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Perceptions and Understanding of Antibiotic Use With Caregivers of School-Age Children

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Purpose: The aim of this study is to determine the current viewpoints of caregivers surrounding antibiotic stewardship utilizing Q-methodology and create a community-based educational intervention based on these results.

Methods: An extensive literature review was conducted over several months to identify themes surrounding antibiotic utilization and stewardship. The research was focused on opinions of caregivers of the school-age population. A comprehensive list of eighty-six viewpoints was compiled to identify the predominant perceptions among caregivers related to antibiotic use and narrowed to thirty-five statements. Participants at a pediatric clinic in the South-Central Region of Indiana were asked to identify with which statements they most agreed or disagreed. In keeping with the Q Methodology approach, the caregiver participants then prioritized these statements onto a sorting sheet (Q sort). Q-methodology is a philosophical framework and set of techniques used to systematically study subjective attitudes, beliefs, and opinions in a way that minimizes researcher bias. The project was classified as exempt by the university Institutional Review Board. The anonymous data collected from each individual was analyzed via Ken Q Analysis to determine the overall common viewpoints as an evidence-based approach for the purpose of creating an educational intervention. The data collected from each individual was analyzed to determine the overall common viewpoints as an evidence-based approach for the purpose of creating an educational intervention. Driven by the resulting final four factors emerging from the analysis of caregiver viewpoints, an educational intervention was created in the format of a public service announcement video. Pre-test and post-test surveys were created to evaluate the effectiveness of the intervention. The educational video is to be strategically placed on a dedicated channel and aired at regional pediatric clinics and offices via a local broadcasting station.

Results: From the thirty-five participants, twenty-six participants loaded on the final four-factor solution which explained 47% of the variance surrounding the caregiver viewpoints. Six Q sorts by participants were found to be confounding and three participant Q sorts did not load. The final four-factor outcomes assisted in the development of the educational intervention for antibiotic stewardship. The results of the pre-test and post-test, created for the initiative, evaluate the effectiveness of the antibiotic stewardship video educational intervention and support quantifying the improvement of antibiotic stewardship knowledge by caregivers.

Conclusion: This was the first study to explore outcomes of utilizing Q Methodology to explore caregiver perceptions of antibiotic stewardship. The study findings help shed light on caregiver viewpoints which allow health care clinicians to focus their educational intervention. The study results suggest Q Methodology can assist the health care team in understanding caregiver viewpoints. The project supported a video educational intervention as a viable format for improved caregiver knowledge related to antibiotic stewardship.

Title:

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Keywords:

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References:

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Abstract Summary:

Common caregiver viewpoints regarding antibiotic use in school-age children were analyzed utilizing Q-methodology. An educational in-service was conducted based on the findings to improve understanding of antibiotics. A pre- and post-test survey of participants was created to evaluate the effectiveness of the educational intervention.

Content Outline:

Perceptions and Understanding of Antibiotic Use with Caregivers of School-Age Children

1. Introduction
 1. Discuss the issue of increasing antibiotic resistance and the importance of appropriate antibiotic use.
 2. The goal of this research is to improve understanding of antibiotic use in the school-age caregiver population.
2. Body
 1. Appropriate use of antibiotics
 2. After conducting a literature review, a gap was identified in the understanding of the proper use of antibiotics.
 1. Antibiotics should be taken until the prescription is completed.
 2. Antibiotics are only helpful in treating bacterial infections; they do not treat viral infections.
 1. Associated risks of improper antibiotic use
 1. Antibiotic resistance occurs when antibiotics are overused and misused.
 2. As antibiotic resistance grows, an epidemic could occur due to lack of treatment options.
 1. Q methodology was utilized to understand the most common viewpoints of caregivers about the use of antibiotics.
 1. From an extensive literature review, 86 viewpoints were identified.
 1. The statements were pared down to 35 common caregiver viewpoints. Participants were asked to prioritize the 35 statements.
1. Caregivers were asked to prioritize the statements in order of preference.
2. A Q Methods sorting sheet was used to assist the participants in prioritizing from most agree to most disagree.
 1. An educational in-service including a pre- and post-test were developed based on the gaps that are identified from the surveys.

1. A public service announcement style video was created for distribution in pediatric clinics and use in the educational intervention.
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1. Information included in the materials.
 - When antibiotics should be used
 - Associated risks of improper use
 2. Structure of the educational in-service
 1. Analysis of pre- and post-test
 2. Conclusion
 1. Reiterate the importance of the research conducted.
 2. Improve understanding of antibiotics in order to prevent disease and promote a healthy population.

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