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Medical Tourism, Public Health and Economic Development in Nigeria: Issues and Prospects

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Authors' contributions

This work was carried out in collaboration between all authors. Authors UUE and EDA designed the study. Authors UUE, BOO and OCE wrote the protocol and the first draft of the manuscript. Authors UUE, EDA, BOO and OCE managed the protocol. Authors UUE and BOO managed the literature searches, review process and the final draft. All authors read and approved the final manuscript.

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ABSTRACT

Background: Nigeria is a densely populated nation with a high prevalence of communicable diseases and increasing prevalence of non-communicable diseases, a manifestation of the "double burden of disease" concept. This is partly due to poor healthcare delivery system. Nigerians have joined the ever-increasing number of people who travel abroad for the treatment of various medical conditions.
Objective: To discuss the concept, effects, and consequences of medical tourism on the Nigerian healthcare delivery system and economy
Methods: The study was a narrative overview of selected studies published in the English Language in Google scholar, Pubmed, Medline, and recognized reference materials. Search terms were medical tourism, health tourism, public health, health system, Nigeria, and health access. The terms were individually used and in a combination of two or more using AND/OR as link words with truncations where necessary. The study period covered January2006 to August 2017, and lasted

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from January 2016 to July 2016.
Results: Nigeria with an estimated population of 180 million people loses $1.35 USD Billion annually to medical tourism. An average of 9000 medical tours occurs monthly from Nigeria to other countries. India is a major destination with an average of 500 visits monthly and affordable treatments in modern medicine and specialties. The average growth rate of medical tourism in Nigeria is 20.0% annually. In 2013, 34,522 Nigerian tourists visited India, out of which 15328 (42.4%) were medical tourists. An estimated 700 Nigerian doctors move to Europe annually.
Conclusion: Poor healthcare delivery system encourages migration of medical tourists from Nigeria. This leads to loss of huge foreign exchange and medical work force. This coupled with poor government expenditures on healthcare has impoverished the sector. Improved and sustained health sector spending by the government with good public sector support in healthcare are major leveraging mechanisms.

Keywords: Healthcare; public health; medical tourism; healthcare financing; universal health coverage; Nigeria.

1. INTRODUCTION

Medical tourism, the phenomenon of leaving one's home country in order to obtain medical care in another, often incorporating a period of sightseeing during recovery has gained popularity in recent times. Although the definition is unclear, several authors seem to agree that it is a subset of health tourism [1,2]. Carrera and Bridges describe medical tourism as 'the organized travel outside one's natural health care jurisdiction for the enhancement or restoration of the individual's health through medical intervention'. Health tourism is 'the organized travel outside one's local environment for the maintenance, enhancement or restoration of an individual's well-being in mind and body' [3]. This definition of medical tourism often excludes those travelling because of bilateral agreements between countries, those who require emergency medical treatment due to ill health while vacationing in another country and long-term residents in a foreign country.

It is a fast growing, lucrative industry, grossing about 60 billion United States (US) dollars annually [4]. Its growth has been linked to globalization, economic development and acceptance of health services as a market commodity [2]. Medical tourism is fast assuming a global competitive dimension [4]. The practice of medical tourism dates back thousands of years. In ancient times, thousands flocked to the Greek healing temples dedicated to the Greek gods Asclepius, Delphi and Zeus [5]. From the 14th to the 19th century, many journeyed long distances to visit spas, which had healing springs purported to cure several types of ailments [5,6]. The practice of washing in rivers such as the Jordan, Ganges or Nile for 'cleansing' is still commonplace today. During the 20th century, people from developing countries travelled to developed countries to obtain health care that was unavailable in their own countries. This is gradually giving way to the 21st-century trend where individuals from developed nations travel to developing nations to access health care [2,6]. This latest trend is brought about by a variety of factors in the individual's home country (source country) which include high treatment costs, long waiting lists for procedures, unavailability, illegality, or lack of insurance for the health service/procedure, desire for privacy, desire to combine medical treatment with luxurious vacationing [7-9]. Medical tourism is made even easier by increasing access to high-speed air travel, fast cross border communication via the internet, ubiquitous medical tourism facilitating firms and increased investment in the development of the private health care industry in destination countries [2,6,10]. This study discussed the concept, effects, and consequences of medical tourism on the Nigerian healthcare delivery system.

2. METHODS

The study was a narrative overview of literature from organized databases to generate evidence-based information for planning and policy. Literature search were with Google scholar, Pubmed, Medline, and recognized reference materials. Authoritative texts retrieved through hand search formed part of the materials for synthesis of the findings. The search terms were 'medical tourism', 'health tourism', 'public health', 'health system', 'Nigeria', and 'health access'. The terms were individually used and in a

combination of two or more using AND/OR as link words with truncations and adjacency searching where necessary. Where more than one publication or documents had similar findings, the more recent ones were preferred. The inclusion criteria were studies and documents published in English Language, and studies carried out in Nigeria. The study period covered January 2006 to August 2017, and lasted from January 2016 to July 2016.

2.1 Global Perspective of Medical Tourism

While the major source countries are in Northern America, Western Europe, the Middle East, Unites States of America (US) and United Kingdom (UK), destination countries abound in every continent of the globe [2,6,11]. Low and middle-income countries seem to have taken the lead among destination countries because of their lower exchange rates relative to that of high-income countries and the availability of medical services comparable with that obtained from these high-income countries. Among all the regions of the world, the South East Asian Region harbours some of the most popular destinations for many tourists [6,11,12]. Within the African continent, South Africa is the only documented popular medical tourist destination country; several other countries in Africa are mostly exporters of medical tourists. According to a 2008 report, 95% of all medical travellers from Africa ended up in Asia, 4% in Europe and 1% in Latin America [6,9,13].

2.2 Healthcare Infrastructural Development and Medical Tourism

Nigeria is not known to be a tourist destination for healthcare, but serves as an important source country to destination countries such as India, Turkey, South Africa, US, UK, Saudi Arabia and Germany, with many Nigerian medical tourists sourcing services such as orthopaedic surgery, oncology and cardiology [14]. India is widely renowned for her prowess in nephrology, oncology, orthopaedic, neural and cardiac surgery [9,15]. In 2013, there were 34,522 Nigerian tourists to India, out of which 42.4% were medical tourists [15]. The Indian High Commission in Nigeria estimates that in 2012, Nigerians spent about 260 million US dollars on medical bills in India [14]. Many of these tourists are attracted by the high-class, modern health care facilities, availability of skilled health professionals and the wide variety of complex medical procedures, friendly climate and lower treatment costs relative to Western countries [9]. These factors fuelled by poor infrastructure, outdated equipment and technology, lopsided staff mix in many of Nigeria's public health institutions, poor knowledge about the few existing private multi specialist hospitals [16] have culminated in lack of confidence in the nation's public health care system and have, in turn, led to an ever-increasing number of outbound medical tourists from Nigeria. The effects of medical tourism weigh heavy on both source and destination countries. These effects are poorly studied; there is a dearth of Nigerian studies on this subject.

2.3 Gains of Medical Tourism

Medical tourism serves to generate foreign income to countries [10,12,17]. From tourist-facilitating companies to visa fees, travel fares, accommodation, sightseeing expenses and the cost of treatment in itself, medical tourism is a very lucrative industry for destination countries. In 2006, an estimated 1.2 million medical tourists accessed health care in Thailand, generating about 1.1 billion US dollars in revenue [18,19]. Hanefeld *et al.,* estimate that medical tourists to the UK generate about 219 million pounds sterling in tourism related revenue each year, excluding the cost of the treatment itself [20]. This income may, in turn, be used to service health care infrastructure or subsidise health care for the local population in these countries or used to service other needs. In the same vein, treatment in state-of-the-art hospitals is available for the local populace in their own country, leading to huge cost savings [21].

Within the health care industry, medical tourism prevents and reverses brain drain by facilitating increased retention of a country's health workforce who may otherwise have emigrated due to poor facilities and low wages [12,22,23]. Doctors and other health personnel can receive wages that are comparable with that of their counterparts in high-income countries while enhancing their skills through exposure to high-end international clients from all around the globe [12,24,25]. It helps hospitals in source countries reduce their waiting lists for procedures, without having to incur further costs on expanding their resource capacity [10]. For countries with health systems which are cost-restrictive in nature, it may serve to reduce the cost of similar

treatments in the home country by driving down demand for such services, thus making it more available for the local population [4,26]. In the long run medical tourism encourages countries to maximise health resources in terms of labour, technology and capital [2].

2.4 Medical Tourism and the Nigerian Economy

Evidence from available reports indicates that medical tourism has far reaching economic and health system implications, in both source and destination countries. When high-income patients leave a country, it leads to a reduction in revenue for sustaining the country's local health services [10]. Losses of such clients also reduce the pressure to invest in certain beneficial health technologies, as well as reduce political support for developing the health system of the country [2]. This results in health worker migration to climes that are more favourable. Loss of health manpower not only leads to a worsening of the health services of the country; it is also a loss of the funds used in training these workers [27]. Some tourists return to their countries with medical complications or multiple births arising from fertility treatment abroad. Studies show that the cost of treating these complications and/or managing these births is enormous [28, 29]. In a UK based study, Hanefeld et al., calculated the additional costs of having multiple births over singleton births due to fertility treatments in other countries in 2010 to be 15.5 million pounds [20]. The resultant effects of population increase are also primarily borne by the home country. Cross-border disease transfer, especially of antimicrobial resistant strains is also an increasing source of concern [30,31].

Concerns have been raised over the possibility that medical tourism may create or worsen a so-called 'two tiered' health system especially in developing destination countries, where the high paying clients get the best level of technology and care in tourist-inclined private facilities; while the local public who cannot pay as the foreign clients do, use the public health facilities [22,32]. Governments may also choose to invest taxpayers' money in these pricey facilities for clients who can afford them and generate much-needed revenue, abandoning the basic health facilities that are more tailored to the suit the needs of the majority of the public [13,23]. The existence of such medical tourist facilities is also likely to create an in-country brain drain, where the skilled health professionals migrate to the better-paying tourist hospitals, leaving the public hospitals bereft of much-needed health workforce [22,33-35].

Nigeria, with an estimated population of over 180 million individuals in 2016 is faced with a high communicable and an increasing non-communicable disease burden [36]. Unfortunately, Nigeria has not keyed into this fast growing industry of medical tourism, despite having the resources to do so. Government health spending is poor, valued at 5% of the nation's Gross Domestic Product in 2012; very different from the Abuja Declaration recommendation of 15% [36]. This has contributed to infrastructural decay in hospitals. Disgruntled health workers, in seeking redress resort to recurrent strike actions leading to poor quality services in most of the public state and tertiary health institutions. This, in turn, has led to a sense of distrust in the populace of the public health system. Individuals who can afford to, leave for other countries such as India, taking with them the much-needed income for the country. For others who can barely afford to pay, yet require such specialised treatment, travelling abroad is a life-saving necessity, which leads to catastrophic or impoverishing health expenditure [37,38]. Furthermore, the cost implications for managing complications and/or death arising from treatment are enormous for both families and the society.

Most wealthy Nigerians have an elitist view about health care, and prefer to travel to foreign countries to access healthcare [6,16]. This perception may have been heightened by the sponsoring of government officials as medical tourists to several foreign destinations at the nations expense [39]. The nation's health care system is therefore not given the political attention that it so desperately needs, creating a vicious cycle of disrepair-distrust-emigration. Like many other countries in sub-Saharan Africa, Nigeria is experiencing a shortage of health work force, especially doctors. There is less than a tenth of the required number of medical doctors to meet the health needs of her teeming populace presently despite the fact that over 20 medical schools in the country churn out graduates every year [27,36]. Most of the doctors, fed up with the difficulties in the health system respond to the promises of better job satisfaction in other countries. A report shows that Nigeria loses 700 doctors annually to Europe [36]. This results in not only a low doctor- patient ratio, but also a loss of the investment put into the training of these doctors. A recent study, which estimated the loss of investment of home,

trained medical doctors migrating from nine African countries including Nigeria to the US, UK, Australia and Canada showed massive loss of doctors to foreign countries in search of greener pastures [27]. However, the destination countries benefit from not having to spend money in training these doctors. The doctors themselves pay exorbitant fees to sit for the licensing examinations of these countries. In the aforementioned study, the UK's gains were the largest of all destination countries at 2.7 billion US dollars [27]. The Nigerian government has made attempts at improving health infrastructure via public-private partnerships and encouraging foreign private health sector investment [14]. However, many of such facilities are underutilised, as many Nigerians do not know about the services they offer; a situation that has been attributed to the ban on medical advertisements in Nigeria [16]. This may go on to further discourage private investors who are interested in the medical tourism industry from doing business.

Nigeria has to develop herself as a key exporter of medical services. The economic and health sector rewards are great and she has the fertile ground for doing this. Being a heterogeneous country with diverse ethnic and religious groups, Nigeria is in a position to meet the needs of a wide range of clients no matter their inclinations. The nation has several tourist attraction sites, which are poorly developed and underutilized. Nigerian specialist doctors are also renowned in their various fields of expertise in several continents of the world. The recent devaluation of the country's currency against the dollar could be harnessed positively. This type of currency fluctuations has been observed to encourage medical tourism, since the cost of accessing treatment is made much lower than that which is obtainable in the Western world [6]. The role of the government in the growth of medical tourism cannot be over emphasised. Governments of several of these currently popular destination countries supported the growth of this industry. The government of India massively supported private investment in healthcare through various means such as creating a special visa category to accommodate medical tourists, collaborating with airlines to facilitate travel, giving tax breaks to these hospitals and reducing import duties of medical equipment for use in the facilities, with functional accreditation systems in place, among others [15]. This has resulted in the great economic gains of medical tourism that India currently enjoys.

2.5 Medical Tourism and Economic and Human Capital Development in Nigeria

Nigeria needs total overhaul of her healthcare system to be able to halt and begin to reverse the trend of medical tourism and the associated economic loses. These are achievable through improved funding and healthcare technology development. Functional policies and health sector infrastructural development should not be dissociated from the development of key sectors of the economy like power and steel, human resources development, regulation and monitoring of operational standards, and infrastructural maintenance agencies [40-42]. Improvement in patient safety and patient care protocols in line with global best practices is also required. Continuous quality improvement of health services through regular training of staff, monitoring and evaluation is invaluable in promotion of quality healthcare. Provision of cost effective and essential healthcare services at the grass root while upholding the principles of evidence-based and value-based care will build trust and promote patronage of the local healthcare facilities and services [43,44]. The gaps in distribution of human resources for health between the northern and southern parts of Nigeria as well as the rural and urban areas have to be reduced. Provision of conducive environment for practice, good incentives like sponsorship for foreign trainings to aid technology and skill transfer, security, and good remunerations are essential in bridging the gaps [45-48].

Development of skills and competencies in areas of inertest interest like oncology, cardiovascular, and renal systems will reduce the number of patients travelling outside the country to access care in those areas [49- 52]. Table 1 summarizes the health, economic, and human resources indices in Nigeria and makes comparisons with some benchmarks [53-68]. The table shows the huge gaps that still exist in the nation's health, economic and human capital development that makes the health sector vulnerable, encourages the exodus of health professionals from the country [69, 47]. The world is now a global village with broadband and high-tech information and telecommunication services. People can easily access needed information pertaining to healthcare in other countries and often waste no time in obtaining such care, especially when it is affordable.

Table 1. Integrated summary table of health, economic and human capital indices in Nigeria

S/N	Health, economic and human capital indices and variables	Values	References
1a	Estimated Number of Doctors Trained in Nigeria (2014)	65, 000	53, 54
1b	Number of Doctors that practicing in Nigeria (2014)	25, 000	53, 54
2a	Estimated Number of Doctors Trained in Nigeria (2016)	72, 000	53, 65, 66
2b	Number of Doctors that Travelled to abroad (2016)	20, 000	53, 65, 66
	Health And Economic Indicators Based on Disease Burden (2015)		
3	Under 5 Mortality Rate	117.0	55, 56
4	Maternal Mortality Rate	560.0	55, 56
5	Prevalence of HIV	3.1%	55, 56
6	Estimated Proportion of Cardiovascular Disease Mortality	12.0%	55, 56
7	Estimated Diabetes Prevalence	4.04%	55, 56
8	Public Hospitals Per Million People	87.8	57, 58
9	Private Hospitals Per Million People	53.8	57, 58
10	Primary Health Centres Percentage of Health Facilities	85.6%	57, 58
11	Secondary Hospitals Percentage of Health Facilities	14.0%	57, 58
12	Tertiary Hospitals Percentage of Health Facilities	0.2 %	57, 58
13a	United States Government Spending on Health as % of GDP	17.1%	58, 65- 68
13b	Nigeria's Percentage of GDP spent on health expenditure	6.10%	58, 65- 68
14	Lesotho Government Spending on Health as % of GDP	9.0%	59
15	Swaziland Government Spending on Health as % of GDP	6.2%	59
16	Zambian Government Spending on Health as % of GDP	4.0%	59
17	Sudan Government Spending on Health as % of GDP	1.0%	59
	Sources of Healthcare Financing in Nigeria		
18	Public	70.3%	
19	Private	7.2%	60
20	Donors	3.8%	60
21	Household	18.7%	60
	Increasing Burden and gap of Non Communicable Diseases		
22	Population	180 Million	60, 61
23	Consultant Oncologist	25.0	60, 61
24	Neurologist	50.0	60, 61
25	Neuro Surgeons	40.0	60, 61
26	Consultant Paediatricians	600.0	60, 61
27	Population of Children In Nigeria	70 Million	60, 61
28	Estimated Spending on Medical Tourism annually in Nigeria	USD 500 Million- 1billion per Year	61, 62
29	Health Insurance Coverage In 2013	5.0%	60- 62
30	Position/Rank In Global Economy In 2014	147/189 Economies	61, 62
31	Sub- Saharan Africa's Average	142/189	61, 62
	Average Hospital Beds Per 10, 000		
32	Sub Saharan Africa	12.0	62
33	Europe and Central Asia	56.0	62
34	East Asia And Pacific	36.0	62
35	Nigeria	5.0	62- 64
36	Global Average	26.0	62-64
	Other Indices		
37	Life Expectancy at Birth (Male and Female)	34.0 Years	62- 64
38	Global Average of Life Expectancy at Birth (Male and Female)	70.0 Years	62- 64
39	Under Five Mortality Rate (Per 100, 000 Live Birth)	560.0	62- 64
40	Global Average of under 5 Mortality Rate (Per 100, 000 Live Birth)	201.0	62- 64
41	Nigeria's Rank on Proportion of GDP spent on health	109/191	65-68
42	United States Rank on Proportion of GDP spent on health	1/191	68

S/N	Health, economic and human capital indices and variables	Values	References
43	Liberia's Rank on Proportion of GDP spent on health (15.50%)	3/191	68
	Top destinations for Nigerian medical doctors seeking work opportunities abroad		
44	United Kingdom	93.0%	68
45	United states	86.0%	68
46	Canada	60.0%	68
47	Qatar	1.0%	68

S/N: serial number, GDP: Gross Domestic Product

3. CONCLUSION

Globally, healthcare service delivery has become very dynamic and very competitive. Countries that are well-positioned to move with the trend stand to maximize their foreign exchange earnings through health tourism. Nigeria has lost huge foreign exchange and human resources for health to foreign countries due to poor infrastructural development, sub-standard health working conditions, poor policy implementation and inadequate funding for health. This has been compounded by poor human capital and economic indices. The Nigerian government should create an investor-friendly, terror-free environment, make the airports safer and more functional, and reduce bureaucratic bottlenecks; these will serve to encourage investment in the country. Together with the leaders of professional health and legal bodies, there should be a framework for monitoring and regulating medical tourism in order to ensure strict adherence to all ethical procedures. Creating a regulatory framework is a means of ensuring the safety of these tourists. It will also serve to check, as much as possible the two-tiered effect of medical tourism on the health system. Medical tourism in Nigeria remains relatively unexplored, as there is a dearth of research-based data on the topic. Promoting research through improved funding and grants on the subject will go a long way in addressing this. Medical tourism is a fast-growing industry. Despite its drawbacks and potential ethical implications, it promises great rewards for low and middle-income countries like Nigeria, especially in terms of employment generation, brain drain reversal, health infrastructure development, availability of standard, up-to-date health facilities for the citizenry, reduction of health care costs and foreign exchange generation. Nigeria has all the human and material resources to key into this. All that remains is the will to do so.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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