**SJ Mircobiology Africa**
**Vol. 1 No. 8 (2024): August 2024 Issue**
**https://doi.org/10.51168/0ncsmw37**
**Original Article**

# HEALTH FACILITY-RELATED FACTORS CONTRIBUTING TO THE PREVALENCE OF SUPERFICIAL FUNGAL INFECTIONS AMONG CHILDREN AGED 15 YEARS AND BELOW AT KAWOLO HOSPITAL, BUIKWE DISTRICT. A CROSS-SECTIONAL STUDY.

*Jamiru Lwanga*, Patrick Ssendugga, Grace Denise Akwang*
*Kampala University School of Nursing and Health Sciences*



## ABSTRACT

### Background
Superficial fungal infections (SFI) are infections associated with the outermost layer of the skin and its appendages such as nails, skin, and hair. Thus, the purpose of the study was to determine the health facility-related factors contributing to the prevalence of superficial fungal infections among youths aged 15 years and below at Kawolo Hospital, Buikwe district.

### Methodology
The study was a descriptive cross-sectional that employed a quantitative data collection method whereby a simple random sampling technique was used to select the 40 respondents(caregivers).

### Results
The majority 15(37.5%) of the respondents were Basoga by tribe and the minority 2(5%) were Banyankole. Almost half of the participants 15 (45%) their level of education was Secondary and a minority 2(5%) had not attended formal education. The findings on health facility-related factors; lack of consultation from the dermatologist about the child's condition 39 (97.5%), not visiting the health facility 20 (50%), unsterile linens and nets used in hospital 25 (62.5%) and 20(50%) reported health facility has no equipment that enables for diagnosis of superficial fungal infection

### Conclusion
Health facility-related factors contributing to the prevalence of superficial fungal infections were lack of consultation from the dermatologist about the child's condition and the reported health facility has no equipment that enables for diagnosis of superficial fungal infection.

### Recommendations
The ministry should put dermatological clinical guides that must be followed in the management of dermatological conditions like superficial fungal infections.

**Keywords:** *Superficial fungal infections, Kawolo Hospital, Buikwe District*
*Submitted: 2024-05-28 Accepted: 2024-07-17*

***Corresponding author:*** *Jamiru Lwanga**
***Email:*** ***lwangajamir@gmail.com***
*Kampala University School of Nursing and Health Sciences*

## BACKGROUND

Superficial fungal infections (SFI) are infections associated with the outermost layer of the skin and its appendages such as nails, skin, and hair. These infections are caused by dermatophytes, yeasts, and non-dermatophyte molds (NDM) and include dermatophytosis that affects skin, nails, and hair and onychomycosis that causes discoloration, thickening, and separation of nail bed, (Jaishi et al., 2022). Globally, superficial fungal infections affect 20% to 25% of people with dermatophytes affecting 10 -15% of children, tinea capitis at 12%, tinea pedis at 8%, and onychomycosis at 3% which has continued to put the health of children at stake, and also increasing its transmission to other people, especially their friends, (Prakoeswa et al., 2022). These infections are responsible for 8% of deaths annually, (Tufa & Denning, 2019). The prevalence of superficial infections in German was 15.43% with dermatophytes contributing to 83.21% and non-dermatophytes contributing to 16.7% of the infection. Fungal infections commonly infected nails 33.16%, scalp 58.33% and feet 33% which led to increased patient suffering poor health of the population, and increased costs of treatment (Gamage et al., 2020). In India the rate of superficial fungal infections was high with onychomycosis affecting 48.8%, scaly skin lesions 13.1%,

tinea corporis 10.3%, Tinea cruis 5.3% and dermatophytes affecting 49.4% of the population. The high rate of fungal infections contributed to poor health status and contributing to increasing sarcoma cases, (Khan et al., 2023). In the same vein, a prospective study about the impact of superficial fungal infections in Northern America revealed that most of the patients who acquired superficial fungal infections were due to limited diagnostic facilities that more than 40% of patients share their bed with someone responsible for spreading the disease, as fungal infections are contagious (Akanda et al., 2024)

In Africa, tinea capitis is the most superficial fungal infection affecting 20% of children in West Africa, and 10% to 70% in other regions, (Qelit, 2023). According to the Ethiopian Demographic Survey (EDHS) report 2018, 60.4% of the population had superficial skin infections 44.7% were caused by dermatophytes, 33.3% were caused by yeasts, and 32.3% were caused by non-dermatophyte molds, these infections were responsible for the change in skin texture, loss of nails and hair plus other complications, (Bitew & Wolde, 2019). However in Eritrea, superficial cutaneous fungal infections stood at 87.5% with 59.2% of males and 40.8% of females reporting the disease, this brought a setback in the achievement of Sustainable Development Goal 3 which emphasizes health for all, (Prabakaran et al., 2021). The Kenyan Demographic Health Survey (KDHS) report 2019 indicated that the prevalence of superficial infections was at 11.57% and this has greatly contributed to poor national health status and high expenditure on disease management and missing school, (Ratemo & Denning, 2023). In a study carried out by Chikoi et al., (2018), establishing the magnitude and associated risk factors of superficial fungal infection among primary school children in Southern Tanzania children who were admitted in rooms where they slept more than 10 members in the room were greatly exposed to high risk of acquiring superficial fungal infections since they are communicable diseases.

In Uganda, 9% of 45 million people suffer fungal infections mostly onychomyosis and dermatophytes. Poor immunity was considered a high determinant of such infections (Bongomin et al., 2024). The Ugandan government through the Ministry of Health, district health committee has ensured the availability of skin clinics and skin disease specialists at every facility on the hospital level, provided laboratory testing equipment to health facilities trained health workers on skin infections through health workers workshops, and ensured availability of fungal disease drugs in hospitals, (Kwizera et al., 2020). Despite the measures and prioritizing prevention and management of superficial skin fungal infections, there is still a rise in the case of superficial fungal infections recorded in the country. Thus, the purpose of the study was to determine the health facility-related factors contributing to the prevalence of superficial fungal infections among youths aged 15 years and below at Kawolo Hospital, Buikwe district.

## METHODOLOGY

### Study design and rationale

In this study, a descriptive cross-sectional study design that utilized a quantitative method of data collection was opted. This research study design was preferred because it was less time-consuming and in addition, the researcher collected data at once without following up with respondents.

### Study setting and rationale

The study was conducted at Kawolo Hospital, Buikwe district. Kawolo Hospital is located in Lugazi town, Buikwe District in the Central Region of Uganda. It is a public hospital operating under the Uganda Ministry of Health and offers a variety of services including general care, maternity services, laboratory services, pediatrics, surgery, and other specialized clinics and receives an average of 100 patients daily with a bed capacity of 106 and approximately over 60 nurses. The economic activities in the area include business and agriculture. The coordinates of Kawolo Hospital are 0°22'05.0"N, 32°56'44.0" E (Latitude: 0.368050; Longitude: 32.945553). This area was chosen for the study because it receives a good number of youths with superficial fungal infections which would help to fulfill the objectives of the study.

### Study population

The study targets were target of 45 children aged 15 years and below infected with superficial fungal infections attending the outpatient department at Kawolo Hospital, Buikwe district.

### Sample size determination

The study considered a sample size of 40 children aged 15 years and below infected with superficial fungal infections attending the outpatient department at Kawolo Hospital, Buikwe district. This was according to Krejcie & Morgan's table of 1970 because it allowed the researcher to make decisions about a population with confidence and provide higher accuracy. The table is reflected in Appendix V.

### Sampling procedure

A simple random sampling procedure was used. This can be defined as a sampling procedure that gives each person in the study population a chance to be selected. On each day of data collection, papers labeled “YES” or “NO” were put in

a box and shaken with each respondent having one chance to be chosen. The eligible respondent was a caregiver of a child 15 years and below infected with superficial fungal infections attending the outpatient department at Kawolo Hospital, Buikwe district who picked the paper with a Label "YES" and was enrolled in the study. This procedure was considered because of its ease and accuracy of representation; selecting subjects completely at random from the larger population produced a sample that was representative of the group being studied and there were no biases among the respondents. This was repeated until the desired sample size of 40 caregivers of children 15 years and below infected with superficial fungal infections was reached during the five days of data collection.

### Inclusion Criteria

The study included all caregivers of children 15 years and below infected with superficial fungal infections attending the outpatient department at Kawolo Hospital, Buikwe district who were available during data collection periods and willing to voluntarily consent to participate in the study.

### Exclusion criteria

The study excluded all children and caregivers with unsound minds.

### Definition of variables

Variables are challenges or characteristics of interest that a researcher would like to handle in the research.

### Independent variables

The independent variables of the study were; health facility-related factors contributing to the prevalence of superficial fungal infections among children 15 years and below.

### Dependent variables

The dependent variable of the study was superficial fungal infections among children 15 years and below.

### Research Instruments

The data were collected from respondents using an interviewer-administered questionnaire with both open and closed-ended questions written in simple English designed to assess the factors contributing to the prevalence of superficial fungal infections among children 15 years and below which were set in sections according to the specific objectives. The instrument was chosen because it was time-saving.

### Data collection procedures

After obtaining permission from the school, the researcher took an introductory letter to the Administrator of Kawolo Hospital seeking permission to conduct a study, the researcher explained the purpose of the study to respondents and then asked for consent from participants who were willing to take part in the study and questionnaires were administered by the interviewer to be filled immediately. The filled questionnaires were collected and checked there and then for completeness to avoid unanswered questions that may spoil the collected data.

### Data management

In the process of data collection, each questionnaire after being filled was checked for completeness and accuracy before leaving the area of study. Filled questionnaires were kept properly in a locker for confidentiality and safety.

### Data analysis

The data collected was analyzed by entering it into the computer using Microsoft Office Word and Microsoft Excel where data were presented in the form of tables, graphs, pie-charts, and figures.

### Ethical considerations

The researcher obtained a formal letter from the school administration which was used to obtain permission and consent from the Administrator of Kawolo Hospital who was told the reason for the study and in turn permitted the study to be carried out. Verbal permission and consent were sought from respondents where the main purpose of the study was clearly explained to them and they were assured of confidentiality as they used serial numbers instead of names to have their cooperation and trust. They were also told that were free to withdraw from a study at any moment if willing.

## RESULTS

### Demographic data findings of the study

SJ Mircobiology Africa
Vol. 1 No. 8 (2024): August 2024 Issue
https://doi.org/10.51168/0ncsmw37
Original Article



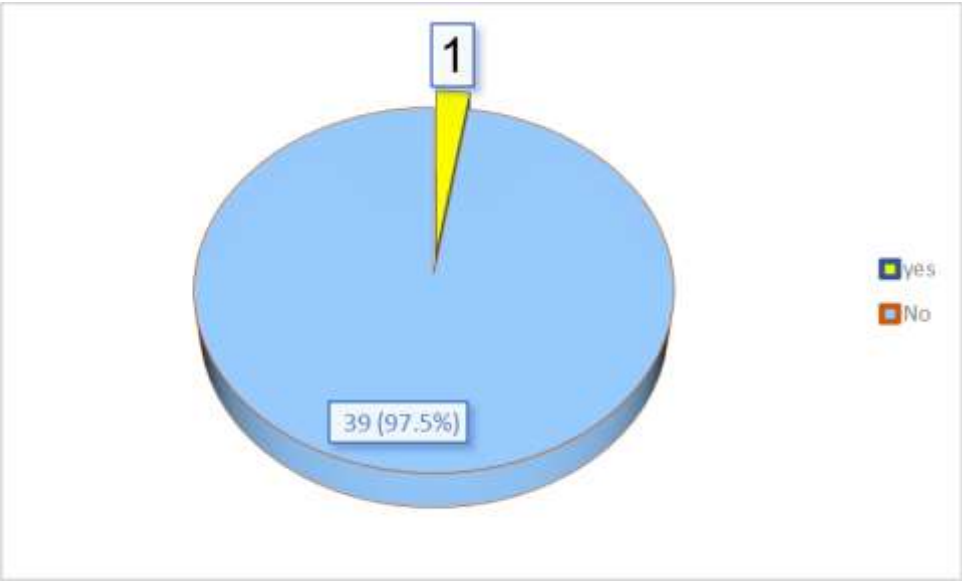
**Table 1: showing the demographic characteristics of caregivers. N=40**

| DEMOGRAPHIC DATA | FREQUENCY (F) | PERCENTAGE (%) |
|---|---|---|
| AGE GROUP | | |
| 20 – 25 | 1 | 2.5 |
| 26 – 30 | 4 | 10 |
| 31 – 35 | 16 | 40 |
| 36 - 40 | 14 | 35 |
| Above 40 years | 5 | 12.5 |
| TRIBE | | |
| Baganda | 7 | 17.5 |
| Basoga | 15 | 37.5 |
| Lugbar | 8 | 20 |
| Nubian | 4 | 10 |
| Bagisu | 4 | 10 |
| Banyankole | 2 | 5 |
| LEVEL OF EDUCATION | | |
| Tertiary | 5 | 12.5 |
| Secondary | 18 | 45 |
| Primary level | 15 | 37.5 |
| No formal Education | 2 | 5 |
| Total | 40 | 100 |

The findings of the study on demographic data in Table 1 showed that most of the care caregivers 16 (40%) were aged 31-35 years and the least 1(2.5%) were aged 20 -25 years. Majority 15(37.5%) of the respondents were Basoga by tribe and the minority 2(5%) were Banyankole. Almost half of the participants 15 (45%) their level of education Secondary and minority 2(5%) had not attended formal education.

## Health facility factors contributing to prevalence of superficial fungal infections among children aged 15 years and below at Kawolo Hospital

**Figure 1: showing whether caretakers had consulted the dermatologist about the child's condition. N= 40**



**SJ Mircobiology Africa**
**Vol. 1 No. 8 (2024): August 2024 Issue**
https://doi.org/10.51168/0ncsmw37
**Original Article**

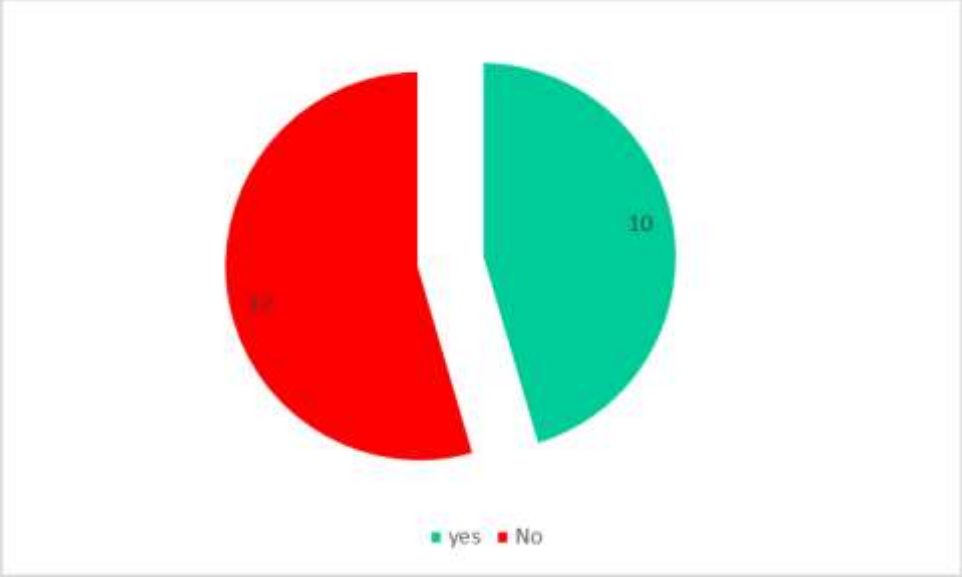
From Figure 1; almost all study participants had not consulted the dermatologist about the child's condition and only 1 (2.5%) had consulted the dermatologist.

**Figure 2: Showing whether respondents think that their health facility has equipment that enables for diagnosis of superficial fungal infections. N= 40**




From Figure 2; half of the study participants 20(50%) think that their health facility has no equipment that enables for diagnosis of superficial fungal infections and a minority 7(18%) were not sure.

**Figure 3: Showing whether respondents think that linens used in hospitals are always sterilized. N=40**

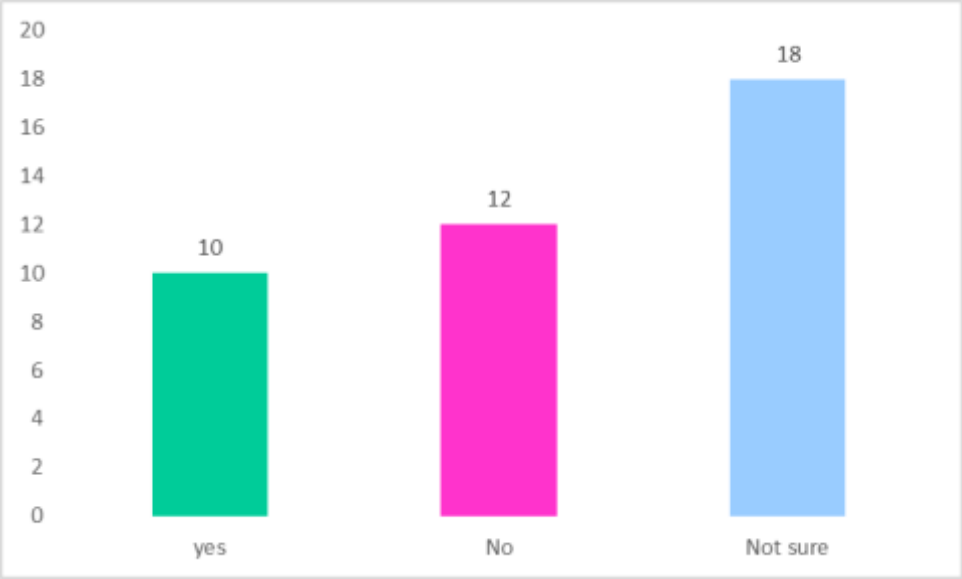



In Figure 3; the majority 25 (62.5%) of respondents think that linens used in hospitals are always not sterile and the minority 15(37.5%) think are sterile.

SJ Mircobiology Africa
Vol. 1 No. 8 (2024): August 2024 Issue
https://doi.org/10.51168/0ncsmw37
Original Article

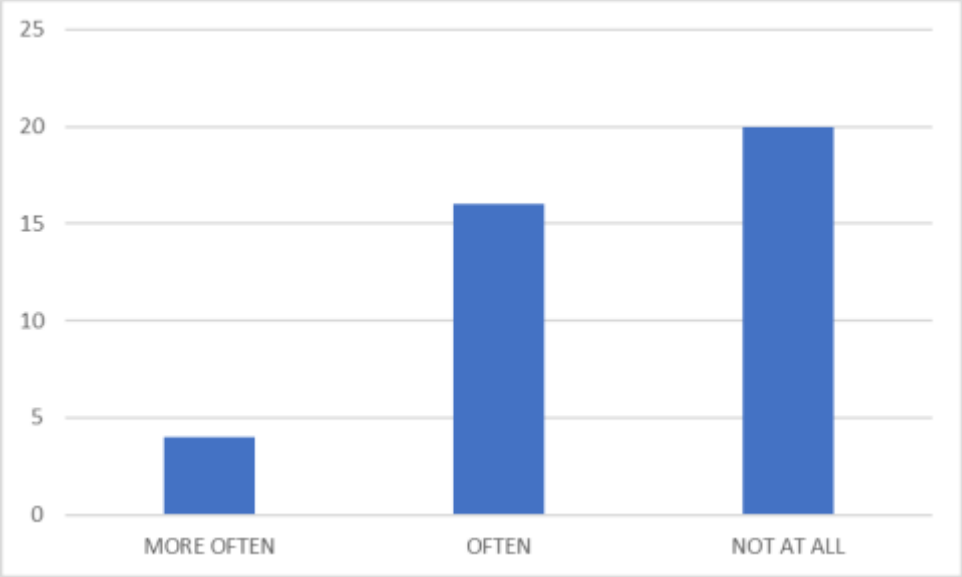


**Figure 4: Showing whether respondents think that tap water used in hospitals contributes to superficial fungal infections. N=40**




The study findings in Figure 4 showed that almost half of the respondents 18(45%) were not sure whether tap water used in hospitals contributes to superficial fungal infections and a minority 10 (25%) think that it contributes.

**Figure 5: Showing how participants were visiting the hospital. N=40**




In Figure 5; half of the participants stated that were not visiting the health facility and 4(10%) visited the hospital often.

SJ Mircobiology Africa
Vol. 1 No. 8 (2024): August 2024 Issue
https://doi.org/10.51168/0ncsmw37
Original Article

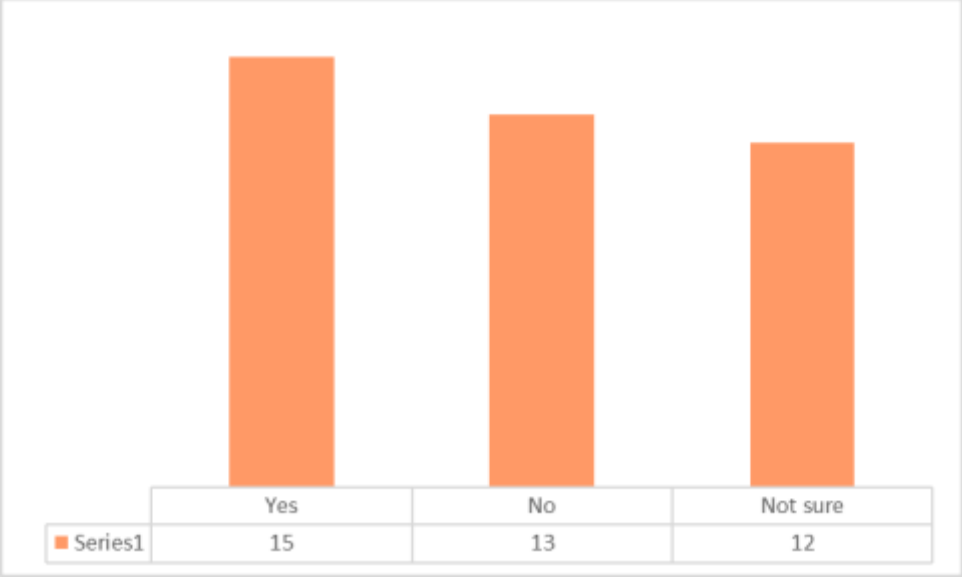


**Table 2: Showing the number of children in the room during admission. N=40**

| Number of children in the room during admission | Frequency (f) | Percentage (%) |
|---|---|---|
| 4 | 1 | 2.5 |
| 5 | 4 | 10 |
| 8 | 6 | 15 |
| 10 | 9 | 22.5 |
| More than 10 | 20 | 50 |
| Total | 40 | 100 |

From Table 2, the findings of the study revealed that half of the respondents reported that the number of children in the room during admission was more than 10 and at least 1(2.5%) reported 1 in a room.

**Figure 6: Showing whether clinicians at health facilities are aware of superficial fungal infections. N=40**




The results of Figure 6 revealed that less than half 15(37.5%) think that clinicians at the facility are aware of superficial fungal infections and the least 12(30%) think that are not aware of it.

## DISCUSSION

### Demographic data of the participants

Almost half of the participants 15 (45%) their level of education was Secondary and a minority 2(5%) had not attended formal education. This implies that parents of low levels of education, their children had a high chance of SFI occurrence which probably may related to good knowledge associated with high levels of education. This is in line with the results of Ezomike et al, (2021) stated that higher levels of education were associated with the good personal hygiene of children hence reducing the chances of SFI occurrence.

### Health facility-related factors contributing prevalence of superficial fungal infections among children aged 15 years and below at Kawolo Hospital

Almost all study participants 39 (97.5%) had not consulted the dermatologist about the child's condition. This probably may be because, in the study area and nearby areas, it caused improper diagnosis and also had a high chance of relapse. Therefore the results of the study agree with the study conducted to determine factors responsible for difficulty in the treatment of superficial fungal infections in India showed that the availability of dermatologists at the health facility was inversely proportional to the prevalence and duration of the disease and children who underwent consultation of the dermatologist while at the health facility

had higher chances of getting better and also had less episodes of relapse (Jain et al., 2021)
Half of the study participants 20(50%) think that their health facility has no equipment that enables for diagnosis of superficial fungal infections. This implies that there is a misdiagnosis of the condition at the facility. This agrees with the findings of the World Health Organization (2020) during a study of assessing training of health workers at national and district levels concerning superficial fungal infections which indicated that the availability of diagnostic facilities for mycological examinations contributed to proper detection, management, and eradication of superficial fungal infections and vice-versa.

The majority 25 (62.5%) of respondents think that linens used in hospitals are always not sterile. This implies that if the linens, bedding, and mosquito nets in the hospital were not sterilized and were shared with an infected person, it predisposed the next person to SFIs. This corresponds with the study conducted by the Centre for Disease Control and Prevention (2023) to establish healthcare-associated fungal infections in developing countries that indicated that the use of medical equipment such as bedding, mosquito nets, and linen, not well disinfected and sterilized was responsible for the increase of hospital-acquired superficial fungal infections.

Half of the participants 20 (50%) stated that were not visiting the health facility. This probably may be due to that majority always visit health facilities when have serious illnesses. This implies that the more a person visits a facility the less chances of getting an infection. This corresponds to the findings of Seo et al., (2020) who carried out a study on the association between hospital visits for superficial fungal infections and climatological factors which revealed that children who regularly visited the hospital were 3times less likely to develop superficial fungal infections compared to their counterparts who never went for hospital visits; routine hospital visits aided in early detection and treatment of infections hence less prevalence of the infection, routine health screenings and medical examinations should be encouraged to all members. In addition, a retrospective study to assess the prevalence of deep fungal infections among General Hospital outpatients in Southwestern China revealed that frequent and regular medical checkups reduced the chances of acquiring superficial fungal infections by 60.53% thus reducing mortality among children aged 15 years and below (Wen et al., 2022).

The findings of the study revealed that half of the respondents 20(50%) reported that the number of children in the room during admission was more than 10. This implies that being admitted in a room greatly exposed them to higher chances of acquiring superficial fungal infections since they are communicable diseases. This is in line with another related study carried out by Chikoi et al., (2018), establishing the magnitude and associated risk factors of superficial fungal infection among primary school children in Southern Tanzania children who were admitted in rooms where they slept more than 10 members in the room were greatly exposed to high risk of acquiring superficial fungal infections since they are communicable diseases. More so, a study conducted by Ezomike et al., (2021) about the risk factors associated with superficial fungal infections in Nigeria revealed that over-congestion in health facilities increased the risks of acquiring superficial fungal infections 20% of the patients acquiring the infection congestion since they are communicable.

The results of the study revealed that less than half 15(37.5%) think that clinicians at the facility are aware of superficial fungal infections. This implies that caretakers trust clinicians at the facility and believe that are aware of the SFIs. These are contrary to the findings of Bongomin et al., (2022) which revealed that 35.5% of children were affected by superficial fungal infections due to poor clinicians' awareness about superficial fungal infections. Similarly, Hay, (2017) conducted a study about the prevalence of superficial fungal infections and it revealed that 15% of the infections were due to limited knowledge of prevention and control of superficial fungal infections among nurses which increased the risks of acquiring superficial fungal infections.

## CONCLUSION

The findings on health facility-related factors contributing to the prevalence of superficial fungal infections among children aged 15 years and below showed; a lack of consultation from the dermatologist about the child's condition, not visiting the health facility, unsterile linens, and nets used in the hospital and reported health facility has no equipment that enables for diagnosis of superficial fungal infection.

## RECOMMENDATIONS

- The Ministry of Health in conjunction with the Ministry of Education should introduce the dermatological nursing course.
- The ministry should put dermatological clinical guides that must be followed in the management of dermatological conditions like superficial fungal infections.
- Nurses and midwives should also ensure that community-based health care services are implemented to prevent the occurrence of communicable diseases like SFIs in the communities.

## IMPLICATION TO NURSING PRACTICE

Ministry of Education and Ministry of Health in conjunction with the Uganda Nurses and Midwives Council would emphasize that during training student nurses should be well equipped with enough knowledge about dermatological conditions like SFIs

Nurses in services would be regularly provided with refreshment courses so that, they are well equipped with enough knowledge concerning superficial fungal infections about their prevention and management.

It would create a baseline for nurses to conduct more research concerning factors contributing to the prevalence of superficial fungal infections among children aged 15 years and below at Kawolo Hospital.

## ACKNOWLEDGEMENT

The successful completion of this report is owed to the assistance I received from several organizations and individuals.

I would like to specifically express my gratitude towards the Ministry of Health (MoH)- Uganda Nurses Midwives Council for looking forward and emphasizing that research is a core for this course and ensuring it is a reality.

I am very thankful to the Ministry of Education and Sport for the endeavors to ensure that we go through the course successfully.

My unlimited thanks go madam. AKWANG GRACE DENISE the principal of Kampala University School of Nursing and Health Sciences and all tutors for their tireless support to me and my colleagues towards the success of this study.

I am also grateful to my supervisor MR. SSENDUGGA PATRICK showed kin interest in the review of my report writing up to the completion of the report by guiding me and showing all the relevant information needed for the study.

I also thank the library department of Kampala University School of Nursing and Health Sciences for the support given during the literature review, organization, and typesetting.

I can't forget to send my sincere appreciation to my beloved parents for the unlimited support given to me.

Finally, I thank all my colleagues in diploma especially the group members plus all entire students at large for the accompaniment, advice, and support rendered during my course of study.

## LIST OF ABBREVIATIONS

**CDC:** Centre for Disease Control and Prevention
**EDHS:** Ethiopia Demographic Health Survey
**KDHS:** Kenyan Demographic Health Survey.
**NDM:** Non-Dermatophyte Molds
**SFI:** Superficial Fungal infections
**WHO:** World Health Organization

## CONFLICT OF INTEREST

No conflict of interest declared

## SOURCE OF FUNDING

The study was not funded.

## AUTHOR BIOGRAPHY

**Jamiru Lwanga** is a student of Diploma in Nursing Extension at Kampala University School of Nursing and Health Sciences.

**Patrick Ssendugga** is a tutor at Kampala University School of Nursing and Health Sciences.

**Grace Denise Akwang** is the principal of Kampala University School of Nursing and Health Sciences.

## REFERENCES

1. Akanda, Md. K. M., Sultana, R., Rana, Md. M., Hossain, Md. A., Barik, S. M. A., Islam, Md. R., Islam, Md. N., & Parvez, G. M. M. (2024). Prevalence, Causes, and Management Strategies of Fungal Diseases in Northern Regions of Bangladesh. *Sciences of Pharmacy*, *3*(1), 24–33. https://doi.org/10.58920/sciphar0301191
2. Bitew, A., & Wolde, S. (2019). Prevalence, Risk Factors, and Spectrum of Fungi in Patients with Onychomycosis in Addis Ababa, Ethiopia: A Prospective Study. *Journal of Tropical Medicine*, *2019*, e3652634. https://doi.org/10.1155/2019/3652634
3. Bongomin, F., Ekeng, B. E., Kibone, W., Nsenga, L., Olum, R., Itam-Eyo, A., Kuate, M. P. N., Pebolo, F. P., Davies, A. A., Manga, M., Ocansey, B., Kwizera, R., & Baluku, J. B. (2022). Invasive Fungal Diseases in Africa: A Critical Literature Review. *Journal of Fungi*, *8*(12), 1236. https://doi.org/10.3390/jof8121236
4. Bongomin, F., Kwizera, R., Namusobya, M., van Rhijn, N., Andia-Biraro, I., Kirenga, B., Meya, D., & Denning, D. (2024). Re-estimation of the burden of serious fungal diseases in Uganda. *Therapeutic Advances in Infectious Disease*, *11*. https://doi.org/10.1177/20499361241228345
5. CDC, 2023 Increasing Threat of Spread of Antimicrobial-resistant Fungus in Healthcare Facilities.

https://www.cdc.gov/media/releases/2023/p0320-cauris.html

6. Chikoi, R., Nyawale, H. A., & Mghanga, F. P. (2018). Magnitude and Associated Risk Factors of Superficial Skin Fungal Infection Among Primary School Children in Southern Tanzania. *Cureus*. https://doi.org/10.7759/cureus.2993
7. Ezomike, N. E., Ikefuna, A. N., Onyekonwu, C. L., Ubesie, A. C., Ojinmah, U. R., & Ibe, B. C. (2021). Epidemiology and pattern of superficial fungal infections among primary school children in Enugu, south-east Nigeria. *Malawi Medical Journal: The Journal of Medical Association of Malawi*, *33*(1), 21–27. https://doi.org/10.4314/mmj.v33i1.4
8. Gamage, H., Sivanesan, P., Hipler, U.-C., Elsner, P., & Wiegand, C. (2020). Superficial fungal infections in the department of dermatology, University Hospital Jena: A 7-year retrospective study on 4556 samples from 2007 to 2013. *Mycoses*, *63*(6), 558–565. https://doi.org/10.1111/myc.13077
9. Hay, R. (2017). Superficial fungal infections. *Medicine*, *45*(11), 707–710. https://doi.org/10.1016/j.mpmed.2017.08.006
10. Jain, A., Dhamale, S., & Sardesai, V. (2021). Factors responsible for difficult to treat superficial fungal infections: A study from a tertiary healthcare center in India. *Mycoses*, *64*(11), 1442–1447. https://doi.org/10.1111/myc.13301
11. Jaishi, V. L., Parajuli, R., Dahal, P., & Maharjan, R. (2022a). Prevalence and Risk Factors of Superficial Fungal Infection among Patients Attending a Tertiary Care Hospital in Central Nepal. *Interdisciplinary Perspectives on Infectious Diseases*, *2022*, e3088681. https://doi.org/10.1155/2022/3088681
12. Jaishi, V. L., Parajuli, R., Dahal, P., & Maharjan, R. (2022b). Prevalence and Risk Factors of Superficial Fungal Infection among Patients Attending a Tertiary Care Hospital in Central Nepal. *Interdisciplinary Perspectives on Infectious Diseases*, *2022*, 1–10. https://doi.org/10.1155/2022/3088681
13. Khan, S. M., Farhana, A., Amin, U., & Khan, R. A. (2023). Clinicomycological pattern of dermatomycosis – A two-year retrospective study in a tertiary care hospital of north India. *Indian Journal of Microbiology Research*, *8*(1), 58–64. https://doi.org/10.18231/j.ijmr.2021.013
14. Kwizera, R., Bongomin, F., & Lukande, R. (2020). Deep fungal infections diagnosed by histology in Uganda: A 70-year retrospective study. *Medical Mycology*, *58*(8), 1044–1052. https://doi.org/10.1093/mmy/myaa018
15. Negm, E. M., Mohamed, M. S., Rabie, R. A., Fouad, W. S., Beniamen, A., Mosallem, A., Tawfik, A. E., & Salama, H. M. (2023). Fungal infection profile in critically ill COVID-19 patients: A prospective study at a large teaching hospital in a middle-income country. *BMC Infectious Diseases*, *23*(1), 246. https://doi.org/10.1186/s12879-023-08226-8
16. Prabakaran, J. J., Kesete, Y., Yohannes, E., Tsehaye, E., Teklezghi, N., Araya, E., & Arefaine, W. (2021). Prevalence and associated risk factors of superficial and cutaneous mycoses among children attending Halibet referral hospital in Asmara, Eritrea. *International Journal of Research in Dermatology*, *7*(2), 163–170. https://doi.org/10.18203/issn.2455-4529.IntJResDermatol20210564
17. Prakoeswa, F., Pramuningtyas, R., & Dimawan, R. (2022). The Epidemiologic and Sociodemographic Features of Superficial Fungal Infection Among Children in East Java Suburban Public Hospital. *Berkala Ilmu Kesehatan Kulit Dan Kelamin*, *34*, 120–124. https://doi.org/10.20473/bikk.V34.2.2022.120-124
18. Qelit, Y. (2023). A Retrospective Study on Dermatophyte Infections In-Relation to the Age, Sex, Site of Infection and In Asmara, Eritrea. *Mathews Journal of Dermatology*, *7*(1), 1–6. https://doi.org/10.30654/MJDE.10018
19. Ratemo, S. N., & Denning, D. W. (2023). Burden of fungal infections in Kenya. *Mycology*, *14*(2), 142–154. https://doi.org/10.1080/21501203.2023.2204112
20. Seo, H.-M., Park, S. K., Oh, S. U., Jang, J. W., & Kim, J. S. (2020). Association between Hospital Visits for Superficial Fungal Infections and Climatological Factor. *Journal of Mycology and Infection*, 35–41. https://doi.org/10.17966/JMI.2020.25.2.35
21. Tufa, T. B., & Denning, D. W. (2019). The Burden of Fungal Infections in Ethiopia. *Journal of Fungi*, *5*(4), 109. https://doi.org/10.3390/jof5040109
22. WHO fungal priority pathogens list to guide research, development, and public health action. Geneva: World Health Organization; 2022. License: CC BY-NC-SA 3.0 IGO.

**SJ Mircobiology Africa**
**Vol. 1 No. 8 (2024): August 2024 Issue**
**https://doi.org/10.51168/0ncsmw37**
**Original Article**



**PUBLISHER DETAILS.**

**SJC PUBLISHERS COMPANY LIMITED**

SJC Publishers Company Limited

Catergory: Non Government & Non profit Organisation
Contact: +256 775 434 261 (WhatsApp)
Email: info@sjpublisher.org or studentsjournal2020@gmail.com
Website: https://sjpublisher.org
Location: Scholar's Summit Nakigalala, P. O. Box 701432,Entebbe Uganda, East Africa