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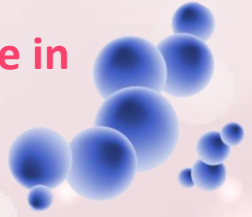
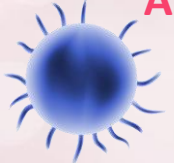
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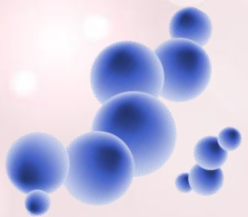
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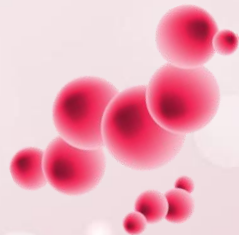
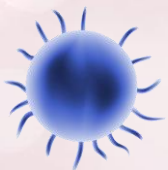
TOPIC:



**Assessment of Parental Knowledge and Attitudes Towards Antibiotic Use in
Paediatric Care: Implications for Antimicrobial Stewardship**



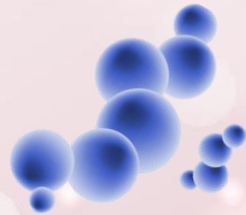
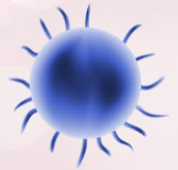
Assessment of Parental Knowledge and Attitudes Towards Antibiotic Use in Paediatric Care: Implications for Antimicrobial Stewardship





INTRODUCTION

CHAPTER - 1



Impact of antibiotics

- Transformed treatment of infectious diseases
- Drastically reduced global morbidity and mortality

Challenge of antibiotic resistance

- Resistance renders traditional treatments ineffective.
- Leads to prolonged infections and spread of resistant strains
- Increases healthcare costs.

Paediatric Concern

- High frequency of antibiotic prescriptions in children
- Contributes to antibiotic resistance
- Adverse reactions and disruptions of the natural microbiome.

Antimicrobial Stewardship – WHO – “a coherent set of actions which promote using antimicrobials responsibly and appropriately, with the goal of preserving the effectiveness of antibiotics and reducing the risk of resistance.”

BACKGROUND : Antibiotic Resistance

Causes

- Overuse and misuse of antibiotics
- Inadequate diagnostic leading to inappropriate prescriptions
- Poor infection prevention and control practices.
- Use of antibiotics in agriculture and livestock

Global Impact

- Rising rates of treatment-resistant infections
- Increased mortality and morbidity
- Strain on healthcare systems due to longer hospital stays and more intensive care
- Economic Burden increase

Consequences

- Reduced effectiveness of standard treatments
- Prolonged illness and hospital stays
- Higher risk of complications and death
- Spread of resistant bacteria across communities and countries.



BACKGROUND : Paediatric Health

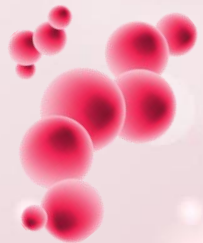
High Rates of Antibiotic Prescription

- Frequent use for common childhood infections.
- Often prescribed for viral infections where they are ineffective
- Lack of rapid diagnostic tools leads to precautionary use.

Global Impact

- Inappropriate antibiotic selection or dosing
- Unnecessary use for self limiting conditions
- Incomplete courses leading to partial treatment and resistance development
- Impact on childrens developing microbiome and overall health.

Understanding the causes and impact of antibiotic resistance, alongside addressing the high rates of antibiotic misuse in pediatric care, is crucial for effective antimicrobial stewardship and protecting global health.



RESEARCH QUESTION

- In what ways do parental understanding and beliefs concerning antibiotic utilization in pediatric healthcare shape prescribing behaviors for children? Additionally, how can insights derived from parental perspectives inform the development and implementation of robust antimicrobial stewardship strategies tailored to pediatric healthcare settings?

PRIMARY GOAL OF STUDY

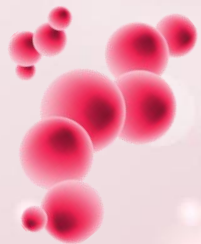
- The primary goal of this study is to comprehensively evaluate parents' knowledge, attitudes, and behaviors regarding antibiotic use in paediatric care. This evaluation aims to identify critical gaps in knowledge, prevalent misconceptions, and the key factors that drive parental attitudes toward antibiotic prescriptions. By thoroughly understanding these elements, the study seeks to inform the design and implementation of targeted antimicrobial stewardship (AMS).

OBJECTIVES

Evaluate parental knowledge levels regarding appropriate antibiotic use in pediatric care, including understanding of indications, dosing, and potential risks.

Investigate parental attitudes and beliefs towards antibiotic prescribing for children, exploring factors such as perceived necessity, concerns about side effects, and influences on decision-making.

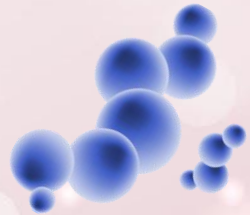
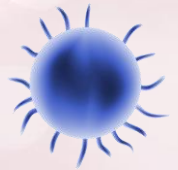
Identify challenges and barriers faced by parents in adhering to antimicrobial stewardship principles in pediatric healthcare.





LITERATURE REVIEW

CHAPTER - 2



Belongia et al. (2002) discovered that parental misunderstandings about antibiotic usage were common, with almost half of questioned parents believing that antibiotics were required to treat viral illnesses.

Pan et al. (2016) found that parents had a general lack of awareness about antibiotic resistance, with many uninformed of the long-term repercussions of antibiotic abuse.

Cabral et al. (2015) found that parents frequently seek antibiotics because they are concerned about the severity of their child's sickness and the possibility of consequences if not addressed. This concern might lead parents to insist on antibiotic prescriptions, even when professionals advise against them.



Gonzales et al. (2008) found that focused instructional materials, such as brochures and movies, might successfully lower parental demand for antibiotics.

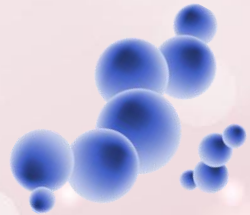
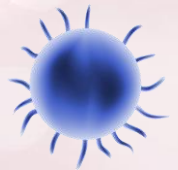
Szymczak et al. (2014) found that interactive communication training for healthcare practitioners enhanced their capacity to handle parental concerns and misconceptions, resulting in higher adherence to prescribing standards.

Barden et al. (1998) discovered that when healthcare personnel explained why antibiotics were not required for a specific sickness, parents were more likely to accept the decision and follow non-antibiotic treatment suggestions.



METHEDOLOGY

CHAPTER - 3



- Cross sectional survey of parents at the pediatric department.

STUDY DESIGN

- Conducted at Cloudnine Hospitals, Bengaluru – Thanisandra.

SETTING

- Stratified Random Sampling representing diverse groups.

SAMPLING METHOD

- 1st April 2024 to 30th June 2024

TIME STAMP

- Parents of children aged 1-12 receiving care at Cloudnine.

STUDY POULATION

- 107 parents of children administered antibiotics.

SAMPLE SIZE

Understanding the causes and impact of antibiotic resistance, alongside addressing the high rates of antibiotic misuse in pediatric care, is crucial for effective antimicrobial stewardship and protecting global health.

INCLUSION CRITERIA

- Parents or legal guardians of pediatric patients aged 0-12 years.
- Parents or legal guardians who have sought medical care for their child in a pediatric between April to June 2024.
- Willingness to participate in interviews or surveys for qualitative data collection.
- Access to necessary technology (e.g., internet, phone) for participation in surveys or interviews.

EXCLUSION CRITERIA

- Parents or legal guardians who are unable to provide consent for participation.
- Parents or legal guardians with children who have chronic medical conditions requiring long-term antibiotic therapy, in order to eliminate any bias owing to distinct health demands.
- Inability or refusal to participate in interviews or surveys
- Individuals with cognitive impairments or mental health conditions that may hinder their ability to participate effectively in the study.
- Parents who are healthcare professionals in order to eliminate any bias owing to advanced knowledge.

INCLUSION CRITERIA

- Electronic Health Records (Liferenz, ADM site)
- Structured Interviews and Surveys
- Case Report Forms/Prescriptions

DATA COLLECTION

- Google Form Surveys
- Anonymity and confidentiality maintained

SURVEY INFORMATION

- Demographic Information
- Knowledge of antibiotic Use
- Attitudes about Antibiotics
- Sources of Information

DATA ANALYSIS

- Descriptive statistics: Frequencies, percentages, averages, standard deviations.
- Inferential statistics: Chi-square tests, logistic regression analysis (SPSS Software).

INCLUSION CRITERIA

- Electronic Health Records (LifeTrenz, ADM site)
- Structured Interviews and Surveys
- Case Report forms/Prescriptions

DATA COLLECTION

- Google Form Surveys
- Anonymity and confidentiality maintained

- Semi structured interviews with a selection of survey respondents.

STUDY DESIGN

- Confidential setting through google forms

DATA COLLECTION

- Purposive sampling.

SAMPLING METHOD

DATA ANALYSIS

- **Informed Consent:** Detailed information provided, and consent obtained before data collection
- **Confidentiality and Privacy:** Data anonymized, identities protected
- **Voluntary Participation:** Participants can withdraw anytime without consequence
- **Data Security:** Secure storage with restricted access.

INTERVIEW GUIDE

- **Informed Consent**
- **Detailed information provided**
- **Consent obtained Before data collection**

ETHICAL CONSIDERATIONS

HOW ANTIBIOTIC RESISTANCE OCCURS?

01

INFORMED CONSENT

Detailed information provided; consent obtained before data collection

02

CONFIDENTIALITY AND PRIVACY

Data anonymized, identifies protected

03

VOLUNTARY PARTICIPATION

Participants can withdraw anytime without consequences

04

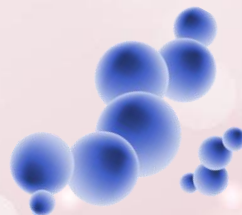
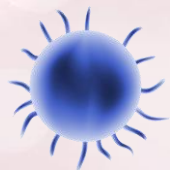
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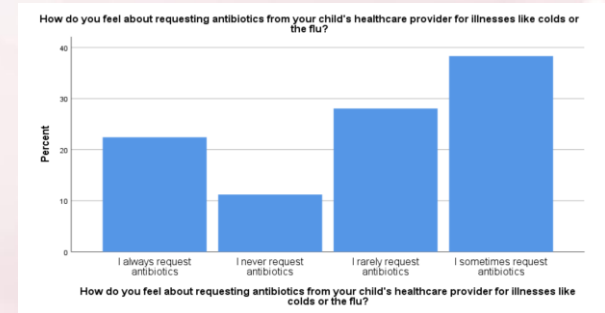
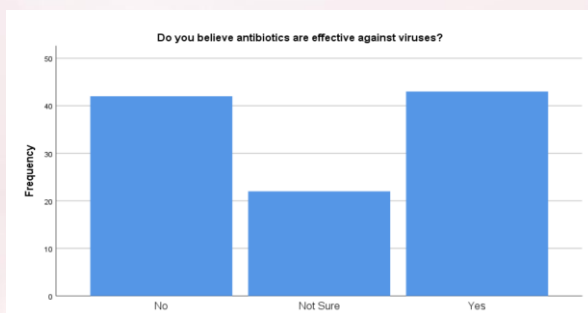
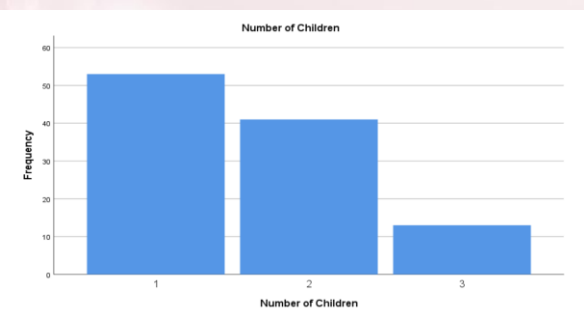
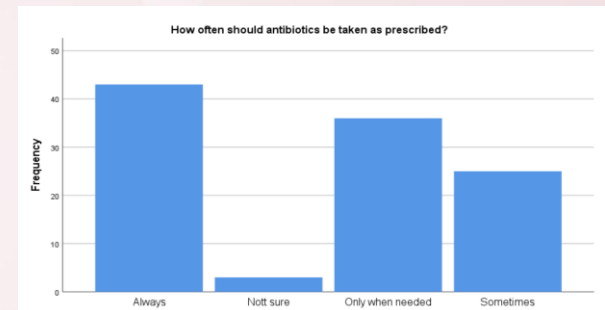
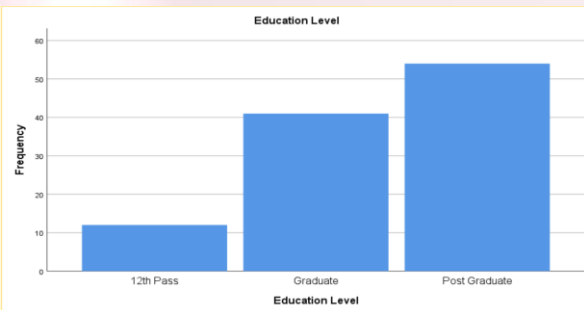
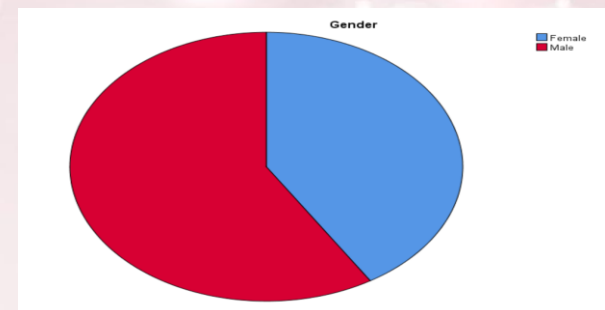
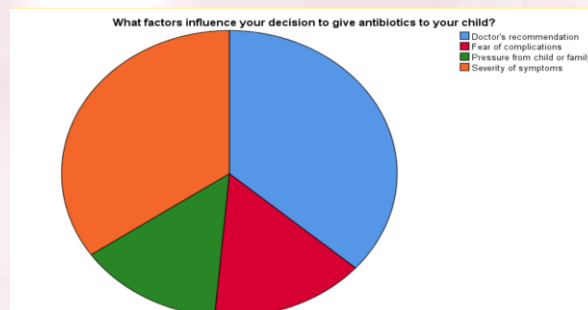
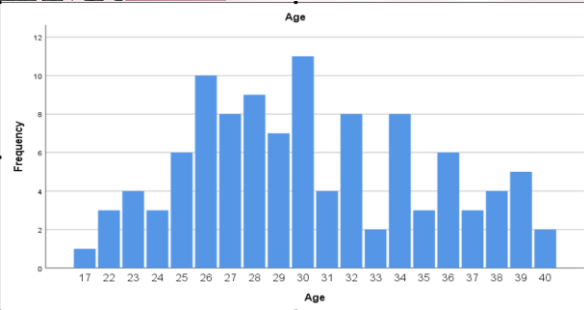
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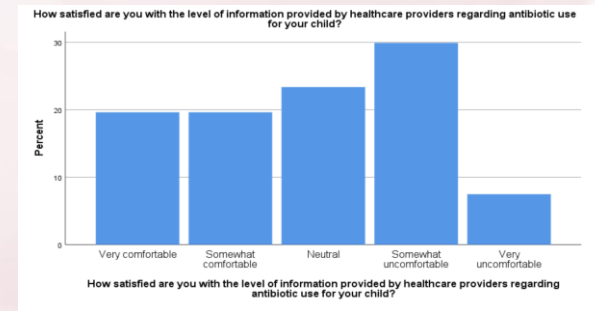
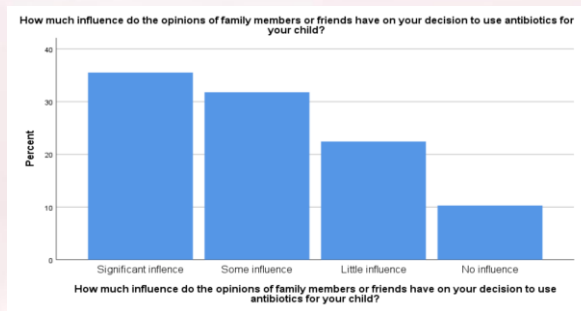
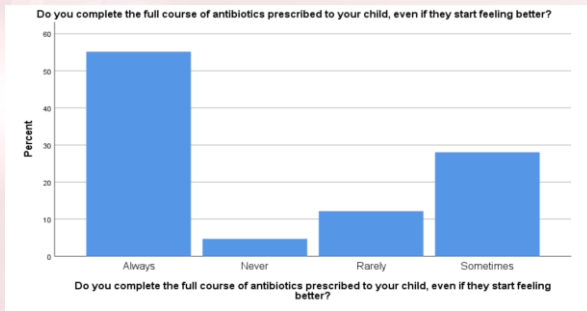
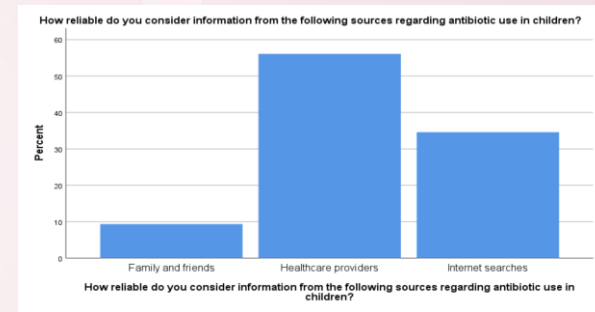
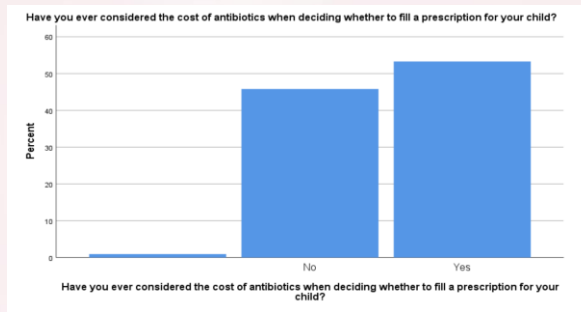
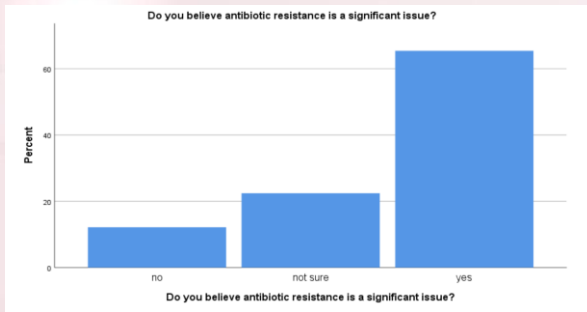
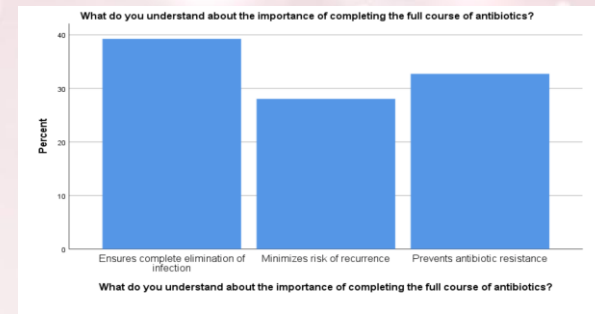
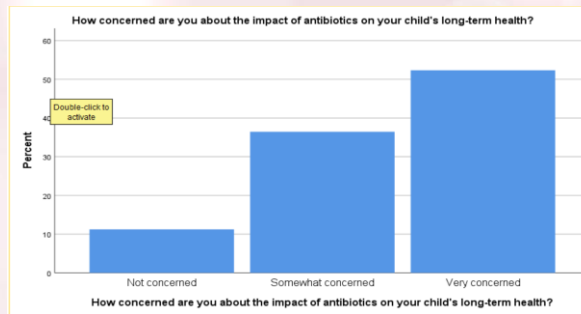
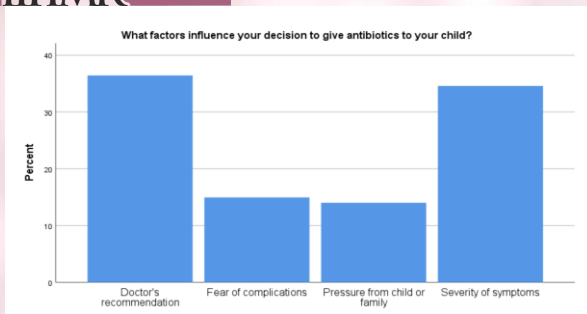


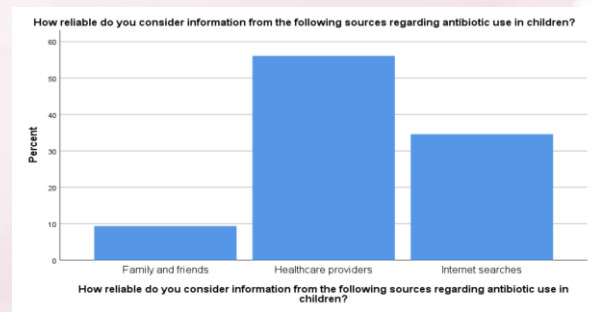
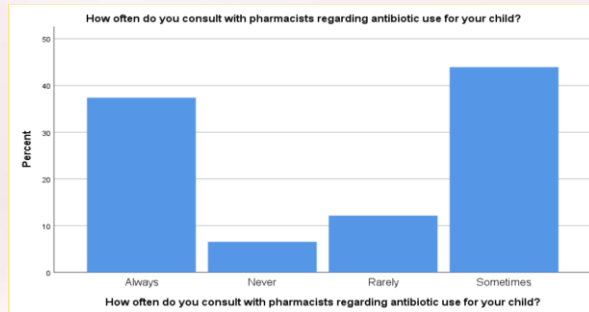
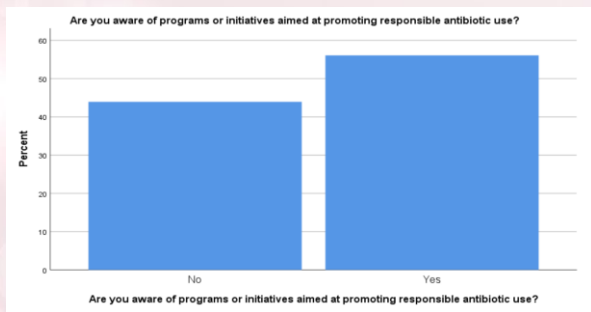
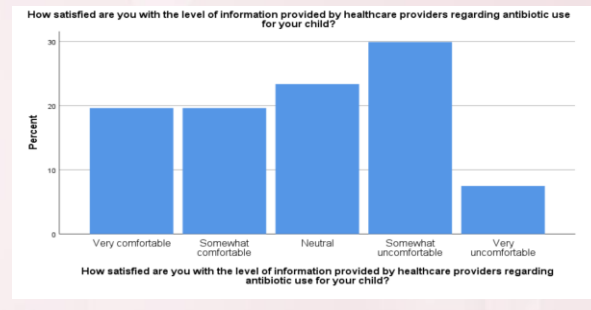
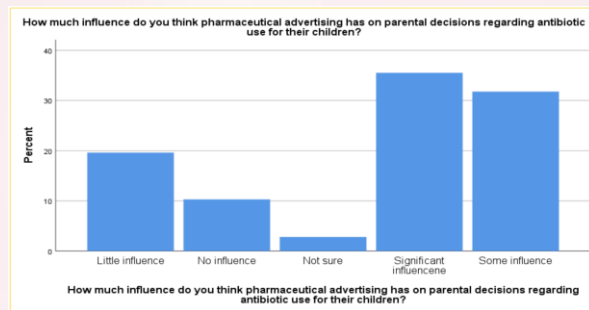
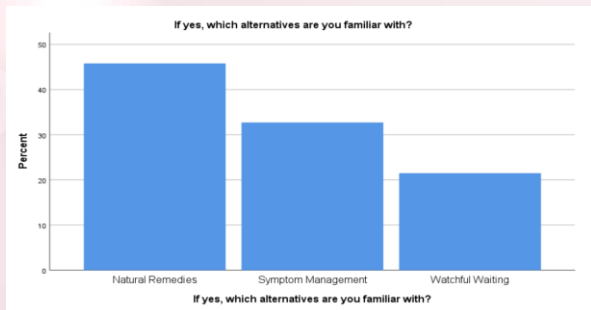
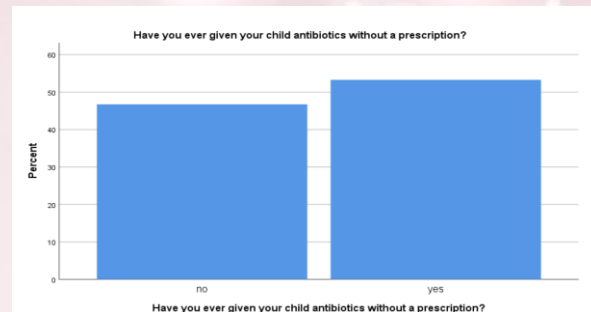
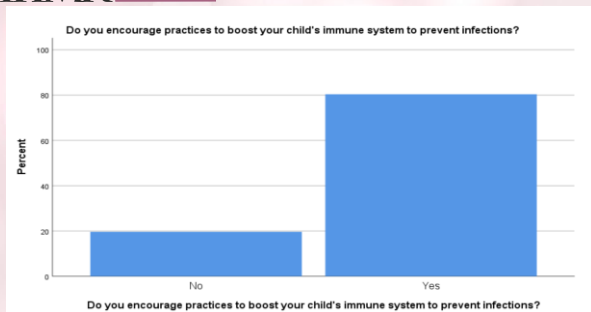
INTERPRETATION

CHAPTER - 4



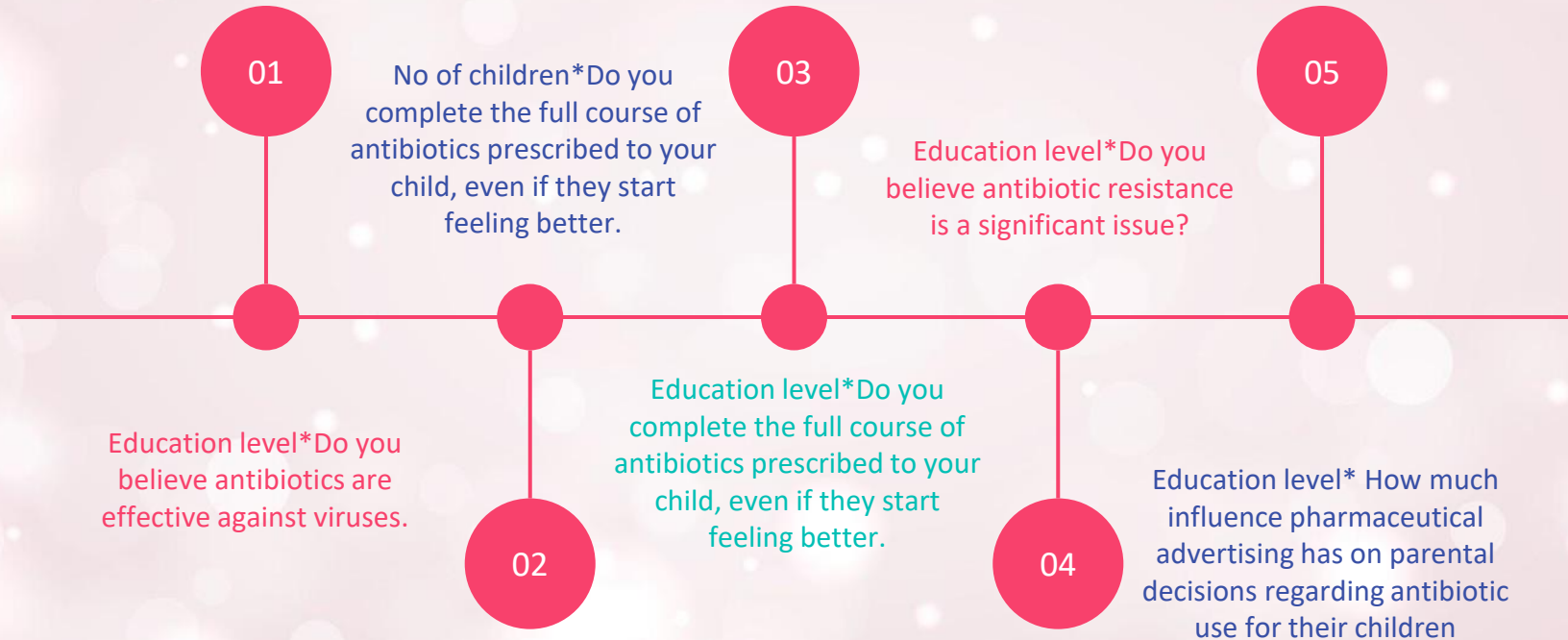






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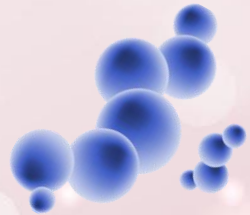
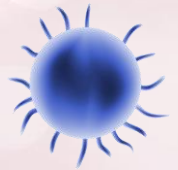
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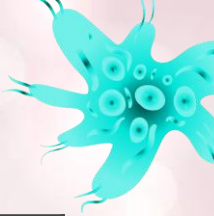




DISCUSSION

CHAPTER - 5





LIMITATIONS OF THE STUDY

Sample Size: The study's small sample size of 107 limits generalizability. Larger samples are needed for more reliable data and conclusions.	Geographical Limitations: Conducted in a specific area, the results may not apply to regions with different demographics, cultures, and healthcare systems.	
Response Bias: Self-reported data may lead to socially desirable answers rather than true responses, affecting the accuracy of findings, especially on sensitive topics like medication adherence.	Recall Bias: Participants may inaccurately recall past antibiotic use or experiences, leading to data discrepancies.	
Limited Characteristics: The study focuses on certain factors related to antibiotic knowledge and attitudes, possibly overlooking other important influences like socioeconomic status, cultural views, and healthcare access.	Questionnaire Limitations: Question wording and design may influence participant responses, potentially affecting results.	
Temporal Limitation: Cross-sectional design captures data at one point, limiting ability to determine causation or changes over time.	1. Sample size and Generalizability 2. Self reported data 3. Survey design 4. Cross-sectional Design	



STRENGTHS

COMPREHENSIVE DATA COLLECTION

Variables: Examines knowledge, attitudes, and demographics. b.

Demographics: Analyzes education and family size impact.

EDUCATIONAL IMPLICATIONS

Suggestions: Provide targeted educational and public health recommendations.

Healthcare Role: Stresses the need for clear communication from providers.



STATISTICAL ANALYSIS & FUTURE RESEARCH

Methods: Uses robust statistical tools for reliable results.

Foundation: Identifies gaps and areas for further study.

RELEVANT AND TIMELY TOPIC

Public Health: Tackles global antibiotic resistance by focusing on parental knowledge and attitudes.

IMPLICATIONS FOR ANTIMICROBIAL STEWARDSHIP



EDUCATIONAL CAMPAIGNS

- **Clear Information:**
- Create evidence-based materials explaining essential antibiotic use and consequences of misuse.
- Address misunderstandings for non-medical audiences using brochures, posters, videos, and online resources.
- **Dissemination:**
- Distribute materials in pediatric clinics and schools, integrating antibiotic education.
- Use social media and healthcare websites to share engaging content like infographics and animations.

ENHANCED COMMUNICATION

- **Enhanced Communication**
- **Training Healthcare Providers:**
- Train providers on effective communication for optimal antibiotic use and addressing family concerns.
- **Standardized Tools:**
- Develop decision aids (brochures, digital tools) for consultations.
- Provide parents with take-home materials reinforcing consultation information.

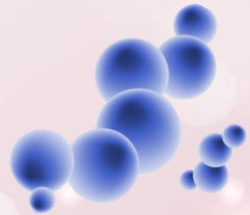
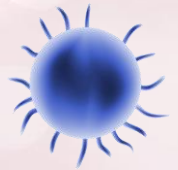
COLLABORATIVE APPROACHES

- **Collaborative Approaches**
- **Engaging Parents:**
- Gather parent input to improve materials.
- Conduct expert-led education sessions.
- **Community Involvement:**
- Partner with local groups for consistent messaging.
- Implement programs across schools and media.
- **Monitoring and Feedback:**
- Monitor impact on knowledge and behavior.
- Provide regular updates on program performance.
- **Enhanced Communication**
- **Training Healthcare Providers**



CONCLUSION

CHAPTER - 6



Knowledge about antibiotics:

1. 40.2% of parents believe antibiotics are effective against viruses.
2. 65.4% recognize antibiotic resistance is a significant issue.

Attitudes towards antibiotic use:

1. 55.1% parents complete the complete full course.
2. 19.6% feel very comfortable with information from healthcare providers.
3. 33.5% are influenced by pharmaceutical advertising.

FINDINGS**Education level and antibiotic knowledge:**

Higher education correlates with better knowledge about antibiotic resistance and appropriate use, with postgraduates showing the highest awareness.

Consultation and Sources of Information:

1. 56.1% trust healthcare providers as the most reliable source.
2. 43.9% consult pharmacists for antibiotic use.

IMPLICATIONS



EDUCATIONAL INTERVENTIONS

Implement programs to correct misconceptions about antibiotics especially targeting parents with lower educational levels.



HEALTHCARE PROVIDER ENGAGEMENT

Improve communication skills of healthcare providers to enhance parent comfort and adherence to prescribed antibiotic courses.



PUBLIC HEALTH CAMPAIGNS

Emphasise the importance of completing antibiotic courses to combat resistance.



PHARMACEUTICAL ADVERTISING REGULATION

Enforce stricter regulations on antibiotic promotions to reduce inappropriate demands.



ANTIMICROBIAL STEWARDSHIP PROGRAMS

Increase awareness and access to programs educating on responsible antibiotic use.



ENHANCED ROLE OF PHARMACISTS

Actively involve pharmacists in educating parents about antibiotics through public health initiatives.





RECOMMENDATIONS FOR FUTURE RESEARCH

INTERVENTION EFFECTIVENESS

Assess the impact of different educational interventions (seminars, pamphlets, digital media) on parental antibiotic – use habits

HEALTHCARE PROVIDER TRAINING

Study how enhanced training for healthcare providers improves their ability to educate parents about antibiotics.



BEHAVIORAL FACTORS

Investigate cultural and socioeconomic influences on parental understanding and attitudes about antibiotics.

LONGITUDINAL STUDIES

Examine the long-term effects of educational interventions on parental knowledge and antibiotic use.





RECOMMENDATIONS FOR THE EFFECTIVENESS OF ANTIMICROBIAL RESEARCH.

EDUCATIONAL CAMPAIGNS

1. **Target misconceptions:** Clarify antibiotic's ineffectiveness against viruses
2. **School Programs:** Educate parents through school initiatives

HEALTHCARE PROVIDER TRAINING

1. **Better Communication:** Train providers on antibiotic use discussions.
2. **Guidelines:** Standardize information given to parents.



PUBLIC HEALTH INITIATIVES

1. **Media Campaigns:** Raise awareness about antibiotic resistance.
2. **Community engagement:** Leverage community leaders for outreach.

PHARMACIST INVOLVEMENT

1. **Consultation:** Encourage pharmacist advice on antibiotics.
2. **Workshops:** Conduct community education sessions.





RECOMMENDATIONS FOR THE EFFECTIVENESS OF ANTIMICROBIAL RESEARCH.

POLICY RECOMMENDATIONS

1. **Regulate Ads:** Pharmaceutical ads to prevent misleading info.
2. **Prescription Policies:** Enforce evidence-based guidelines for antibiotic resistance.

PARENTAL RESOURCES

1. **Pamphlets:** Provide information brochure on correct antibiotic use and resistance.
2. **Online Hub:** Create a website with reliable info and advice.



IMMUNE SYSTEM RESPONSE

1. **Healthy Practices:** Promote healthy habits.
2. **Alternative Approaches:** Educate on natural remedies and symptom management.

RESEARCH AND MONITORING

1. **Ongoing Research:** Support ongoing studies.
2. **Data Collection:** Regular surveys to improve antibiotic stewardship.



RECOMMENDATIONS BASED ON SURVEY

BOOST CONFIDENCE

FINDING: 56.1% of parents feel confident about antibiotics.

RECOMMENDATIONS: Implement educational programs and distribute flyers to enhance understanding.

CORRECT MISCONCEPTIONS

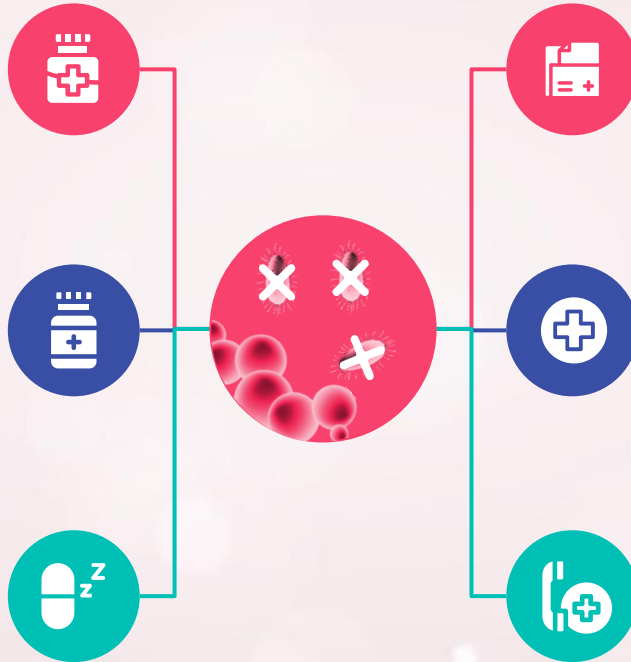
FINDING: Parents believe antibiotics treat viral infections.

RECOMMENDATION: Provide clear materials explaining the difference between bacterial and viral infections

PROMOTE ADHERENCE

FINDING: Some parents do not complete antibiotic courses.

RECOMMENDATION: Reinforce messages about finishing prescriptions using visual aids and handouts.



ADDRESS INFLUENCING FACTORS

FINDING: Decisions influenced by doctor's recommendations and symptom severity.

RECOMMENDATION: Communicate necessity based on symptoms and manage without antibiotics when appropriate.

SUPPORT INFORMED DECISIONS

FINDING: Some parents use antibiotics without a prescription due to costs.

RECOMMENDATIONS: Highlight the dangers of non-prescribed use and discuss cost effective options.

IMPROVE INFORMATION ACCESS

FINDING: Some parents use antibiotics without prescriptions due to cost

RECOMMENDATION: Highlight the dangers of non-prescribed use and discuss cost effective options.



THANK YOU.

