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Neuroleadership Research Challenge for Systematic Literature Review in Kenya: A Documentary Analysis

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Abstract
The purport of this literature review was to synthesise and present subsisting cognizance on neuroleadership, including concepts, theories, and research findings, with the aim of incrementing understanding of its potential to inspire a replicable study in Kenya. Neuroscience-predicated approaches have had little presence in studies in the field of leadership and healthcare leaders in public hospitals. Neuroleadership, an emerging field that bridges cognitive neuroscience and leadership and holds great promise in enhancing leadership efficacy. While the paucity of research shows neuroleadership is neglected in Kenya, it is a promising area that coalesces neuroscience and leadership to provide a comprehensive understanding of leaders and to amend decision making quality.
Keywords: *neuroscience; leadership; neuroleadership; neuroplasticity*

1. Introduction

The purport of this literature review was to synthesise and present subsisting erudition on neuroleadership, including concepts, theories, and research findings, with the aim of incrementing understanding of its potential to inspire a replicable study in Kenya. Neuroscience-predicated approaches have had little presence in studies in the field of leadership and healthcare leaders in public hospitals. Shield, Perkins, Clark, and Shields (2018) and Gocen (2021) note that the consequentiality of field experts and educators interpreting findings in systematic literature analyses of neuroscience regarding scholastic processes and transferring them to a practical context is growing.

According to Scheepers, Swart, Scheepers, and Swart (2020), neuroleadership is generally defined as the application of neuroscience findings to the field of leadership. Beugré (2018) note and fortified by Psychogios and Dimitriadis (2021) and Weinberger, Dzirasa, and Crumpton-Adolescent (2020) that neuroscience is the interaction between ancestral brain and demeanour, dyadic leader- adherent. However, inscribing an exhaustive literature review on neuroleadership in Africa, categorically for practical use in public hospitals and gregarious scientists in Kenya, presents consequential challenges. We are genuinely concerned by the scarcity of available research on this topic, making it arduous to compile an adequate paper. Özcan (2021) suggests that this could result in imbalanced cognizance representation and a consequential number of leaders experiencing failures.

Walters and Nilesh (1999) and in a kindred vein, Quansah and Karikari (2016) argue that scientists who are well-trained and conduct impactful neuroscience research will be needed to efficaciously tackle these challenges. Supplementally, research directions should be aligned with national research priorities. Additionally, there is lack of sizably voluminous-scale disease epidemiology, efficacy of diagnostic platforms and therapeutic treatments, and the genetic, genomic and molecular bases of diseases.

Neuroleadership, an emerging field that bridges cognitive neuroscience and leadership, holds great promise for enhancing leadership efficacy (Akhaddar, 2019; Schiefer, & Gattner, 2019; Voegtlin, Walthert, & Robertson, 2019; Grönfors, 2023). Despite facing inhibited resources and funding, African scientists have made consequential progress in neuroscience. Collaborative networks and international partnerships have been crucial in advancing edification, research infrastructure, and capacity building in this field. Egypt, Ghana, South Africa, Nigeria, Tunisia, and Morocco have become consequential centers for neuroscience research, fostering a community of dedicated researchers fixated

on understanding the involutions of the encephalon (Quansah, & Karikari, 2016). The study explores the potential of systematic review of neuroleadership literature to engage Kenya's neuroresearchers in leadership. Neuroscience is crucial in change leadership, and Africa faces challenges in infrastructure and expertise. Innovative approaches are needed to boost neuroscience expertise, categorically in East Africa. The human encephalon, responsible for dealing with industrialization, medical, commercialization, and pharmaceutical politics, has not evolved at the same rate as organizations. The study concurs with Ghana's recommendations to refocus on neuroscience and leadership due to the lack of research in Kenya.

The question of whether there is facility for systematic review of literature on neuroleadership to engage Kenya's neuroresearchers in leadership has been raised. Quansah and Karikari (2016) designated those advancements in neuroscience ameliorate human salubrity, but there are discrepancies between Africa and more scientifically advanced countries, a sentiment fortified by Maina, Ahmad, Ibrahim, Hamidu, Nasr, Salihu, ... and Baden (2021) and Baden, Maina, Chagas, Mohammed, Auer, Silbering, ... and Prieto-Godino (2020).

Further, African countries are confronted with difficulties in terms of infrastructure and the availability of expertise in neuroscience inculcation and research, which is impeding advancements in this field (Kanmounye, Ghomsi, Djiofack, Tétinou, Nguembu, Zolo, & Esene 2020; Ngongalah, Rawlings, Wepngong, Musisi, Ngwayu, & Mumah, 2019; Maina et al. 2021). Nonetheless, innovative approaches are required to boost neuroscience expertise continent-wide, starting particularly in East Africa (peradventure Kenya destitute of most), addressing the issue efficaciously. Neuroscience is paramount in change leadership (Akhaddar, 2019; Martineau, & Racine, 2019; Shields, Perkins, Clark, & Shields, 2018; Voegtlin, Walthert, & Robertson, 2019). External environments are coercing organisations to shift their focus away from traditional leadership and management approaches, and to increment their neuroplasticity in order to acclimate to current and future changes caused by expeditious clinical, technological, political, and social changes.

However, the human brain, the organ in charge of dealing with the uncertainty and challenges of industrialisation, medical, commercialisation, and pharmaceutical politics, has not evolved in the same way or at the same rate as organisations (González-Forero, & Gardner, 2018; Scarlett, 2019). The primary goal of the human brain is still survival (Barker, Cicchetti, & Robinson, 2017; Platt, 2020; Leon, 2023), and in order to achieve this, it operates on biological, genetical, neuronal, and hormonal principles (Bear, Connors, & Paradiso, 2020; Kandell, Koester, Mack, & Siegelbaum, 2021), as well as on the substratum of patterns, comportment, habits, and heuristics. Given the lack of research on neuroscience and leadership in Kenya, we concur with the recommendations made in Ghana by Quansah and Karikari (2016) and Hinkle Alexander, Avanecean, Batten, Bautista, Hundt, and Rhudy (2022) to refocus.

The aim was to conduct a review of the existing conceptual, theoretical, and empirical literature on the concept of neuroleadership in order to identify its implications in the context of an organisational setting. The objectives were:

i) To investigate existing conceptual literature on neuroleadership and its effects in a healthcare environment.
ii) To appraise the existing theoretical literature on neuroleadership and its related outcomes in a healthcare setting.
iii) Formally assess the empirical literature on neuroleadership and its effects in a healthcare environment.
iv) To thoroughly evaluate the new and existing gaps in knowledge in the neuroleadership literature being reviewed.
v) To propose a suitable conceptual framework that can help fill the existing knowledge gaps and advance the field of neuroleadership into unexplored areas.

The main question was: Is there reliable Neuroleadership research, findings, and proof of the practical application of locally engendered outcomes in Kenya?

2. Research Methods

To commence, the researchers optically canvassed subsisting literature by conducting a search utilizing the keyword 'neuroscience'. This initial search yielded 1,145 results. However, when authors utilized a more categorical search strategy, including MeSH terms like 'neuroleadership' and 'neuroscience and leadership', 'neuroplasticity and leadership' they found less than 15 germane results on both the PubMed database and Google Scholar search engines. Supplementally, Prospero and Cochrane were explored for any systematic review of literature. Intriguingly, there were some published articles on neuroscience without leadership that made reference to Kenya in the years 1973, 1992, 1999, and 2009 (Harries, 1973; Kwasa, 1992; Walters, & Nilesh, 1999; McDonald, 2009). This review did not explore leadership without neuroscience. This review investigated the reliability of Neuroleadership research in Kenya,

fixating on its practical application in the healthcare sector. It explored conceptual, theoretical, and empirical literature, identifies erudition gaps, and proposed a conceptual framework to address them.

3. Theoretical review

David Rock developed the SCARF model of neuroleadership in 2013, which applies psychological and neuroscience findings to enhance leadership and healthcare team management (Gocen, 2021). According to Rosa (2023), the study seeks to transform Filipino educational leaders by integrating neuroscience and leadership development. The paper examines and assesses 18 scientific research papers on Neuroleadership techniques and efficacy, as well as 12 articles on the functions of the encephalon and its application to scholastic leadership. The study findings would appear to suggest that social science and neuroscience may be habituated to comprehend and ameliorate human comportment as an individual and as a component of an organization. The study suggests that neuroleadership withal revolutionizes established leadership theories and practices since all of its principles and strategies are scientifically grounded.

Lane (2023) findings back up neuroscience research that suggests the distinction between task-oriented and socio-emotional roles stems from a fundamental feature of our neurobiology. There is general acquiescent that leadership role differentiation is both natural and obligatory, especially when openness to incipient conceptions, people, emotions, and ethical concerns is critical to success.

In a similar vein, the study by Dimitriadis and Psychogios (2020) indicates how neuroscience relates to leadership. Their findings shows that leaders can amend their mentally conceiving, emotional understanding, encephalon responses, and relationships by following a categorical process. This research is paramount for leaders who want to utilize scientific erudition to succeed in business.

4. Conceptual review

Murray and Antonakis (2019) note that the time has come for a fresh, interdisciplinary approach to organisational research that includes neuroscientific techniques. They have methodological, analytical, and interpretational limitations, as do all methods; however, the potential gains from utilizing these techniques are far more preponderant. The study mentions examples of the application of neuroscience methods to sundry disciplines such as economics, marketing, finance, organisational deportment, and neuroethology, as well as an integrative translational critique on a variety of applications, but omits leadership for unknown reasons.

Jack, Rochford, Friedman, Passarelli, and Boyatzis, (2019) address design logic and inferential issues involved in evaluating and conducting neuroscience research capable of apprising organisational science in response to the conceptual need. Their study found that the facility of scholars to evaluate, design, analyse, and accurately interpret neuroscientific research is critical to neuroscience's potential as a viable framework for studying human deportment in organisations. They conclude by making suggestions to address design and interpretation conceptualization limitations.

The study by Roberson, Quigley, Vickers, and Bruck (2021) shows that the concept of neurodiversity in the workplace, which includes individuals with developmental disorders, has not been included in leadership theory and research. Current studies on this topic incline to view these differences as unique cases rather than as a group that can be studied and understood holistically.

5. Empirical review

Quansah and Karikari (2016) study optically canvass publications from the last two decenniums (1995-2015) that reported on research investigations conducted by scientists affiliated with Ghanaian institutions in categorical areas of neuroscience. The research foci, annual publication trends, and author affiliations of 127 articles that met the inclusion criteria were systematically evaluated. Neurocognitive impairments in non-nervous system disorders, depression, and suicide are among the most actively researched areas identified. The study suggested that future research need to fixate on the following categorical areas where information is lacking of: immense-scale disease epidemiology, diagnostic platform and therapeutic treatment efficacy, and the genetic, genomic, and molecular bases of diseases.

Findings in de la Nuez (2023) shows how affective workplace events influence employees' evaluations of specific organisational factors. The findings show that affective events ameliorate employees' evaluative judgements of sundry organisational variables, emphasising the importance of neuroleadership skills in emotion management and employee well-being.

According to Cristofaro, Bao, Chiu, Hernández-Lara, and Perez-Calero (2023), their eleven studies look into the innate features and personality of upper echelons and how they relate to cognition, emotions, and decisions; the role of upper echelons' leadership in cognition and cognate decisions; and how the identity of the progenitors or CEOs influences their cognition and decisions. The study emphasises the utilization of (ostensibly) unrelated domains (management, psychology, philosophy, neuroscience, and so on) to apprise upper-echelon strategic decisions. The studies suggest that to open executives' black boxes and understand organisational demeanour, research is the way to go.

6. Discussion, Conclusions, and Direction

Neuroleadership is an emerging and promising area that coalesces neuroscience and leadership to provide a comprehensive understanding for leaders and to amend decision making quality (Parincu, Capatina, Varon, Bennet, & Recuerda, 2020). This study apprises researchers about the presence of systematic literature reviews in databases.

Despite the lack of data from Kenya in many studies, it is a promising starting point due to its adequate conceptual, theoretical, empirical information and contextual pertinence for future research. The presence of methodological and constraint issues is conspicuous in this work, as in any other study.

The main benefit of a systematic review of the literature is that it provides an evaluation predicated on a predetermined protocol, which sanctions for better results and assessment of whether the findings can be applied to the local population.

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