ISSN: 0975-833X

*Available online at http://www.journalcra.com*

*International Journal of Current Research*
*Vol. 11, Issue, 07, pp.5498-5501, July, 2019*

**DOI: https://doi.org/10.24941/ijcr.35847.07.2019**

**INTERNATIONAL JOURNAL OF CURRENT RESEARCH**

## RESEARCH ARTICLE

# LEVEL OF EDUCATION ATTAINMENT AND PARENTAL HEALTHCARE SEEKING BEHAVIOUR FOR CHILDREN DIAGNOSED WITHTUNGIASIS IN KIKUYU CONSTITUENCY, KIAMBU COUNTY, KENYA

**[1]Wambui Keiyoro and [2]Prof Peter N. Keiyoro**

[1]Ph.D. candidate Taxila American University
[2]Ph.D. University of Nairobi, Kenya

**ARTICLE INFO**

*Article History:*
Received 19th April, 2019
Received in revised form
20th May, 2019
Accepted 25th June, 2019
Published online 31st July, 2019

*Key Words:*

Formal Education Attainment, healthcare-Seeking Behavior, Tungiasis Infect Ion.

**Corresponding author:* **Hizrah Hanim Lubis**

**ABSTRACT**

The Level of formal education can influence one's perceptions to causes and approaches to diseases and wellbeing. Communities or individuals who have high level quality education are of tenlikely to seek medical attention and treatment of certain diseases. This is because they are able to read and comprehend instruction hence could even self-medicate and appreciate the need for healthcare. This study investigated how the level of formal education attainment influenced parental health care seeking behaviour among parents whose children were diagnosed with Tungiasisinfection in endemic areas in Kenya. The study adopted a mixed mode research design. A representative sample of 327 parents whose children were diagnosed with Tungiasis were randomly drawn from clusters of households in the administrative wards in Kikuyu Subcounty, Kiambu; Kenya. This was done through cluster simple random sampling. Fifteen clusters were selected through simple random sampling from 25 clusters. This was followed by identifying 384 children who were suffering from tungiasis from these households and questionnaires were used to collect vital data. Response rate was high (95%) because only 12 parents (5%) withdrew from the study. A total of 327 parents of children diagnosed with Tungiasis were selected for the study. For those who were not able to fill the questionnaires, discussions and interviews facilitated qualitative data collection. Apart from the children the gender of the participants were 34.1% males while females were 65.9%. It was found that those with non-formal education were 3.3% (11) of the respondents. The respondents with an undergraduate degree or a college diploma/ Certificate were 42.8% (140) while 40.2% (131) of the respondents did not have any previous knowledge of Tungiasis until they encountered Tungiasis infections at home. The other 59.6% (196) had a previous knowledge of the disease. Majority (43 %) of the respondents admitted getting information about the disease from other secondary sources like the village talk, parents, books, journals and web recourses. The researchers found that the level of formal education attained by an individual influenced medical seeking behavior. The study found that the level of educational increased the visitations to health care facilities that were available in the constituency to seek medical care for children diagnosed with tungiasis infection.



***Citation: Wambui Keiyoro and Prof Peter N. Keiyoro.*** **2019.** "Level of education attainment and Parental Healthcare Seeking Behaviour for Children Diagnosed withTungiasis in Kikuyu constituency, Kiambu county, Kenya", *International Journal of Current Research*, 11, (07), 5498-5501.

## INTRODUCTION

Education worldwide is recognized as a key determinant of human development (Von Wagner, 2007). Lack of quality education has been found to have long-term negative consequences that include intergenerational existence of poverty in communities. In a household the level of education of head of the family, is likely to be a key determinant of the household earnings and possibly even the healthcare seeking behavior of the family (Bourguignon *et.al.,* 2007, Kovacevic, 2010). The knowledge, personal and social skills of an individual that is provided through education can equip the person with access and use information and services. Hence people who have high level of quality education are more likely to seek medical attention and treatment (Qi zhang 2009). This is because they are able to read and comprehend instructions, hence could self-medicate and appreciate the need for seeking healthcare. Educated persons in the communities especially in sub-Saharan Africa are more likely to seek health care than those who are not educated. In Kenya, about 25% of the population have not attained any form of basic education. Slightly 50% of the population has primary/elementary level of education only and only 23% of the population has secondary and tertiary education (SID, 2017). In a study in china it was found that individuals with a college education were less likely to perceive stigmatization than those with lower education (Qi zhang 2009). In this case the perception of stigmatization in people with a lower education level was a barrier to treatment than those with higher education (Ruan, 2001).

This study suggested that individuals who have low education attainment are less likely to visit health care facilities as compared to individual with higher levels of education attainment. On the other hand, persons who have completed high school level of education are likely to perceive the value of seeking health care facilities (Ruan ,2001)Furthermore, a study by Sudha et al (2007) on Indian women found that individuals who had advanced level of education were more motivated in seeking health care for illness related to reproduction organs regardless of the stigma associated with diseases of reproductive organs. Individuals who have low education attainment may lack knowledge about the significance of disease symptoms hence have higher perception of stigmatization compared with their counterparts who have more education (Qi zhang, 2009). The level of education has been shown to have greater impact on mental health in younger age groups and physical functioning in older people (Eldemire, 2008). Evidence suggests that those who achieve a higher level of educational are more likely to engage in healthy behaviours and less likely to adopt unhealthy habits. This is particularly true in relationship to physical activity, diet, smoking and sexual activity (Montalto, 2001).

The effects of literacy on healthcare seeking behaviour would entail basing ones decisions on health benefits along with financial benefits (Thobaben, 2007). Health literacy is important for dealing with a range of chronic diseases (Davis, 2004). Members of the communities who have inadequate health literacy compared to those with less suitable health literacy may have less knowledge about their chronic diseases. It has also been observed that those in a community who are likely to completely abstain from the use of alcohol, not to smoke in their lives and not to have sedentary lives are those who have adequate health literacy compared to people who had less health literacy (Wolf, 2007). Therefore, health literacy/education or level of education attainment may directly influence health outcomes through appropriate healthcare seeking behaviour.

*Tunga penetran* which also known as sand flea or jigger flea causes Tungias is infection. Hence, Tungiasis isa parasitic tropical disease which is mainly prevalent among the low income communities in sub-Saharan Africa. Under International Classification of Diseases 10th Edition the disease is coded as B88.1 (WHO, 2008). Tungiasis infections often lead to loss of health and quality life due to various disabilities which include pain and itching, lack of sleep, difficulty in walking and grasping (Keiyoro and Ngunjiri 2015,Kehr *et. al.*, 2007; Feldmeier *et. al.*, 2014). The wounds caused by the disease may create entry points for pathogens such as *Clostridium tetani, Staphylococcus aureus, Enteroccous faecalis, Streptococcus pyogenes*, *Pseudomona sp, Bacillus sp., Bifermantaos sp. and Peptosterptococcus sp (*Ngunjiri *et.al.,* 2015: Feldmeier *et. al.*, 2002). In Kenya, Latin America, Caribbean and sub-Saharan Africa, the disease is prevalent among children (Keiyoro *et. al*., 2015; Pampliglione *et. al.*, 2009; Ugbomoiko *et al.*, 2008, Muehlen *et al.,* 2003; Heukelbach *et .al.,* 2001). Millions of people are at risk of infection especially in the stable endemic areas in the affected countries (Pampliglione *et al.*, 2009; Feldmeier and Heukelbach, 2009; Heukelbach *et al.*, 2001). This study focused on how the educational level influences health seeking behavior among parents who have children who have been diagnosed with Tungiasis infection in the endemic areas. Tungiasis is a neglected tropical (NTD) that affect low income groups in endemic areas. Those who suffer from the disease become stigmatized in the society. They are viewed by other members of the community to have directly neglected their personal hygiene. They therefore often ridiculed by both healthcare givers and the community members in most cases.

## MATERIALS AND METHODS

This study adopted a mixed mode research design. The study was conducted from January to November 2017 in Kikuyu constituency which has five county assembly administrative wards. These are Nachu with population of ≈18,655 persons, Karai with ≈20,420 persons, Sigona with≈ 26,823 persons, Kikuyu with≈ 32,422 persons and Kinoo with ≈27,083 persons (2009 census). Cross-section of the area was identified in which data collection. Data collection methods, included use of questionnaires, observations and macroscopic diagnosis. The primary and secondary data sets were merged.

The target population was 125,402 persons of all the age groups, residents of Kikuyu constituency. The study population consisted of parents of children aged 4-14 years. A representative sample of 327 parents of children suffering from Tungiasis were identified through simple random sampling method. The participants were drawn from clusters of households in the administrative wards in the constituency. This was done through cluster random sampling. Fifteen clusters were selected by simple random sampling from 25 clusters. This was followed by identifying 384 children who were from these households. During the study period, it was established that the average number of children per household was four. The households were clustered in areas where a community health worker was in charge. A sample size of 35 which is 54% of the total number of Health care centres in Kikuyu was selected through simple random design. The questionnaires were used to obtain the data from the participants. They were administered to the parents of the children who suffered from Tungiasis. Observation ,checklist and desk top review guide were used for collecting secondary. The variables that were measured included level of education and health seeking behaviour. The data were coded and analyzed using SPSS (version 18.0) for descriptive statistics. Chi square test was computed to find the associations between healthcare seeking behaviour and the highest level of education data of the respondents. In addition, regression analysiswas used to determine the factors which contributed to health care seeking behavior among the parents. The p-value of $<0.05$ with a confidence level of 95% was considered significant.

## RESULTS AND DATA ANALYSIS

A total of 327 parents of children diagnosed with Tungiasis were chosen for the study through simple random sampling. For those who were not able to fill the questionnaires, focus group discussions and interviews facilitated qualitative data collection. Data on level of education achieved by the respondents was collected. The results are tabulated the table 1.It was found that those who had non-formal education were3.3% (11) of the respondents. The respondents with an undergraduate degree or a college diploma/ Certificate were 42.8% (140) which showed that they had higher level of education attainment. 40.2% (131) of our respondents did not have any previous knowledge of Tungiasis until they encountered the infections at home.

**Table 1. Level of education and health seeking behaviour**

| Level of education | Number N=327 | percent | Those seeking for healthcare | | Previous Knowledge of Tungiasis |
|---|---|---|---|---|---|
| Highest Level of Education | | | Number | % | % |
| Non-formal Education | 21 | 3.3 | 10 | 48 | 21 |
| Primary/elementary | 61 | 15.7 | 34 | 56 | 51 |
| Secondary | 140 | 42.8 | 86 | 61 | 60 |
| Undergraduate/College | 91 | 27.8 | 34 | 37 | 78 |
| Masters above | 14 | 10.4 | 2 | 14 | 79 |
| Previous Knowledge of Tungiasis | | | | | |
| None | 131 | 40.2 | | | |
| Yes | 196 | 59.8 | | | |

**Table 2. Level of education attainment and sources of prevalence of infection of Tungiasis information**

| Level of Education attainment | Media (TV, internet radio, social media | AwarenessProgrammes | Relatives and Others people | Books/Journals/Newspapers | Other sources |
|---|---|---|---|---|---|
| Non-formal Education | 36 | 2 | 60 | 2 | 21 |
| Primary/elementary | 60 | 5 | 73 | 6 | 14 |
| Secondary | 67 | 12 | 56 | 44 | 15 |
| Undergraduate/College | 75 | 15 | 77 | 34 | 18 |
| Masters above | 87 | 18 | 56 | 53 | 17 |

The other 59.6% (196) had a previous knowledge of Tungiasis infections. Majority (43 %) of the respondents admitted getting information about Tungiasis from other secondary sources like the village talk, parents, books, journals and the internet (Table 2).

## DISCUSSION

Tungiasis infections among children cause a lot of health disabilities in children, especially in sub-Saharan Africa countries like Kenya (Heukelbach, 2001). Factors such as poverty, poor hygiene, improper sanitation,poor housing and unclean environment, have been linked with Tungiasisinfection among children (Kimani *et al.,* 2012). Kimani (2012) suggested that all these causes are preventable. Health policiesand programs have been aligned with preventive activities in order to manage or eradicate Tungiasis. However, policy implementation and suitable health seeking behaviourcould provide a great opportunity for reducing disease burden caused by Tungiasis in school going children (Ngunjiri and Keiyoro, 2011). Appropriate health seeking behaviour may result in decrease of the complications brought about by Tungiasisinfectionsamong children (Ngunjiri *et al.,* 2015).

Nevertheless, report of this have shown that health seeking behaviour among parents especially in the rural setting in developing countries like Kenya is still poor.Analfi (2016) found that factors such as both social and economic \influence health-seeking behaviour. In this study the influence of level of Education on Health seeking behaviour was studied at two levels. First the academic achievements of the respondents and secondly on how much information the respondents had on Tungiasis infection. Level of formal Education is a key factor in acquisition of good healthcare skills in any community (Zimmerman, 2015). This study indicated that majority of the respondents either had low basic educationor had gone up to high school level of education (47.4%). The findings of this study indicated that the respondents whohad secondary or lower level of education were less informed on Tungiasis infection. This could be the reason why they had a lower indulgence in seeking medical attention from the health care facilities for their children. Earlier studies by Ngunjiri and Keiyoro (2011) also observed that the level of education of the parents affects the spread of Tungiasis. The lower the level of education could also be associated with lower income (Cestari, 2007). Majority (60%) of the respondents who were in this study had previous knowledge of Tungiasis infection, either from the community health workers, familyand friends (42.8%), the Media (30.6%), and the rest from the Tungiasis infection awareness programmes (26.6%). This indicated that the respondents were not misinformed about Tungiasis infection status. However even with such vast knowledge they did not seek medical attention for their children who were diagnosed with Tungiasis. This therefore emphasises on the need for high level of education attainmentandan increase in awareness on early management, prevention and control of Tungiasis infections.

### Conclusion

The study found that thelevelsof education attained by an individual influence medical seeking behavior for their children who may be diagnosed with various diseases. Thusthe level of educationalattained could result in increasedvisitations to health care facilities.

### Recommendations

The Government and Non-Non-Governmental institutions should endeavor to educate both the community and the public in the endemic areas on the importance of taking their children to health care facilities, whenever they were suffering from any disease. They should also raise awareness on the need for thediagnosis and treatment of Tungiasis to eliminate any stigmatization and the health disabilities caused by the disease. The Tungiasis management policy already in place should be fully implemented by the ministry of Health in Kenya.

## REFERENCES

Anarfi J K., Delali M B., Alfred KARAI., Deborah A., Aaron A., Francis A. 2016. Religious affiliation and health-seeking behavior related to non-communicable diseases among children in Ghana*, University of Ghana Medical School, Ghana: Published*: June 14, 2016

Bourguignon, F., Francisco F., Marta M. 2007. "Inequality of Opportunity in Brazil." *Review of Income and Wealth* 53(4):585–618.

Cestari CF., Hassun K., Sittart A. 2007. A comparison of triple combination cream and hydroquinone 4% cream for the treatment of moderate to severe facial melasma. *J Cosmet Dermatol.;* 6:36–39.

Chakraborty, A., Sain, M. and Kortschot, M. 2005. Cellulose Microfibrils: A Novel Method of Preparation Using High Shear Refining and Cryocrushing. Holzforschung, 59,102-107. http://dx.doi.org/10.1515/HF.2005.016

Chibwana AI., Mathanga DP., Chinkhumba J., Campbell CH. 2009. Socio-cultural predictors of health-seeking behaviour for febrile under-five children in Mwanza-Neno district, Malawi. *Malaria Journal 8: 219.*

Davis, J. G. 2004. Capabilities: A Different Perspective. Australian Journal of Management, 29(1), 0-44.

Eldemire-Shearer D. 2008. Ageing – Yesterday Today & Tomorrow. *West Indian Med J; **57**: 577–88.*

Feldmeier H., Heukelbach J. 2009. Epidermal parasitic skin diseases: a neglected category of poverty-associated plagues. *Bull World Health Organ* 87: 152–159.

Feldmeier H., Heukelbach J., Eisele M., Carvalho CBM. 2002. Bacterial super infection in Human Tungiasis. *Trop Med Int Health*7:559–564

Feldmeier H., Heukelbach J., Ugbomoiko US., Sentongo E., Mbabazi P. *et al.* 2014. Tungiasis-A Neglected Disease with Many Challenges for Global Public Health. *PLoS Negl TropDis8(10):e3133.doi:10.1371/journal.pntd.0003133*

Gakuu, C. M. Kidombo H. J & Keiyoro P. N. 2017. Fundamentals of Research Methods: Concepts, Theories and Application. *Aura Publishers*, Nairobi;

Gakuu, C. M.,Kidombo H.J. & Keiyoro, P. N. 2018. Fundamentals of Research methods; Concepts, Theories and Practice: A Handbook for Students and Practitioners. *Aura Publishers*. ISBN:9966-1504-3-9.9

Heukelbach J., de Oliveira FA., Hesse G., Feldmeier KARAI. 2001. Tungiasis: a neglected health problem of poor communities. *Trop Med Int Health 6,267-272.*

Heukelbach J., Ugbomoiko US. 2007. Tungiasis in the past and present: A dire need for intervention. *Nigerian Journal of Parasitology* Vol. 28 [1], pp1-5.

Kehr J. 2007. New methodological aspects of micro dialysis. In: Handbook of micro dialysis: Methods, Applications and Perspectives. Eds. *Westerink BHC and Cremers T Elsevier*, The Netherlands. pp 111-129.

Keiyoro P., Ngunjiri W. J., Mwanda W., Omondi B. 2016. Influence of disabilities caused by Tungiasis on school attendance among school age children in Murang'a County , Kenya; International *Journal of Current Research ISSN: 0975-833X Vol. 8, Issue, 03, pp.28826-28830,*

Kimani B., Nyagero J., Ikamari L. 2012. Knowledge, attitude and practices on jigger infestation among household members aged 18 to 60 years: case study of a rural location in Kenya. Pan*Afr MedJ.13(Supp1):7*

Kovacevic M. 2010. Measurement of inequality in human development--a review: United Nations Development Program Human Development Reports,

Mantalto M., Gilfillan CP., Dutta D., Cole S., Avery C Smith SV. 2001. Inpatient Insulin Initiation using a Hospital in the home unit. *Internal Medicine Journal* 31:492-4.

Muehlen M., Heukelbach J., Wilcke T. *et al.* 2003. Investigations on the biology, epidemiology, pathology and control of *Tunga penetrans* in Brazil II: prevalence, parasite load and topographic distribution of lesions in the population of a traditional fishing village. *Parasitol Res*; 90:449–455.

Ngunjiri J.W. and Keiyoro P.N. 2011. Soil factors influencing occurrence of Jigger flea (Tunga penetrans) in Kenya *Lambert academic publications Germany* .ISBN 978-3-8465-0095-8

Ngunjiri J. W., Keiyoro P. and Mwanda W. 2015B. Quantifying Burden Of Disease caused by Tungiasis using Disability Adjusted Life Years (DALYS)metric among children aged 4to 15 years ,in Murang'a County , Kenya. *: International Research Journal of public and Environmental Health. IRJPEH,15-076*

Ngunjiri J. W., Keiyoro P. N. and Mwanda W. 2015A. Impact of Tungiasis on acquisition of basic education among children aged 5 -14 years, International *Journal of Scientific Research and Innovative Technology .ISSN 2313-3759 Vol 2 NO 6; June 2015* .

Ngunjiri J., Keiyoro, P. 2011. Soil factors influencing the occurrence of *Tungapenetrans* in Kenya. LAP LAMRT *Academic publishing GmbH&Co.KG,Germany*,7,30,53-54.

Pampiglione S., Fioravanti ML., Gustinelli A., Onore G., Mantovani A., Luchetti A. et al. 2009. Sand flea (*tunga* spp.) infections in humans and domestic animals: state of the art. *Med Vet Entomol*23:172–186

Qi Zhang, Lauderdale D., Mou S., Parish W.I., Laumann EO., 2009. Schneider J. Socioeconomic disparity in healthcare-seeking behavior among Chinese women with genitourinary symptoms. *Journal of Women's Health.;*18: 1833–1839

Ruan F.F., Lau MP. 2001. The international encyclopaedia of sexuality. China, New York: *Continuum 2,*

SID Society for International Development 2017. Education Levels in Kenya.

Sudha S., Morrison S., Zhu L. 2007. Violence against women, symptom reporting, and treatment for reproductive tract infections in Kerala State, Southern India. *Health Care Women Int.;*28:268–284.

Thobaben, M. 2007. Horizontal workplace violence. *Home Health Care Management and Practice,* 20(1), 82-83.

Ugbomoiko US., Ariza L., Heukelbach, J. 2008. Pigs are the most important animal reservoir for Tunga penetrans (jigger flea) in rural Nigeria. *Trop. Doct* 38; 266- 227.

Von Wagner, C., Steptoe, A., Wolf, M.S., and Wardle, J. 2009. Health literacy and health actions: A review and a framework from health psychology. *Health Education and Behaviour, 36*(5), 860-877.

World Health Organization, 2008.. Global Burden of Disease, Update World health report hot:/Karai.who.int/ accessed on December,2012.

*******