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Introduction

OLIVER MTAPURI and BETTY C MUBANGIZI

Knowledge is like a baobab tree; no one individual can embrace it.

Akan proverb

The nature and complexity of societal problems invoke the need to craft responses, not from an insular and narrow-minded perspective, but from an open-minded perspective that is inclusive of a variety of thoughts and paradigms. This need to recast societal problems outside the traditional discipline boundaries and reach solutions based on a redefined understanding of complex situations saw the emergence of Transdisciplinarity. Transdisciplinarity aims to systematically and holistically focus on problem-solving while drawing on a variety of seemingly disparate disciplines and *knowledges*. Haverkort and Reijntjes (2006:2) note that Transdisciplinarity is a relatively recent approach (to knowledge generation) having emerged seven centuries later than disciplinarity which, itself, followed the work of the Swiss philosopher and psychologist Jean Piaget (1896-1980). In this Issue of the African Journal of Governance and Development, it is with brevity that we reflect on Transdisciplinarity. We see this as relevant and timely given the contemporary and contextual imperatives on the African continent. Working in silos insulates the cross-pollination of *knowledges*, practices, praxes, know-how and technologies and does not augur well to finding solutions for Africa's multifaceted problems. For Max-Neef, 'Disciplinarity relates to a mono-discipline, which represents specialization in isolation' (Max-Neef, 2005: 3). McGregor (n.d) opines that single disciplinary work, while possible, is constrained when solving complex problems by viewing things through a single lens. If inter-disciplinarity represents the transference of discipline-specific methods to another but keeping the disciplines 'pure', we define transdisciplinarity as a synthesis of disciplines without subordinating any. It involves many disciplines undergirding transdisciplinary research. In other words, transdisciplinary accords all disciplines equal status. *Trans* refers to *across* disciplines, *between* disciplines and *beyond and outside* all disciplines as it *traverses* all possible disciplines – 'to crisscross, zigzag, and move laterally from side to side' (Nègre, 1999 cited in McGregor, n.d). How then is it different from multidisciplinary?



Haverkort & Reijntjes (2006) define multidisciplinary as an investigation of a phenomenon in several disciplines at the same time but loyalty remains in the home discipline. Although multidisciplinary work overflows disciplinary boundaries, it remains disciplinary research. Colins (2002 cited in McGregor, n.d: 5) observes that 'If we simply mingle disciplines to problem solve, while each discipline maintains its distinctiveness, we are multidisciplinary'. Haverkort & Reijntjes (2006:10) contend that the goal of transdisciplinarity 'is the understanding of the present world, of which one of the imperatives is the unity of knowledge'.

As such, for McGregor, (n.d: 8), 'transdisciplinary takes us *beyond* disciplines by weaving a new kind of *knowledge*'. Within the context of Africa, we seek new theories, concepts and paradigms to explain our circumstances – our growth trajectories, our governance structures, prospects for development, our hopes and imaginings for a better Africa – of alternative economics, alternative governance, alternative development and alternative environmental studies – our own studies – African studies by Africans for Africans. For, as argued by Odoro - Hoppers "...the crisis we face (in Africa) today is definitely no longer that of 'economics', 'politics' or 'culture' per se; neither is it, for that matter, a crisis of the humanities versus the natural sciences; but rather it is one in which there is a peculiar convergence of all these factors and which, together, form an entirety exceeding the sum of its parts" (2009:168).

Spurred by transdisciplinarity we present, in this Issue, articles that seem disparate in thrust but which in coalesce to debunk the silo mentality.

Jackson Aluede investigates the logics of cross-border conflict whose genesis he traces to technologies of colonialism and the partitioning of Africa. The consequences have been tendencies to irredentism and perpetual boundary disputes between (and within) countries. Warikanda, Nhemachena & Mtapuri (2017: xvii) argue that 'the fatal weakness of existing theories and discourses on (contextless) action and agency lie in the fact that they neglect the historicity of agency and action; the ways in which agency and actions are contextualized, framed and influenced by historical colonial aspects including enslavement, dispossession, robbery, looting, exploitation and zombification of the enslaved and (neo-) colonized victims'. It is this legacy that Africans live and re-live in their everyday lives. Aluede argues that it is in the scramble for Africa and its subsequent partitioning that ethnic rivalry in Africa had its evolution and in turn, ethnic rivalry is hamstringing and stultifying efforts at nation-building. He found the dialogic encounters



between limitrophe states as scholarly, intellectual and emancipatory for the bordering communities and states.

Ebele Mogo et al examine issues related to urban health and the prospects for urban health and community resilience in the context of Lagos State's development agenda in the context of Lagos State. They lament the fact that while state government's development agenda alludes to some important focus areas, it negates others thus breaching the imperatives of transdisciplinarity in that issues of governance and citizen participation for holistic outcomes were ignored. The authors suggest that it behoves health planners and urban planners to synergize their activities so as to deliver holistic solutions as transdisciplinarity would behest. The advantage of adopting a transdisciplinary approach is that methods, approaches and assumptions are shared, in dialogue, so that new approaches emerge to solve complex societal problems (Lattanzi, 1998 in McGregor, n.d: 6).

In their paper, **Mojapelo and Kok** deal with adherence to occupational health and safety standards using the case of a South African steel processing company. They opine that occupational accidents have dual forked impacts on the financial and non-financial status of individuals and firms. The study found out that employees were satisfied with how health and safety were handled by the firm which had the support of the labour union. They observed that the active participation of the labour union in health and safety issues does matter. Issues of occupational health and safety beckon that they too need to be viewed through a transdisciplinary lens.

In conclusion, we are of the view that we have reached a point in our evolution as human beings, in which we know very much, but understand very little. The discussions in ensuing articles attest to the value of working across traditional disciplines and sectors. We echo the words of Max-Neef that 'Transdisciplinarity, more than a new discipline or super-discipline is, actually, a different manner of seeing the world, more systemic and more holistic (2005: 15).

And as the Akan people in their wisdom remind us *Knowledge is like a baobab tree; no one individual (discipline) can embrace it.*

Oliver Mtapuri

Betty C Mubangizi



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Border relations in Africa and the Impact on Nation-Building: A study of Nigeria and Her Limitrophe Neighbours Since the 1960s

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Abstract

Across Africa, and especially in countries of heterogeneous composition and religious differences, forging a nation has been a major challenge to nation-building in the continent. Similarly, the colonial boundaries inherited by African states from their respective colonial masters at independence have equally frustrated nation-building efforts in different parts of the continent. For instance, there is ample evidence of irredentism and boundary disputes arising from the manner in which the countries were partitioned in Berlin Germany in 1884/1885. Post-independence Africa's international boundaries, to a large extent, have served as a barrier to socio-economic cooperation and nation-building among shared ethnic groups abutting both sides of the international boundaries across the length and breadth of the continent. By foregrounding these issues, this paper examines the efforts by Nigeria and her immediate neighbours to promote nation-building through trans-border relations programmes. It interrogates the extent to which such programmes have encouraged nation-building across borders.

Keywords: Africa, Berlin, Border, Limitrophe and Nation-building

Introduction

Nation-building is an inevitable stage in the socio-economic and political development of both new and old nations. It is a continuous process of building a nation out of a people of different ethnic/religious and political background or history fused together by war; likewise, colonialism, plebiscite and the sanction of an international organisation like the United Nations (UN). Nation-building is a herculean task in which a new nation has to



emerge from the old. In Africa, and Nigeria in particular, one of the challenges that have continued to plague the continent is building a nation out of the diverse ethnic nationalities. Fused together by the respective colonial powers that colonized the continent namely the British, French, Spanish, Portuguese, German and the Belgian during the Berlin Conference on Africa in 1884/85 (Asiwaju, 1984: 7). Boundaries issues in Africa such as irredentism, border disputes and contention over mineral resources discovered in border regions have created tensions and hindered cooperation between limitrophe countries across the continent. It is within this context and other associated issues that this paper discusses nation-building: and border relations. The paper opens with a discussion on an overview of nation-building and boundary in Africa. This will be followed by an examination of border relations between Nigeria and her immediate neighbours since independence. Lastly, the paper examines the effort of Nigeria government in promoting nation-building across her international boundary. The work adopts a descriptive and analytical approach in analyzing and interpreting the sources of the paper. Primary and secondary sources such as published books, government records, journals and internet sources were utilized in the paper.

Nation-building and Boundary in Africa: An Overview

Building a nation from the various ethnic nationalities across the African continent forged together into a nation-state by colonialism has been a major challenge that has continued to elude African leaders since the second half of the twentieth century. Africa is not alone in this dilemma; the same has been the experiences of countries in the Middle East, Eastern Europe and parts of Central Asia. Nevertheless, nation-building is one of the major important national activities that every African leader must face (Uchendu, 1977). One of the hindrances to nation-building in post-independence Africa is the inherited modern boundaries of the continent, which is among the legacies of colonialism on Africa that emanated from the resolution of the Berlin Conference of 1884/1885. The singular act left an indelible imprint on the African continent and was responsible for several intra and inter-states conflict, socio-economic and political crisis within the length and breadth of the continent (Ikome, 2012).

Like many concepts in the social sciences and humanities, nation-building has been defined differently, by various scholars across the world. According to Karl Deutsch and William Foltz (1963), nation-building has to do with reshaping territories that had been carved out



by colonial powers or Empires without regard to ethnic, religious, or other boundaries. Rupert Emerson (2014) in his definition of nation-building affirms that nation-building involves the citizens' loyalty towards their country of residence, and reduces their prioritizing towards their own ethnic. For Ali A. Mazrui (1972, 277), in a fundamental way, nation-building is more than a political activity; it is essentially culture-building. On his part, Ladipo Adamolekun (1988, 100) argues with respect to nation-building in Africa that it involves two primary activities: national integration, and the promotion of rapid social and economic development. From the above definitions, it is clear that nation-building involves building a new nation from an old characterized by ethnic/religious, cultural and political differences fused together by a hegemonic power irrespective of their heterogeneity.

In Africa, with the exception of Ethiopia, all other countries were forged together through colonialism (Akpan, 1985: 254). In the process different independent ethnic nations across the continent were amalgamated or assimilated for several reasons by the colonial powers, mainly to fulfil their political and economic interest. With total disregard to the consequences, their actions would have on post-independence Africa. For instance, in British and French colonial territories across West Africa, various ethnic nationalities (the Ewe, Aja, Bariba' Dahomey and the Yoruba's among others) which had lived together for centuries, if not millennium were separated, while some without any form of shared history were forged together (Asiwaju, 2003). Still, during the period little or nothing was done by the colonial powers to promote nation-building, within their respective colonies. Instead, they employed the 'divide and rule tactic' to further divide the people within their colonies as well as embarked on rival colonial policies and tighten their colonial international boundaries to distance separated ethnic nationalities. Post-colonial African leaders inherited the structure of divide and rule along ethnic line of the colonial masters. This to a large extent influenced the pattern of administrations, whereby appointments to public offices were based on ethnicity not merit. Some ethnic groups were marginalised from governance. These factors hindered efforts at promoting nation-building in some states in Africa.

Notwithstanding, nation-building was an inevitable process that was bound to take place in Africa, to correct the ills of colonialism across the continent. As a result, nation-building becomes imperative in fostering unity as well as integrating different nationalities into nation-states. Similarly, the process was equally to contribute to national integration. However, the colonial experience of forging and separating ethnic nationalities with shared



history has hampered effort by post-independence African leaders to actualizing nation-building in their respective countries. Carolyn Stephenson (2005, 4) in an article titled "Nation-building" further affirmed the ills of colonialism in Africa and other colonial territories across the world, and why nation-building is imperative in these countries with the demise of colonialism. In her words:

One of the reasons for the difficulties of what many consider "failed states" is that some peoples who had been integrated were taken apart by European colonialism, while others who were separate peoples were integrated together in new states not based on common identities. Particularly in Africa and the Middle East, new political borders paid little attention to national identities in the creation of new states. Thus the notion of nation-state, a nation which developed the governmental apparatus of a state, was often nonsense. While in Europe nation-building historically preceded state-building, in post-colonial states, state-building preceded nation-building. The aftermath of colonialism led to the need for nation-building.

Several reasons have accounted for why the African continent is lagging behind in nation-building. A majority of them point to the colonial legacy which entrenched ethnicity and ethnic marginalisation, tribalism, minority fear, underdevelopment and nepotism (Olayode, 2015; Onuoha, 2002; Lemarchand, 1997). Similarly, post-independence African leaders have equally played their part to hinder the process of nation-building by promoting ethnic rivalry within their states. Likewise, many of them disregard the rule of law, democratic processes and are involved in corrupt practices. The colonial legacy and the actions of post-colonial African leaders have resulted in political instability across several states in Africa such as coup d'états, intra- inter-states conflicts, ethnic/religious and communal conflicts in the following countries namely: Nigeria, Liberia, Rwanda, Sierra Leone, Burundi and the Democratic Republic of Congo (DRC) (Ikome, 2012; Imobighe, 2001, Lemarchand, 1997). In the same vein, the political instability had equally hindered efforts towards infrastructural and economic development critical for the continent's progress. These challenges have hindered efforts at promoting nation-building in the continent by its leaders. The ills of colonialism and the failure of continental leaders to manage the situation have continued to hinder nation-building domestically in post-independence Africa.

Nigeria like several countries in Africa has had her own share of the challenges of nation-building. Several works written by Nigerians and scholars abroad (Ajaye and Ajayi 2006; Bray and Cooper 1979; Francis 1968; Ade Ajayi 1961) have documented factors and actions of both colonial and post-colonial Nigeria in particular and Africa in general that have not



only stultified national integration, but also, negate efforts towards nation-building. Colonialism left an indelible imprint on post-independence Nigeria. Several of its socio-cultural, economic and political challenges are attributable to colonialism. Those to the British colonial master relate to falsely amalgamating the different ethnic nationalities without their consent. Likewise, they did not have any workable programme during the colonial period to unify them because they were not aware of their differences in culture, language, religious, political system and worldview. Hence, at independence, the new leaders who were a product of the colonial era carried out actions that further divided the peoples along ethnic and religious lines. Akinjide Osuntokun (2000 cited in Aworawo David 2003), claims that the British laid the foundations for disunity and political instability in Nigeria. The development accounts for the myriad of ethnic-religious, communal and political crises that have confronted the country since independence. The height of which was the thirty months Nigerian Civil War (1967- 1970), that almost resulted in the secession of the eastern part of the country. These seeds of ethnicity and religious sentiment were sown and still live among Nigerians, and influenced their relations with one another. This is a major challenge that the present generation will have to overcome to build a Nigeria in which every Nigerian will not be judged by their ethnic or religious background but as a Nigerian.

Similarly, nation-building in post-independence Africa and Nigeria had equally been hindered by the inherited boundaries bequeathed on the continent by her colonial masters. The colonial boundaries were arbitrary but acquired some significance on the continent with the demise of colonialism. Each territorial unit became the focus of national loyalty of its own (Emerson, 1961). These boundaries created rivalry among the newly independent African states. In the process, it somewhat frustrated efforts directed at promoting genuine cooperation and by extension nation-building. Furthermore, it promoted ties among ethnic nationalities with a shared history separated by the colonial boundaries erected by the colonial masters. The partition of the African continent introduced the state system and equally changed the boundary arrangements that had existed on the continent. The arbitrary demarcation of Africa in the nineteenth century, without the consent of its peoples, separated kith and kin, ethnic and linguistic groups and this delimitation created the concept of international boundaries that was alien to Africans before the Berlin Conference of 1884-1885.



African and Africanist historians and boundary scholars have documented the effect of the partitioning of the continent in several works. Anene and Asiwaju two Nigerian renowned historians and boundary experts captured succinctly the effect of colonialism on the partition and boundaries of Africa. Anene (1970, 2) affirms that:

The contemporary African scene does not leave room for optimism and complacency. People who had assumed that, in view of the arbitrariness of the boundaries, the preservation of the frontiers would arouse no patriotism have been proved wrong. Morocco and Algeria resorted to war in order to maintain the integrity of the boundaries which national honour appeared to demand. In many other African areas, there is an uneasy stirring of irredentist claims kept alive by the clamour of groups whose traditional frontiers have apparently been outraged by the international boundaries. Somalia, for instance, makes territorial claims against Ethiopia and Kenya. Togo, the home of the Ewe groups, insists that Ghana should return to her the portion of Ewe country incorporated into Ghana. There are therefore many potential sources of trouble arising from dissatisfaction with the international boundaries.

Asiwaju (1999, 11) argued that most of the challenges confronting the continent after independence were tied to the unjust partitioning of the continent. Asiwaju (1999, 11) observes:

Africa was badly partitioned; African boundaries were arbitrarily drawn with little or no regard for pre-existing socio-economic patterns and networks and are, therefore, artificial; the boundaries have led to the erratic separation of unified culture areas and a fragmentation of coherent natural planning regions and ecosystem; ... A great deal of Africa's current economic problems have stemmed from the division of territories into a large number of competitive, rather than complementary, national economies; and finally, much of the continent's current political problems have originated from the arbitrary nature of the colonial boundaries.

In recent times, other boundary disputes and issues have emanated from the continent all to a large extent are blamed on the partition of 1884/85, such as irredentism, genocide and dispute over mineral resources. For example, on one hand, the Bakassi Peninsula dispute boundary between Nigeria and Cameroon is one such boundary dispute in Africa (Asiwaju, 2009). The ethnic genocide in the Great Lakes Region of Africa between the Hutus and Tutsis in Rwanda, Burundi and the DRC is another case of border-related issues in Africa (Kanyangara, 2016). On the other hand, post-independence African leaders have



contributed to boundary problems in the continent by promoting irredentism. The defunct Organisation of African Unity (OAU), now African Union (AU), in 1964, at Cairo, Egypt unanimously agreed to retain the colonial boundaries left behind by the colonial masters, though some African leaders led by Kwame Nkrumah (1909 – 1972) of Ghana opposed the resolution. According to Chime (1969), Nkrumah argued for the remaking of the continent boundaries to its original state before 1884/85 arrangement. African boundaries, due to its colonial configuration, have stultified developmental efforts as well as approaches to promoting border relations between neighbouring countries.

Border Relations between Nigeria and her immediate neighbours since Independence

Nigeria is strategically located in the heart of West Africa and is surrounded by former French colonies in the sub-region. Nigeria shares her boundary with the Benin Republic to the west; Cameroon to the east; Chad to the north-east; Niger to the north; and Equatorial Guinea, to the south on the Atlantic coast (Osuntokun, 2008: 142). Since independence, Nigeria has had mixed border relations with her immediate neighbours (Ate, 1992), which in some cases had impaired diplomatic relations between them. As it was in other parts of Africa, the partitioning of the African continent in 1884/85 separated ethnic nationalities that had lived together for centuries between Nigeria and her immediate neighbours. For instance, the Berlin debacle divided part of the Yoruba and the Bariba ethnic nationalities between Nigeria and Benin Republic in the west and in the north-west border of both countries. Similarly, some parts of the Hausa in northern Nigeria were divided between Nigeria and southern Niger. In the same way, the Kanuri of north-eastern Nigeria were separated between Nigeria and Chad. The same can be said of the Mandara, the Jukun, the Chamba and the Efik between Nigeria and Cameroon (Asiwaju, 1984, 6).

Nigeria's border with her immediate neighbours provides an opportunity for the country's leaders and that of her immediate neighbours to promote and build on existing relations among their border communities dating back to the pre-colonial era. That was altered by colonialism and the creation of boundary lines separating the people into different territories. The border areas equally serve as a platform to promote nation-building through economic cooperation and the promotion of cultural ties among the peoples. In addition, it offers the opportunity to resolve national issues at the local level and among border communities, despite the existence of borderlines that defines their separation.



However, the mixed relations between Nigeria and her limitrophe neighbours have created suspicion and fear of Nigeria based on her strength, population and resources.

Border relations between and Nigeria and her immediate neighbours since independence have been ambivalent. There have been the periods of cooperation as well as conflict between Nigeria and her immediate neighbours. Shortly, after independence, the Nigeria government established cordial relations with her immediate neighbours (Nwolise, 1989). For example, the Sir Tafawa Balewa led government (1960-1966) in 1964, in conjunction Chad, Cameroon and Niger established the Chad Basin Commission to promote economic ties across their borders. Apart from the joint commission, the Nigeria government equally established bilateral relations with her immediate neighbours to promote economic, cultural, political and security cooperation over the years. For instance, in 1971 the Nigeria-Niger Joint Cooperation was established to resolve the various forms of challenges facing both countries, especially the border communities (Asiwaju and Barkindo, 1993). The border-related issues include smuggling, border clashes and irredentism among others. In 1981, the Nigerian-Beninois government created the Nigeria-Benin Joint Border Commission to address border related challenges in their borderlands.

On the other side of the border relations between Nigeria and her immediate neighbours, involving rancour have been well documented. For instance, during the President Shehu Shagari's (1979-1983) civilian administration, some Nigerian villages in Illo district in Sokoto State, in 1981, were invaded by Beninois military (Nigerian Herald, 1981). They even hoisted their country flag in these villages. The same event repeated itself in 1983 when Cameroonian troops ambushed and killed five Nigerian soldiers at Ilang, a border town adjoining Cross River State. In the same vein, Chadian soldiers encroached into Nigerian territory and occupied some border towns in 1983 (Ate, 1992). This development created tensions between Nigeria and her immediate neighbours. Despite the fact, that the Shagari administration resolved the issues diplomatically, instead of force, the situation raised security concerns on border relations between Nigeria her immediate neighbours.

General Muhammadu Buhari (1983-1985) in April 1984 closed Nigeria's land border with her limitrophe neighbours. The regime closed Nigeria's borders with her immediate neighbours to all human and material traffic following the change of her currency. In the same vein, the border closure was influenced by the threat of smuggling from neighbouring countries into Nigeria through their borders. The decision to close the country's border



was reinforced by the need to protect Nigeria's infant industries. The prices of Nigerian products have been greatly affected by the cheap prices of smuggled goods entering the country. The border closure had negative effects on the economic well-being of Nigeria's immediate neighbours – particularly traders involved in carrying trade across the Nigerian border into their country. In the course of the border closure, Niger Republic lost nearly one-fourth of its 1984 customs revenue (www.country-data.com/cgi). General Buhari's decision to close Nigeria's borders with her immediate neighbours was condemned by the Economic Community of West African States (ECOWAS), as a breach of its protocol on open border and free movement of persons and goods across the sub-region. ECOWAS is the major intergovernmental international organisation in the West African sub-region which was established in 1975.

Several failed appeals were made by the governments of Nigeria's immediate neighbours to General Buhari to re-open Nigeria's border. Efforts were made to address some of the factors that led the Nigerian government to close her borders with her immediate neighbours. One of such efforts brought together some of the affected states namely Nigeria, Benin Republic, Ghana and Togo who signed the Quadripartite Agreement to address and combat border-related issues among them (Gambari, 1989: 56). Despite, these efforts, General Buhari refused to re-open Nigeria's border. Significantly, it was after Buhari's regime was toppled by General Ibrahim Babangida in a military coup in 1985, that Nigeria's borders were re-opened with immediate effect in 1986 (Asiwaju, 2003). Thus, the trend of open borders characterised Nigeria's external relations with her neighbours until the end of his administration.

In 1996, during the military regime of General Abacha, Nigeria closed her borders with Benin Republic. This was because President Soglo had criticised his administration for killing the nine Ogoni activists (Abegunrin, 2003: 148). Still, during the Abacha military era, the Nigeria-Cameroon boundary dispute over who owns the Bakassi Peninsula came to a high point. The leaders of both countries laid claim to the disputed peninsula rich in crude oil deposits. The development led to the militarisation of both sides of border. The boundary dispute was finally resolved later by the International Court of Justice (ICJ) judgment in 2002 (Abang, 2010: 222-223). The period of the crisis affected relations between both countries, and especially relations between the border communities that had lived together for centuries.



Trans-border criminal activities in Nigeria's border with her immediate neighbours have been on the increase since the 1970s. Several factors contributed to the upsurge in the illicit criminal activities such as poverty, unemployment, the porous nature of the border, the lucrative nature of the illicit enterprise and corruption (Albert, 2006: 65; Donna, 1997). In the Nigeria-Benin border, the illicit enterprise had undermined security and economic development. Trans-border crime has become an embarrassment to the Nigerian government; despite the efforts she has put in place to stem the tide. The development compelled the Nigerian government of the civilian administration of President Olusegun Obasanjo to take decisive action to compel the Beninois government to act (*Nigerian Tribune*, 2003).

The notorious activities of trans-border criminals, especially across Nigeria-Benin borders forced the Obasanjo administration to close the border between the two countries in 2003. The closure of the border between the two countries affected commercial activities between businessmen and women from both countries. For the border to be re-opened, the Nigerian government demanded the Beninois government to handover Ahmed Tijani, a notorious criminal engaged in trans-border crime to the Nigerian government (The Punch 2003; *Daily Champion* 2003).

Promoting Border Relations and Nation-Building through Trans-Border Cooperation Workshops: The Nigerian Example

The colonial boundaries inherited by post-independence African states created several challenges for the new African states, internally and with their immediate neighbours. African leaders through their actions and policies have equally aggravated border-related problems between countries. The growth and expansion of trans-border crime across the border regions of African countries and their impact on the socio-economic and political development of the continent has become one of the major challenges confronting the continent in recent times. These border issues have hindered cooperation among Africa countries as they blame each other.

The Nigeria government since independence has shown commitment to promoting cordial relations with her immediate neighbours. The commitment is enshrined in her foreign policy objectives at independence, among which, Nigeria will not interfere in the domestic affairs of her immediate neighbours and vows to promote the policy of good neighbourliness with her immediate neighbours (Gambari, 2008). Like other countries in



the continent faced with border and boundary issues, the Nigerian government has sought various ways to find a lasting solution to the myriad of challenges emanating from borders related challenges with her neighbours. These border issues are a by-product of colonialism that has hindered cooperation and by extension nation-building between Nigeria and her limitrophe neighbours. One of the avenues that the Nigerian government has tried to address boundary and border-related challenges with her neighbours is through the establishment of the National Boundary Commission (NBC) in 1987 (Ahmad, 2015). The NBC focuses on organizing trans-border cooperation workshops as part of her strategies to resolve border issues between Nigeria and adjacent neighbours and by extension promote nation-building. It is interesting to note that the formation of the NBC was a by-product of boundary and border-related problems between Nigeria and her neighbours (Asiwaju, 2013).

General Ibrahim Babangida re-opened Nigeria's borders with her neighbours in 1986, closed by his immediate predecessor in 1984 for security and other reasons. The Babangida led military government sought to find a lasting solution to boundary issues between Nigeria and limitrophe neighbours. This development led the regime to establish the NBC to resolve boundary challenges emanating from Nigeria's internal boundaries (within the country) and Nigeria's external boundaries with her immediate neighbours (Asiwaju, 2013). One of the ways, the NBC has sought to resolve boundary and border issues between Nigeria and her neighbours are through trans-border cooperation and intellectual discourses through workshops, conferences and seminars. In line with the objective of intellectual discourse, the NBC has organised several workshops since its inception. NBC trans-border cooperation workshops are held to discuss border-related issues in a friendly atmosphere. The Communiqué crafted at each of the workshops serves as a blueprint of intent in addressing the numerous border challenges between Nigeria and her immediate neighbours. The workshops serve as a laboratory where solutions to border conflicts and efforts at promoting regional integration through the borders are discussed (Asiwaju and Barkindo, 1993). The idea of the trans-border cooperation workshops was initiated by the then Commissioner of International Boundary in NBC, now Emeritus Professor Anthony I. Asiwaju. In his words, the entire project is aimed at forging a border-specific bilateral cooperative policy and practice between Nigeria and each of the five adjacent countries (Asiwaju and Igue, 1992: xviii).



The NBC has organised five workshops of trans-border cooperation between Nigeria and her immediate neighbours from 1988 to 2005. The first workshop was held in 1988 in the ancient town of Badagry titled the Nigeria-Benin Trans-border Cooperation Workshop, the second was the Nigeria-Niger Trans-border Cooperation Workshop, which took place in Kano in 1989 (Asiwaju, 2014). The third was the Trans-border Cooperation Workshop between Nigeria and Cameroon and was held in Yola in 1992. Still, in 1992, the Nigeria-Equatorial Guinea Trans-border Cooperation Workshop was held in Calabar. The fifth and the last was the Nigeria-Niger Trans-border Cooperation Workshop of 2002, which took place in Sokoto. These workshops provided a forum to discuss various border-related challenges that had over the years confronted Nigeria and her neighbours. The workshops discuss an array of issues affecting border communities. They also, seek to establish areas of cooperation between Nigeria and her neighbours. Interestingly, the workshops are influenced by the feat achieved by the European Union (EU) member countries in 1992 of “Europe without frontiers”.

These trans-border cooperation workshops examine an array of topical issues in which leading experts in the academia and professional bodies as well as traditional ruler’s from both sides of the international border present papers. The workshops examine issues on culture, local administration, the border economy, delimitation question and border security, legal issues and close with conclusions and recommendations (Asiwaju and Igwe, 1992). The trans-border cooperation workshop is a noble idea that has not only addressed border-related issues but also, serves as a platform to promote nation-building between Nigeria and her neighbours. The commitment by the Nigerian government through the NBC to sponsor these workshops reveals the country’s determination to correct the ills of colonialism on boundary relations between her and her neighbours. In the same vein, the workshops provide the platform to promote cultural and economic cooperation among border communities, a major requirement for promoting nation-building. The trans-border cooperation has come to stay. In this regard, the NBC should be encouraged to organise more of the workshops.

The Nigerian experience of trans-border cooperation workshops through the NBC to address and resolve border-related issues with her immediate neighbours have influenced similar programmes in West Africa and the AU. In 1999, the Malian Government influenced by the Nigerian model established National Borders Directorate, which promotes and articulates the policy concept of “Pays Frontiers” (Border Country or Cross-Border Area) in



2002 (Asiwaju, 2015: 26–38). Also, ECOWAS launched her version of the programme (2015) tagged “ECOWAS Cross-Border Initiatives Programme (CIP)” in 2005-2006. CIP has metamorphosed into ECOWAS Cross-Border Cooperation Programme, domiciled in the ECOWAS Commission in Abuja. In 2007, the AU launched the African Union Border Programme (AUBP), as a strategy for the transformation or systematic conversion of Africa’s inherited colonial borders from traditional postures of barriers to new pro-active roles and functions as bridges between limitrophe member states (Asiwaju, 2015).

Conclusion

The colonial boundaries bequeathed to post-independence African states by their respective colonial masters created several border problems for the continent. Similarly, the continental leaders, after independence worsened issues by pursuing policies and actions that created tensions across their international borders. Nigeria like many Africa countries had several border issues with her immediate neighbours as discussed in this paper. The various border problems created friction between Nigeria and her neighbours that affected their diplomatic relations. This notwithstanding, the Nigerian government was committed to maintaining cordial relations with them where some residents have relatives on the Nigeria side of the border. In this regard, the Nigeria government in collaboration with her immediate neighbours, established joint commissions to address pressing issues among them, including border-related issues. Similarly, the Nigerian government created the NBC to find lasting solutions to her internal and international boundaries problems. With respect to boundary issues between and Nigeria and her limitrophe neighbours, the NBC can be said to have recorded some significant progress. Through its trans-border cooperation workshops, the commission has been able to bring together policy makers, traditional rulers, the academia, residents of border communities to discuss and find solutions to their border challenges. The NBC trans-border cooperation workshops since their commencement as an intellectual exercise have been confronted with some difficulties such as funding, delays in hosting the workshops and implementing communiqués in respective countries. Despite these challenges, the NBC management has remained resolute in promoting border relations between Nigeria and her immediate neighbours through these workshops. This is because the workshops provide a platform to discuss and this is central to resolving issues. Through this avenue, it can be said that the Nigerian government through the NBC workshops, is promoting nation-building with her immediate neighbours through discourse on border-related issues. The NBC intellectual



workshops serve as a guide that should be emulated by countries in Africa seeking to promote border relations with their neighbours.

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Urban Health and Community Resilience in the Context of Lagos State's Development Agenda

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Abstract

Two-thirds of the global population will live in cities by 2050. Already, over half of the world's population lives in urban areas. In line with Goal 11 of the Sustainable Development Goals, these urban areas must be made sustainable. Resilient urban development prioritizes urban residents' physical and social environments, not just for their present but also for their future. We asked, "to what extent do health and resilience inform the stated development agenda of the Lagos metropolis?" Additionally, our work serves as a case study for planners and health officials to critically evaluate key planning documents, with the goal of aligning them with the Sustainable Development Goals.

In conducting this assessment, we reviewed Lagos State's archives. These documents were compared against a conceptual framework for urban health and resilience derived from the socio-ecological model, the Rockefeller Foundation's resilience framework, and the social determinants of health theory. The analysis was further informed by qualitative research conducted with civil society and civil servants working within the intersections of health, resilience, and Lagos State's present environment.

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Lagos State Government's development agenda encompasses health and resilience focus areas such as housing, health, safety and transportation. However, insufficient attention was placed on the processes of governance which are critical for effective and equitable delivery of these determinants of health. Such poorly addressed factors include the need to emphasize, equitable processes, to incentivise cooperation within and across sectors, and to open lines of participation with citizens, especially those in the informal sector. Additionally, reports from surveillance systems were aggregated and thus unable to reveal or adequately monitor inequities. Without such information, health and resilience cannot be delivered especially to the most marginalized.

We, therefore, recommend a heightened focus on the processes of governance, investment in surveillance systems to target pockets of intra-urban inequity and deprivation, and resource allocation and capacity building in order to move the focus of urban health beyond health centres to urban living conditions.

Keywords: Resilience; Lagos; Urban health; Urban development; Equity; City; Urban governance

Introduction

The urban phenomenon is said to be beneficial for human thriving in theory but urbanization is often characterized by the poor distribution of resources, disrupted urban functionality, and stalled economic development, all of which are compounded by poverty in African cities (Prasad et al. 2015; Cobbinah & Erdiaw-Kwasie). Urban health indices are at their lowest in African cities and in settings where they are increasing, inequality is rising (Stauber et al. 2016). Urban challenges in West Africa occur on the intersection of environmental change and human livelihood and include issues such as water, sanitation, unemployment and depletion of greenery (Adelekan 2015; United Nations 2014; Cobbinah & Darkwah 2016). In African countries, communicable disease deaths are declining while non-communicable diseases are increasing (Mberu, Wamukoya, Oti & Kyobutungi 2015). This epidemiological transition affects urban health. Unplanned urbanization exposes residents to poverty, crime, climate threats, chronic diseases and outbreaks like the recent Ebola threat (Akinwale, Adeneye & Musa 2014; Ayodele 2014; Marans 2015; Sekoni, Adelowo & Agaba 2013; Shuaib, Gunnala & Musa 2014). The urban poor are highly disadvantaged and they are at risk for catastrophic health spending, unhealthy lifestyles,



and poor psychosocial outcomes (Adisa 2015; Idowu et al. 2016). In African cities, the disadvantage is compounded by high rates of poverty and the lack of institutional frameworks, which make them vulnerable to disaster (Amusat 2016).

Resilience, defined as the ability of cities to cope with stresses in a way that safeguards health is urgent in Africa because without it, sustainable development will not be feasible (Da Silva & Moench 2014; Amusat 2016). Having acknowledged the urgency of resilience; the next concern is the politics of resilience (Maddox 2015). Scholars have called for a move beyond engineering-based understandings of resilience to progressive understandings of resilience that treat cities as human systems (Vale 2014; Bahadur & Tanner 2014; Smith & Stirling 2010). Progressive resilience involves steering people, politics and power toward urban health equity (Bahadur & Tanner 2014). While resilience needs to be integrated into decision-making, environmental and health issues are typically marginalized by unstable politics and short-term economic interests (Anguelovski 2009). In African countries, efforts to improve urban outcomes have been said to favour the economically empowered without addressing ecological vulnerability, inequalities and sustainable job creation (Obeng-Odoom 2014).

Given that urban health and resilience intersect, understanding city systems, structures and institutional mechanisms are necessary for sustainable societal transformation (United Nations-Habitat 2010). The health sector can play a pivotal role in building political will, analyzing policy, and coordinating intersectoral action for resilience. We used the Lagos metropolis as a case study of how health planners can critically analyze development agendas and work toward healthy and resilient cities. The Lagos metropolis is the fastest urbanizing region of the world and Lagos is one of the 100 resilient cities identified by the Rockefeller Foundation (Coker, Olugbile & Oluwatayo 2015; Kinney 2016). Our study can, therefore, inform the integration of resilience into city planning in Lagos and other similar metropolises.

Method

Framework development

The framework in Figure 1 was derived by integrating the social determinants of health, the resilience framework of the Rockefeller Foundation, and the socio-ecological model (Wilkinson & Marmot 2003; Da Silva & Moench 2014; Bronfenbrenner 1994). The socio-ecological model is relevant to this study because it frames health as a complex adaptive system whose impact goes beyond the sum of its parts to include bi-directional relationships between the individual and the environment, as well as the individual's living,



working and schooling experiences; the model also comprises macro-political forces such as migration, housing policies, environmental policies, social and economic conditions (Golden et al. 2015). The social determinants of health provide a comprehensive view of life-course factors including living and working conditions (Wilkinson & Marmot 2003). The Rockefeller Foundation's resilience framework was used due to its prominence in designing resilience in cities globally (Kinney 2016). The resilience framework is a lens for understanding the drivers of resilience within cities (Da Silva & Moench 2014). Four dimensions of this framework (health and wellbeing, economy and society, infrastructure and environment, and leadership and strategy) informed the framework. The resulting figure frames urban health as the product of regional, local, interpersonal and individual influences.



Figure 1: Conceptual model

Archival analysis processes and documents



Figure 2 is a flowchart of the archival analysis. We reviewed literature and archives on the Lagos State website (Lagos State Government, 2016) to review to capture the state's priorities relative to health and resilience. Through these documents, we also researched the state's financial priorities and urban indices. We found the following documents: The Lagos State Development Plan which was launched in 2014 by the previous Governor Fashola, The 2016 Budget, The 2013 Digest of Statistics and The Manifesto of Governor Akinwunmi Ambode, the current governor.

FLOWCHART FOR THE ARCHIVAL ANALYSIS

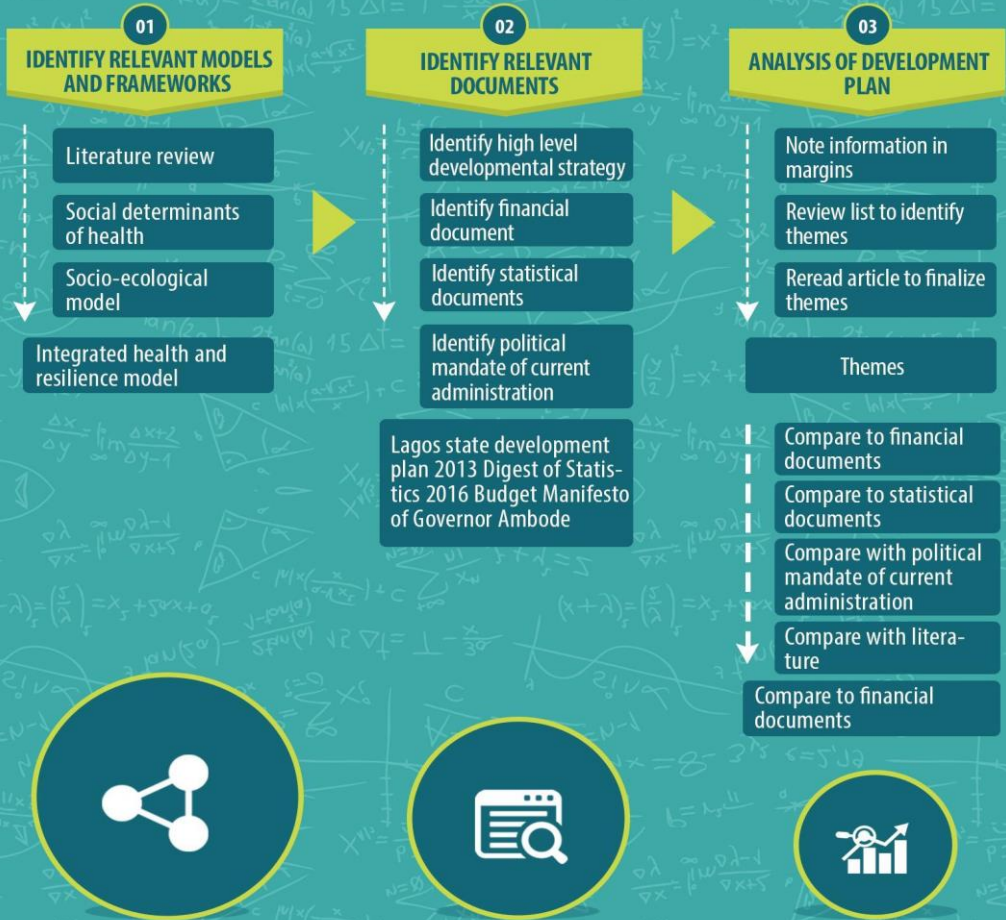


Figure 2: Flowchart of The Archival Analysis

We chose the Lagos State Development Plan because of its function as a high-level strategic planning document. References to this document were made in the 2016 Budget, press releases, and reports in the state archives. Financial records could help confirm the



political objectives expressed in the Lagos State Development Plan and the Governor's Manifesto. As such, financial archives on the state's website were reviewed. An overview of the 2016 Budget was available on the website (Lagos State Government n.d.). Lawrence Vale explains that resilience and urban issues are political (2014); because such politics affects community resilience, it is important to understand the priorities of each administration (hence our analysis of Governor Akinwunmi Ambode's Manifesto).

Monitoring and evaluating urban metrics reduces urban health disparities (World Health Organization 2010). A review of the Lagos government's website for statistics led to the 2013 Digest of Statistics published by the Lagos Bureau of Statistics, Ministry of Economic Planning and Budget, which provides data on socio-economic activities in Lagos. The Digest of Statistics fell into three categories: financial receipts and expenditures, governance decisions such as motions and bills, local government information such as election results, wards, and units. The ten steps stipulated by Hancock were used for the content analysis (2002). They involve the following steps: 1) reviewing the document being analyzed to note relevant information 2) noting the various types of information 3) placing this list of items into relevant and unique categories 4) reviewing the categories to link them, thus creating major and minor categories 5) reviewing the emergent minor and major categories and reviewing them critically, revising as is necessary 6) repeating this process for each new document using the pre-identified categories while identifying any new categories 7) comparing previously reviewed documents against the most updated list of categories to recode as needed 8) reviewing the names and descriptions of categories to ensure their relevance 9) assessing categories to see whether they might form a major theme and 10) reviewing the original documents again incase uncategorized information and previously excluded data may fit in the subsequent categories, then recoding as needed.

Results

The themes that emerged in reviewing the Lagos State Development Plan centred on the process of developing the plan, ensuring priorities and growth sectors. We cross-referenced these themes with information from the Bureau of Statistics, the manifesto of Governor Ambode, and the 2016 Budget. Finally, we evaluated the collective results from the framework in Figure 1. This framework categorizes critical elements for health and resilience at the regional, local interpersonal and individual levels. We then analyzed the archived information to understand which aspects of the framework for health and resilience planning were integrated into the archival information. The aspects of health



and resilience planning represented were: environment, transport, poverty and unemployment, health, civic participation and integrated communities. Below we discuss these emergent themes and the extent to which they aligned with the framework for health and resilience planning.

Governance

The framework for health and resilience planning notes governance as a major factor for integrating health and resilience into urban development. Key aspects of governance noted include cooperation between transport, health environment and urban planning, and having an emergency preparedness plan. Within the Lagos State Development Plan, various goals are considered such as developing the city master plans, further establishing a climate change framework, and expanding policies and legal support for sewage and sanitation (Lagos State Development Plan 2013). This is equally the case for Governor Ambode's Manifesto which focuses on creating laws, policies and e-governance options (Ambode n.d.). The focal areas of financial investment in the 2016 Budget were on issues, specifically infrastructure (Ambode 2016).

Data from the Bureau of Statistics also did not capture information on governance processes such as citizen involvement and inter-sectoral cooperation which could have taken the form of minutes, frequency and type of meetings between sectors. Rather the information gathered concerned penalties imposed on citizens for contravening laws, suggesting a transactional relationship between the government and the people (Lagos State Government of Statistics 2013). This may suggest that the decision-making process is skewed toward governance issues without sufficient consideration for the equitable processes that need to be in place.

Environment

The framework for health and resilience planning notes environment as a major factor for integrating health and resilience into urban development. Key aspects of the environment noted in this framework include environmental policy, integrated development plans, practices to manage ecosystem risks including floods and aesthetics. There was significant mention of environmental management and pollution control issues in The Lagos State Development Plan. These include environmental management education, reducing flooding, drainage and erosion, and private sector partnerships; they also breached subjects that would clearly affect urban areas: pollution control, slum clearance, accessible



transport, climate change, public toilets, recreation parks and beautification of open spaces (Lagos State Development Plan 2013). Governor Ambode's Manifesto addressed similar concerns on climate change, relocating slums, and responding to floods; he made commitments to the environment, specifically clean air, recycling businesses, and emergencies (Ambode n.d.). Environmental issues were allotted 4.07% of the 2016 Budget, amounting to 27 Billion Naira (Ambode 2016).

Infrastructure development (Housing and transportation)

The framework for health and resilience planning notes both housing and transport as a major factor for integrating health and resilience into urban development. Key aspects of these factors include: housing policy, mortgage policies, land use policies, and building codes, the access, convenience and cost of integrated transport networks. The Lagos State Development Plan states priorities for housing for the urban population by encouraging home-ownership, expanding state housing, engaging the private sector in low-cost housing; the plan addressed needs in providing housing for single families, young, disabled and ageing Lagosians, and increasing land subsidies (2013). The plan's detailed housing agenda highlights the desire for adequate and appropriate housing for Lagos' urban population. Housing comprised 3.82% of the 2016 Budget, amounting to 25.3 Billion Naira (Ambode 2016). Governor Ambode's manifesto spoke on the following housing-related issues: private sector collaborations, slum reduction, and providing options like mortgages and rent-to-own (Ambode n.d.). The Bureau of Statistics monitored housing-related transactions between the state, landowners and developers (World Health Organization 2010). For transportation, The Lagos State Development Plan expresses goals of increasing both the sector's capacity and private sector partnerships in order to improve access to transit such as water transport, roads, and rapid rail (2013). Transportation was another focus for Governor Ambode; his Manifesto said that he would diversify the transport management system, improve roads and pedestrian bridges, bus rapid transit, rail service, waterways transportation, signage and lighting (Ambode n.d.).

Poverty and Unemployment

The framework for health and resilience planning notes both poverty and unemployment as a major factor for integrating health and resilience into urban development. Key aspects of these factors include: employment and skills development. Within the Lagos State



Development Plan the state set a goal of growing the economy, skills training, and supporting the informal sector; in line with growing the economy, the government intended to simplify business creation, which will involve standardizing business creation (2013). Similarly, Governor Ambode articulated his dedication to job creation, scholarships and traineeships to develop skills within the population (Ambode n.d.). Given that poverty and unemployment are not conducive to creating a resilient community; these issues can be addressed by creating supportive infrastructure. To meet the needs for power supply, Governor Ambode also committed to supporting fair pricing options for electricity, alternative emergency sources and the independent power project scheme (Ambode n.d.).

Food security

The framework for health and resilience planning notes food security as a major factor for integrating health and resilience into urban development. Key aspects of this factor include: the availability, quality, purchasing power to ensure access to quality food as well as the sustainability of access to food. The Lagos State Development Plan stated that farming and fishing estates, agro-industrial parks and conditioning centres would be developed (2013). Two methods would take care of funding obstacles: financing small and medium scale farmers, and offering sponsorship, risk management tools, and cooperative benefits for agricultural stakeholders (Lagos State Development Plan 2013). Consumers are part of this equation. On the consumer end, the state plans to protect consumers from foodborne illnesses and to diversify end users of agricultural products (Lagos State Development Plan 2013). Governor Ambode's plan promises to ensure food security and creating jobs; champion optimizing aquatic and seafood resources, providing incentives for agricultural processing companies, fish production, rice processing and sustaining land for agricultural products (Ambode n.d.). Agriculture and food security had the fifth highest allocation within the 2016 Budget (2 Billion Naira) (Ambode 2016). Information collected by the Bureau of Statistics typically concerned animals entered through livestock control, slaughtered in the state, crop production, land size, allocation and acquisition, state abattoir/lairage and slaughter slabs (Lagos State Government Digest of Statistics 2013).

Safety

The framework for health and resilience planning notes safety as a major factor for integrating health and resilience into urban development. Key aspects of this include: trust, transparency and adequacy of policing, the cooperation of local leaders with police, inclusive public spaces, civic education, and fairness in the use of law.



The Lagos State Development Plan recognizes aspects of policing such as improving the rapid response squad, revamping security services, data for security systems, emergency response systems and supportive partnerships with communities (2013). There were only 28 cases of rape reported in 2012 (Lagos State Government Digest of Statistics 2013). Finally, the current administration's manifesto states commitments to rally around residents, with attention towards better funding for security, enhancing security communications technology, reforming the security and justice sectors, and protecting inhabitants' inalienable rights (Ambode n.d.).

Health

The framework for health and resilience planning notes health as a major factor for integrating health and resilience into urban development. Key aspects of this factor include: public health management, funding, primary health care quality and quantity, and health insurance policy. With regard to health, both The Lagos State Development Plan and Governor Ambode's Manifesto look to upgrade multiple levels of health care, such as the quality and affordability of healthcare services; health infrastructure will be observed so as to increase and raise standards for citizen participation and private sector engagement (2013; Ambode n.d.). Public health was budgeted for 49.6 Billion Naira (7.9% of the 2016 Budget) (Ambode 2016). Although Governor Ambode's Manifesto commits to advocating for better health systems, it specified that it is important to provide free medical care for the following: children from birth to age six, pregnant women, patients 65 and older (Ambode n.d.).

Participation and Integrated Communities

The framework for health and resilience planning notes civic participation, social networks and integrated communities as a major factor for integrating health and resilience into urban development. Key aspects of these factors include: membership of local organizations, varieties of social support, trust, and ethnic, religious and income diversity in neighbourhoods. Administration plans indicated that Lagos' government will improve corporate social responsibility, community relations, community-focused youth entertainment and development projects, and participation of professional women organizations in the political economy (Ambode n.d.). Community vibrancy was particularly focused on lifting up women and children. Governor Ambode stressed that the state will



ensure inclusive and participatory governance, facilities and legislation to support youth, women and children and services to enhance opportunity and quality of life (Ambode n.d.). Among other plans, Governor Ambode is devoted to delivering education, green spaces, tax incentives for women, equal opportunity in political parties, protection of women against domestic violence, libraries and sustainable support systems for youth. Finally, the Manifesto supports creating jobs, closing the wealth gap, and ensuring community cohesion and civic identity (Ambode n.d.).

Discussion

City planning and its driving ideology is critical for the health of city dwellers. For example, a pro-growth model megacity ideology can lead to poor health outcomes and inequities; Heynen noted that the privatization of urban environmental management and neoliberal policies correlated with race and place inequities (Heynen, Perkins & Roy 2006, pp. 3-25). Mulligan et al. used an urban political ecological model to show how poor health in India resulted from the low prioritization of health in socio-political hierarchies (2012, pp. 612-620). When a city undergoes neo-liberalization and is touted as a model city (with characters including having intelligent garden ecology), the real city is replaced with a symbolic city; this can negatively impact health and urban outcomes (Mulligan, Elliot & Schuster-Wallace 2012, pp. 613-620). We seek to inform health-focused urban development planning especially in emerging African metropolises like Lagos. We used the Lagos State Development Plan, the Manifesto of Governor Ambode, and data from the Bureau of Statistics as a case study on analyzing urban development through a health and resilience lens. The themes described above interact with each other to affect urban health outcomes on multiple levels (personal, interpersonal, and communal scales). For example, unemployment is related to poor mental health and safety (Opoko & Oluwatayo 2014, pp. 15-26).

The commitments of the government span various aspects of the framework for health and resilience planning such as environment, transport, poverty and unemployment, health, civic participation and integrated communities. It is important to note that the aspects of governance in the conceptual framework were not covered by the documents reviewed. A qualitative study on Lagos' governance priorities found that low levels of population awareness of environmental issues and financial challenges in the government and private sector limited effective community engagement (Mogo et al. n.d.).



Reading through the archival documents, we observed that there was a transactional approach to governance that involved punished individuals for contravening rules rather than active engagement of citizens, as well as a top-down approach to decision making exemplified by the absence of process-based indicators of governance priorities in the surveillance data being collected. The Lagos State Development Plan was created by integrating already existing high-level policy documents (2013). Given that this document sets the long-term vision for Lagos, it could have benefited from feedback by lower levels of power such as civil society groups, local governments and field officers within various ministries. In a previous qualitative study, interviewees working with the Lagos State government mentioned that decision-making was typically at the higher political levels (Mogo et al. n.d.). The study found that decision making was mostly top-down: political offices such as the commissioner, board of directors and permanent secretary made strategic decisions while the local levels of power carried out routine functions but had little agency over decision-making (Mogo et al. n.d.).

Another related component is the concept of equity in delivering health and resilience, which is key to achieving the Sustainable Development Goals. The plan did not have stated processes that could be monitored over time to improve outcomes specifically for the marginalized. For example it was unclear what plan was in place to specifically cater to the needs of low income members of the society, for example those living in the slums which would be cleared and how emergency plans may cater to those living in environmentally vulnerable areas who are low income and being in the informal sector, not counted. Clearly, urban housing was receiving attention from the archival analysis. However, with options like mortgages and rent-to-own requiring formal legitimacy, the question about how this plan would be applicable to those in the informal sectors remains. These are demonstrations that transportation is on the agenda to improve urban living conditions. While the Lagos State Development Plan states a commitment to a multi-tiered approach to health including the individual, family, community and the population, the health data collected by the Bureau of Statistics focused on in-hospital resources and events such as the number of equipment in the hospital, patients seen, and deaths recorded. This data did not address the demand-side of these outcomes such as access to insurance, health literacy, spatial and income inequities in health outcomes and urban environmental indicators. A study by Mogo et al. also found that the government prioritized treatment and control of infectious diseases such as HIV/AIDS, tuberculosis, malaria and maternal



and neonatal health (n.d.). For example, environmental management would be given high priority due to a growing need to prevent malaria (Mogo et al. n.d.). There is need for a conception of health that goes beyond infectious disease management to broad prevention including factors mostly outside the health system such as the environment that affects health outcomes. One of these is housing. Within Lagos' housing sector, the data collected by the Bureau of Statistics focused on the number of housing projects and approvals and transactions between the state, landowners and developers (Lagos State Digest of Statistics 2013). This process will need to transition into an equity-oriented relationship rather than a transactional relationship with the public.

In reviewing the surveillance data, it was clear that this data was not comprehensive and very importantly, not disaggregated to uncover inequity. Additionally, there was no long-term monitoring of governance priorities. For example, the low number of reports on crimes such as suggests underreporting. Furthermore, there is no information on the conclusion of these cases and if justice was delivered eventually. The data on emergencies was substantive, reporting on people and properties lost or saved- but it lacked information on emergency preparedness planning, training, and assessment; Lagos reports for 2013 show 13 fire incidents, 5 road/motor accidents and 12 collapsed buildings (Lagos State Government Digest of Statistics). This number is low given the population size of the metropolis. This poor and aggregated reporting was repeated across most of the state's priorities which we evaluated. For example, despite the goals for food security being laudable goals, it is not clear how these goals will be monitored or whether there is a plan to ensure they need those most in need of such social and economic support. The Bureau of Statistics collected data on jobs at the local government level, omitting information on the private sector, state government, federal government and informal sector jobs (Lagos State Government Digest of Statistics 2013). Likewise, information on the beneficiaries of skills training was also provided although there is no detail on skills imparted and individuals' employment rate post-training (Lagos State Government Digest of Statistics 2013).

Additionally, data on access to housing and identifying the social strata along which inequities are organized were missing. A previous qualitative study found that both government workers and civil society groups identified equitable access to housing as the central determinant of health in the metropolis (Mogo et al. n.d.). Civil society groups were also concerned that while there were state efforts to improve housing, these efforts



excluded the low income who could not access mortgage (Mogo et al. n.d.). This population could benefit the most from improved housing. The data reported by the Bureau of Statistics was aggregated, thus making it difficult to identify areas of deprivation and consequently to target resources. Therefore, the means to monitor, evaluate and improve these goals are unclear. This is particularly important for the most vulnerable who need these health and resilience priorities the most and have access to them the least.

Below, we recommend how to align the results with improved and equitable health outcomes.

The need for participatory and multi-level governance

Decision-making within the State could benefit from being informed by local levels of power, integrating citizens' inputs, and emphasizing processes in addition to issues. Non-participatory governance approaches act as a bottleneck that prevents African cities from having resilient services and urban infrastructure (Chirisa et al. 2016, pp. 113-127). When locals participate in policies that affect them, they advocate for their own needs. Locally-relevant measures must undergird strategic plans, especially allowing for knowledge exchange and engaging civil society stakeholders to ensure effectiveness (Chirisa et al. 2016, pp. 113-127).

To encourage stronger local agency, governments must devolve power and utilize more democratic process. In a previous qualitative study on urban health and resilience in Lagos, both government workers and civil society groups mentioned that community involvement was critical to implementation, environmental stewardship and data collection in the metropolis (Mogo et al. n.d.). In a setting such as Lagos, the informal sector plays a significant role in service provision and partnering with them is critical to environmental sustainability (Nzeadibe & Mbah 2016, pp. 279-298). Decision-making, therefore, must occur in a way that allows stronger agency at the local government level and builds partnerships with the informal sector and communities.

The need to embed equity as a core value within surveillance systems

If urban health indicators are collected, they are more likely to be used; however, this is typically not the case in African cities (Prasad et al. 2015, pp. 237-242). Social factors contribute and detract from successful urban health- therefore they should be followed



closely so as to ensure viable and effective health systems. Data collection needs to be comprehensive, spanning demand and supply-side factors. For example, the Bureau of Statistics collected data on the quantitative supply of food, but collecting demand side factors would help clarify the sufficiency of food supply in order to assess food security (Lagos State Digest of Statistics 2013). In law enforcement, while crime data was reported, even if underreported, comprehensive data on justice would allow for more effective improvement of justice in the metropolis. This entails collecting data such as the presence of inclusive spaces, civic education and trust, transparency, and adequacy of policing. The Bureau of Statistics reports on local government jobs but this data would be more useful in improving employment rates if it also reported on the private sector, state, federal, and informal sector jobs (Lagos State Digest of Statistics 2013). The state collected data on how many skills training programmes existed (Lagos State Digest of Statistics 2013), but it would be more effective at informing action if it detailed these skills relative to the skills gap in the economy and employment rates as a consequence of these training programs.

Technologies of the city in themselves will not improve the city, unless these technologies are managed using a political understanding, and a process approach that incorporates public values in addition to economic gains in resource management (Meijer & Bolivar 2015, pp. 392-408). Equity, as a value, should undergird resource management and data collection given disparities in resource distribution in African cities (Prasad et al. 2015, pp. 237-242). In a previous study, Mogo et al. found that while there were new resources such as mortgages to improve access to housing, these new solutions excluded the informal sector (n.d.). This was reiterated about governance and budgeting processes (Mogo et al. n.d.). The disadvantage is higher among slum dwellers in Nigeria compared to other subgroups (Mberu et al. 2015, pp. 422-445). Catastrophic healthcare spending among the elderly is higher in poor households (Adisa 2015). Deprivation in urban households in Ilorin, Nigeria was associated with 75.5% of the variation in the household health of the city (Raheem 2016). All of this information shows that urban health is not thriving in urban areas - if equity was a core value, it would set metropolises on a road towards stronger health and well-informed resilience.

Within Lagos' housing sector, the data collected by the Bureau of Statistics focused on the number of housing projects and approvals and transactions between the state, landowners and developers (Lagos State Digest of Statistics 2013). If this process transitioned to an equity-oriented relationship (versus a transactional relationship with the public), then the



government can lay a foundation to improve existing infrastructures that support health and wellness. This can be accomplished by collecting data on access to housing and identifying the social strata along which inequities are organized. A previous qualitative study found that both government workers and civil society groups identified equitable access to housing as the central determinant of health in the metropolis (Mogo et al. n.d.). Civil society groups were also concerned that while there were state efforts to improve housing, these efforts excluded the low income who could not access mortgage (Mogo et al. n.d.). This population could benefit the most from improved housing. The data reported by the Bureau of Statistics was aggregated, thus making it difficult to identify areas of deprivation and consequently to target resources. Variations in urban characteristics need to be taken into account when collecting urban data, by disaggregating the data. Specific groups can then be prioritized for impact, with responses fitted to context-specific needs, in alignment with best practices (Adetokunbo 2015).

We, therefore, recommend building strong surveillance systems, with equity embedded into these systems as an underlying public value. Data collection would also need to be more rigorous, as well as collecting demand and supply side information on the determinants of urban health. Data should be disaggregated in order to inform action. Finally, rather than viewing urban health as a consequence of infectious health issues, urban health should be a concurrent priority. This implies that the governing bodies view urban living contexts as sites for health interventions and as determinants of health. By improving governance, data collection and strengthening the capacity of the health sector to deal with the urban living environment, Lagos can move closer to being a healthy and resilient city, with great benefits to its residents.

Need for preventive and demand-side health investments

Health in an African city such as Lagos is related to urban living conditions (Idowu et al. 2016). Mberu et al found a 13% decline in communicable disease death, a 16% increase in non-communicable diseases, and an 11% increase in injuries among the urban poor in Nairobi (2015, pp. 422-445). In urban Nigeria, poorer households had a higher risk for catastrophic spending among the elderly (Adisa 2015). Idowu et al. reported that unhealthy lifestyles were associated with adverse neighbourhood characteristics in Lagos State (2016). Studies across Africa have found that African countries score the lowest on urban health indices with the environment being one of these domains (Stauber et al. 2016, pp.



5-73). These findings point at the urban environment, specifically as an intervention area for urban health. The Manifesto of Governor Ambode states that it will improve equipment, infrastructure and the human resource capacity of medical institutions (Ambode n.d.). In line with this goal, health sector capacity needs to be improved to intervene in the urban environment as a determinant of health. This will include monitoring and designing interventions to improve health within the urban environment rather than focusing solely on health centres. Low levels of trust of the government and low levels of awareness of the population on urban health and resilience issues called for more effective engagement of communities. This would require participatory governance between the government and people.

With such heightened investments in the processes of governance, in surveillance systems to target pockets of intra-urban inequity and deprivation, and resource allocation and capacity building, the focus of urban health can shift beyond health centres to urban living conditions. Additionally, governments can place health and resilience at the centre of development and will be ensuring that the dividends of development are indeed accruing to those who need them the most.

Limitations

Archival analyses provide detailed descriptions of issues across multiple levels of evidence; however, they are also limited by survival bias of the data (Ambode n.d.). Archival analyses omit data that is not available and this leaves open room for incompleteness and subjectivity in the data. Pre-empting this limitation, this analysis was informed by data derived from sixteen key informant interviews with civil society and civil servants working on the nexus of health, resilience and the present environment in Lagos State.

Conclusion

From the ensuing discussion, it is clear that insufficient attention was placed on the processes of governance yet these are critical for effective and equitable delivery of the determinants of health. Such poorly addressed factors include the need to emphasize, equitable processes, to incentivise cooperation within and across sectors, and to open lines of participation with citizens, especially those in the informal sector. Additionally, reports from surveillance systems were aggregated and thus unable to reveal or



adequately monitor inequities. Without such information, health and resilience cannot be delivered especially to the most marginalized.

In conclusion, therefore, we recommend a heightened focus on the processes of governance, investment in surveillance systems to target pockets of intra-urban inequity and deprivation, as well as resource allocation and capacity building in order to intricately link urban health to urban living conditions.

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Adherence to Occupational Health and Safety Standards: The Case of a South African Steel Processing Company

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Abstract

Occupational accidents bring with them serious problems, both financial and non-financial, for employees as well as organisations. The purpose of this study was to investigate adherence to health and safety standards in a selected steel processing company in South Africa. A quantitative survey approach was used in which a structured questionnaire was administered to a purposively selected sample composed of 165 employees from a steel processing company based in the Gauteng province. The collected data were analysed using the Statistical Packages for Social Sciences (SPSS version 22.0). The results of the study confirm that employees in the selected steel processing company are satisfied with the degree of adherence to health and safety standards. Employees felt that the company has in place various rewards which are offered to employees whenever they successfully follow health and safety rules. The study further revealed that the labour union in the company participates actively in health and safety issues and that its recommendations are taken seriously by the company. Finally, employees are satisfied with the workplace surroundings in areas such as ventilation, room temperature, lighting and hygiene. Conclusions drawn from the study and recommendations are discussed.

Keywords: *employee health and safety adherence, steel processing industry, costs, accidents, and injuries.*

Introduction



The steel industry is a very complex and highly risky environment for employees to working. It is usually bedevilled by accidents and injuries, in some instances resulting in death. Costs related to occupational accidents are exorbitant for employers as they affect the bottom line, damage property and lead to work stoppages, increases in medical costs, loss of income and hardships for the employee's dependants (Yakovlev & Russel, 2010). Maintaining the required level of safety adherence in such an industry is paramount in order to safeguard the lives of employees in the workplace (Omogoroye & Oke, 2007). Masia (2010) and Sendagala (2010) define adherence as the minimum amount of legal obligation and requirement that should be met to ensure the absence of accidents in the workplace. Safety adherence shapes the required or desirable behaviour in the workplace. Adherence is linked to the safety culture or climate in the organisation, which is believed to shape employee behaviour through expectations (Lingard, Blismas & Cooke, 2011). Occupational accidents such as those that led to the Chernobyl, Bhopal and Kinross catastrophes are well known to have caused severe human devastation and have changed the way occupational health and safety is viewed many workplaces (Saleh & Pendley, 2011). There are myriad factors that contribute to industrial accidents in the workplace, including employee attitude, employee age, organisational culture and management practices (Geldart, Smith, Shannon & Lohfeld, 2010). According to McSween (2003), unsecure work behaviour is referring to the result of (1) physical environment, (2) the social environment and (3) workers' experience within these. Meanwhile, the safety triangle shows relationships between the unsecured work situation and injuries that influence safety condition in the automotive industry. Safety not only focus on the bottom line workers but it also influences the top management, manager and staff to become more responsibility and accountability in their efforts to provide the safe environment.

Benefits of Occupational Safety and Health Practice

Direct Benefits	Indirect Benefits
Decrease insurance premiums	Decreased absenteeism
Decrease litigation costs	Decrease staff turnover
Decreased sick pays costs	Increase corporate image
Increased production/productivity Rates	Increased chances of winning contracts
Decreased production and materials Damage	Increased job satisfaction/morale

The purpose of this study is to examine the adherence to the health and safety act in a South African steel processing company. To date, there is little information on the effectiveness of the South African government's initiatives regarding the promotion of health and safety regulations in the steel manufacturing sector (Edwards, Davey & Armstrong, 2014). There is serious concern about health and safety in the steel processing industry in South Africa (Adebiyi & Charles – Owaba 2009). Edington and Schultz (2008) argue that the health and safety of employees are invaluable and that it is highly unethical to assign a price tag to an employee's health and safety. Non-adherence to the safety regulations continues to be a major challenge for many steel processing companies (Trethewey 2005). Internationally, it is estimated that employees experience about 250 million accidents yearly, accompanied by at least 330,000 deaths (Moller & Rothmann 2006). Curtailing occupational disease and accidents not only improves and saves employees lives but can reduce the unnecessary spending of billions of rand paid out annually by the office of the Compensation Commissioner (CC) to victims of work-related diseases and accidents (Geminiani & Smallwood 2008). Executives in the highest echelons of organisations are often detached from and have little information about, shop floor health and safety issues. They are therefore very unlikely to be fully acquainted with the health and safety needs of the employees at the shop floor level (Bosak, Coetsee & Cullinane 2013).

The remaining part of this article is organised as follows: the next section provides a theoretical review in terms of the background of occupational health and safety in South Africa, the sources of occupational accidents and the cost implications of occupational accidents; thereafter, the article discusses the research methodology, followed by the research results. The final sections of the article discuss the conclusions and recommendations.

Literature review on Occupational health and safety

Legislation



Internationally, one finds that societies have laws and regulations in place with the aim to secure health and safety of humans in their occupations. Occupational health and safety laws across nations share many similarities. They have in common that the health and safety of employees must be secured by assessing, analyzing, adjusting, and minimizing hazards and risks for injury and disease in the workplace. Modern national OHS legislation has been implemented during recent decades.

OHS management practices

To achieve a functioning systematic management of OHS, there are different practices and tools available to use. Companies set up their own routines to meet the legislative demands on their types of businesses. There are check-lists and systems available for free to handle OHS issues systematically. There are also OHS systems available for purchase. OHS management practices include, for example, regularly investigating working conditions, conducting risk assessments, monitoring sick leave, reporting incidents, following up adjustments, or having an OHS policy in place. (The Council of the European Communities, 1989) Incidents in the workplace include near misses, accidents, and work-related diseases, and should be reported and documented. If near misses are repeatedly reported from some part of the workplace, then the company needs to make adjustments to achieve a lasting improvement. If an accident occurs, the company must make necessary adjustments to prevent a reoccurrence. (The Council of the European Communities, 1989)

Benefits of OHS management

The motivation for OHS management is that by managing hazards and minimizing risks a safe workplace ought to be achieved for everyone working there. It is a moral sentiment that nobody should have to be injured in an accident, suffer from disease, or become chronically ill or depressed from labouring in a workplace. The workplace should be organized in such a manner as to achieve a sound physical as well as psychosocial environment. Managers' commitment and prioritization of safety are essential for the OHS performance in an organization (Gillen, Kools, McCall, Sum and Moulden, 2004; Mattson, 2015).

Another positive dimension of being committed to OHS, less often considered, is employer branding, that companies are more attractive to potential employees because of a reputation for prioritizing safety, health, well-being, and benefits for their staff (Åteg,



Andersson and Rosén, 2009). Often, for a company to want to prioritize OHS management, there need to be some noticeable effects of the efforts taken (Eklund, Lindbeck, Riquelme and Törnström, 2007: 16). The perceived advantages are crucial for companies' decision-making about how to set the priorities (Rosén, Hedlund, Andersson, Antonsson, Bornberger-Dankvardt and Klusell, 2007:31). But even if companies are motivated to improve OHS management, they often do not associate it with better business performance (Dul and Neumann, 2009). It is generally difficult to estimate the benefits of investing in OHS, and there are several calculation tools to choose from (Rose, Orrenius and Neumann, 2013). Reduced sick-leave costs often come to mind as a direct beneficial effect, but frequently, there are productivity and quality improvements to consider as well (Dul and Neumann, 2009; Abrahamsson; 2000). Estimations of return on prevention (ROP) done by the International Social Security Association (2011) indicate an average cost-benefit ratio of 1:2.2.

Background of the Occupational Health and Safety Act in South Africa

In the South African context, employees enjoy the benefit of the Constitution. The Constitution stipulates that employees have the right to discharge their duties in a safe working environment that is not detrimental to their health and safety. The old Machinery and Occupational Safety Act no: 85 of 1983 (MOSA) was replaced by the Occupational Health and Safety Act (OHSA) no: 85 of 1993 on 1st January 1994 (Du Plessis & Fouche, 2006). The prime focus of the OHSA is to protect the health and safety of workers or any other persons from harm in connection with the use of the plant and machinery (Kopel, 2009; Nel, van Dyk, Haasbroek, Shultz, Sono & Werner, 2009). For the purpose of this research "*an employee*" is defined as any person who agrees to enter into, or who works under, a contract of service or apprenticeship or a learnership programme with an employer (Venter & Levy, 2009 Strydom, le Roux, Landman, Christianson, Dupper, Myburgh, Garbers, Barker, Basson, Esselaar & Dekker, 2006).

Sources of Occupational Accidents

Organisational culture

Organisational culture is defined as a system of well-shared beliefs and values that influence employees' behaviour in an organisation (Dubrin 2002); Macey, Schneider, Barbera & Young 2009:43). For the purpose of this study, safety culture is described as a



brief summary of the beliefs and perceptions of employees about health and safety in the workplace which influence employees' behaviour (Fernandez-Muniz, Montes-Peon, & Vazquez-Ordas 2011:743). Organisational aspects such as societal, environmental, and historical influences have an impact on adherence to the health and safety culture in the workplace. Recently, there has been an interest in the field of occupational health and safety with the main focus being health and safety. This interest has grown in the wake of high-profile industrial accidents. An example of such well-documented occupational accidents includes the Clapham Junction rail disaster in the United Kingdom (UK), the Bhopal disaster in India and the Russian Chernobyl nuclear plant accident (Parbotech & Kapp 2008). It is widely believed that employees and employers can avert occupational accidents by maintaining a positive safety culture. A safety culture relates to the nucleus of assumptions and beliefs that organisational members are familiar with as regards health and safety. This is usually expressed through organisational beliefs, behavioural norms, values of supervisors and managers and is spelt out in the safety policies, rules and procedures that the organisation espouses (Clarke 2003).

Employee attitudes

Attitude is defined as the evaluation of people, ideas, issues, situations and objects (Lamberton & Minor 2010). According to Bergh, Theron, Geldenhuys, Ungerer, Albertyn, Roythorne-Jacobs, and Cilliers (2003), attitude encompasses three main components: behavioural, cognitive, and emotional. Employee attitudes to health and safety are reflected in the behavioural component, which is fundamental. Attitude is one factor that determines and influences the level of employee adherence to workplace safety standards (Hsiang Huang, Chen, DeArmond, Cigularov & Chen, 2007). Out of a population of 6.9 billion people, half spend a third of their lives working in various organisations; it is these efforts by employees that keep the economy thriving (Shalini, 2009). According to the International Labour Organisation, it is estimated that 2.3 million industrial accidents arise out of employment. This figure is accompanied by 321 000 mortalities that occur annually (Cheng, Leu, Cheng, Wu, Lin, 2011; Hamalainen, Saarela & Takala, 2009). The influence of attitude cannot be separated from workplace safety (Shaluf & Ahamadun 2006). Unsafe acts include the failure to comply with health and safety regulations; an example would be an employee's intentional failure to wear Personal Protective Equipment (PPE). Employees that have positive attitudes are more likely to be satisfied with their jobs and to experience lower levels of occupational accidents, turnover and absenteeism in the workplace

(Robbins 2005). It is therefore advisable for employers to start paying substantial attention to employees' attitudes as it has been established that attitude significantly influences employee safety behaviour.

Workplace stress

The term stress is defined as the physiological and psychological response made by an individual to environmental events called stressors (Werner, Bagraim, Cunningham, Pieterse-Landman, Potgieter & Viedge 2011; Mashego 2014). Businesses are likely to experience increased occupational accidents when employees experience high levels of stress. When an employee's concentration level is compromised, accidents are likely to occur frequently in an organisation. This can result in overwhelming workplace injuries and an increase in the death toll in the workplace. It is therefore imperative for organisations to devise coping mechanisms such as Employees' Assistance Programmes (EAPs) to assist employees to deal with stress in the workplace. (Hayes, O'Brien-Pallas, Duffield, Shamian, Buchan, Hughes, Spence Lachinger & North 2011) A massive challenge facing employees in the steel manufacturing sector is meeting daily production targets and job demands. Besides having to meet these daily deadlines, further emotional and mental stress faces employees in organisations. Employees are therefore expected to strike a balance between their relationships outside work while also fulfilling their duties as employees (Moorhead & Griffin 1998). Meeting productivity demands can be gruelling and can lead to employees being prone to increased stress levels (Jacobs, Mostert & Pienaar 2008). Stress in the workplace is one of the invisible health problems facing many employees in many steel manufacturing companies. There is no doubt that the major influence on job performance, productivity, absenteeism and high labour turnover is high-stress levels. Stress has been proven to be the main source of frustration and tension in the workplace. This arises as a result of various interconnected factors such as employees' behaviour and organisational and environmental factors (Mullins 2006). Uncontrollable workload and lack of safety mechanisms have been shown to be contributing factors leading to high levels of stress which, in turn, impacts severely on employees' levels of adherence. To ameliorate this phenomenon it is imperative to manage the workplace load of employees (Grobler, Warnich, Carrell, Elbert, & Hartfield, 2011).

Influence of working experience and age on safety adherence

A study by Schultz and Schultz (2006) established a direct link between safety adherence and the employee's age. Underlying forces such as physical health and the employee's



attitude directly interact with the employee's age. The study established that experienced and older workers have greater knowledge of their job description and greater job knowledge as a result of experience acquired over the years. It was also found that eye coordination, vision and hearing deteriorate as employees become old. When it comes to personal safety, older employees demonstrated a higher degree of caution as compared with younger employees, who are more susceptible to occupational accidents and injuries (Chin, Deluca, Poth, Chadwick, Hutchinson & Munby 2010; Salminen 2004).

Cost implications of occupational accidents

The economic costs of accidents and illnesses can be divided into two categories, namely direct costs and indirect costs, which will be discussed in detail. (Waehrer, Dong, Miller, Haile & Men, 2007) Some of the direct costs include payments to rehabilitation centres, hospitalisation, nursing home care, damage to property, and the administrative costs of medical claims and burial costs (Jallon, Imbeau, Marcellins-Warin, 2011). Indirect costs include loss of salaries, loss of skills, equipment damage and loss of productivity by the employer (Ural & Demirkol 2008; Gavius, Mizrahi, Shani & Minchuk, 2009). Other indirect costs include low morale among colleagues and production disruption when an accident occurs, the recruiting and training of the new incumbent to replace an injured or sick employee, investigation costs and loss of experienced and qualified personnel (Pillay, 2014). In South Africa, the picture is depressing when it comes to levels of accidents due to poor levels of adherence to health and safety regulations in the workplace. Occupational accidents have a negative bearing on the state as well as employers, having serious financial ramifications for both employer and State. Employers' wage bills increase because the employer spends additional funds on insurance pay-outs, hospital stays and replacement of injured or killed employees (Mearns, Hope, Ford & Tetric, 2009). In South Africa, the State spends over 50 billion rand on the compensation fund to compensate the injured and the families of the deceased (Kinoti 2010). Occupational accidents are distressing to employees and their immediate families. Therefore, occupational accidents are expensive and have destructive implications for an organisation's reputation

Research methodology

Research design and sample



The research employed a quantitative technique in which a structured questionnaire containing closed-ended questions was used to collect data from the selected respondents. The final sample in this study was made up of 165 production employees employed by a selected steel processing company based in Southern Gauteng. A non-probability purposive sampling method was used to select the respondents. Only individuals who had been employed by the company for at least two years were selected. An up-to-date list of these participants was obtained from the Human Resources Department. Data were collected between January and February 2015, after permission to conduct the research had been granted by management at the company. Initially, 300 questionnaires were distributed and 209 were returned. After screening the questionnaires, 44 questionnaires were discarded because they were unusable, leaving 165 questionnaires which were used in the final data analysis.

Data analysis

For the purpose of this inquiry, the Statistical Package for the Social Sciences (SPSS version 22.0) was used to analyse the data. Descriptive statistics were used to conduct analysis of the demographic profile of the respondents and mean score analysis was conducted to examine the extent of adherence to the occupational health and safety act within the steel processing industry in South Africa.

Research results

Biographical information of respondents

Section A of the measuring instrument elicited biographical information, which included gender, race, age, work experience and current position. The sample size of n=165 employees was selected for the research. The demographic details of respondents are reported in Table 1.

Table 1: Profile of participants

Demographic profile	Classifications	n	%
Gender	Males	116	70
	Females	49	30
Age	Less than 28 years	73	44
	29-40 years	67	41
	41-50 years	21	13
	Over 51years	4	2



Race	Black	126	76
	White	35	21
	Mixed race	1	0.6
	Indian	3	2
Work experience	Between 2 and 4 years	62	38
	5-10 years	54	33
	10-15 years	22	13
	Over 15 years	27	16
Current position	Apprentice	35	21
	Artisan	70	42
	Supervisor	23	14
	Engineer	37	23

Section B of the questionnaire sought biographical information in terms of gender, race, age group, work experience, occupational level and type of employment contract. In terms of gender representation, 79% of the respondents were male. With regard to race, 76% of the respondents were blacks, followed by 21% who were whites. At least 44% of the respondents were aged between 18 and 28 years of age, followed 41% who were aged between 29-40 years. In terms of work experience, 37% of the respondents had less than four years of work experience, whilst 33% had between five and ten years' work experience. Regarding their current positions in the company, 42% were employed as artisans, 21% were apprentices, 14% were supervisors and 23% were engineers.

Mean Score Analysis

To analyse the views of respondents towards adherence to the OHS Act, mean scores of four dimensions were analysed: safety adherence, rewards for maintaining health and safety standards, labour union involvement and workplace surroundings. Likert-type scales were used in the study and were anchored by 1= strongly disagree and 5 = strongly agree. A higher mean score closer to the 5 value denotes agreement with the question/s while a lower mean score closer to 1 denotes disagreement with the question.

Perceptions towards Employee Safety Adherence

The mean scores and standard deviations (SD) for employee safety adherence are shown in Table 2.

Table 2: Mean analysis for employee safety adherence

Items	Description of items	N	Min	Max	Mean	SD
B1	Safety procedures and instructions are followed.	165	1	5	4.17	0.816
B2	I usually wear my Personal Protective Equipment (safety goggles, safety boots, helmets, and gloves) that are provided by the employer.	165	1	5	4.36	0.788
B3	I believe that safety adherence leads to good business performance.	165	1	5	4.32	0.771
B4	Safety culture is promoted from managers to employees.	165	1	5	4.21	0.832

Scale denotation: Likert scale: 1= Strongly disagree to 5= Strongly agree

Mean scores for the employee safety adherence scale ranged from $\bar{x} = 4.17$ to $\bar{x} = 4.36$. Items such as the extent to which safety procedures and instructions are followed ($\bar{x}=4.17$; $SD=0.816$), the correct use of protective clothing($\bar{x}=4.36$; $SD=0.788$), the belief that safety adherence leads to good business performance ($\bar{x}=4.32$; $SD=0.771$), and the promotion of safety culture by managers ($\bar{x} =4.21$; $SD=0.832$) indicate that the majority of the employees were aware that it was important to adhere to safety standards in the workplace.

Perceptions towards the influence of rewards for health and safety

The mean scores and standard deviations for perception of employees towards rewards for health and safety are shown in Table 3.

Table3: Mean analysis for the influence of rewards on health and safety

Items	Description of items	N	Min	Max	Mean	SD
C1	Employees must be rewarded for achieving excellent safety records.	165	1	5	4.26	0.987
C2	Rewards lessen occupational accidents.	165	1	5	4.08	1.009



C3	In this organisation, employees are rewarded for achieving excellent safety records.	165	1	5	4.19	0.891
Scale denotation: Likert scale: 1= Strongly disagree to 5= Strongly agree						

The mean scores for the influence of rewards on health and safety scale ranged from \bar{x} =4.08 to \bar{x} =4.26. Item C1, indicating that employees agreed they felt that they should be rewarded whenever they experienced a low rate of accidents, scored the highest mean (\bar{x} =4.26; SD=0.897). In item C2 (\bar{x} =4.08; SD=1.009), employees agreed that they felt that rewards led to reduced occupational accidents. In Item C3 (\bar{x} =4.19; SD=0.891), employees concurred that their organisation rewarded employees for achieving excellent safety records. The results of this study imply that the efforts of employees to reduce accidents in the workplace should be acknowledged and rewarded. For example, bonuses could be awarded when specific behaviours and achievements are attained in the workplace as they serve as a motivator for safety adherence (Deeprise, 2007; Jensen, McMullen & Stark, 2007).

Perceptions towards the role of a labour union in health and safety

The mean scores and standard deviations for perception of employees towards the role of a labour union in health and safety are shown in Table 4.

Table 4: Means analysis of the role of a labour union in health and safety

Items	Description of items	N	Min	Max	Mean	SD
D1	My labour union is involved in health and safety matters.	165	1	5	4.04	1.050
D2	My labour union is proactive in health and safety meetings with the employer.	165	1	5	3.39	1.019
D3	Health and safety recommendations by the labour	165	1	5	4.01	0.913

	union are taken seriously by the employer.					
Scale denotation: Likert scale: 1= Strongly disagree to 5= Strongly agree						

There were three items measuring the role of the labour union in health and safety issues. The first item scored a mean value of $\bar{x}=4.04$; $SD=1.050$, thereby indicating that the labour union was actively involved in health and safety matters. According to the results of the second item ($\bar{x}=3.39$; $SD=1.019$), the labour union was proactively involved in health and safety meetings. Item D3 ($\bar{x}=4.01$; $SD=0.913$) showed that recommendations from the labour union regarding health and safety issues were taken seriously by the organisation. These results indicate that employees within the company firmly believed that trade unions perform a meaningful role in health and safety matters affecting employees in the workplace. Representatives of the labour union were often invited to attend safety meetings by the management, which depicts an approach by trade unions that is considerably more proactive than reactive. A proactive involvement is one in which the labour union is involved in health and safety matters before any crisis occurs, whereas a reactive approach is one in which the labour union gets involved only after a crisis (Flynn & Shaw 2008). Thus, the labour union movement in the organisation is vibrant and dedicated to addressing health and safety matters.

Perceptions towards the state of the workplace surroundings

The mean scores and standard deviations for perceptions of employees towards the workplace surroundings are shown in Table 5.

Table 5: Means analysis of workplace surroundings

Items	Description of items	N	Min	Max	Mean	Std. deviation
E1	There is enough ventilation at my workstation.	165	1	5	4.19	0.860
E2	I am comfortable with the room temperature.	165	1	5	4.05	1.011



E3	I am satisfied with the level of hygiene at my workplace.	165	1	5	3.84	1.118
E4	There is sufficient lighting at my workplace.	165	1	5	4.12	1.021
K5	Chemical substances are clearly marked.	165	1	5	4.24	0.828

Scale denotation: Likert scale: 1= Strongly disagree to 5= Strongly agree

As indicated in Table 19, the mean scores ranged from $\bar{x}=3.84$ to $\bar{x}=4.24$, which shows that the majority of respondents agreed that the workplace surroundings in which they operated met the required health and safety standards. Item E1 ($\bar{x}=4.19$; $SD=0.860$) indicates that employees felt that there was sufficient ventilation at their workstations. Item E2 ($\bar{x}=4.05$; $SD=1.011$) reveals that employees felt comfortable with the temperatures in their workplace environment, whilst item E3 ($\bar{x}=3.84$; $SD=1.118$) indicates satisfaction with the hygienic standards in the workplace. Item E4 ($\bar{x}=4.12$; $SD=1.021$) shows satisfaction with lighting and item E5 ($\bar{x}=4.24$; $SD=0,828$) indicates agreement with the statement that chemical substances were clearly marked. These conditions prevent the spread of hazardous chemicals and the spreading of diseases within the workplace and indicate that appropriate measures are applied to prevent occupational accidents.

Reliability and validity

To determine the content validity of the instrument, 30 questionnaires were piloted on a convenience sample made up of part-time students who were studying for a Diploma in Safety Management at a university of technology which is based in Gauteng Province. Apart from their knowledge of safety management, the part-time students were also employed in the steel processing industry, and so they had some knowledge that was relevant to this study. To determine the reliability of the measurement scales, the Cronbach alpha coefficient was used. Feedback by the pilot sample led to the deletion of some scale items, which increased the reliability of the overall scale to 0,883. This value surpassed the recommended acceptable reliability level of 0.7 (Marre et al., 2010). These results are reported in Table 6.



Table 6: Scale Reliabilities

Section	Scale	Number of items Before Pilot Study	Number of items After Scale Purification	Reliability A
B	Employee safety adherence	6	4	0.868
C	The influence of rewards on health and safety	5	3	0.933
D	Role of labour unions in health and safety issues	5	3	0.846
E	Workplace surroundings	7	5	0.887
Overall scale		23	15	0.883

Conclusions and recommendations

The purpose of this study was to investigate adherence to health and safety standards in a selected steel processing company in South Africa. The study confirms that employees in the selected steel processing company are satisfied with the degree of adherence to health and safety standards. Employees felt that the company has in place various rewards which are offered to employees whenever they successfully follow health and safety rules. The study further revealed that the labour union in the company participates actively in health and safety meetings and that its recommendations are taken seriously by the company. Finally, employees are satisfied with the workplace surroundings in areas such as ventilation, room temperature, lighting and hygiene. The study recommends that there be periodic retraining of employees on the significance of the health and safety standards in



the company. Employees' awareness of the importance of hazard identification and risk assessment in the workplace should be enhanced. Employees should be monitored to ensure the correct usage of personal protective equipment. Health and safety meetings should be conducted on a regular basis and supervisors should conduct frequent inspections of various plants or departments.

The results of the study were limited to one organisation which was based in one South African province. This makes it necessary to exercise caution when generalising the results of this study to other companies and environments. It is therefore advisable that the study is extended to other steel processing companies in other regions of South Africa. This may provide a platform for comparative studies based on geographic location.

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Guide for Authors

The *African Journal of Governance and Development* is a multidisciplinary publication that seeks to bring academic researchers from beyond territorial and regional boundaries to share scientific knowledge focused at the intersection of governance and development. The journal aims at providing space for sharing and debating issues of social, political and economic development not only for academic consumption, but also for policy consideration. The journal is published on a biannual basis and is peer-reviewed.

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- All papers should have the name/s of the contributor/s, institutional affiliation, country and a short biography referring to the current and/or previous position/occupation of the contributor.
- Contributors must employ the Harvard system of citation (see the guide on the adjacent page). Where extended comments are necessary, they can appear in footnotes.
- Submissions must be in British English only.
- Manuscripts should be sent to: the managing editors:
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Referencing

Notes: Please ‘copy’ the title of a book/an article/whatever (as far as the spelling of words such as ‘behaviour’/‘behavioural’ are concerned (and this also goes for direct quotations) exactly as in the original.

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- If within the same paragraph, reference is made to **the same author(s) for a second and further time(s)**, the year of publication is omitted in the second and further references – as long as it does not lead to confusion.

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Basic in-text referencing		
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In-text reference to more than one source	More recent studies (Bartlett, 1992; James, 1998) show that... The researchers (Bartlett, 1992, p. 54; Brown, 1876, p. 45; James, 1998, p. 45) refer to...	In-text reference to more than one author should be ordered alphabetically.
General forms for reference lists		
Non-periodical	Author, A. A. (1994). <i>Title of work.</i> Location: Publisher.	Non-periodicals include items published separately: books, reports, brochures,



		certain monographs, manuals, and audiovisual media.
Part of a Nonperiodical	Author, A.A., & Author, B.B. (1994). Title of chapter. In A. Editor, B. Editor, & C. Editor (Eds.), <i>Title of book</i> (pp. xxx-xxxx). Location: Publisher.	
Periodical	Author, A.A., Author, B. B., & Author, C.C. (1994). Title of article. <i>Title of Periodical</i> , xx, xxx-xxxx.	Periodicals include items published on a regular basis: journals, magazines, scholarly newsletters, etc.
Online periodical	Author, A.A., Author, B.B., & Author, C.C. (2000). Title of article. <i>Title of Periodical</i> , xx, xxx-xxxx. Retrieved Month day, year, from web address	
Online document	Author, A.A. (2000). <i>Title of work</i> . Retrieved Month day, year, from web address	
Referencing other sources		
A book with only one author	Rose, L. (1977). <i>Crime and punishment</i> . London: Batsford.	
A book by two authors	Gordon, E.W., & Rourke, A. (1966). <i>Compensatory education for the disadvantaged</i> . New York: College Entrance Examination Board. In order to avoid possible communication problems all procedures should be explained to the patient (Gardner & Sheldon, 1967, p. 40)... Gardner and Sheldon (1967, p. 40)	When quoting a book with two authors in the text, use the word 'and' between the names; if the reference is in parentheses, use '&' examine the problem...

Referencing other sources (continued)

A book by three or more authors

Meyer, B.S., Anderson, D.P., Bohning, R.H., & Fratanna, D.G., Jr. (1973). *Introduction to plant physiology*. New York: Van Nostrand.
...the traditionalist personality (Riesman, Denney & Glazer, 1968, p. 40) restrains him from doing...
...due to his "other-directness" modern Western man in a sense is at home everywhere and yet nowhere (Riesman et al., 1968, p. 40).

In referring to a work by three, four or five authors all the relevant names have to be furnished in the **first** reference to the work. In **later** references to this work only the first author's name is stated, and the abbreviation '*et al.*' is used. In referring to a work by six or more authors, cite only the surname of the first author followed by *et al.* (italicised and with a full stop after "al"), and the year for the first and subsequent citations. **In the reference list, provide the initials and surnames of the first six authors, and shorten any remaining authors to et al.**



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A book with (an) editor(s)	<p>Driver, E., & Broisen, A. (Eds.). (1989). <i>Child sexual abuse</i>. Basingstoke, UK: MacMillan Education Ltd.</p> <p>Strunk, W. (Ed.). (1976). <i>Adult learning</i>. New York: MacMillan.</p>	
A chapter in a book (not edited)	<p>Capra, F. (1983). The systems view of life. In <i>The turning point: science, society and the rising culture</i> (pp. 376-399). London: Fontana Press</p>	
Part/chapter of an edited book	<p>Hartley, J.T., Harker, J.O., & Walsh, D.A. (1980). Contemporary issues and new directions in adult development of learning and memory. In L.W. Poon (Ed.), <i>Aging in the 1980's: Psychological issues</i>, (pp. 239-252). Washington: American Psychological Association.</p> <p>Shirom, A. (1989). Burnout in work organisations. In C. L. Cooper & I.T. Robertson (Eds.), <i>International review of Industrial and Organizational Psychology</i>, Vol. IV (pp. 25-49). New York: Wiley.</p>	



Anonymous work	<p>A recent article (Anonymous, 1993) stated that... In the case of articles in newspapers or magazines where no author is named, the title is used instead of the author.</p> <p>A recent article (War over, 1991) stated that...</p> <p>Anonymous. (1993, 17 February). Best practices. <i>The Star</i>, p. 10. War over. (1991, 7 January). <i>The Star</i>, p. 1.</p>	When a work's author is designated as "Anonymous", cite in text the word 'Anonymous'.
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Referencing other sources (continued)

A work with a foreign title	Spyridakis, A. (1987). <i>E historia tis Helladas</i> [A history of Greece]. Athens: Therios ita Iona.	
Translated works	Luria, A.R. (1968). <i>The mind of a mnemonist: A little book about a vast memory</i> . (L. Solotaroff, Trans.). New York: Basic Books. (Original work published 1967).	In text, cite the original publication date and the date of the translation.

	A recent study (Luria, 1967/1968).	
Second, further or revised editions	<p>Dyson, G.G.H. (1977). <i>The mechanics of athletics</i>. (7th edn.). New York: Homes and Meier.</p> <p>Cohen, J. (1977). <i>Statistical power analysis for the behavioral sciences</i> (Rev. edn.). New York: Academic Press.</p>	

Date of publication unknown	Wolverton, H. (n.d.). <i>The geological structure of the Black Hills</i> . Wilmington: Prairie Press.	
Dictionaries	<p><i>The concise Macquarie dictionary</i>. (1982). New South Wales: Lane Cove.</p> <p>Nguyen, D.H. (1966). <i>Vietnamese-English dictionary</i>. Rutland Vermont: Charles Tuttle Company.</p> <p>Sadie, S. (Ed.). (1980). <i>The new Grove dictionary of music and musicians</i> (6th edn, Vols. 1-20). London: MacMillan.</p>	
Encyclopedia	Bergmann, P.G. (1993). Relativity. In <i>The new Encyclopaedia Britannica</i> (Vol. 26, pp. 501-508). Chicago: Encyclopaedia Britannica.	If an entry has no byline, place the title in the author position.



<p>Personal communication</p>	<p>According to T.K. Lutes (personal communication, April 18, 2001)...</p>	<p>Personal communications may be letters, memos, some electronic communication (e. g., email or messages from non-archived discussion groups or electronic bulletin boards), personal interviews, telephone conversations, and the like. Because they do not provide recoverable data, personal communications are not included in the reference list. Cite personal communications in text only. Give the initials as well as the surname of the communicator, and provide as exact a date as possible.</p>
<p>Unpublished manuscript submitted for publication</p>	<p>Jordan, B. (1989). <i>Psychology of adolescent parents</i>. Manuscript submitted for publication.</p>	
<p>Unpublished manuscript not submitted for publication</p>	<p>Ryder, M. (1987). <i>Wonder woman: An Amazon legacy</i>. Unpublished manuscript.</p>	



Newspaper article	Lamb, J. (1970, 20 October). The perfect plants for lazy gardeners. <i>Weekend Australian</i> , p. 3.	
Periodical article	Phillips, E. (1985). The Australian scene. <i>Australian Journal of Ecology</i> , 3(2), 25-29.	If a journal or newsletter does not use volume numbers, include the month, season, or other designation with the year, for example (1994, April). Only indicate the issue number after the volume number if each issue begins on page 1.
Journal article in press	Phillips, E. (in press). The Australian scene. <i>Australian Journal of Ecology</i> . In text: Phillips (in press) or (Phillips, in press)	
Abstract	Phillips, E. (1985). The Australian scene [Abstract]. <i>Australian Journal of Ecology</i> , 3(2), 25-29.	

Referencing other sources (continued)

Non-English journal article	Ising, M. (2000). Intensitätsabhängigkeit evozierter Potenzial im EEG: Sind impulsive Personen Augmenter oder Reducer? [Intensity dependence in event related EEG potentials: Are impulsive individuals augmenters or reducers?]. <i>Zeitschrift für Differentielle und Diagnostische Psychologie</i> , 21, 208-217.	Give the original title, as well as an English translation in brackets.
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Published dissertation or thesis	Bevins, G.D. (1987). <i>Theory and practice at an Australian university</i> . Doctoral dissertation. Montreal: McGill University.	
Unpublished dissertation or thesis	Little, P. (1965). <i>Helplessness, depression and mood in end stage renal disease</i> . Unpublished master's thesis, Wits University, Johannesburg, South Africa. Or: Unpublished doctoral dissertation...	
Dissertation abstract	Ross. D.F. (1990). Unconscious transference and mistaken identity: When a witness misidentifies a familiar but innocent person from a lineup (Doctoral dissertation, Cornell University, 1990). <i>Dissertation Abstracts International</i> , 51, 417.	



<p>Government publications</p>	<p>According to The Bill of Rights (1996)... Education is in the process of transformation (Department of Education, 1995)...</p> <p>The Bill of Rights of the Constitution of the Republic of South African. (1996). <i>Government Gazette</i>. (No. 17678). Department of Education. (1995). White Paper on Education. <i>Government Gazette</i>. (Vol. 375, No. 45621).</p> <p>Commission on Civil Rights. (1967). <i>Racial isolation in the public schools</i>. Washington: United States Government Printing Office. Republic of South Africa. (1997). Basic Conditions of Employment Act, No. 75 of 1997. Pretoria: Government Printers.</p>	<p>When referring to a government publication, the date is sufficient for in text referencing.</p> <p>Provide all numbers, sections, chapters or volume numbers that is available, in brackets.</p>
<p>Unpublished raw data, untitled</p>	<p>Bordi, F., & LeDoux, J.E. (1993). [Auditory response latencies in rat auditory cortex]. Unpublished raw data.</p>	<p>Use brackets to indicate that the material is a description of the content, not a title.</p>
<p>Booklet, pamphlet or leaflet</p>	<p>South African College of Advanced Education. (1976). <i>Referencing: the footnote and Harvard system</i> [Brochure]. Johannesburg: Wits Technikon.</p> <p>Research and Training Center in Independent Living. (1993). <i>Guidelines for reporting and writing about people with disabilities</i> (4th edn.). [Brochure]. Lawrence, K.S.: Author.</p>	



Study guide	Speedy, C. (1999). <i>Study Guide: Electrical Engineering 1</i> . America: South American College of Engineering.	
Conference proceedings, no author or title	International Microcomputer Conference. (1984). <i>Conference proceedings held at the Western Australian Institute of Technology</i> , Perth, 22-24 May 1984. Perth: Western Australian Institute of technology.	
Conference proceedings, with author	Field, G. (2001). Rethinking reference rethought. In <i>Revelling in Reference: Reference and Information Services Section Symposium, 12-14 October 2001</i> (pp. 59-64). Melbourne, Victoria, Australia: Australian Library and Information Association.	
Unpublished paper presented at a meeting	Lanktree, C., & Briere, J. (1991, January). <i>Early data on the Trauma Symptom Checklist for Children (TSC-C)</i> . Paper presented at the meeting of the American Professional Society on the Abuse of Children, San Diego, CA.	



Referencing other sources (continued)

Publication of limited circulation	Klombers, N. (Ed.). (1993, Spring). <i>ADAA Reporter</i> . (Available from the Anxiety Disorders Association of America, 6000 Executive Boulevard, Suite 513, Rockville, MD20852).	For a publication of limited circulation, give in parentheses immediately after the title a name and address from which the publication can be obtained.
Review	Schatz, B.R. (2000). Learning by text or context? [Review of the book <i>The social life of information</i>]. <i>Science</i> , 290, 1304. Kraus, S.J. (1992). Visions of psychology: A videotext of classic studies [Review of the motion picture <i>Discovering Psychology</i>]. <i>Contemporary Psychology</i> , 37, 1146-1147.	
Electronic sources		
In-text reference where the author of the electronic source is known	The project website was created using <i>Aldus Pagemaker version 3</i> (1987-1988)... Several films (e.g. Bertolucci, 1988) have used this technique... Azar and Martin (1999) found that...	Simply use whatever you used as author in the reference, as well as the year of publication.



<p>In-text reference to a website</p>	<p>Rainbow MOO is a virtual space designed especially for teachers and their elementaryschool students (http://it.uwp.edu/rainbow).</p> <p>Jones, 2000: ¶15)</p> <p>Jones, 2000: Conclusion, para. 7)</p>	<p>To cite an entire website (but not a specific document on the site), simply give the site's URL in the text.</p> <p>When a specific part of an electronic source has to be quoted and no page number can be found, use the paragraph number if</p>
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		<p>available, preceded by the ¶ symbol or the abbreviation para. If these are absent, cite the heading and the number of the paragraph following it.</p>
<p>Internet site with author</p>	<p>Holmes, A. (1998). <i>Greenpeace wins media war</i>. Retrieved November 25, 1998, from http://www.independent.co.uk/international/green25.htm</p>	
<p>Internet document without author</p>	<p>GVU's 8th WWW user survey. (n.d.). Retrieved August 8, 2000, from http://www.cc.gatech.edu/gvu/user_surveys/survey-1997-10/</p>	



Article from an online periodical with DOI assigned	Author, A.A., & Author, B.B. (Date of publication). Title of article. <i>Title of Journal</i> , <i>volume number</i> (issue number). doi: 0000000/000000000000	
Personal electronic communication (email)	According to T.K. Lutes (personal communication, April 18, 2001)...	Because personal email do not provide recoverable data, they (like other personal communications) are not included in the reference list. Cite personal communications in text only. Give the initials as well as the surname of the communicator, and provide as exact a date as possible.
Article in an Internet-only journal	Fredrickson, B.L. (2000, March 7). Cultivating positive emotions to optimise health and well-being. <i>Prevention & Treatment</i> , 3, Article 0001a. Retrieved November 20, 2000, from http://journals.apa.org/prevention/volume3/pre0030001a.html	



Electronic sources

Electronic copy of a journal article retrieved from database	Borman, W.C. (1993). Role of early supervisory experience in supervisor performance. <i>Journal of Applied Psychology</i> , 78, 443-449. Retrieved October 23, 2000, from PsycARTICLES database.	
Internet articles based on a print source	VandenBos, G., Knapp, S., & Doe, J. (2001). Role of reference elements in the selection of resources by psychology undergraduates [Electronic version]. <i>Journal of Bibliographic Research</i> , 5, 117-123.	If you have reason to believe that the article might be subject to change, you should add the date you retrieved the document, and the URL



<p>Newsgroups, online forums, electronic mailing lists</p>	<p>FORMAT: Author. (Year, Day Month). Subject of message. Message posted to Name mailing list, archived at URL Brack, Ernie (1995, 2 May). Re: Computing short courses. Message posted to LisLink mailing list, archived at http:// archive.lislink.com Jensen, L.R. (1995, 12 December). Recommendation of student radio/tv in English. Message posted to IASTAR mailing list, archived at http://nrg.dtu.dk Brett, P. (1999, June 6). Experiments proving the collective unconscious [Msg 1]. Message posted to news://alt.psychology.jung lrm583@aol.com (1996, May 26). Thinking of adoption. Message posted to news://alt.adoption</p>	<p>If you cannot determine the author's name or screen name, then use the author's email address as the main entry. When deciding where in your Reference List to insert such a source, treat the first letter of the email address as though it were capitalised. If the message is not retrievable from an archive, it should not be included in the reference list. It can be cited as a personal communication.</p>
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Paper presented at a virtual conference	Tan, G., & Lewandowsky, S. (1996). <i>A comparison of operator trust in humans versus machines</i> . Paper presented at the CybErg 96 virtual conference. Retrieved May 16, 2000, from http://www.curtin.edu.au/conference/cyberg/centre/outline.cgi/frame?dir=tan	
Abstract	Isaac, J. D., Sansone, C., & Smith, J.L. (1999, May). Other people as a source of interest in an activity. <i>Journal of Experimental Social Psychology</i> , 35, 239-265. Abstract retrieved June 7, 1999, from IDEAL database: http://www.europe.idealibrary.com	
Article in an electronic magazine (ezine)	Adler, J. (1999, May 17). Ghost of Everest. <i>Newsweek</i> . Retrieved May 19, 1999.	
Newspaper article	Azar, B., & Martin, S. (1999, October). APA's Council of Representatives endorses new standards for testing, highschool psychology. <i>APA Monitor</i> . Retrieved October 7, 1999, from http://www.apa.org/monitor/oct99/in1.html	
Review	Parfit, M. (1997, December 7). Breathless [Review of the book <i>The climb: Tragic ambitions on Everest</i>]. <i>New York Times on the Web</i> . Retrieved October 7, 1999, from http://search.nytimes.com/books/97/12/07/reviews/971207.07parfitt.html	
Letter to the editor	Gray, J. (1999, May 7). Pesticides linger in land and air—and in our bodies [Letter to the editor]. <i>Lexington Herald-Leader</i> . Retrieved October 7, 1999, from http://www.kentuckyconnect.com/heraldleader/news/050799/lettersdocs/507letters.htm	



Government publication	Bush, G. (1989, April 12). Principles of ethical conduct for government officers and employees Exec. Order No. 12674. Pt. 1. Retrieved November 18, 1997, from http://www.usoge.gov/exorders/eo12674.html	
CD-ROM	Hawking, S. (1994). <i>A brief history of time: An interactive adventure</i> [CD]. Sacramento: Crunch Pod Media.	
Electronic sources		
Sound recording	Williamson, C. (1985). <i>Prairie fire. On Arkansas traveller</i> [CD]. Oakland, California: Olivia Records. <i>Rock 'n roll classics</i> . (1986). [Cassette] San Diego, California: Uptown Sound.	
Motion picture/film	<i>Transactional analysis</i> [Motion picture]. (1974). Los Angeles: Research Films. Bertolucci, B. (Producer). (1988). <i>The last emperor</i> [Motion picture]. Los Angeles: Columbia Pictures.	
Television broadcast	Crystal, L. (Executive Producer). (1993, October 11). <i>The MacNeil/Lehrer news hour</i> [Television broadcast]. New York and Washington, DC: Public Broadcasting Service.	
Video recording	<i>Babakuieria</i> . (1986). [Video recording]. Sydney: ABC Drama Department. Sutton, P. (Producer). (1986). <i>Kay Cottee: First Lady</i> [Video Recording]. New South Wales: Direct Video Pty Ltd. Cochrane, C., (Executive Producer) & Graham S., (Director). (1988). <i>The Superkids' fitness video</i> [Video Recording]. Perth: Dynami Australia.	



Microfiche	Illinois State Office of the Superintendent of Public Instruction (1971). <i>Toys for early development of the young blind child: a guide for parents</i> . (ERIC Document Reproduction Service No. ED 065 201)	
Computer programme	<i>Aldus Pagemaker version 3.0</i> [Computer software] (1987/1988). Seattle, Washington: Aldus Corporation. Schwarzer, R. (1989). Statistics software for metaanalysis [Computer software and manual]. Retrieved from http://www.yorku.ca/faculty/academic/schwarze/meta_e.htm	

Commonly used abbreviations

Appendix – app. Chapter – ch. Column – col.

Columns – cols.

Editor – ed. Editors – eds. Edition – edn. Editions – edns. Number – no. Numbers – nos. No date – n. d. No publisher, no page – n. p. Page – p.

Pages – pp. Paragraph – para.

Revised – rev. Reprinted – rpt.

Supplement – Suppl.

Technical Report – Tech. Rep. Translated, translator – trans.

Volume – vol. Volumes – vols. Written – writ.

Rule: a capital letter for the abbreviation for editor or editors i.e. Ed. or Eds. Use lower case for edition i.e. 2nd edn.

Latin abbreviations

And others – *et al.* (et alii) Used where there are too many authors to list

In the same work – *ibid.* (ibidem) Signifies the same work as the one cited immediately before, but a different page

The same – *id.* (idem) The item cited is by the author of the item cited immediately before

In the work cited – *op. cit.* (opere citato) Refers the reader back to the author's previously cited work, but to a different page Without place – *s. l.* (sine loco)

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- <http://owl.english.purdue.edu/owl/resource/560/07/>
- <http://library.osu.edu/sites/guides/apagd.php#articleone>

This referencing guide is compiled from various resources, our appreciation to http://www.infosecsa.co.za/Reference_Techniques.pdf





