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# FACTORS AFFECTING THE UTILIZATION OF HEALTHCARE SERVICES AMONG NOMADIC FULANI IN THE FEDERAL CAPITAL TERRITORY, ABUJA

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## **Abstract**

The nomadic Fulani ethnic group is part of the demographic structure in the Federal Capital Territory FCT, Abuja. They have health needs and challenges that require attention, especially from the FCT administration. This paper assessed the factors determining the utilization of healthcare services among transient/settled Fulani nomads in FCT. Using the Health Belief Model as the theoretical framework, a community based cross-sectional research design was adopted. Primary data were obtained using both qualitative and quantitative methods. Questionnaires were administered using multi-stage sampling techniques of wards, settlements, households and individuals. Focus Group Discussions were conducted for in-depth understanding of their challenges. Descriptive and inferential statistics were also utilized. It was revealed that existing healthcare services and facilities have not been able to meet the transient nature of the nomads. In addition to the limited financial resources of the nomads, unavailability or inadequacy of health services and providers constitute barriers to the utilization of healthcare services. Strong cultural practices also create problems as the nomads believe certain illnesses are only treatable using traditional herbs and practices. Other barriers include their level of education, transportation to health facilities and language. It recommends that the FCT Administration should establish well-funded Primary Healthcare Centres some of which can be mobile, close to the settlements of pastoralists in order to manage the issue of accessibility. Awareness and enlightenment campaigns should be pursued, which should focus on the importance of medical treatment, health practices, and reduced transient practices to enable children in particular to experience regular schooling and forestall any form of conflict with farmers and residents of the city and various communities.

# Keywords: Nomads, Healthcare, Utilization, Healthcare Services

#### INTRODUCTION

The agricultural activities of the nomadic Fulani have been part of Nigeria's economy for decades. In spite of their nomadic lifestyle, they are also routinely sedentary during certain times of the year (sometimes maintaining the same location). In recent years, terrorism in the northeast and cattle rustling in the northwest have forced Fulani nomads to concentrate in the central states of Nigeria where the Federal Capital Territory, Abuja is located. Access and availability of healthcare services especially for the women and children among the nomads in the FCT have been a challenging experience for them. This paper is an

assessment of the factors that influence and determine degree of healthcare utilization by the Fulani nomads in the course of their livelihood within the Federal Capital Territory, Abuja.

According to Nweze (2010) the Fulani nomads are among the most widely dispersed and culturally diverse peoples in Africa and their immigration spanned several centuries as they passed through the West African savanna in small groups. They usually migrate from the predominantly dry northern parts of Nigeria and neighbouring countries to the wetter southern parts, where they reside in camps. Tonah (2002) observed that climate change that led to drought in the Sahel region decades ago principally accounts for their movement from their origin to the northern guinea savanna of West Africa. Nori (2006) observed that pastoralism provides the best strategy to manage low net productivity, unpredictability and risk, as rainfall and temperature patterns result in marked spatial and temporal variations in livestock grazing resources. Thus, seasonal movements are essential for pastoralists (Nori, 2006). In Nigeria, the contribution of the nomads to the local food chain and national food security is significant (Abdikarim & Jolian, 1999). They add that the nomads hold over 90 per cent of the nation's livestock population, and they are the major breeders of cattle, which is the main source of meat in Nigerian markets, and the major source of animal protein consumed by many Nigerians.

With regard to healthcare services, its availability is a very important factor in determining the level of use of healthcare services in any community. Healthcare services in Nigeria is provided on three levels based on the tiers of government; federal, state and local governments. As observed by Sina & Adekeye (2019) the healthcare indicator indices in Nigeria are low, and lack of reliable data for accurate planning and deployment of healthcare facilities has made hospitals either too small or not centrally located and accessible even for the sedentary population in the cities. Also, it is not unusual for the long queues in public hospitals and exorbitant or unaffordable prices charged by private hospitals to drive patients into traditional or faith healers. Thus, utilization of healthcare therefore is determined by socioeconomic, cultural and demographic factors. Sina & Adekeye (2019) found that religious belief, cost of service, efficacy of the service, women working condition, stereotypes, family customs as well as marital status are socio-economic factors that influence utilization of healthcare services in urban areas. Similarly, some people prefer going to patent medicine stores for self-medication than attending health centres even when available and accessible.

## **Statement of Problem and Objectives**

The health of nomadic pastoralists is influenced by some factors specific to their way of life. Nomads have the least access to any health services due to cultural, political and economic obstacles, and no satisfactory strategy has been devised to deliver proper healthcare to remote populations (Sheik-Mohamed & Velema, 1999). According to Abdikarim & Jolian, (1999) nomads are virtually overlooked in the provision of health services because of lack of understanding and planning. According to Nweze (2010) children of nomadic herdsmen are thought to be more at risk because of their early and

continuous exposure to different kinds of animals. Mace & Sear (1996) estimated a high maternal mortality rate (MMR) among the pastoralists. Infant mortality is higher among nomadic than among neighboring settled populations. Knowledge on everyday use of primary healthcare services by pastoralist population is said to be insufficient, as little experience exists in providing primary health services to nomads.

This paper therefore seeks to examine the factors that encourage or impede the use of healthcare facilities by the nomadic Fulani in FCT Abuja. It will assess whether the facilities are within reach of the nomadic Fulani, and if so what are the enabling factors or if not, what are the inhibitors; the knowledge and attitude of the nomadic Fulani towards the use of healthcare facilities; constraints faced by the nomadic Fulani as well as cultural practices towards health seeking will also be examined. In addition, issues encountered by healthcare service providers in attempts to provide for this transient population will be explored as well.

Hence, the objectives of this paper is to use the Knowledge, Attitude and Practice (KAP) model to assess the level of use and barriers to the use of healthcare services among the nomadic Fulani in the FCT. Specific issues to be addressed include: examining how accessible healthcare facilities are to the nomadic Fulani in the FCT; determining the barriers to utilization of healthcare services among the nomadic Fulani in the FCT; and ascertaining the level of use of modern healthcare services among the nomadic Fulani in the FCT.

# **Clarification of Concepts**

The concept "Nomads" is used to describe the group of people who move from place to place as a way of obtaining food, finding pasture for livestock or otherwise make a living (Ahmed & Abdel-Rahman, 2008). However, a global concept of nomads has been widened to include all transient populations, which include migrants, tourists as well as herders who are all categorised as vulnerable populations with regard to health related issues. In this paper, a nomad refers to any Fulani herder, who is settled in the Federal Capital Territory waiting to proceed further with their livestock in search of pasture or on transit because of his livestock.

Healthcare according to Farlex (2012) are the services provided to people or communities by agents of the health services or professions for the purpose of promoting, maintaining, monitoring or restoring health. This paper adopts the definition of healthcare provided by World Health Organization (WHO) (2013) which states that healthcare is the diagnosis, treatment, and prevention of disease, illness, injury and other physical and mental impairment in human being. Thus, healthcare embraces all the goods and services designed to promote health, including preventive, curative and palliative interventions, whether directed to individuals or to populations.

Accessibility refers to the ease with which activity, locations or urban services can be reached from a particular location or by an individual (Hansen, 1959). The Institute of Medicine defines access to healthcare as having "the timely use of personal health services to achieve the best health outcomes" (IOM, 1993). Thus, accessibility refers to having

everything required to use a health facility. This includes having the means of transportation or ability to pay for transport, having the means to pay, the availability of personnel to render required service and drugs, laboratories as well as diagnostic equipment for tests.

#### **REVIEW OF LITERATURE**

Research has revealed that there are different reasons why nomads utilize healthcare services. Nomadic pastoralists' limited knowledge of specific diseases is one of the reasons (Von Elm, Altman, Egger, Pocock, Gotzsche & Vandenbroucke, 2008). Lack of education is also another factor (Wesolowski, Eagle, Tatem, Smith, Noor & Snow, 2012) and limited familiarity with, and value of formal health services to prevent and treat diseases (Yebyo, Alemayehu & Kahsay, 2015) as are barriers to health services uptake. Nomadic pastoralists' understanding of specific diseases (including risk factors, consequences, and prevention methods) and awareness of health services offered locally were found to facilitate health service utilization (Yebyo, Alemayehu & Kahsay, 2015).

The poor quality of health services delivered to nomadic pastoralists was identified as a barrier to uptake (Ali, Cordero, Khan & Folz, 2019). Structural factors impacting the quality of services included deficient infrastructure, equipment, supplies, and health products e.g., vaccines and; insufficient or poor-quality data (e.g., for logistical planning); and inadequate numbers of appropriately trained healthcare personnel (Schwabe & Kuojok, 1981). The behaviour and attitudes of formal sector healthcare workers (e.g. rudeness and prejudice) toward patients were identified as indicators of degrees of utilization, and high-performing service delivery and well-trained healthcare workers also facilitated access (Schelling & Bonfoh, 2008). For Randall (2015) effective, targeted health communications, service reliability and stability of health supplies, or community members' positive perceptions of the quality and value of services were specifically identified as drivers of health service uptake.

Health systems are often designed to serve static populations, with services that cater for nomadic lifestyles rarely being prioritized or even considered by governments. Further, as many nomadic populations are ethnic minorities, reproductive health needs, and practices specific to these populations are often not well understood or are inadequately addressed (Mansour, Chatty, El-Kak, & Yassin, 2014; Ibrahim, Demissie, Medhanyie, Worku, Berhane, 2018;). For example, members of one community of nomads in Ethiopia were reluctant to give birth at the nearby health facility as the health workers refused to provide a suture for complications arising from a delivery that occurred at home (Ibrahim et al, 2018). Discrimination against nomadic populations is also a barrier to care. Health officials interviewed in Nigeria considered the Fulani, a nomadic tribe, to be outsiders who take advantage of the resources available to the host community, and are thus reluctant to provide services (Okeibunor, Onyeneho, Nwaorgu, I'Aronu, Okoye, Iremeka & Sommerfeld, 2013). In another example, Bedouin women in Lebanon perceived the health system as being underpinned by institutional discrimination against their ethnic group (Mansour, 2011). Similarly, surveys and interviews with nomadic women in Kenya,

Mali, and India reported mistreatment or discrimination by healthcare workers (Caulfield, Onyo, Byrne, Nduba, Nyagero, Morgan & Kermode, 2016; Jackson et al, 2017).

On the barriers of vulnerability to political factors, there is often a lack of representation of nomadic cultures in national governments. Mansour (2011) noted that with a lack of political advocacy, nomadic populations are left out of health policy agendas including those that aim to increase access to modern reproductive health services. Another way in which nomads are vulnerable to political factors is through regional political conflict. In several cases, regions inhabited by nomads are riddled with conflict. This further contributes to a lack of governmental ability to provide adequate healthcare services. One example is Puntland, an independent state within Somalia where the majority of the nomadic population, along with internally displaced people lives in a volatile zone with high incidence of conflict (Sorbye, 2009).

Nomadic women's ability to make decisions concerning health issues, as well as their autonomy to travel freely to health facilities is often very limited. In most nomadic societies, a woman must seek permission from her husband to access modern health care, including reproductive health services (Jackson et al, 2017). Even in a situation where a woman is giving birth and needs emergency lifesaving modern healthcare, it is necessary to seek the permission of the husband in some cultures, or if the husband is not present, community leaders must confer and grant permission. This can be a major barrier to accessing reproductive Health services, as some husbands and communities can be very resistant to services such as costly delivery at a health center or modern family planning methods (Ernest, Saiteu & Maro 2011). Lack of autonomy of movement for women is another barrier, as nomadic women, especially pregnant women seeking reproductive healthcare, do not travel alone. This limits the accessibility of distant health centers, as male chaperones are often busy with work and unable to accompany women on these long trips.

Also, geographic factors have been identified as barriers to the uptake of health services among nomadic pastoralists. These included the distance (and road conditions) between temporary camps and health facilities (Helander, 1990); limited operational capacity to provide outreach services to nomadic groups and difficulty locating them (Randall, 2015); and the inherent difficulty providing services that require multiple visits (e.g., multi-dose vaccines) in the absence of systems that would facilitate clinical continuity from location to location (Thomas & Harden, 2008).

Nomadic pastoralists' beliefs, behaviours and attitudes are also identified as a factor affecting the utilization of healthcare services among nomads. Examples include nomadic pastoralists' reported preferences for self-treatment and traditional medicine/healers (Kaplan& Wein, 2003). El Shiekh & Kwaak (2015) reported that literature shows that in rural areas of Sudan the common cultural practice is to use self-care or home remedies or to consult traditional healers. The general population perceives religious healers called Wali, Fagir or Shiekh as holy persons with extraordinary powers to cure ailments through prayers, charms and summons (Mohammed & Babikir 2013).

Oladipo (2014) carried out a study on utilization of health services in urban and rural areas with a thorough exploration of the existing disparities and their implication on management and planning of healthcare delivery systems. The factors were divided into need, predisposing, enabling and health services which amounted to 31 variables. The data was analyzed using cross tabulation and factor analysis in a 4-stage model of use of healthcare services. It was found out that 12 of the variables were the most dominant predictors of health services utilization. They include quality of care, health insurance, availability, proximity, symptoms, disease, income, family size, age, sex, education, and beliefs. All the need variables covered in this study showed importance but disease and symptoms were more powerful than the health status and disability days.

#### THEORETICAL FRAMEWORK

## **Health Belief Model**

This study is situated within the framework of the Health Belief Model. The Health Belief Model (HBM) is a Psychological Model that attempts to explain and predict health behaviours. This is done by focusing on the attitude and beliefs of individuals. The Health Belief Model was developed in the 1950s by Social Psychologists Hochbaum, Rosenstock and & Kegels working in the USA public Health Services. This theory explains psychological health behaviour change, the model is developed to explain and predict health-related behaviours, particularly in regard to the uptake of health services (Janz, Becker 1984; Rosenstock, 1974). It remains one of the best known and most widely used theories in health behaviour research (Christopher, 2010). The Health Belief Model suggests that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behaviour (Rosenstock, 1974). A stimulus, or cue to action, must also be present in order to trigger the health promoting behaviour.

In a review of Health Belief Model or theory, Chen (2012) demonstrated that the decision to engage with a particular medical channel is influenced by a variety of variables, including sex, age, the social status of the individual, the type of illness, access to services and perceived quality of the service. Health-seeking behaviour looks at illness behaviour more generally and focuses in particular on motivating factors of illness perception and health belief. Healthcare seeking behaviour studies look beyond the individual for social patterns or determinants of decision-making. Health seeking behaviour clearly varies for the same individuals or communities when faced with different illnesses. For example, Barret (2008) highlights contrasting pathways to care for aged women when faced with abnormal vaginal discharge, as opposed to malaria. For the former, the woman is bound far more by rituals and obligations, such as shaving prior to examination, and being accompanied to a medical consultation by her husband.

The Health Belief Model is used to develop effective interventions to change health-related behaviours by targeting various aspects of the model's key constructs (susceptibility, severity, benefits, cue to action). Interventions based on the Health Belief Model may aim to increase perceived susceptibility and perceived seriousness of a health condition by

providing education about prevalence and incidence of disease among the nomads, individualized estimates of risks, and information about the consequences of disease or illnesses (e.g., medical, financial, and social consequences). Interventions may also aim to alter the cost-benefit analysis of engaging in a health- promoting behaviour when seeking health care by the aged (i.e., increasing perceived benefits and decreasing perceived barriers) by providing information about the efficacy of various behaviours to reduce risk of disease, identifying common perceived barriers towards healthcare, providing incentives to engage in health-promoting behaviours, and engaging social support or other resources to encourage health-promoting behaviours among the aged persons.

Applying the health belief model which is an individual opinion and perspectives about a certain health risk and their behaviour, the incidence of the use or non-use of health facilities among nomads is determined by the various factors that affect the health. Harmful traditional practices such as genital mutilation, child marriage, utilization of traditional birth attendants, delivery at home, and the trust in traditional medicine are factors that affect the use or non-use of healthcare services

#### **METHODOLOGY**

The study was conducted at Abuja through a cross sectional survey. A multistage sampling technique was adopted to draw a sample size of 100 nomads using Taro Yamane Formula. Data was collected using both qualitative and quantitative methods. The instruments of data collection include questionnaires and Focus Group Discussion. Method of data analysis used was the statistical package of social science (SPSS) windows version 25.0. Descriptive data were presented as simple frequencies and percentages.

# **DATA ANALYSIS**

On the sex of the respondents shows that 70% percent of respondents are male while 29% percent are were female. The excess of male respondents over females is as a result of access to male respondents by the researchers and no approvals from partners were required. Most of the respondents were 25 years and above and were 86% of the total sample size. Respondents who were 50 years and above (18.2%) made up the majority. Those that were between 15-19 years (4.0%) were the least.

Further, 100% of the respondents practiced Islam as their religion. It is not strange that all the respondents are Muslims considering the history of Islam and Fulani in Nigeria. Data concerning the educational attainment of respondents indicated that 60% of nomadic Fulani had Quranic education. The nomadic nature of their livelihood may not have allowed them to obtain formal education. Also, more than half (58.6%) of respondents earns income below the Nigerian minimum wage of 18,000.00 naira per month from petty trading in livestock. However, more income is generated from the sale of cattle when there is a need or event like wedding, naming or purposely for a capital project like buying motorcycle or even building or reconstructing shelter. Data revealed that 90% of respondents have lived in their locality for more than a year.

On the factors that influence and affect the use of healthcare services among the nomads in Abuja, majority of respondents cited finance as their main impediment, as they

have to settle bills promptly at the nearby hospitals and clinics. Finance is a potent factor that determines accessibility and utilization of health services among the nomadic Fulani. In cases where finance is not the issue access is also crucial. Focus Group members comprised of 117 participants in all, with 43 females grouped into four. Seventy four were males grouped into seven. Responses from the FGDs revealed that the use of herbs and other traditional remedies are common among the nomadic Fulani in Abuja. In cases of emergencies the services of commercial motorcyclists are engaged, and this has serious cost implications to them-the alternative would be to embark on a walking journey that can take about 40 minutes and hope to return with a commercial motorcycle. Discussants also stated that cultural and religious reasons did not prevent them from using modern healthcare facilities. However for certain diseases such as epilepsy, witchcraft or spiritual attacks, group discussants believed that they are best treated with herbs and other local alternatives.

#### **DISCUSSION OF FINDINGS**

Nomadic Fulani in the FCT have good knowledge of illness and where to get help whenever there is health challenge. However, there are cultural influences on their perception of diseases as data collected shows a strong belief that certain illnesses are only treatable using herbs and some others using orthodox medicines. This has great impact on their general health seeking behaviours, especially in terms of seeking for modern healthcare services. On the barriers to utilization of healthcare services among the nomadic Fulani in the FCT, the study found that finance and transportation are significant determinants of access and utilization of healthcare services. Other potent factors or barriers include location of health services. This finding is in agreement with Sina & Adekeye (2019) who found in their study, that religious beliefs, cost of service, efficacy of the service, women working condition, stereotypes, family customs as well as marital status are socioeconomic factors that influence utilization of healthcare services in urban areas. It further supports the Health Belief Model's assumption that the perceived threats of a disease may influence a succession of change in behaviour of an individual to adopt preventive measures, seek appropriate treatment, or adhere to a therapeutic regiment. The nomadic Fulani normally do not live among the sedentary populations, and in most cases live far away from sedentary communities. This implies that conventional public transportation system used by sedentary populations might not impact their commuting to and from the health facilities near them. Finally, the Fulani in Abuja have erected 'permanent structures' in most locations. This means there is a significant change in the lifestyle of the nomads where they used to move in complete families from the northern parts of Nigeria to the middle-belt states and back seasonally. According to a participant in the FGD, some group of nomads still migrate with their complete families, but they have chosen to stay in their present locations while the men and male youth and sometimes children migrate with their livestock.

#### **CONCLUSION**

This study revealed that nomadic Fulani in FCT Abuja have a positive attitude towards the utilization of healthcare services though these services are not easily accessible

to them from their settlements. Inadequate income, availability of health facilities and means of transportation from home to healthcare centers are some of the constraints encountered by the nomads in the course of their utilization of primary healthcare and other secondary health services.

#### **RECOMMENDATIONS**

The following recommendations are suggested to improve the access and utilization of healthcare services by the nomadic Fulani in the Federal Capital Territory, Abuja. Federal and local governments should establish Primary Healthcare Centres close to the pastoralists and along their migratory routes, especially now that some nomads are beginning to establish relatively permanent settlements.

Also, mobile health services should be provided for those moving around since their routes and stopping areas are known. Enlightenment and awareness outreach programmes to the pastoralist should be pursued; Available healthcare services should operate with multilingual staff that can communicate effectively with the nomads. The National Health Insurance Scheme should be expanded and modified to cater for non-civil servants and those with nomadic settlements. Basic infrastructure that aids access to healthcare services and delivery like roads and electricity should be provided to link the existing Primary Health Centres; also, emphasis on education of the children of the nomads be pursued through the National Commission for Nomadic Education in order to empower them to advocate for inclusion in policy formulation for better design and delivery of healthcare services.

## **REFERENCES**

- Abdikarim, S. & Jolian, P.V. (1999). Where health care has no access; the nomadic population of SubSahara Africa. *Trop. Med. Int.*, 4 (10): 677-770
- Ahmed, N. & Abdel-Rahman, N. (2008): Demographic and socio-economic characteristics of nomadic population/ Sudan fifth census. Khartoum; 2008;454–524:
- Ali, M., Cordero, J.A., Khan, F. & Folz, R. (2019) Leaving No One Behind: A Scoping Review on the Provision of Sexual and Reproductive Healthcare to Nomadic Populations. *BMC Women's Health* 19, 161 (2019). https://doi.org/10.1186/s12905-019-0849-4
- Barrett, L. (2008). *Healthy at Home.* Washington, DC: AARP Foundation; March (2008) available at www.globalag.igc.org
- Caulfield, T., Onyo, P., Byrne, A., Nduba, J., Nyagero, J., Morgan, A. & Kermode, M. (2016). Factors influencing place of delivery for pastoralist women in Kenya: a qualitative study. *BMC Womens Health*. **16**, 52. (2016)
- Chen, R., Lee, M., Chang, Y., & Wahlqvist, M. (2012). Cooking frequency may enhance survival in Taiwanese elderly. *Public Health Nutrition*, *15*(7), 1142-1149. doi:10.1017/S136898001200136X
- Christopher, C. J. (2010). A meta-analysis of the effectiveness of Health Belief Model variables in predicting behaviour. *Health Communication* 25 (8):661-669.

- El Shiekh, B., & van der Kwaak, A. (2015). Factors influencing the utilization of maternal health care services by nomads in Sudan. *Pastoralism*, *5*(1), 1-12.
- Ernest, H., Saiteu G., & Maro G.(2011) Promoting modern family planning among Tanzania's nomadic communities. *Exchange on HIV/AIDS, sexuality and gender*; 9–11.
- Farlex, P. (2012). Medical Dictionary. Sounders Comprehensive Veterinary Dictionary
- Hansen, W. G. (1959). How accessibility shapes land use. *Journal of the American Institute of planners*, 25(2), 73-76.
- Helander, B. (1990). Getting the most out of it: nomadic health care seeking and the State in Southern Somalia. *Nomadic Peoples*, 122-132
- Jackson, R., Tesfay, F. H., Gebrehiwot, T. G. & Godefay, H. (2017). Factors that Hinder or Enable Maternal Health Strategies to Reduce Delays in Rural and Pastoralist Areas in Ethiopia. *Tropical Med Int Health*. 22(2):148–60.
- Mace, R. & Sear, R. (1996). Maternal mortality in a Kenyan pastoralist population. International Journal of Gynaecology & Obstetrics, 54(2) 137-141
- Mansour, N., Chatty, D., El-Kaak, F., & Yassin, N. (2014). They aren't all first cousins: Bedouin marriage and health policies in Lebanon. *Ethnicity & health*, *19*(5), 529-547.
- Mansour, N. (2011) Gender at the Margins: Bedouin Women's Perceptions of Lebanese Health Provision. *Int J Migr Health Soc Care*. 6(3):42-52.
- Mohammed, I.N., Babikir, H.E. (2013): Traditional and Spiritual Medicine Among Sudanese Children with Epilepsy. *Sudanese Journal of Paediatrics 2013: 13(1) pp 31-37*
- Moss, A. H., Rettig, R. A., & Cassel, C. K. (1993). A proposal for guidelines for patient acceptance to and withdrawal from dialysis: a follow-up to the IOM report. *ANNA journal*, 20(5), 557-61.
- Nori, M. (2006). Milking drylands: the marketing of camel milk in northeast Somalia. *Nomadic Peoples* 10(1):9-28
- Nweze, E.I. (2010). Dermatophytosis Among Children of Fulani/Hausa Herdsmen Living in Southeastern Nigeria. *Rev Iberoam Micol.*, 27(4): 191-194
- Okeibunor, J. C., Onyeneho, N. G., Nwaorgu, O. C., l'Aronu, N., Okoye, I., Iremeka, F. U., & Sommerfeld, J. (2013). Prospects of using community directed intervention strategy in delivering health services among Fulani Nomads in Enugu State, Nigeria. *International journal for equity in health*, 12(1), 1-17.
- Oladipo, J. A. (2014). Utilization of Health Care Services in Rural and Urban Areas: A Determinant Factor in Planning and Managing Health Care Delivery Systems. *African Health Sciences* 14(2): 322-333
- Randall, S. (2015). Where have all the nomads gone? Fifty years of statistical and demographic invisibilities of African mobile pastoralists. *Pastoralism*. 5(1): 1-22
- Rosenstock, I. (1974). Historical Origins of the Health Belief Model. *Health Education Behaviour* 2(4): 328-335.

- Rosenstock, I. M., Strecher, V. J. & Becker, M. H. (1988). Social learning theory and the health belief model. *Health Education & Behaviour* 15(2): 175-183.
- Schelling, E. W. D. & Bonfoh, B. (2008). Learning from the Delivery of Social Services to Pastoralists: Elements of Good Practice. *Nairobi: International Union for Conservation of Nature (IUCN)*
- Schwabe C.W, & Kuojok I.M. (1981) Practices and beliefs of the traditional Dinka healer in relation to provision of modern medical and veterinary services for the Southern Sudan. *Human Organization*. 40(3) 231-238
- Sheik-Mohammed, A., & Velema, J. P. (1999): Where health care has no access: the nomadic populations of sub-Saharan Africa. *Tropical Medicine and International Health*, 4(10), 695-707
- Sina, O. J. & Adekeye, D. S. (2019). Socio-Cultural Factors and Utilization of Healthcare Facilities: Implications for Maternal Mortality in Urban Areas of Ekiti State, Nigeria: *Alternative Medicine & Chiropractic Open Access Journal* 2(1) 224-260
- Sorbye, I. K. (2009). A situation analysis of reproductive health in Somalia. Somalia: UNICEF; https://www.unicef.org/somalia/SOM\_resources\_ finalRHSanalysis.pdf. Accessed 2 Dec 2019.
- Thomas, J. & Harden, A. (2008) Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews. *BMC Medical Research Methodology*. 8(1) 1-10
- Tonah, S. (2002). Fulani Pastoral Migration, Sedentary Farmers and Conflict in the Middle Belt of Ghana. Paper presented to the national conference on livelihood and migration, ISSER, University of Ghana, Legon
- van der Kwaak, A., Baltissen, G., Plummer, D., Ferris, K., & Nduba, J. (2012). *Understanding nomadic realities: case studies on sexual and reproductive health and rights in Eastern Africa*. KIT Publishers.
- Wesolowski, A., Eagle, N., Tatem, A. J., Smith D. L., Noor, A. M., & Snow, R. W. (2012). Quantifying the Impact of Human Mobility on Malaria. *Science*. 336(6104)
- Yebyo, H., Alemayehu, M., & Kahsay, A. (2015). Why do women deliver at home? Multilevel modeling of Ethiopian National Demographic and Health Survey data. *PLoS ONE* (*Electronic Resource*) 10 (4)