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FACTORS INFLUENCING THE MANAGEMENT AND PREVENTION OF FUNGAL SKIN INFECTIONS AMONG CHILDREN UNDER THE AGE OF 5 SEEKING HEALTH CARE AT KAJANSI HEALTH CENTRE IV. A CROSS-SECTIONAL STUDY.

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ABSTRACT

Purpose

This study assessed factors influencing the management and prevention of fungal skin infections in children under 5 years seeking care at Kajansi Health Centre IV in Uganda.

Objectives

The objectives were to examine caregiver knowledge, attitudes, and practices; health system-related factors; and social demographic factors impacting fungal infection prevention and management.

Methods

A cross-sectional study design was utilized. Data was collected through interviews with 100 caregivers of children under 5 with fungal skin infections at Kajansi Health Centre IV. A systematic random sampling technique was used to select participants from health center records. Structured questionnaires covering caregiver experiences, health system factors, and demographic details were administered.

Results

The Highest proportion (40) of the respondents were caretakers of children in a range of 1-2 years with the lowest observed among 5 years. Knowledge gaps among caregivers regarding causes, transmission, severity, and prevention. Variable attitudes were found, with concerns about stigma but also misconceptions of mildness. Health system weaknesses existed in workforce capacity, medication supply, and prioritization of fungal infections. Poverty, rural residence, and young age emerged as demographic factors increasing infection risk and care access barriers. Long waiting times, medication stock-outs, and financial limitations were commonly cited health system barriers.

Conclusions

Targeted education, health system strengthening, and tailored interventions for high-risk groups are necessary to address identified knowledge, attitudinal, and health system limitations negatively impacting fungal infection prevention and management.

Recommendations

Recommendations include developing national guidelines designating fungal infections as a priority issue; integrating caregiver education into outreach; ensuring consistent medication availability; improving rural access through outreach; establishing community initiatives to address financial barriers; and strengthening health workforce capacity.

Keywords: Management and Prevention, Fungal Skin Infections, Health Care, Kajansi Health Centre IV
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Background to the study

Fungal skin infections are a common health concern among children under the age of 5 worldwide, with prevalence ranging from 20% to over 50% in tropical climates (Kwizera, Bongomin, & Lukande, 2020a). In 2017, fungal skin disease DALYs (Disability-Adjusted Life Years) were most prevalent among children aged 1 to 5, showing a skewed distribution. Sub-Saharan Africa had the highest burden of fungal skin disease, with a DALY rate of 89.3 per 100,000 males and 78.42 for females. In Uganda, the warm and humid climate puts children at high risk for these infections (Kwizera, Bongomin, & Lukande, 2020a) A study conducted in government clinics in Francistown, Botswana found that over 50% of children brought in by parents had fungal skin infections, even though parents did not list these infections as a presenting complaint (Kwizera, Bongomin, & Lukande, 2020a). This highlights the need for health education and care at facilities like Kajansi Health Centre IV in Uganda.

The most prevalent fungal skin infections in young children are tinea capitis (scalp ringworm), tinea corporis (body ringworm), and Candida diaper dermatitis. (Parkes-

Ratanshi et al., 2015) Tinea infections are highly contagious and spread through skin-to-skin contact, shared items like hats, combs, and clothing, and contact with infected pets. (Parkes-Ratanshi et al., 2015) Candida thrives in warm, moist environments like the diaper area. (Kwizera, Bongomin, Meya, et al., 2020)

Several factors influence the management and prevention of fungal skin infections in children including warm and humid climates, overcrowding, poor hygiene, low socioeconomic status, compromised immune systems, and antibiotic use children in developing countries like Uganda face many of these risks. (Parkes-Ratanshi et al., 2015)

Management of mild fungal skin infections can be done with over-the-counter topical antifungal creams, shampoos, and powders. (Parkes-Ratanshi et al., 2015) First-line ingredients include clotrimazole, miconazole, terbinafine, and ketoconazole. (Parkes-Ratanshi et al., 2015) Access to these affordable topical medications at Kajansi Health Centre IV could treat many cases early before they spread. For severe, widespread, or scalp infections, oral antifungal medication may be needed. First-line oral treatments include griseofulvin, terbinafine, and itraconazole. (Parkes-Ratanshi et al., 2015) Kajansi Health Centre IV should ensure the availability of these medications and train healthcare workers on proper diagnosis and prescription.

Preventive strategies like Health education for parents and children on the importance of seeking medical care for fungal skin infections (Kwizera, Bongomin, & Lukande, 2020b), Improving hygiene practices, including regular handwashing and proper cleaning and drying of the diapers (Kwizera, Bongomin, Meya, et al., 2020), promoting awareness of the contagious nature of tinea infections and the need to avoid sharing personal items. (Parkes-Ratanshi et al., 2015)

Addressing the underlying risk factors such as overcrowding and poor socioeconomic conditions. (Parkes-Ratanshi et al., 2015)

By addressing these factors and implementing prevention strategies, Kajansi Health Centre IV can effectively manage and prevent fungal skin infections among children under the age of 5 seeking healthcare. This research background provides a foundation for further investigation and intervention in this area.

The purpose of the study was to assess the factors influencing the management and prevention of fungal skin infections among children under the age of 5 seeking health care at Kajansi Health Centre Iv

METHODOLOGY

Study design

This study utilized a cross-sectional study design to investigate the factors influencing the management and prevention of skin fungal infections among children under the age of 5 seeking healthcare at KAJANSI Health Center IV. The choice of a cross-sectional design was appropriate as it allowed the simultaneous assessment of multiple factors and provided a snapshot of the current situation regarding the management and prevention of skin fungal infections in this specific population. This design enabled me to gather valuable insights into the prevailing conditions and factors influencing these health practices among young children

Study area

The study area for this research was KAJANSI Health Center IV, which serves as the primary healthcare facility under the Uganda Ministry of Health located in KAJANSI County Wakiso district. The scope of this study encompasses children under the age of 5 attending the Kajansi Health Center IV in Uganda. The study will aim to collect data from 10th September to 10th October to ensure the timely completion of the research project

Study population

The study population for this research comprised children under the age of 5 who are seeking healthcare services at KAJANSI Health Center IV and are experiencing skin fungal infections.

Sample Size Determination

The sample size for this study was determined using Fisher's formula (1998) as follows:

n = (k x P x Q) / (L XL)

Where:

n = the desired sample size

L = permissible error in the estimate, set at 10% (0.1)

k = constant, set at 4

P = estimated percentage of bar attendants aged 18+ years, assumed to be 50% (0.5)

Q = (100 - P) %

So, plugging in the values:

n = (4 x 0.5 x (100 - 0.5)) / (0.1 x0.1)

n ≈ 100

Therefore, the target population for this study consisted of 100 participants who will be enrolled in the research.

Sampling technique

A systematic random sampling technique was utilized to select study participants for the research focused on factors influencing the management and prevention of skin fungal infections among children under the age of 5 seeking healthcare at KAJANSI Health Center IV. The sampling frame was derived from the health center's records of children in this age group seeking medical care for skin fungal infections. The sampling interval was calculated by dividing the total number of such children during the study period by the desired sample size. Every nth child was systematically selected from the records until the required sample size was reached. This approach ensured a representative sample for a comprehensive understanding of the factors involved in managing and preventing skin fungal infections in this specific population.

Sampling procedure

The study employed a systematic random sampling technique to select 100 participants from children under

the age of 5 seeking healthcare at KAJANSI Health Center IV for skin fungal infections. The sampling frame was derived from health center records, with a sampling interval calculated based on the desired sample size. Starting from a randomly chosen point on the list, every nth child was included in the study. This rigorous approach ensured a representative sample for investigating factors influencing the management and prevention of skin fungal infections in this specific population.

Data Collection Method

Data for the research on factors influencing the management and prevention of skin fungal infections in children under the age of 5 at KAJANSI Health Center IV was collected through structured interviews. These interviews, developed based on research objectives and literature, covered socio-demographic characteristics, individual health factors, hospital-based influences, perceived benefits and barriers, communication with healthcare providers, and healthcare utilization. Trained research assistants conducted face-to-face interviews, following informed consent procedures and ensuring participant confidentiality. This comprehensive approach ensured professional, ethical, and thorough data collection for the study.

Data Collection Tools

The data collection tools for this study encompassed structured questionnaires that were used by trained research assistants. These questionnaires were designed to gather comprehensive information on socio-demographic characteristics, caregiver factors, hospital-based influences, perceived benefits, and barriers, communication with healthcare providers, and healthcare utilization among children under 5 with skin fungal infections at KAJANSI Health Center IV.

Data Collection Procedure

The data collection procedure for this study, which investigated factors influencing the management and prevention of skin fungal infections among children under the age of 5 seeking healthcare at KAJANSI Health Center IV, involved the following steps:

Questionnaire Development: Structured questionnaires were meticulously designed based on the study's research objectives and relevant literature. These questionnaires encompassed various aspects, including socio-demographic characteristics, individual health factors, hospital-based influences, perceived benefits and barriers, communication with healthcare providers, and healthcare utilization.

Training of Research Assistants: Carefully selected research assistants underwent comprehensive training. This training covered research ethics, data collection procedures, and techniques for ensuring participant confidentiality. Research assistants were well-prepared to conduct interviews professionally and ethically.

Informed Consent: Before data collection began, caregivers of the participating children were approached for informed consent. The consent process ensured that participants fully understood the study's purpose, procedures, and their rights. Participation was entirely voluntary, and only those who willingly agreed were included.

Structured Interviews: Trained research assistants conducted face-to-face interviews with the study participants. The structured interviews followed the questionnaires to gather detailed information on the factors influencing the management and prevention of skin fungal infections in children under 5 years old.

Confidentiality Measures: Strict measures were placed to protect the confidentiality of participants' responses and personal information. Data will be anonymized and stored securely to safeguard participants' privacy.

Study Variables

Independent variables

These were Social Demographic factors, health system-related factors, and the knowledge, attitude, and practice regarding the management and prevention of fungal skin infection among children under the age of five seeking health care at KAJANSI Health Center iv

Dependent variables

These included the management and prevention interventions of fungal skin infections among children under the age of five seeking health care services at KAJANSI Health Center IV

Quality control

Quality control measures have been implemented throughout the research process to ensure the reliability and validity of the study on factors influencing the management and prevention of fungal skin infections among children under the age of 5 seeking healthcare at KAJANSI Health Center IV:

Pretesting of Research Tools: Before initiating data collection, the structured questionnaires and interview guides were pretested on a small sample of caregivers outside the study population. This allowed for the identification and rectification of any ambiguities or issues in the research tools.

Training of Research Assistants: Research assistants were selected carefully and underwent comprehensive training. This training encompassed research ethics, data collection procedures, and techniques for maintaining participant confidentiality. The training ensured that research assistants were well-prepared to conduct interviews professionally and ethically.

Giving Ample Time for Data Collection: Adequate time was allocated for data collection to prevent rushed or incomplete interviews. This ensured that research assistants could engage with participants effectively and gather comprehensive information.

Clear Inclusion and Exclusion Criteria: Inclusion and exclusion criteria were clearly defined to ensure that only

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eligible participants who meet the study's specific criteria are included. This helps maintain the relevance and focus of the research.

Inclusion criteria

All children under the age of 5 seeking health care services at KAJANSI Health Centre iv
Children whose parents are legal guardians provide informed consent for their participation in the study
Children who were diagnosed with fungal skin infections or are seeking healthcare for skin-related issues will be included

Exclusion criteria

Children with severe medical conditions that might have interfered with the study participation
Adherence to Standard Operating Procedures (SOPs): Standard operating procedures (SOPs) were established and were strictly adhered to throughout the data collection process. These SOPs included guidelines for approaching caregivers for informed consent, conducting interviews, and ensuring data confidentiality.
These quality control measures were integral to maintaining the rigor and validity of the research, ensuring that the data collected accurately reflects the factors affecting the management and prevention of fungal skin infections among children under 5 at KAJANSI Health Center IV.

Data Analysis and Presentation

Data analysis

Descriptive statistics was employed to provide a summary of key findings. This included calculating measures such as means, frequencies, and percentages to describe the socio-demographic characteristics of participants and the prevalence of various factors affecting management and prevention activities.

Data presentation

Data presentation involved the following,
Narratives: Key findings and important trends were presented in narrative form to provide a clear and concise description of the research results.
Themes/Categories: Qualitative findings from thematic analysis were presented by highlighting themes and categories that emerged from the caregiver interviews, providing rich insights into their experiences.
Charts and Figures: Visual representations, such as charts and figures, were used to illustrate quantitative data trends and patterns, which made it easier for readers to comprehend the research outcomes
Tables: Tabular formats were employed to present detailed quantitative data, including socio-demographic characteristics, frequencies, and statistical results, in an organized and easily accessible manner.
Pictures and Photographs: Where applicable and ethically appropriate, visual aids like pictures and photographs were used to supplement the presentation, especially when showcasing specific aspects of the healthcare facility or preventive measures.
Overall, the data analysis and presentation approach combined both quantitative and qualitative methods to provide a comprehensive and insightful understanding of the factors affecting the management and prevention of fungal skin infections in young children at KAJANSI Health Center IV. The use of various formats, including descriptive statistics, thematic analysis, and visual aids, enhanced the clarity and accessibility of the research findings.

Ethical Considerations

In researching factors influencing the management and prevention of fungal skin infections among children under the age of 5 seeking healthcare at KAJANSI Health Center IV, a comprehensive set of ethical considerations was diligently observed. These included obtaining informed consent, maintaining strict participant confidentiality, respecting autonomy, minimizing risks, securing ethical approval, fostering transparency, engaging with the community, ensuring data privacy, and responsible dissemination of findings. These ethical principles underscored our commitment to conducting the research with integrity, respect for participants, and adherence to the highest ethical standards.
Additionally, an introduction letter from the Mildmay Institute of Health Sciences was used to obtain permission and guidance from the administration and staff of KAJANSI Health Center IV. This collaborative approach ensured that the research adhered to ethical principles and guidelines, guaranteeing the rights and well-being of all participants involved in the study. These ethical principles underscored our commitment to conducting the research with integrity, respect for participants, and adherence to the highest ethical standards.

RESULTS

Social Demographic

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Table 1 presents demographic data for children under 5 years' old who took part in the study (n) = 100

Age group	Frequency
<1 years old	15
1-2 years old	40
3-4 years old	30
5 years old	15
RELIGION	
Religious group	Frequency
Christianity	60
Islam	25
Traditional Beliefs	10
Other	5
SEX	
SEX GROUP	FREQUENCY
Male	55
Female	45
NUMBER OF CHILDREN UNDER THE AGE OF FIVE IN THE HOUSE HLD	
Number of children	Frequency
1	38
2	41
3	13
4	6
5	2

Table 1 shows that the highest proportion (40) of children were in the age range of 1-2 years with the lowest observed among 5-year-olds. in terms of religious affiliations, it shows that the greater proportion were Christians with the least being in others. Also, the table shows that the most affected gender is males (55). As well it shows that homes with the least number of children were more affected than those with the highest number of children

Figure 1 shows the Distribution of the Respondents Basing On Their Areas Of Residence And Income Levels

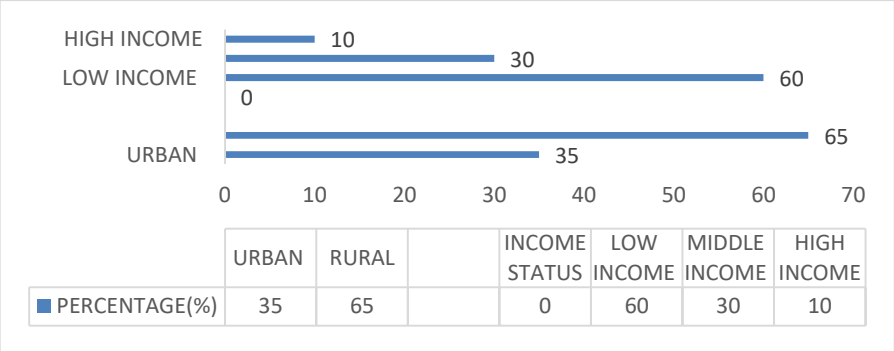

Figure 1 shows that the majority (65%) of the respondents reside in rural areas with few of them residing in urban areas (35%). It also shows that a greater percentage of them are of low-income status and the rest belong to the middle and high-income status

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Figure 2 shows the attendance of children in daycare/school and those who don't attend school

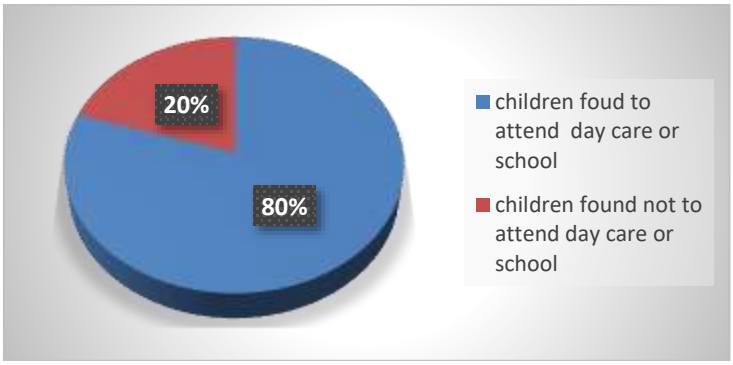
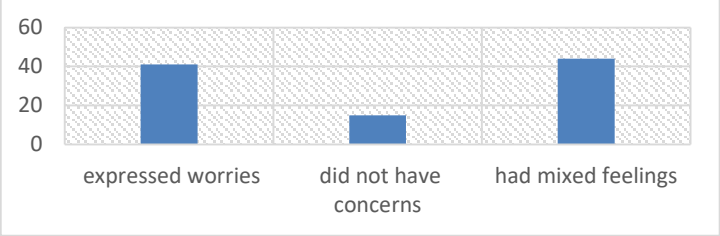


Figure 2 shows that the majority of the children (80%) attend the daycare/ school, with the least attending no school or daycare

KNOWLEDGE, ATTITUDE, AND PRACTICES OF CAREGIVERS

Figure 3 shows caregivers' concerns about their children missing school or engaging in social interaction when they have fungal skin infections



The figure indicates that the majority (44%) of the caretakers had mixed feelings, with the proportion having no concerns

Table 2 shows the caretakers believe in the safety of traditional remedies compared to modern medicine

beliefs	Percentage(%)
trust in traditional remedies	20
Trust in modern medicine	70
uncertain	10

Table 2 shows that the majority (70%) of the caretakers trusted modern medicine while 20% trusted traditional remedies and the rest were uncertain

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Figure 4 shows the caretakers' knowledge of the mode of transmission of fungal skin infections

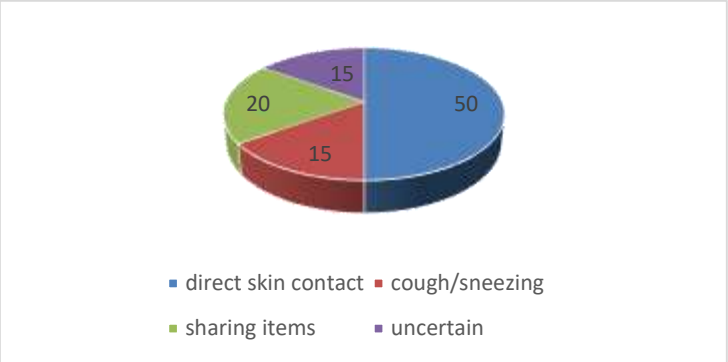

Figure 4 shows that the majority knew that fungal skin infections are transmitted through direct skin contact 50%, 20% mentioned sharing items while only 15% said it can be transmitted by cough/sneezing

In response to the inquiry regarding the frequency of skin inspection for new rashes or signs of infections in their children, respondents noted the following patterns: 25% conduct daily checks, 35% engage in weekly monitoring, 20% perform inspections rarely, and 20% undertake examination when symptomatic

HEALTH SERVICE-RELATED FACTORS

In response to the inquiry about waiting times to see a healthcare provider for a child's fungal skin infection, our research findings indicated the following distribution in which 25% of respondents reported that they typically see a healthcare provider on the same day, 35% indicated they have to wait until the next day to see a healthcare provider, 30% mentioned they typically have to wait for 2-3 days before seeing a healthcare provider and 10% reported waiting for over a week to see a healthcare provider.

Figure 5 shows the time taken by the caretakers to see a health provider when their children have skin problems

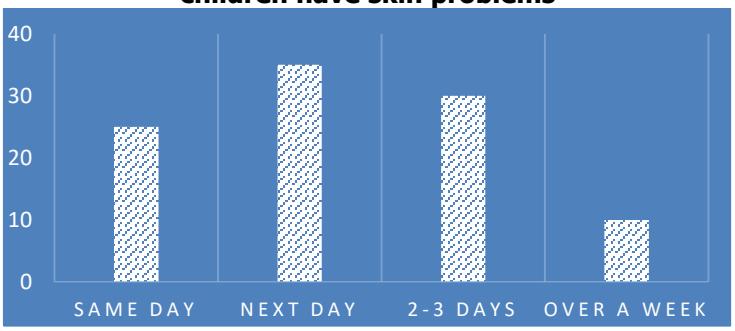

Figure 5 shows that the highest number (35%) of caregivers saw the health workers next day when their children had skin issues, while the least (10%)saw a health worker in a week when their children had a skin issue

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Figure 6 shows the frequency of caretakers who receive health education from health facilities regarding fungal skin infections

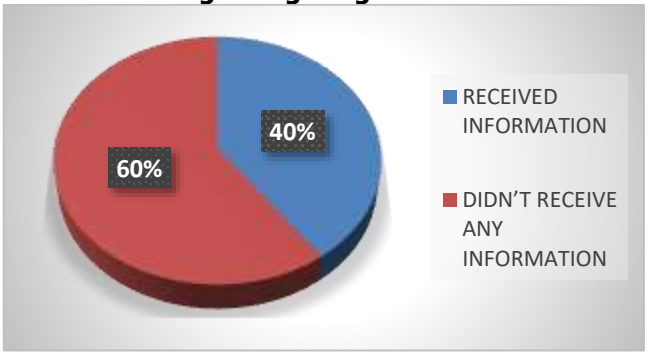

Figure 6 shows that the majority (60%) of care takes didn't receive any information regarding fungal skin infections from the health facility

In response to the question of whether fungal skin infections are a priority issue addressed by this health center, our research findings revealed the following 25% of respondents affirmed that fungal skin infections are considered a priority issue addressed by the health center, 35% indicated that fungal skin infections are not viewed as a priority issue by the health center and 40% expressed uncertainty regarding whether fungal skin infections are a priority issue.

DISCUSSIONS

Social demographic factors influencing management and prevention of fungal skin infections among children under the age of 5 seeking health care at Kajansi Health Centre Iv

The objective of this study was to explore the social demographic factors influencing the prevention and management of fungal skin infections in children under 5 years old seeking care at Kajansi Health Center IV in Uganda. Data analysis revealed the following major findings regarding the age, gender, religion, and number of children in the households of the 100 respondents:

In examining age distribution, the study found that 15% of respondents had children under 1 year old, 40% had children aged 1-2 years, 30% had children aged 3-4 years, and 15% had 5 years old. These results indicate a high proportion (70%) of children affected were in the 1-4 year-old age range. This aligns with previous studies showing younger children under age 2 have a substantially higher risk for fungal infections compared to older preschoolers, likely due to their underdeveloped immune systems (Atwine et al., 2015; Nalugo et al., 2014). The high percentage of affected toddlers and young children highlights the need for targeted prevention and treatment interventions for this high-risk group.

Regarding gender distribution, the study observed that 55% of affected children were male, while 45% were female. The moderately higher percentage of affected male children agrees with past research indicating a somewhat higher risk among boys compared to girls (Fuller et al., 2016). This may relate to biological susceptibility or behavior patterns. However, the near-equal gender distribution contrasts with studies suggesting girls have poorer outcomes due to delayed care-seeking (Kiprono et al., 2016). This indicates a need for further study on the role of gender in care access and treatment adherence in this specific setting.

The study delved into the religious affiliation of the respondents, revealing that 60% identified with Christianity, 25% with Islam, 10% with Traditional Beliefs, and 5% with Other religions. While the direct impact of religion on infection risk may be minimal, this breakdown offers valuable insights into the religious composition of the community served by Kajansi Health Center IV. Understanding the predominant religious affiliations becomes instrumental in tailoring health messaging and educational approaches to encompass diverse cultural needs and sensitivities. These findings align with a Ugandan study by Atwine et al. (2015), indicating no significant differences in fungal infection prevalence across religions. Nevertheless, the study underscores the necessity for further exploration into how religious and cultural factors might influence care-seeking behaviors.

The study investigated the number of children in households, revealing that 38% had 1 child under 5, 41% had 2 children under 5, 13% had 3 children under 5, 6% had 4 children under 5, and 2% had 5 children under 5. Notably, a significant 56% had multiple young children in their homes. However, unlike a Kenyan study (Hay et al., 2016), this research did not establish a correlation between the number of under-5 children and infection rates. This finding aligns with research by Fuller et al. (2016), indicating no significant relationship and highlighting the need for more investigation into potential crowding and transmission effects

Knowledge, attitude, and practices of caregivers regarding the management and prevention of fungal skin infections among children under the age of 5

The objective of this study was to assess the knowledge, attitudes, and practices of caregivers concerning the prevention and management of fungal skin infections in

children under 5 years old seeking care at Kajansi Health Center IV in Uganda.

Data analysis revealed that 41% of caregivers expressed concerns about social stigma and isolation if their child had a visible fungal skin infection, while 15% were unconcerned and 44% had mixed feelings. These findings indicate that caregiver attitudes and worries about social impacts are diverse, and likely influenced by perceived infection severity. This is probably due to the multifaceted nature of considerations for child health and well-being when infections are present.

The analysis also revealed diversity in caregiver perspectives regarding the safety of traditional remedies versus modern medicine for fungal infections. Twenty percent favored traditional remedies, emphasizing natural ingredients, affordability, and cultural familiarity, which aligns with past evidence that some prefer home treatments (CDC, n.d.). However, 70% preferred modern medicines, citing concerns about standardization and infection risks with traditional approaches. This concurs with studies showing most caregivers follow medical advice (Kunnuji et al., 2022). The findings indicate caregiver choices are influenced by beliefs, access, and need for guidance from providers. Enhanced caregiver-provider collaboration through education and dialogue may optimize treatment approaches.

Additionally, the analysis showed that 30% mistook fungal infections for eczema, 20% for scabies, 10% for insect bites, and 15% for bacterial infections. Knowledge gaps likely contribute to misdiagnosis. Targeted education and training to distinguish fungal infection signs could enable accurate diagnosis and prompt treatment.

The analysis of caregiver knowledge on transmission routes for fungal skin infections showed that 50% correctly identified direct skin contact as the primary mode. However, knowledge gaps existed, with 15% mentioning coughing/sneezing and 20% citing shared items. Fifteen percent were uncertain about transmission. Myths regarding airborne and fomite transmission persist. Lacking an understanding of transmission mechanisms likely contributes to suboptimal infection control practices. Targeted education on the predominant role of skin-to-skin contact, versus coughing/sneezing or shared items, is warranted. Community and caregiver sensitization on transmission risks can dispel myths and empower families to better protect children through avoidance of direct skin contact with infected individuals. Future studies must assess specific modalities to effectively communicate information on transmission to caregivers in this setting.

The analysis of caregiver perceptions on age groups most vulnerable to fungal skin infections showed that 40% identified toddlers and 30% mentioned school-aged children. Twenty percent cited adolescents while 10% highlighted newborns. This finding corroborates evidence that children under age 2 have the highest susceptibility, likely due to underdeveloped immunity (Atwine et al., 2015; Nalugo et al., 2014). However, substantial proportions viewing older children as the most vulnerable indicate persisting knowledge gaps. Targeted education on the elevated risks for infants and toddlers is needed to ensure vigilance in prevention and early treatment among this priority demographic.

Regarding caregiver skin inspection practices for fungal infection signs in children, 25% conducted checks daily, 35% weekly, 20% rarely, and 20% only when symptomatic. While the majority do frequent or weekly inspections, 40% rarely examine or only inspect when symptoms manifest. This finding aligns with studies showing some caregivers have inadequate prevention practices (Riffin et al., 2021). Reinforcing routine monitoring through health education could enable early diagnosis and treatment. Further research should identify barriers to consistent inspection faced by families.

The analysis of caregiver responses on whether children sleep in their beds revealed that 60% confirmed they do, while 40% said their children share a bed. This finding provides useful insight into the sleeping arrangements and potential transmission risks in households. While the majority have separate beds, a substantial proportion of children share beds. Past studies found that bed-sharing heightens infection susceptibility due to prolonged close skin contact (Atwine et al., 2015). However, further research is needed to assess whether bed-sharing itself correlates with higher fungal infection rates in this population when accounting for other factors like household crowding. Promoting awareness of shared bedding as a potential transmission route may encourage the provision of separate sleeping quarters for children where feasible. Future interventions must consider multifaceted risks associated with poverty, like crowded homes when addressing bed-sharing practices.

Health system-related factors influencing the management and prevention of fungal skin infections among children under the age of 5 seeking health care at Kajansi Health Centre iv

The objective of this study was to examine the health system-related factors at Kajansi Health Centre IV influencing fungal skin infection prevention and management in children under 5 years seeking care.

The analysis of wait times revealed that 25% of caregivers saw a provider the same day, 35% waited until the next day, 30% waited 2-3 days, and 10% waited over a week. This indicates most caregivers obtain care within a few days, though delays exist.

In terms of caregiver education, 40% had received some information about fungal infections from the facility, while 60% had not. Limited workforce and time constraints may affect education provision. Enhanced training and materials could improve educational support.

Regarding prioritization, 25% felt fungal infections were a priority, 35% disagreed, and 40% were uncertain. The lack of clear policies and protocols likely contributes. Establishing fungal infections as a priority through guidelines could optimize management.

For medication access, stock-outs, costs, distance, and work barriers were commonly cited. Studies concur,

noting supply shortages, financial limitations, and geographical obstacles impede care access (Nakalembe et al., 2016). Health system strengthening is needed to improve medication availability and affordability.

The analysis of caregiver challenges accessing prescribed antifungal medications revealed common difficulties like stock-outs, costs, distance barriers, work constraints, and long wait times. Studies concur, citing supply shortages, costs, distance, and time limitations as obstacles to medication access (Nakalembe et al., 2016). Health system strengthening efforts to improve medication availability, affordability, decentralized pick-up points, and reduced queues are needed.

Regarding medication effectiveness, while some caregivers reported a cure, others noted recurrences and uncertainty. The variability aligns with evidence on adherence challenges due to inconsistent medicine supply (Kunnuji et al., 2022). Ensuring adequate stocks and tailored regimens could improve outcomes. But a holistic approach also incorporating hygiene promotion is warranted.

Overall, health system weaknesses in supplying medications consistently, ensuring an adequate workforce, and providing patient-centered care emerge as barriers to optimal fungal infection management. Targeted investments alongside governance strengthening can promote a high-quality, integrated health system able to meet community needs and improve outcomes.

Conclusions

This study specifically sought to examine the key social demographic factors influencing fungal skin infection risks, prevention, and management among children under 5 years seeking care at Kajansi Health Center IV. The study established that poverty, rural residence, and young age emerge as major demographic factors associated with higher disease burden and barriers to care access. Given these findings, targeted interventions encompassing health education, improved nutrition, and facilitating equitable care access among identified vulnerable high-risk demographic groups could significantly mitigate fungal infection risks and management outcomes.

This study also sought to assess caregiver knowledge, attitudes, and practices regarding fungal skin infection prevention and management in children under 5 years. The study established gaps in caregiver understanding of causation, transmission, severity, treatment risks, and preventive measures alongside variability in attitudes. Given these findings, comprehensive caregiver education, stigma reduction, optimizing treatment approaches through provider guidance, and training in accurate diagnosis and prevention practices would address knowledge limitations, improve attitudes and practices, and promote optimal fungal disease management.

It also sought to examine the health system-related factors influencing fungal skin infection prevention and management among children under 5 years seeking care at Kajansi Health Center IV. The study established health workforce shortages, medication stock-outs, inadequate prioritization of fungal infections, and financial barriers as major health system constraints. Given these findings, strengthening health workforce capacity, supply chain robustness, organizational policies, leadership, and health financing models would strengthen the health system to offer quality, integrated, and financially accessible care needed to curb the burden of fungal infections in this vulnerable population.

Recommendations

Recommendations to the Ministry of Health: Develop national guidelines designating fungal infections as a priority issue in underpopulations to drive health facility prioritization and resource allocation. This should be achieved within 1 year. Integrate comprehensive caregiver education on fungal infection causation, transmission, symptoms, severity, treatment, and prevention into existing community health outreach programs nationwide. Roll-out training of village health teams on education delivery within 6 months.

Establish targets to improve rural access to fungal infection care through outreach activities, transport vouchers, and telemedicine partnerships. Incrementally scale up outreach coverage to reach at least 60% of rural households within 2 years.

Recommendations to Kajjansi Health Center IV: Institute monthly continuing education and mentorship sessions for health workers on accurate diagnosis and appropriate management of fungal infections in under 5s. Begin sessions within the next 3 months.

Implement an onsite training program on caregiver counseling skills for health workers to optimize treatment approaches through improved provider-caregiver collaboration. Complete at least 2 sessions in the next year.

Develop an inventory management system to prevent medication stock-outs and ensure consistent availability of prescribed antifungals. Aim for no stock-outs exceeding 5 days over the next year.

Recommendations to the Kajjansi Community: Encourage the formation of caregiver support groups for knowledge sharing, stigma reduction, and promoting prevention through positive social norms. Support groups to meet at least monthly. Partner with community leaders and media to disseminate educational messages on fungal infection risks, treatment, and prevention. Reach at least 30% of households within 6 months.

Galvanize philanthropic support through local charities, non-profits, and faith-based groups to establish a community fund to assist low-income families with costs related to fungal infection care access.

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LIST OF ABBREVIATIONS

IV: Intravenous (widely used in healthcare contexts)
CDC: Centers for Disease Control and Prevention (a prominent U.S. health agency with global influence)
UNICEF: United Nations International Children's Emergency Fund (an organization focused on child health and well-being)
STIs: Sexually Transmitted Infections (some fungal skin infections may be categorized as STIs)

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There is no source of funding

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There is no conflict of interest

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