# A NARRATIVE OF RESEARCHER CONUNDRUMS IN SUB-SAHARAN AFRICA.

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## Abstract

This study commissioned the narrative literature review methodology to examine the challenges encountered by researchers in sub-Saharan Africa. The study found out that, despite the overwhelming documented evidence that sub-Saharan Africa faces a plethora of problems related to disease management, infrastructure, food insecurity, sanitation, and climate change hazards that can be tackled by research, it lags behind other regions of the globe in terms of research output. The factors that impede research that were gathered and examined were related to gender, chronic low output record, poor funding and infrastructure, role conflict, lack of training and experience, linguicism, epistemicism and knowledge imperialism, starved academic freedom and participation, deficient digital scholarship, digital divide, and predatory publishing. To mitigate these conundrums, the governments in sub-Saharan Africa need to upscale investment in funding, training and infrastructure so as to empower their traditionally disadvantaged academics such as women and early career researchers.

## 1. Introduction

Research is undoubtedly an important process in the growth, survival and development the society. Poor research is a drawback to growth, sustainable development and improvement in education, economy, technology and health in Africa (Ngongalah *et al.,* 2018). Research is a key tool in sustainable development and remarkable growth of any society (Kumwenda, *et al.,* 2017). In their understanding, Fayomi *et al.,* (2018) expound that research entails a structured inquiry that utilizes acceptable scientific methodology to solve problems and creates new knowledge that is

generally applicable. Research refers to the continued scientific search for knowledge in an objective and systematic way in order to find solutions to a problem that trouble humankind. It is important to note that research is an intentional and deliberate process that is guided by scientific rules, procedures and process as individuals try to seek for solutions to problems that plague humankind. Africa, particularly the sub-Saharan region, experiences the toughest problems such as poor disease control and management, dilapidated infrastructure, food insecurity, compromised hygiene and sanitation, and climate change hazards (Ngongalah *et al,* 2018). Given a plethora of challenges that bedevil sub-Saharan Africa (African countries south of the Sahara desert), it is unfortunate, to learn that there continues to be little and insignificant investment in research in the region (Kumwenda *et al,* 2017). Ahmed & Shifraw, (2019) posit that investment in research and technology is urgently required to tap the best minds on the continent and to develop innovative local solutions to the numerous problems the continent is facing. In any given society, governments and leaders need dedicated researchers who invest their time diligently in research so that political decisions are informed by quality empirical evidence (Kumwenda *et al,* 2017).The production of knowledge is critical for global development, growth and progress. However, different countries have different responses to research, some countries are producers of knowledge used globally, while most of sub-Saharan countries are consumers of that knowledge (Moja, *et al.,* 2022). Africa produces less than 1%

of global research output. Presently, sub-Saharan countries are mounted by a plethora of indestructible and unbreakable challenges worldwide which require robust, coherent and well-planned research (Ngongalah *et al*, 2018). Given this precarious situation, the sub-Saharan Africa need to upscale its research environment so as to devour its chronic problems. Universities are considered the torch bearers of the society. The world over, universities are in charge of and accountable for research, knowledge generation, scholarship and innovation. They are also robust conduits for the transfer, management, adaptation, and dissemination of knowledge gathered in the society (Matula, 2010). Fayomi *et al.,*( 2018) add that "colleges and research institutes over the world are in charge of research, information creation, scholarship and advancement as they serve as channels for the exchange, adjustment, and dispersal of learning produced over the world". Unfortunately, sub-Saharan universities underperform in global comparison (Adu, 2020). Research portrays that statistics on research reveal that sub-Saharan Africa produces less than 1% of the world's research output (Cox & Abbort, 2021). This is very pathetic given the fact that this region is among the poorest that is also plagued by a plethora of human threatening challenges. There are a profusion of challenges in research that can be classified as individual, environmental, and exogenous among others. Cox and Abbort (2021) report that the sub-Saharan researchers have challenges through the pressures on them to publish, the costs of research, poor infrastructure, lack of skills and limited access to literature.

Extrapolating from the background discussion, this study is a literature review study whose aim was to examine the challenges that are experienced by researchers in sub-Saharan Africa. Literature is awash with conundrums that are associated with research on the global scale but this study is unique in the sense that it focused on sub-Saharan Africa. Given the importance of research in solving societal problems, it is important to expose those challenges that are faced by researchers and proffer the possible solutions to improve research.

## 2. The Problem

The bright future of research in Africa rests in the hands of its researchers, but there is little investment to give them the needed support (Ngongalah *et al*, 2018). Research structures in most sub-Saharan countries are not capable to address the challenges that it faces, and the conditions under which research is carried out are severely compromised (Kumwenda *et al,* 2017). Given this quandary and dilemma, it was the purpose of this study to examine and expose the challenges that sub-Saharan researchers face with the aim of improving research that will in turn promote sustainable development and improved standard of living. This problem is significant in the sense that, with the intention to provide solutions to it, the study sought to expose the barriers to research publication in sub-Saharan Africa. By implication, the study aimed to boost researcher confidence and research output that will culminate in solving African problems like food insecurity, climate hazards, poor infrastructure disease management and poor sanitation.

## 3. Researcher Conundrums in Sub-Saharan Africa

This section examines the challenges that are faced by researchers in sub-Saharan Africa. The challenges discussed in this section are related to research output, gender, experience and training of novice researchers, time and role conflict, funding and infrastructure, digital scholarship and digital divide, academic freedom, linguicism, epistemicism and knowledge imperialism and predatory publishing.

## 4. Chronic Low Research Output

Low research output is a chief indicator of the challenges that researchers are experiencing and this has been a common trend in sub-Saharan Africa. Africa's research output contribution to the share of the global research and scientific publications is at the rock bottom of the globe (Ahmed & Shifraw, 2019; Cox &Abbort, 2021; Kumwenda *et al*, 2017). The research output is not compatible with the numerous problems and population size of Africa. Ahmed and Shifraw, (2019) admit that there is still inadequate research capacity in Africa to sufficiently address the continent's problems in the fields of food, security, energy, transportation, and health. This is reflected in the minimal contribution of Africa to the global share of researchers, which has not changed over the years. Available literature has blamed the apparent under-performance of African researchers to the limitations posed by the scholarly communication through which scholars disseminate their knowledge and findings (Lynch, 2006; Tarkang & Bain, 2019). The global commercial publishing is centered in the major

cities of the powerful capitalist states in the world (Lynch, 2006). Cox and Abbott (2021) discerned that "this system is dominated by a number of powerful commercial publishers based primarily in the USA and UK, publishing in English. Run on a for profit basis, their journals are expensive to license and the costs have historically spiraled upwards .Material published outside the system is almost invisible and so effectively has no impact (as measured through citations). The set up in the scholarly communication system and global commercial publishing industry is such that the powerful commercial publishers are rarely receptive to African debates and problems. This results in the sub-Saharan scholars publishing in the local journals that are lowly recognized in terms of global research output and web-metric ranking.

## 5. Gender and Research Participation

In terms of the global population, women prevail over men. Apparently, women are under-represented in terms of research output (Chitsamatanga & Rembe, 2019; Vurayai, 2023). Bray-Collins *et al.,* (2022, p.156) opined that "Despite advances in gender equality, women and girls in Africa are still constrained by sociocultural norms, rooted in patriarchy, which profoundly shape their lives and curtail their equal access to education and employment.". This gender inequality is also mirrored in the research fraternity. Hakura, *et al.,* (2016) reported that sub-Saharan Africa remains one of the regions with the highest gender inequality, just behind the Middle East and North Africa. There is no doubt that the gender inequality in the sub-Saharan region is also transposed to research productivity in which

research by women or about women is frequently undervalued by male colleagues. Chitsamatanga & Rembe (2019) raised the concern that women researchers experience high rejection rate of research manuscripts hence they fail to publish and develop their careers. In a case study of one university in Zimbabwe, Chitsamatanga and Rembe (2019) found out that male academics contributed 83 percent of research output and articles produced. By comparisons, the picture in most African countries is almost the same as the Zimbabwean situation. Apart from the above, Bray-Collins *et al.*, (2022) add that women often lose their previous connection to their sector of employment because of childbearing and often lack time, mobility, and complete flexibility necessary for full participation and/or advancement in education, training, and formal employment. The patriarchal nature of the society and its reproduction in the higher education sector leaves women in role conflict dilemma that chews most of the time they should allocate to research resulting in low research output. Restricted research contribution from women denotes a considerable loss to the development of sub-Saharan Africa.

## 6. Experience and Training of Novice Researchers

Research needs intensive training and experience to ensure meaningful progress and improved outputs. In sub-Saharan Africa, there are generally inexperienced and novice researchers who require a lot of guidance, support, mentorship and motivation to ascend through a difficult and challenging job, requiring the ability to maintain a balance between teaching, research and administrative

responsibilities (Shinkaf, 2020). These novice researchers need a lot of support from mentors, peers and other experienced researchers. The most required support is mentorship from experienced researchers and relevant training. Shinkaf (2020) observed that most early career researchers in Africa do not get the required training, mentorship and guidance from experienced scholars in their institutions when they get appointed. The experienced and potential mentors are too busy with their work and have little time to assist junior researchers (Kumwenda *et al.*, 2017). Lack of training and mentoring militate against the potential of novice researchers to be productive in their research career.

## 7. Time and Role Conflict

Time and role conflict have been discussed before as factors that affect women's contribution in research. It is important to note that these factors also affects all the academics. At many universities, academics grapple to afford the required time and necessary resources for research (Adu, 2020). Academic staff in African universities are overwhelmed by innumerable and countless administrative and teaching responsibilities (Shinkaf, 2020). The academics generally have a heavy workload that hardly permit them time for research (Kumwenda *et al.*, 2017). Cox and Abbott, (2021) acknowledged that teaching loads made doing any research difficult. Most contracts stated that 50% of time was for teaching (30% research; 20% administration). But class sizes were very large, so that in reality there was little time for research. Most of the time, work demand does not give room for research. Universities neglect

research because there has been a growth of student numbers, with accompanying pressures on academics' workload reducing the time to do research. As a result, the productivity of African academician is very low.

## 8. Funding and Infrastructure

Available literature confirms that commitment to and investment in research in Africa is low. Besides competence or hard work of individual researchers, other factors such as the research environment, availability of facilities and supportive structures all have a bearing in determining research productivity (Ngongalah *et al.*, 2018). Limited funding, equipment, support and mentoring are key ditches for African academics. The funding structures are fragile thereby limiting the sustainability of research and related efforts. Adu (2020) admits that investment in research and development measured as a share of GDP is remarkably low in Africa: few countries meet their goal of 1 per cent of GDP. This is a clear indicator of low research output in sub-Saharan Africa. Another key condition for meaningful research is the basic infrastructure. Less funding, poor infrastructure such as laboratories and computers are major setbacks for researchers (Kumwenda *et al*, 2017). Cox and Abbott (2021) aver that there are fundamental problems in terms of reliable electricity supply, computer ownership, internet access and bandwidth. The unreliable power supply compromises the rate and quality of research and finding an alternative source of power increases the cost of research (Kumwenda *et al*, 2017). Matula (2009) had noted that research capacity development in most African countries represents

an instance of market failure because explicit public policy does not exist to reinforce and ensure that higher education and research receive adequate investment from both private and public sectors for infrastructure development in the form of laboratories, equipment, libraries, and a system of information storage, retrieval, and utilization (p.2). Literature on challenges of researchers agrees that incentive structures in sub-Saharan countries frequently do not favour publication. Basedau, (2020) lamented that scholars in Africa are often underpaid or irregularly paid, if at all. African universities rarely provide environments suitable for innovation and research, as a result academics move away. The pattern is recognizable across sub-Saharan Africa, as portrayed in the case studies of countries such as Tanzania, Uganda, Zimbabwe and Rwanda. Resultantly, poor investment, limited funding and compromised infrastructure are impediments that militate against effective research in sub-Saharan Africa as compared to the other parts of the globe.

## 9. Linguicism, Epistemicism and Knowledge Imperialism

Epistemicism and knowledge imperialism in African research is manifested through neo-colonialism and the relegation, even deletion, of African epistemology dominated by the Global North (Ndlovu-Gatsheni, 2016). Basedau (2020) noted that research on Africa is strongly dominated by outside, non-African, mostly Western views, there is a tendency towards undifferentiated views on Africa, which usually concentrate on negative aspects, overlooking progress in many areas. This entrenched the assumption that local African knowledge is inferior to the knowledges of the Global North. The alien and external perspectives of Western and other non-African scholars are riddled with stereotypes, and these western academics are deficient of specific knowledge about the African culture, environment and problems. As part of knowledge imperialism, African languages are denigrated in research. In sub-Saharan Africa, there are many local languages, but a limited number is used for research publication. Many African researchers who want to publish in English journals have to pay language experts for proof reading and language editing (Kumwenda *et al*, 2017). Poor skills in writing in English also attribute to high rejection rates and failure to publish resulting in low research output. On another note, non- English speaking scholars in Europe have recognized journals that publish in their own native language, something that is rarely found in Africa. Non-native English speaking researchers have a burden to translate their ideas into English for publication in international journals, thereby overburdening the researcher. The poor command of English in academic writing has a high risk of getting a desk rejection (Lages, *et al.,* 2015). Non-native English speakers, in sub-Saharan Africa scholars battle to express their ideas in another language. This is a clear indication of linguistic imperialism that impedes research and development in sub-Saharan Africa. Knowledge imperialism is also manifested in the reluctance of African academics to publish in local journals that are perceived as lacking reputation and prestige. Lages *et al*, (2015) aver that many African scientists publish infrequently or in local science

journals that are not accessible through frequently used electronic databases. Publication in high-quality journals is challenging, because a majority of these journals are targeted to American and European audience[s]. As a result, Africa's citation impact scores are significantly below the worldwide average, which has resulted in a low degree of visibility and impact of African perspectives within the international scientific community (Ahmed & Shifraw, 2019). Local journal and the accompanied publications are rendered invisible as a result and are not invisible since they are not essentially indexed within scholarly communication systems. This situation reinforces knowledge imperialism in which endogenous knowledge was seen under colonialism as inferior and primitive. The argument is that it remains ignored both in the Global North and within Africa itself. African education retains epistemological xenophilia and knowledge dependency (Cox, & Abbott, 2021). Over and above, the epistemic hegemony perpetrated by the global North renders sub-Saharan scholars and their contribution invisible.

## 10. Academic Freedom and Participation

Adu (2020,) states that academic freedom consists of five elements: freedom to teach; freedom to do and design research; personal freedom (tenure); institutional freedom (shared governance); and individual rights for students. Moshman (2017) adds that academic freedom encapsulates freedoms of teaching, learning, and inquiry, intellectual freedom, and academic integrity of any academic endeavor or institution. In this concern, it is freedom to do research, to produce and disseminate

knowledge that is globally recognized that sub-Saharan academics seem to lack, hence they have compromised academic freedom. Deficiency in and infringement on academic freedom in research is manifested in a variety of ways such as epistemological ethnocentrism (being judged by others' ways on knowing), low rewards for research, absence of a research environment. Good remuneration is an important condition to build a motivated researcher while lack of it leads to violation of academic freedom. Cox and Abbott (2021) acknowledges that the low rewards for research and absence of a research environment has led to a brain drain, with many talented individuals being drawn to migrate. Ahmed and Shifraw (2019) detected that the proportion of scholars moving away from Africa is increasing. In line with this, the issue of low salaries in African universities is reported to be the cause of senior researchers leaving the academic environment or migrating to industrialized countries. A poorly paid academic is demotivated to work and is less productive in research. Studies from Zimbabwe, Rwanda and Uganda testify that most experienced researchers frequently leave their countries for greener pastures leading to excessive brain drain. Epistemological ethnocentrism is another indicator of violation of academic freedom. Epistemological ethnocentrism in this context entails refers to a situation where scholars try to interpret local problems through the lenses of the Global North's knowledge system, instead of using their own theory. This practice leads to the relegation and denigration of African researchers, knowledge and ways of knowing. Adu (2020) adds that the global market tends to relegate

Africa to providing raw material (data) to outside academics who process it and then re-export their theories back to Africa. The research field including that of Africa is dominated by outside, non-African, mostly Western scholars (Basedau, 2020). Adu (2020) underlines that universities in the Global South thus become peripheral, while research universities in the US and Europe become central – both in research output and in setting the agenda. It is the creators of theory, not the collectors of data, who receive acclaim. This is an extreme form of epistemological relegation in the case of African scholars in which they are taken as peripheral participants in knowledge production by mere provision of raw data. Literature agrees that the global North defines that pace and magnitude of research in a variety of ways that range from the definition of knowledge, control of scholarly communication, ranking criteria, and the language of knowledge dissemination. Scholarly communication works in such a way that the publishing industry works places authors in the Global North in a powerful position to dominate academic knowledge especially through the language of knowledge dissemination that favours them. Secondly, the ranking of universities according to research output on the global scale is defined by the ideals of the global North. The ranking of universities infringes on the research culture of the sub-Saharan countries in the sense that it affects prospective students and staff who will boost their research capacity and potential. Apparently, world university rankings are dominated by institutions in wealthy countries, particularly those situated in Europe, the United States and Asia while African universities are relegated to the lower echelons of the research matrix.

## 11. Digital Scholarship and Digital Divide

Digital scholarship promotes research while digital divide retards it. Matula (2009) conceptualizes digital scholarship as a networked, scholarly or academic environment with pervasive integration of digital technologies in everyday learning and research, the necessary physical infrastructure both on and outside campus for access, integration of university information systems such as institutional repositories, online public access catalogues and content management systems, that allow seamless access to content needed for research, publication and scholarly communication (p.5) . Digital scholarship is closely linked to e-research and both promote the pace and quality of research output by utilising ICT tools and skills. Digital scholarship exploits information and communication technology (ICT) tools and methods to explore innovative and unique knowledge that contribute to scholarly and research goals. On the other side of digital scholarship lies digital divide. Esteban-Navarro, García-Madurga, *et al.,* (2020) opine that The digital divide is currently understood as the difference between individuals, companies, regions, and countries in the access and use of ICT. It consists of a difference of approach to technological tools and services such as mobile telephony, computers, and the internet that generates an inequality of opportunities to satisfy needs and improve living conditions, which is intolerable in a democratic society (p. 3).

Digital divide can be conceptualized as a contemporary form of inequality in the ownership, use and understanding of digital information in the current digital dispensation particularly between the information have and have nots. When transposed to research, digital divide is a threat to quality and quantity of research in sub-Saharan Africa as it prevails in this region more as compared to other parts of the globe. Digital scholarship plays important roles in research through digital libraries, minimising information deficiency, bridging digital divide, improved epistemic access among others. Apparently, the available literature delineate a serious dearth of digital scholarship in sub-Saharan Africa and this poses numerous threats to its researchers and research outputs given that the academic environment in universities the world over is undergoing tremendous digital transformation. Matula (2009) reports that in most SADC states, ICT resources are poor or virtually non-existent in sub-Saharan universities, with 80% of the region's universities inadequately connected. In a related study in Rwanda, Cox and Abbott, (2021) detected that at both national and institutional levels there were issues with basic electricity supply, computer access and ownership, bandwidth, software and IT support. There were not enough computer labs; not all researchers have computers at home because of the expense of home internet. The anecdotes above paint a dim picture of digital scholarship and the prevalence of digital divide thereby contributing to the dearth of research and related participation by researchers in sub-Saharan Africa.

## 12. Predatory Publishing

The immediate effect of challenges in research is predatory publishing which may come as a response to blocked opportunities to participation in research. COPE Council (2019) views predatory publishing as the systematic for-profit publication of purportedly scholarly content (in journals and articles, monographs, books, or conference proceedings) in a deceptive or fraudulent way and without any regard for quality assurance. Predatory publishing involves a situation where the researcher pays the publisher to fast-track the publishing processes. This process is fraudulent in the sense that publication is done without following and meeting all the necessary processes like scope alignment, peer review, revisions and proofreading. Predatory publishing is the 'pay and publish' model that avoids the important and critical step of the peer review process, and accepts and publishes research papers. Due to blocked opportunities to publish, sub-Saharan researchers are desperate to publish and as a result they fall prey to predatory publishing. The other factors that attribute to predatory publishing are fear of job loss, failure to publish in world recognized data bases, rejection by accredited journals, and lack of awareness. Predatory publishing is harmful in the sense that it leads to loss of money. Predatory publishers are scammers and they may disappear after receiving publishing fees. Through predatory publishing, the curriculum vitae of researchers is gets contaminated leading to career defacement since most institutions do not recognize publications in these journals.

## 13. Conclusion and Recommendations

The study concluded that there is a serious dearth of research and related participation by researchers in sub-Saharan Africa due to a plethora of factors. Apparently, without vibrant and robust research African problems (such as poor disease control and management, dilapidated infrastructure, food insecurity, compromised hygiene and sanitation, and climate change hazards) remain unresolved giving a high possibility of further multiplication. The dearth of participation in research by sub-Saharan researchers is depicted in low research output as dictated by scholarly communication that is in the armpit of the powerful commercial publishers that are domiciled in the global North. Despite the fact that women dominate the global population and that more are joining higher education in Africa, their efforts in research and publication are underestimated and discounted particularly in Science, Technology, Engineering and Mathematics. More so, patriarchy and role conflict further cause debilitating effects on their potential to publish as they are to attend to household chores and childbearing. Besides women, role conflict also affects all researchers particularly when they have overwhelming responsibilities such as administration and teaching that leave no breathing space for research. Lack of time by experienced researchers also affects early career researchers. Overwhelmed mentors are reported to be too busy and rarely get time for training and mentoring of novice researchers into robust researchers. The depleted funding opportunities and the dearth of infrastructure also militate against quality research in sub-Saharan Africa as it affects the provision of equipment, laboratories and conference funding. The researchers lack supportive structures like laboratories, libraries, and ICT tools that facilitate research. In addition the remuneration is poor leading to demotivated academics to undertake research. As a result the demotivated academics migrate to greener pastures thereby increasing the brain-drain in sub-Saharan Africa and further depletion of research output. Linguistic and epistemic imperialism are also tools that are used to subjugate sub-Saharan Africa researchers. Through neo-colonialism, African knowledge and languages are erased, relegated and denigrated. The local knowledge and ways of knowing by sub-Saharan researchers are marginally considered for publication. Moreover, non-English speakers in sub-Saharan Africa have a double task of struggling with the language and grappling with the content and concepts. This practice is tantamount to linguistic and epistemic imperialism. The academic freedom of sub-Saharan researchers is also suffocated and compromised. This is manifested through poor remuneration, epistemological ethnocentrism, biased language of scholarly communication and the definition of research agenda. The dearth of digital scholarship and the widening digital divide has reduced the sub-Saharan researchers into intellectual beggars. Most universities in sub-Saharan Africa have limited electronic databases and compromised digital libraries resulting in information dearth, widening of digital divide and diminished epistemic access. Reduced access to participation in research creates the desperation to publish among the researchers.

As a result such researchers unsuspectingly fall prey to predatory publishing which is fraudulent and may result in loss of money and contamination of one's curriculum vitae. Given a plethora of challenges discussed above, there is need to proffer some mitigation strategies to counter their effects on research. African governments can increase their support for research by generating new funding schemes for research training and research-based education in Africa (Ngongalah *et al.*, 2018). This will empower the researchers to develop sustainable research skills and realize more potential. More so, it is prudent for African governments to start prioritizing research funding and considering the needs of young researchers (Kumwenda *et al*, 2017). This should also be extended to women and other marginalized groups in academia This can be done through increased funding opportunities, reduced workload and provision of laboratory and ICT equipment and skills to novice researchers. The future of Africa and the solution to its problem lies in the hand of the present novice researcher and marginalised women academics hence the need to invest in them. To counter epistemic imperialism, Adu (2020) suggests that many scholars and policymakers should push to decolonise higher education and reduce dependence on colonial languages, textbooks and approaches to research as a path towards more relevant output. The sub-Saharan African researchers need to question and challenge the epistemic domination of the global North in research and the curriculum. They need to push for their research agenda and have focused attention to African problems so as to realize their full potential and research opportunities.

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