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Unpacking the 'explorer' narrative and its impacts on African palaeoanthropology

The concepts of explorer, expedition, and the combination of the two into the myth of the explorer have been integral parts of Western mentality for more than 200 years. Here we briefly outline the colonial origins of these ideas, and use this crystallised understanding of the explorer myth to consider how African palaeoanthropology in the 20th century and up to the present continues to carry many of these biased, outdated overtones – some more overtly than others. We examine how Raymond Dart and the discovery of the Taung Child were situated and storied within this explorer narrative. We also expand on how these outdated concepts persist in determining which scientific approaches and outcomes are valued and which are not, which in turn has perpetuated extractive approaches to palaeoanthropology and the marginalisation of Indigenous scientists. This is especially notable in fieldwork practices which, to this day, embody the explorer myth's deeply problematic colonial ideals of Western, masculine moral and cultural superiority. By understanding the mindset behind the discovery and reporting of Dart's work on the Taung Child, we can better understand why it still holds such sway in palaeoanthropology today, and propose important practical and cultural disciplinary changes that will allow us to move beyond these colonial and masculine ideas in a manner that creates a more equitable future for all scholars.

Significance:

- This paper shows how palaeoanthropology has remained tied to an outdated view of the role of field exploration in science, since the time of Dart's discovery.
- This is then linked to the disproportionately high number of white men working across Africa who have achieved professional success under this rubric.
- We provide suggestions on how and why the discipline should shift away from glorifying 'explorer' science, and towards the work of local African scholars, be it in the laboratory or the field.
- This paper thus contributes to greater awareness of scientific biases, their historical origins, and opportunities for correction.

[Abstract in Setswana]

Introduction

The explorer myth in Western Europe emerged from a complex interaction of literary, political, and economic historical developments.[1,2] While 19th century European imperial exploration in Africa can be traced back to the 1400s, it was not until 400 years later that the "exploration of far-off lands" became an integral part of Western Europe's collective cultural identity.[3] The explorer himself (always a man) was initially distinct from the early travel writer and the later natural historian[1], and often served as an ambassador who facilitated the work of missionaries and traders, and even of natural historian collectors. Their expeditions were journeys that went beyond just travel and engaged in some form of mapping and documenting a new land.[4] The idea of the intrepid European on an expedition, together with the intentional construction of Africa as a dangerous unknown land, combined to form the myth of the explorer.[3]

The timeline of the emergence of the explorer as a distinct identity in Western European thought is important to understand in order to grasp why the explorer mindset is still pervasive, particularly in African palaeoanthropology. We begin by considering how these concepts emerged, and then show how Raymond Dart's work, particularly on the Taung Child, played a significant role in the field's development within this mindset. We then consider the continued stronghold of the explorer myth in African palaeoanthropology more generally, and offer suggestions for how to shift this dynamic going forward.

Exploration, Western science, and the expansion of empire in Africa

Until recently, the history of world exploration has generally been considered one of progress, at least from the perspective of the exploring nations, with images of unknown distant lands becoming replaced by scientific knowledge of the world.[1,5] In reality there was a considerable amount of myth-making about the explorers and about the nations they represented.[5] In his 1994 work *The Myth of the Explorer*, Riffenburgh[3] describes how geographical exploration in the 19th century became an integral part of Western mentality. Africa in particular was central to the creation of the explorer.

> *In an era of imperialism and extreme nationalism, when the state was extolled as supreme and the individual was subordinated to, yet made to personify, the nation, men who achieved remarkable feats were more than just popular heroes: they were symbols of real and imagined nationalist or imperialist cultural greatness. Explorers […] were a particularly celebrated genre. They were pictured as journeying into the blank spaces on the globe, where they confronted constant challenges and danger, both natural and human.*[3(p.2)]

The explorers' actions were justified ideologically both by Social Darwinism and the Western demand to ultimately conquer the physical/natural world by "defeating 'barbarism', exporting Christianity, mapping and defining the unknown, and establishing trade" (p. 2). As such, the explorer embodied the collective cultural superiority of the nation they represented (see also[1,6,7]).

Prior to the Industrial Revolution, European engagement with sub-Saharan Africa was limited. The first permanent European building in sub-Saharan Africa, Elmina Fort, was built for Portuguese traders in 1482 by African labourers, and initially served as a settlement for European merchants. It quickly became a central port through which Portugal earned revenue by inserting themselves into the African gold trade and sending enslaved Africans across the Atlantic. This in turn provided the funds for the Portuguese to "discover" the route around the Cape of Good Hope (by following Asian and African sailors), which they reached in 1488, opening the sea trade route between Europe, and Southern and Eastern Eurasia. By the 1600s, France, the Netherlands and Great Britain followed suit in establishing trading posts and settlements around the African coast. But European economic interests in Africa were well served through these coastal settlements for 250 years, precluding a need to operate or explore inland. So, despite the longstanding presence of Europeans in sub-Saharan Africa, the idea of inland 'exploration' did not develop for centuries.[6,8]

When the sociopolitical and technological landscape of Europe began to shift from agrarian serfdom to industrialisation, the demand for natural resources increased. No longer was chattel slavery the primary goal of European exploitation of Africa; Europeans sought to acquire the abundant resources in interior portions of the continent, such as minerals, ivory, and rubber. This dovetailed with the height of what Europeans call their Age of Discovery, and the seeking of new geographies (such as the source of the Nile), people (e.g. pygmies) and flora and fauna (e.g. gorillas). By the late 1800s, Western European policy shifted to what is sometimes referred to as The New Imperialism, which featured an unprecedented pursuit of overseas territories to annex and rule.[9] In 1870, 10% of Africa was under European control; by 1914, as a result of the Scramble for Africa, this increased to almost 90%.[10] Within this seismic geopolitical shift, historians are in general agreement that the explorer was not a mere outgrowth of the invasion, annexation, division and colonisation of most of the African continent, but a facilitator.[3,8,11,12]

One of the key properties of exploration is an exotic setting[13], and Africa was considered remote and primeval. Explorers often storied distant lands as "empty" and thus uninhabited, unclaimed, and free for taking[6,14] – a literary style that distinctly othered Indigenous people[2]. Famously, Africa was mythologised as a Dark Continent in need of discovery and its people in need of enlightenment; Africa and the African were the subject, and the explorer was the intrepid conveyor of said enlightenment.[15] In addition, authority over the natural world began shifting from the church to natural scientists, leading to the data-collection push that dominated the Victorian era, and further creating a desire for exploring lands previously unknown to Europeans.[1,11]

Europeans were also mythologising about themselves, as the process of exploration allowed them to reimagine their heroic efforts as being responsible for "pushing back the frontiers of ignorance and resistance"[5(p.166)].

> *The business of exploration was thus not merely about overcoming distance; it was about the creation of new worlds and the fashioning of new heroic personae. In this perspective, narratives of exploration can tell us as much about the explorers' views of themselves as about the territories and peoples they encountered.*[5(p.166)]

The actors engaging in this process were both distinct and evolving. Travellers or travel writers – typically upper class gentlemen – took the mantle from maritime explorers, heralding the unique challenges that came with exploring inland.[1] The development of a transnational classification system by Linnaeus led to a new agenda among Europeans: that of documenting and classifying the flora and fauna, as natural historians.[1] Essentially, explorers could have multiple intersecting identities, with scientific explorers sometimes also acting as missionaries, traders, pioneers or in other roles.[7] Of course, these explorers were not working alone, and historians now recognise the large numbers of people who accompanied these individuals or facilitated their access, including local porters, guides, leaders, etc., but who have not been written into history or glorified as heroes in the same manner.[16]

During the late 18th and especially the first half of the 19th century, field observation became increasingly standardised through the production of manuals and field guides – an indication of the growing importance of scientific exploration. Ultimately, science itself became a tool of colonialism, and exploration became increasingly undergirded by a practical scientific value along with perceived moral imperatives. By the 1850s, the Royal Geographic Society produced the unique identity of the explorer – embodied in scientific legends such as Stanley, Livingstone, and even Francis Galton – that we still see today: a kind of scientist but operating in service of wider political and commercial (tourism) interests.[6] Early anthropologists trace their origins to these explorers. Forebears of biological anthropology, such as Buffon and Morton, justified the need for finding out more about the people in distant lands and studying them before they "disappeared completely". Studies of 'race' as a key factor underlying human differences, their origins, and especially whether or not human 'races' have one or several points of origin (i.e. polygenism versus monogenism) – and therefore whether some 'races' were more or less human than others – became prominent during the 19th century. Anthropology ultimately provided race-science to validate the need for exploration and political control.[12,17]

Raymond Dart and the study of Taung as "discovery"

> *Raymond Dart, especially, helped to promote the study of physical or palaeo anthropology and to excite a wider public interest in the search for the evolutionary progenitors of modern man. Rather like the Victorian explorers of an earlier era, physical anthropologists uncovered the secrets of the African landscape and paraded their 'discoveries' for the perusal of a curious and receptive audience. In charting the paths of evolutionary development they helped to confirm – by implicit analogy if not outright comparison – the intrinsic superiority of the white races and the inexorable progress of European civilisation.*[18(p.39)]

Raymond Dart was a self-described pioneer, having descended from a stock of early settlers in Australia.[19] He discovered a passion for human evolution and comparative cranial anatomy while at Cambridge. After a brief period of training, Dart's three mentors, Sir Grafton Eliot Smith, Sir Arthur Keith, and J.T. Wilson, recommended him for the newly established position of Chair of Anatomy at the University of the Witwatersrand. Southern Africa could not have been further from the palaeoanthropological action at the time, at least in the view of Dart and his contemporaries in Europe. The centre of human origins was believed to be Asia, and Europe was also yielding a rich fossil record. Dart describes his reaction to being called to this unknown world:

> *The very idea revolted me; I turned it down flat instantly. I did not have, as he well knew, the slightest interest in holding a professorship anywhere; least of all one newly founded, utterly-unknown, as remote as possible from libraries and literature and devoid of every other facility for which I had yearned from earliest sentient manhood.*[20(p.421)]

Yet he ultimately took up the post, a position which soon led to a successful career as a palaeoanthropologist due in no small measure to his acumen at identifying the significance of one South African hominin fossil – the Taung Child – in the story of human evolution.

The details of Dart's serendipitous finding of the Taung Child have been well reviewed[19,21,22] and are further clarified in this volume[23]. Rather than repeat the story, we focus on two points in the context of the explorer mindset in palaeoanthropology. First, although Dart is lauded for the "discovery" of the Taung Child, he made it clear in his biography that he did not actually *discover* the fossil.[19] Indeed, we do not know who did because two crates of specimens from the lime mine at Taung in the Northern Cape were brought to his house by geologist R.B. Young one afternoon in 1924.[22,24] Yet when Dart passed away in 1988 at the age of 95, he was hailed around the world as having *discovered* the fossilised skull of the Taung Child, a humanoid that provided the "missing link" between apes and humans. This may seem like hair-splitting until we consider how his "discovery" came to be storied. According to his obituary in the New York Times, Dart was "the forerunner of some of the most illustrious fossil hunters on that continent, like Dr. Tobias, the Leakey family and Donald Johanson"[25]. From encyclopaedia entries to biographies on the websites of his alma mater institutions, Dart's contribution transformed from one of his astute neuroanatomical skills to one of storying his process of removing matrix from the specimen to "73 days of gruelling chipping and digging"[26]. These imply activities that did not happen: Dart did not travel into the "unknown" parts of Africa to discover the Taung Child, or do the challenging fieldwork himself, both points of which should exclude him from the heroic efforts reserved for the explorer. We need to ask: why the re-storying of his life's work?

To be fair, Dart's relationship with field research was dictated in part by the nature of the South African early hominin sites as mines, starting with Taung. Mine labourers in South Africa were black underpaid migrants who worked under harsh and abusive conditions – not white academics. Later, Dart's colleague Robert Broom more clearly pursued field exploration in his subsequent work in the Cradle of Humankind – which resulted in the recovery of many hominin fossils, including additional members of *Australopithecus africanus* and the closely related *Paranthropus robustus*. But like explorers of an earlier generation, Broom worked under the colonial model of black labourers and white academics. The black workers have been disappeared from history, while Dart's efforts have been reframed (by himself and others) as arduous fieldwork. These are not innocent oversights nor are they unique to Dart, or even to South African palaeoanthropology (as we will discuss later). They affirm that the activity of *exploration* is significantly valued over the equally arduous work of detailed neuroanatomical comparative analysis. To this day, palaeoanthropology exhibits a disciplinary bias towards "missing link" discoveries over slow, steady scientific discernment. By re-framing his work towards this bias, Dart reaped the academic and political benefits of his so-called "discovery" of the (at the time) first australopithecine and earliest human ancestor.

Our second point pertains to Dart's broader research agenda following the Taung discovery, which involved studying living Indigenous South Africans explicitly as models for understanding human ancestors.[27] Most notably, he led the University of the Witwatersrand's Kalahari Bushman Expedition of 1936 where he and his white male colleagues measured, photographed, and casted Indigenous living human bodies.[27–29] Earlier, he had participated in the Italian Scientific Expedition from Cape Town to Cairo, where he tracked a gorilla to be shot, formed his problematic racist ideas about the Great Zimbabwe ruins not being constructed by Africans, and was introduced to the process of making face masks (see detailed discussion of Dart's expeditions in Kuljian[27]). These practices were conducted before Dart arrived in South Africa, with researchers such as Louis Peringuey establishing a growing practice of local race-based anthropometry, including recording the physical characteristics of Indigenous peoples. This in turn was built on a long international history of racist and sexist dehumanisation of Indigenous South Africans, particularly Khoe (e.g.[30–32]). When Dart wrote that the Taung Child skull was representative of "an extinct race of apes *intermediate between living anthropoids and man*"[33] (Dart's emphasis), his interpretations would have been informed by such studies of living Africans, and would have included the attendant implications of them being less human. Broom, a staunch supporter of Dart's ideas following the Taung discovery[34], became a collector of "Bushmen" remains in service of this interpretation[21]. Until fairly recently (and even now in several popular narratives), Dart's engagement in these dehumanising practices was not part of the conversation around his legacy (but see[18,27]), despite being central to the search for, and understanding of, human origins. Such a mindset is consistent with the foundational beliefs of European exceptionalism and the need to 'civilise' Africans that undergirded early exploration and the explorer identity.

While Dart's 'hands-off' approach to collecting fossils, and his strong connection to European centres of Western academic power, are consistent with earlier periods of African colonial exploration described earlier, he also famously stood up to these centres in his decision not to circulate the Taung Child overseas, and to rather keep it for study in South Africa.[35] Moreover, by arguing for the origin of humanity in South Africa, Dart was entering an informal scientific competition for the rights to this title that was decidedly nationalistic.[18] He challenged the narratives of these European centres with their prevailing – and implicitly anti-black – ideas for human origins in Asia or Europe. His argument was widely disregarded by his former mentor and colleagues in Europe and his advocacy came at a price. Dart's subsequent attempts to gain employment back in Britain were unsuccessful, leaving him resigned to remaining in South Africa, and ultimately abandoning engaging in international debates for decades around the relevance of the Taung Child to human origins.[36] So while Dart benefitted from the discipline's colonial/explorer mindset that prioritised discovery over other forms of intellectual contribution, he was also a victim of its emphasis on the exceptionalism of European capabilities/intelligence over any other region.

The explorer myth and its continued stronghold in palaeoanthropology

The explorer myth in palaeoanthropology did not begin with Dart: anthropology as a discipline is rooted in the idea of colonial exploration, tracing its origin in part to organisations such as the Royal Geographic Society.[6] Palaeoanthropology developed as a subdiscipline within this colonial mindset of expedition and discovery[37], and these are still familiar themes today. Yet, the announcement of the discovery of the Taung Child 100 years ago opened the door for palaeoanthropologists to shift their focus to Africa. Treating it as the Dark Continent to be "discovered" by a white man in a pith-helmet is not just a part of Dart's origin story, but of palaeoanthropology's.

While sensibilities around viewing Africa in this way have shifted over the past century, palaeoanthropology continues to elevate the myth of exploration and "discovery" as noble pursuits for Western science. This is manifest in a couple of ways. First, fieldwork in Africa remains focused on discovering and establishing new palaeontological finds that "rewrite" the story of human evolution. This valorisation of fossil discovery has led to an outsized value being placed on finding the "first" of something, or of naming a previously unknown entity (e.g. a new species) regardless of whether it is good science. This plays out in publication currency, with the high-profile scientific journals *Nature* and *Science* the go-to repository for descriptions (and cover photos) of almost all new hominin species in the last century. In this sense, the outdated explorer myth still determines which (and whose) scientific approaches and outcomes are valued and which are not. The Taung Child story is an early example of how the competition between scientists for "firsts" is central to the human evolution story, but it is far from the only example. The tendency to place outsize value on "firsts" has in turn contributed to a proliferation of new genera and species[38] as well as a minimisation of other contributions that are valuable pieces of the bigger puzzle and answer important questions. Together, these practices have done a disservice to the quality of science that is produced in human evolution studies.

Second, palaeoanthropology remains dominated by men from the Global North, and from the Western Hemisphere. This aligns with the prototypical 'explorer', both within the discipline and, perhaps more importantly, within the international press. These values have in turn perpetuated extractive approaches to palaeoanthropology, especially fieldwork practice, with African scholars receiving little to no (or at best, belated) recognition of their talents and contributions, and with African women in particular massively underrepresented in the discipline. Thus,

to this day, despite the explorer myth's embodiment of deeply problematic colonial ideals of Western, masculine moral and cultural superiority, it is perpetuated in the practice of 21st century palaeoanthropology. Many books have been written about the dominance of big, bold Western male personalities – "hero" fossil hunters on their quests to discover "missing links" – so we will not detail this here and instead refer the reader to these accounts (e.g.[39–42]). And several of the historical examples of palaeoanthropological exploration across the rest of the continent more clearly align with the masculine heroic global explorer mentality outlined above than Dart's story did. But what is important to note is how the masculine values of competition, dominance, confidence and toughness have become internalised in the discipline, impacting the success and well-being of others.[43] The fact that these Western scientists have historically not actually been the people finding the fossils – more often than not they were discovered by hired black field workers who reaped no academic credit nor headlines – further highlights how palaeoanthropology has modelled itself after colonial exploration.

With this in mind, one of the clearest contemporary manifestations of the explorer mindset is helicopter research, where many of the elements of historical colonial explorers still hold today.[44,45] Helicopter research – also called parachute research or neocolonial science – is increasingly attracting critical attention as a cause for concern (e.g.[46–49]). The practice involves researchers from wealthy (typically Global North) countries conducting short-term research in less resourced regions of the world (typically Global South) with little to no meaningful involvement from local researchers or communities. These extractive practices have been commonplace in human evolution research in Africa (and beyond) over the last century, and have resulted in a persistent dominance of Europe and North America in research outputs to this day. Critics of helicopter research have pointed out that in order to mitigate this practice, communities or local (often early career) researchers must be given power and voice in the form of actively shaping the conceptualisation, design, development and publication of research.[44,46]

Specific fieldwork practices are also problematic, with high-profile projects often controlled by Western researchers whose access to funding leads to them being centred in media coverage, even when the fieldwork teams themselves are composed largely of Africans. Even the clothing often chosen by Westerners recalls the colonial explorer, such as Indiana Jones style hats and vests. This continued glorification of the explorer through the media and into the public realm is a symptom of the colonial mindset of our field persisting until the present.

Where do we go from here?

We recognise that palaeoanthropology is by its nature explorative – so how do you keep the good parts of that while eliminating the bad? We argue that palaeoanthropology needs to look closely at how exploration is conducted and by whom, in order to recognise and eliminate its racist and patriarchal colonially derived explorer elements. The positive aspects of exploration – the excitement of the search for new data, and the thrill of finding it – can still benefit our discipline, attract young scholars, and even secure funders, while purging the deeply problematic elements of the past that diminish other kinds of contributions, but it will take conscious effort. We believe there are three key interventions that need to happen in order to move us to create this culture shift: changing demographics, enhancing African research and support networks, and having tough conversations.

It has been a century since the publication of the Taung Child, and yet we still struggle to identify women in palaeoanthropology who have benefitted from networks of private funding (sponsorship) for their research, and easy access to media coverage (including high-profile talks, tours, quotes, etc.), comparable to their male colleagues. The men who have most obviously succeeded in this system are valued precisely for demeanours and approaches that fit into the explorer archetype developed during colonial times, because this meets the expectations of the funders and funding bodies, but also the public. It does not, however, serve the science of palaeoanthropology and its need for solid evolutionary theory, diverse African-led teams, and the application of sophisticated analytical methods to existing data. Dart's true contribution as an excellent neuroanatomist who was willing to take on the orthodoxy of defining humans is a more critical piece of his story – and substantially less problematic – than his forays into explorer tropes.

It almost goes without saying that, today, people engaged in exploration should reflect a diverse demographic of scientists and storytellers from across the globe (two of us, K.M. and S.A., both women of colour, are among the National Geographic Society's recently named Explorers). At the local level within the realm of palaeoanthropology, South Africa is renowned for its significant fossil discoveries, particularly in the Cradle of Humankind World Heritage Site which has yielded some of the most important hominin fossils in the world. However, African researchers, particularly women, are nearly invisible in palaeoanthropology. This has been the plight of the discipline for a very long time, and much discussion on the matter has taken place in various workshops at higher education institutions. Until recently, no programmes or formal structures had been put in place to address the issue. However, today we see an intentional movement by various institutions, organisations and funding bodies to recruit, support and highlight the research of young Africans in the field. The most notable example in South Africa is the Human Evolution Research Institute at the University of Cape Town whose mission statement elevates diversity and inclusivity to the same level as its scientific goals. We are not naïve in thinking that simply changing demographics will solve our problems; however, it is now a well-established fact that diverse teams produce better outcomes. In the context of the explorer narrative, substantial African representation at senior levels may shift the field's discourse – and value system – away from valorising exploration and discovery, which comes at the expense of other critical advances in understanding human origins. Through this, the mission of palaeoanthropology can be reframed from exploration in the colonial sense to investment in the work and ideas of a diverse, global community of researchers.

Related to this, we need to balance the diverse needs of our science by supporting (and glorifying!) thorough and well-trained scientists and technicians – particularly Africans and women – in addition to explorers and discoverers. This can come about through a shift towards collaborative networks that centre African scholars in knowledge production, thereby changing the dynamics around who produces knowledge and who is excluded from doing so. Meaningful collaborations between foreign and African researchers are not sufficient. We need African networks that encourage cutting-edge research among African institutions to grow our research strength in Africa. There are specific funding opportunities (local and global) that are targeted at exclusively supporting Indigenous/local researchers working on research projects within their home countries, but we would like to see more of these as they play a crucial role in facilitating the changes we propose. Such opportunities financially empower local scientific endeavours and support the movement to limit helicopter/parachute science in support of real collaborative endeavours where Africans have the lead role, and promise to deliver new postcolonial research questions and approaches. In South Africa, the Palaeontological Scientific Trust (PAST) is a funding body that was established 30 years ago and has made an important impact in supporting research and education across the continent, albeit working within a constrained local budget. Internationally, two of the most prominent funding bodies that support palaeoanthropological research and exploration in Africa are the Leakey Foundation and the Wenner-Gren Foundation. In recent years they have supported a growing number of young African researchers and other researchers of colour; however, they still overwhelmingly fund students at Western institutions, maintaining colonial dynamics in training. There are exceptions to this, such as the Wadsworth African scholarship, which focuses on Africans who are trained at African institutions. Another exception is the recent award to one of us (R.R.A.) and colleagues of a Wenner-Gren Foundation Global Initiatives Grant specifically targeted at providing short-term training for African graduate students in laboratories and field sites with African principal investigators, from African institutions.

Finally, we strongly believe that having tough conversations around issues like the one we have focused on in this article is key to helping us move forward as a discipline. We recognise that these conversations can be difficult, and sometimes feel quite personal, but they are necessary for making the kinds of changes detailed above, and for guiding new

practice going forward. In this regard, we want to highlight a Wenner-Gren funded workshop to be held in South Africa in 2025, entitled 'Theorising a More Socially Responsive Practice in African Palaeoanthropology', with the goal of co-creating best practice guidelines to help researchers move away from extractive science to a more engaged and ethical research practice that shifts the way palaeoanthropology is done. We are encouraged by this and the other funding developments detailed above and would like to see more such programmes. In particular, we encourage international funding bodies to follow the lead of the Wenner-Gren Foundation, by considering their funding schemes and how they can be used positively to facilitate internal growth in the countries from which palaeoanthropological resources derive, to become leaders in breaking down the legacy of colonisation.

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Data availability

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We have no competing interests to declare. We have no AI or LLM use to declare.

Authors' contributions

R.R.A.: Conceptualisation, writing – initial draft, writing – revisions, funding acquisition. K.M.: Writing – initial draft. S.A.: Conceptualisation, writing – initial draft, writing – revisions. All authors read and approved the final version.

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