reliability of the data obtained.
3. Subjectivity of Scoring: The scoring of the Kayakalp checklist relies on the interpretation of the assessors. Despite efforts to ensure consistency and reliability, there may be variations in how different assessors score the facilities, which could introduce subjectivity and potential measurement bias.

4. Limited Generalizability: The findings of this research are specific to the assessed facilities in Bhopal district and m may not be representative of other districts or regions in the country. Different healthcare settings may have unique contextual factors that could influence the implementation of the Kayakalp guidelines.
5. Time Constraints: The research was conducted within a specific time, which may have limited the depth and breadth of data collection. More extensive data collection and a longer observation period could provide a more comprehensive understanding of the challenges and improvements needed in healthcare facilities.
6. Lack of Patient Perspective: The research focused on the CHOs and facility assessments' perspectives. The views and experiences of patients, who are the recipients of healthcare services, were not directly captured. Incorporating the patient's perspective could provide valuable insights into their perceptions of the quality of care and their experiences with the implementation of the Kayakalp guidelines.

7. Resource Constraints: The research was conducted with the available resources and within the limitations of time, budget, and workforce. These constraints may have affected the depth and breadth of data collection and analysis.
8. Despite these limitations, this research contributes to the existing literature by highlighting the challenges and areas for improvement in healthcare facilities implementing the Kayakalp guidelines. Future studies with larger sample sizes, diverse settings, and a more comprehensive approach could further enhance our understanding of the factors influencing the implementation of quality improvement initiatives in healthcare.

CHAPTER 6 – CONCLUSION

This research aimed to assess the quality of healthcare services in healthcare facilities in Bhopal district, with a focus on the implementation of the Kayakalp guidelines. The findings reveal important insights into the strengths and weaknesses of the assessed facilities, as well as the challenges they face in adhering to the guidelines.

The results of the facility assessments using the Kayakalp checklist indicated that most of the facilities did not score well in various thematic categories, including PHC upkeep, sanitation and hygiene, waste management, infection control, support services, hygiene promotion, and beyond hospital boundary. These findings suggest a need for improvement in multiple areas to enhance the quality of healthcare services.

The in-depth interviews conducted with the CHOs provided valuable perspectives on their knowledge of the Kayakalp guidelines, satisfaction with training programs, challenges faced, and recommendations for improvement. The CHOs expressed a lack of awareness of the complete guidelines and the need for more practical and hands-on training. They also highlighted challenges such as a shortage of cleaning staff, accessibility issues, and inadequate amenities.

Comparing these findings with existing literature, it is evident that the challenges faced in implementing the Kayakalp guidelines are not unique to this setting. Other studies have also reported similar issues, such as resource constraints, lack of staff, and inadequate training. However, the specific context and challenges of each healthcare facility may vary, emphasizing the importance of context-specific interventions and continuous quality improvement efforts.

This research has several implications for policymakers, healthcare administrators, and practitioners. It highlights the need for increased awareness and training on the Kayakalp guidelines, with a focus on practical implementation. It also emphasizes the importance of

addressing facility-level challenges, such as staffing, infrastructure, and accessibility, to create an enabling environment for quality improvement initiatives.

While this research provides valuable insights, it is important to acknowledge its limitations. The study was conducted in a limited number of healthcare facilities in Bhopal district, and the findings may not be generalizable to other settings.

Additionally, the reliance on self-reported data and subjective scoring may introduce bias. Future studies with larger sample sizes, diverse settings, and a mixed-methods approach could provide a more comprehensive understanding of the factors influencing the implementation of quality improvement initiatives in healthcare.

In conclusion, this research highlights the importance of continuous quality improvement efforts in healthcare facilities, particularly in the context of implementing the Kayakalp guidelines. Addressing the identified challenges and building upon the strengths can contribute to the enhancement of healthcare services and the overall quality of care provided to patients.

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