Juxtaposing Oral Traditions of the Origins of the Ukwuani and Ndosumili People of Southern Nigeria with DNA Relative Matching Findings: An Exploratory Study

**Abstract**

This paper examines the origins of the Ukwuani/Ndosumili people in southern Nigeria. The prominent narrative favours the Benin (Bini) heritage over other origins, such as the Igbo. Lively debates and controversial arguments about the origins of the Ukwuani/Ndosumili people have accordingly ensued. This study seeks to contribute to the debate from two perspectives. First, it employed sources, including archival documents, scholarly accounts, and other materials, to reassess accounts of the Ukwuani/Ndosumili peoples’ origins. Second, it utilised an innovative technique of DNA relative matching on select individuals from the Ukwuani/Ndosumili communities to help ascertain who the people are or are more related to. Evidence from documented sources indicated that most of Ukwuani/Ndosumili’s eponymous ancestors came from Benin and the Igbo heartland. However, many have challenged this assertion. The analysis of the matched relatives results of Ukwuani/Ndosumili participants who took tests with a direct-to-consumer (DTC) genetic company used for the study did not suggest that the participants have more genetic relatives in Benin or are more genetically linked to the Bini. The DNA relative matching results showed that the study’s participants have more recent genetic links (or are more closely related) to others within the Igboid grouping, which downplays the central role accorded to the Benin origin narrative for the Ukwuani/Ndosumili people.

Keywords: Ndosumili; Ukwuani; Nigeria; oral history; DNA relative matching; ethnicity; Igbo; Benin

# Introduction

An inquiry into one’s origins enhances a person’s historical consciousness, and a lack of such awareness negatively impacts an individual’s understanding of the present and future (Seixas, 2004). Insightful studies that seek to reconsider and critique widely held views of the origins of some African societies are available (e.g., Ehret, 1972; Atanda, 1984; Klein, 1996). In Nigeria, studies on the re-evaluation of groups’ origins have contributed to an understanding of group identity (Atanda, 1980; Afigbo, 1998; Author, name deleted, 2009).

Commentaries by Afigbo (1981; 1998) and Atanda (1980) infer that most Nigerians want to know “who they are and where they came from.” People’s desire to know about their past could be linked to prevailing realities in Nigeria, where group identity or membership largely determines an individual’s political and economic standing and opportunities (Igwara, 1993). Knowing one’s historical past or origins can also arise from a desire to quench the thirst for self-knowledge (Author, name deleted, 2017a).

Notwithstanding, interest in the origins of smaller ethnic sub-groups, such as the Ukwuani and Ndosumili people (the focus of this study), has been low due to the disproportionate attention given to the larger ethnic groupings within the Nigerian nation-state (Alagoa, 1993; Ikime, 2006). These erudite historians cautioned against downplaying the significance of the historical origins of smaller ethnic societies in the country. We maintain that social cohesiveness in a heterogeneous milieu like Nigeria deepens when every group, regardless of size, knows more about its neighbours’ historical past. In many respects, communal sensibility and harmony are enhanced, and rooted prejudices can be minimised.

Equally alarming is that where narratives of the origins of smaller ethnic groups or sub-groups in Nigeria are provided, such commentaries tend to muddy the waters by perpetuating facts that are too simplistic and often difficult to substantiate (Ikime, 2006; Afigbo, 1981). For example, regarding the Ukwuani and Ndosumili (hereafter referred to as Ukwuani/Ndosumili) ethnic sub-group, several writings on their origins have dwelled too much on the hypothetical, leaving very little room for factual realities (Author, name deleted, 2017a).

One wild historical claim propounded by foreign chroniclers of history and the Benin royal house and elites about the Ukwuani/Ndosumili people’s origins is that the latter were emigrants from Benin who, due to the proximity of Igbo land, adopted the language and customs of the Igbos (N.A.I. File No. 28384, 1933; N.A.I. File No. 26769, 1931; Egharevba, 1934). The inadvertent or intentional role of the early 1930s *primus inter pares* monarch, the Obi of Aboh, in perpetuating the faulty Benin origin claim in the Ukwuani/Ndosumili area is depicted in the records (see N.A.I. File No. 26769, 1931).

It appears some indigenous Ukwuani/Ndosumili commentators (e.g., Okolugbo, 2004) have accepted such weakly constructed narratives about their origins without questioning the historicity of these archived accounts. Many of them, according to Nwaokocha (2015, p. 25), have to “[look] at themselves based on how others saw them.” Notable efforts are made by other Ukwuani/Ndosumili people (see Okafor, 2006; Adewoyin, 2010; Ozah, 2021) to disseminate information about who they are and who they are not. For instance, a shared view among these commentators is that “Ukwuani/Ndosumili is NOT Igbo.” The primary concern is whether these commentators base their information on facts, sentiments, or myths.

Adding to the confusion are perceptions of Ukwuani/Ndosumili held by people from the Igbo heartland. For example, Nwanze wrote:

“*Some people from this area* [Ukwuani/Ndosumili, Enuani, and Ika collectively called Delta Igbos] *have pointed out that they have been victims of taunts by some Igbos from the East of the Niger* [the Igbo heartland]*, who have themselves said that Delta Igbos are not Igbo*.”

Discussions and communication about their origins are leading to an identity crisis among the people. This work does not claim to have a definitive solution to addressing any burgeoning ethnic identity crisis among the people. Instead, this current study examines the oral traditions of the origins of the Ukwuani/Ndosumili people, which are checked against empirical data from an emerging innovative genetic DNA relative matching technique provided by a direct-to-consumer (DTC) personalized genetic company.

If the Ukwuani/Ndosumili people are Edoid in origin and not Igboid, one would expect a higher proportion of their inhabitants to have founding or eponymous progenitors with Benin land connections and Bini (Edoid) names. Information on Ukwuani/Ndosumili’s oral traditions can be critically examined from print and digital sources. Regarding ancestral relationships, if the Ukwuani/Ndosumili are Bini, one would expect many of their modern populations to have more genetic kin or relatives in Benin than elsewhere. Likewise, one would not expect to see genetic relatives in the Igbo heartland if they are not Igbos.

Considering the preceding discussions, this study’s research question is posed as follows: a) *Where are more of Ukwuani/Ndosumili's eponymous ancestors from*?

*b) Given the genetic ancestry data available for this study, who are the sampled Ukwuani/Ndosumili people more related to in Southern Nigeria?*

This study aims to contribute to the literature by dispelling the sloppy narratives about the Ukwuani/Ndosumili people’s origins. Hopefully, this endeavor will add to the ongoing lively debate on the people’s origin and the ethnohistorical research on the Ukwuani/Ndosumili people.

**The Ukwuani/Ndosumili people**

Ukwuani (*lowland dwellers*) and Ndosumili (*riverine dwellers*) people live in Nigeria, a multinational country with 250 ethnic groups speaking 520 living languages (Ethnologue.com, 2024). Approximately 500,000 Ukwuani/Ndosumili people reside in the low-lying, swampy, and riverine areas of Delta State, Nigeria, where they engage in farming, fishing, hunting, trading, and weaving (Nzei, 1997; Okolugbo, 2004). Figure 1 shows a map of Ukwuani/Ndosumili land, with a demarcating line between the two sub-units and some of their settlements (towns and villages).

A map of the united states

Description automatically generated

Figure 1. The Map of Ukwuani/Ndosumili land.

The Ukwuani and Ndosumili tongues are closely related. Their common language, Ukwuani-Aboh-Ndoni, with the code *ukw* (Ethnologue.com, 2024), is classified as Igboid (Basden, 1938; Forde & Jones, 1950; Nwaozuzu, 2008; Okwu, 2024), a branch of the Volta-Niger family within the core Niger-Congo phylum (Williamson & Blench, 2000). It is worth noting that the people have an ethno-Ukwuani-Ndosumili identity (Igwara, 1993; Ozah, 2021), preferring a separate ethno-cultural, social, and political taxonomy from the larger Igbo group (Adewoyin, 2010; Ozah, 2021).

The Ukwuani/Ndosumili people share similar cultural beliefs with their neighbours, namely the Ijaw, Isoko, Urhobo, and Benin (also known as Bini or Edo); however, more conspicuous similarities are found with the mainland or heartland Igbos. Manifestations of such connections exist in cosmology, spiritual practices, religious paraphernalia such as *Ọfọ* (the supreme ancestral symbol of authority) and *Ikenga* or *Ikenge* (a symbol of one’s personality and one’s ancestors) (Ojieh, 2003; Author, name deleted, 2022), local administrative system, i.e., age grade system (*Otu*) (Forde & Jones, 1950) and rulership through the *Ọkpala-Uku,* the oldest male in their community (Nzei, 1997; Ojieh, 2003; Author, name deleted, 2022), traditional beliefs (*Omenala / Omenana/ Odinala / Omenani*) (Ezekwugo, 1991), women’s roles in society (*Umuada /Ndiom Imusu* and *Ndiom Omusa*) (Nzei, 1997), speech community or language similarities (Onwuejeogwu, 1975; 1978; Nwaozuzu, 2008; Bright-Ajoku & Okumo, 2020; Boise, 2024), observed market days (*Eke, Orie, Afor, Nkwo*), and so on.

Nevertheless, there are also cultural differences between Ukwuani/Ndosumili and the Igbo heartland. For example, their descent systems differ even when both practice polygyny (Jack Jackson, 2015). The Igbo heartland employs patrilineal descent systems for kingship, whereas Ukwuani/Ndosumili relies on a combination of patrilineal and matrilineal heritages (Nzei, 1997; Ejiofor, 2015). The worldviews and fundamental cognitive values of people from the Ukwuani/Ndosumili and Igbo heartlands differ markedly. These can be seen in social ideology, ethics, norms, taboos, concepts of good and bad, fairness, and justice (Boise, 2024; Okecha, 2024). For instance, Boise (2024), writing about the Anioma, which includes Ukwuani/Ndosumili, notes that the people are more egalitarian, less individualistic, and exploitative than those in the Igbo heartland.

Boise quoted the work of the late Igbo author Arthur A. Nwankwo from Ajalli, Anambra State, who wrote *Nigeria: The Challenge of* Biafra[[1]](#footnote-1); therein, it notes that “the principle of Biafran brotherhood was a distant dream in a nation where trampling on everybody else like maggots in the struggle for personal survival, was deeply ingrained in the Igbo national psyche” (p. 57). Okecha (2024) commented that “The [heartland Igbos] worship money, and can do anything and everything to get money. We [Ukwuani/Ndosumili] are not so.” To some degree, the presented information appears to indicate that the social norms of the Ukwuani/Ndosumili differ from those of the Igbos in the hinterland.

**Traditions of Origins of the Ukwuani/Ndosumili people**

Primarily, communities in Ukwuani/Ndosumili land are organised by clans. Thus, stories of clan origins begin with accounts of the migration of a founding or eponymous progenitor (Isichei, 1976). A clan allows community members to claim descent from an apical ancestor who symbolises the clan's unity (Chisholm, 1911). However, some writers (Nzimiro, 1972; Onwuejeogwu, 1978), noting the mixed origins of many communities in Southern Nigeria, argue that more beneficial insight will ensue from efforts that focus on the accounts of the origins of settlements, i.e., towns and villages.

This work heeded this suggestion. Indeed, some clans, such as Utagba or Ogume in Ukwuani/Ndosumili land, are composed of settlements with diverse origins. At the same time, other communities (e.g., Ashaka, Obikwele) have one large settlement without noticeable outreach or extensions.

That being noted, the traditions of origins of Ukwuani/Ndosumili settlements have been documented in many sources, including colonial-era “Intelligence Reports” (e.g., N.A.I. File No. 26769, 1931; N.A.I. File No. 26769, 1932; N.A.I. File No. 29300, 1939). Other writers have presented information on the origins of some settlements in the area (e.g., Ohadike, 1994; Ogedengbe, 1971; Okolugbo, 2004; Ozah, 2010; Omenuwa, 2010; Izuogu, 2019). Commentaries detailing the origins of settlements in Ukwuani/Ndosumili land are available from other media (e.g., Uwechue, 2013; Umukoro & Oweniwe, 2022). Complementing these sources are findings from current fieldwork, which includes personal interviews with locals in the area (e.g., Author, name deleted, 2017a, 2017b; Author, name deleted, 2022).

Table 1 presents summarised information from sources detailing the origins of settlements in Ukwuani/Ndosumili land; the names of eponymous ancestors and their migratory sources or origins are also provided. Ukwuani/Ndosumili’s settlements are many; however, only a select few from which DNA samples were obtained are shown in Table 1. Notably, all the major clans of the land are represented.

Table 1. Origins of settlements in Ukwuani/Ndosumili land

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sub-unit** | **Eponymous ancestor(s)** | **Settlement** | **Origins** | **Sources** |
| Ndosumili | Ogwezi, Ekensu, Esume (Esumai-Ukwu | Aboh | Benin, Igbo land (Onitsha, Aro, Nri, Awka, Ishiagu), Northern Nigeria (i.e., Igala) | N.A.I. File No. 28384, 1933; N.A.I. File No. 26769, 1931; Egharevba, 1934;  Hubbard, 1948; Forde & Jones, 1950; Boston, 1960; Ogedengbe, 1971; Okolugbo, 2004; Ikwuazom, 1993 |
|  | Osumili-Ukwu, Dike, Ewa | Ossissa | Benin, Aboh, Northern Nigeria (i.e., Igala) | N.A.I. File No. 26769, 1931; N.A.I. File No. 26769, 1932; Uwechue, 2013; Izuegbu, 2011, 2012; Ogedengbe, 1971; Okolugbo, 2004 |
| Etim-Ukwu, Ifite, Achi, Okpala, Okolori | Afor | Benin, Igbo land (Nri, Awka) | N.A.I. File No. 26769, 1931;  Alagoa, 2004; Ogedengbe, 1971; Okolugbo, 2004; Author, name deleted, 2022; |
| Ozoma-Ukwu | Ashaka | Benin, Isoko land | Forde & Jones, 1950; Ogedengbe, 1971; Okolugbo, 2004 |
|  | Oduga | Ushie | Aboh, Isoko land (Okpe) | Okolugbo, 2004; Felix-Obianu, 2015 |
|  |  | Aballa | Igbo land (Nri, Onitsha, Isu), Western Igbo (Ogwashi Ukwu), Northern Nigeria (i.e., Igala) | Okolugbo, 2004; Uwechue, 2013; N.A.I. File No. 26769, 1931; Forde & Jones, 1950; Nzei, 1997 |
| Okpai, Umun, Orishi [Oluchi] | Okpai | Benin, Northern Nigeria (i.e., Igala) | N.A.I. File No. 26769, 1931; Okolugbo, 2004; Boston, 1960) |
| Barautchi | Utchi | Igbo land (Nri) | N.A.I. File No. 26769, 1931; Omenuwa, 2010 |
| Onuabo, Oche, Azu, Ugwo | Onuabo | Igbo land (Nri), Northern Nigeria (i.e., Igala) | N.A.I. File No. 26769, 1931; Nwaokocha, 2015 |
| Ase, Ozuem, Ebeneze, Azaga, Omuku | Ase | Benin, Igbo land (Onitsha, Atani), Western Igbo (Asaba), Eastern Nigeria (Ndoni), Isoko | N.A.I. File No. 26769, 1931; Okolugbo, 2004; Welch, 1934; Forde & Jones, 1950 |
| Uwa, Etebuozo, Obruese | Onya | Benin, Eastern Nigeria (Igbo land), Ijaw, Isoko land (Iyede), Northern Nigeria (i.e., Igala) | N.A.I. File No. 26769, 1931; Okolugbo, 2004; Boston, 1960 |
| Onyah | Azagba | Ijaw (Biseni), Urhobo (Orogun), Ukwuani/Ndosumili towns (e.g., Ogume, Aboh, Ushie), and Isoko towns (e.g., Irri, Okpe) | Izuogu, 2019; Okolugbo, 2004 |
| Ukwuani | Eziza (Ezizanweani), Adamgbodongbo, Ezeti, Ezeodu, Ezemu, and Isulumani, Epumegede | Utagba  (Utagba-Ogbe, Oliogo, Utagba Uno) | Benin, Western Igbo (Nsukwa, Atuma-Iga), Eastern Igbo (Egbema, Onitsha, Awka), Ika (Akumazi) | Fordes & Jones, 1950; Izuegbu 2003; Okolugbo, 2004; Nzei, 1997; Author, name deleted, 2017a |
|  | Ogbe-Ani | Ndosumili town (Adaiwai) | Okolugbo, 2004 |
| Eze-Odu (Ezeodu), Eze-Emu (Ezemu) | Onicha-Ukwuani | Benin, Ndosumili town (Utagba Uno), Eastern Igbo (Onitsha) | N.A.I. File No. 26769, 1931; Okolugbo, 2004; Nzei, 1997; Author, name deleted, 2017a |
|  | Ugiliamai | Ukwuani town (Amai), Western Igbo (Ashama, Ubulu) | Blank NEWS Online (2014) |
| Olor, Emu | Emu  (Ebendo, Obodeti) | Benin, Ukwuani town (Onicha-Ukwuani), Eastern Igbo (Onitsha), Isoko (Owhe), Urhobo (Orogun) | N.A.I. File No. 26769, 1931; Fordes & Jones, 1950; Okolugbo, 2004; Author, name deleted, 2017a |
| Ezedogume, Chime, Odumegwu, Agbulu Akah, Ogwezi Olodu; Ossai Ojugbeli, Ogwezi Omai, Mokobia, Okpala Olodu, Ugwua, Ezede Ifeloji (Ifuloji) | Ogume  (Ogbe-Ogume) | Benin, Eastern Igbo (Nnewi), Northern Nigeria (i.e., Igala), Ndosumili towns (Ase, Akarai, Aboh) | N.A.I. File No. 26769, 1931; Forde & Jones, 1950; Okolugbo, 2004; Nzei, 1997; Igwara 1993; Opia, 2023; Igwara, 1993 |
| Udei, Okpu, Ezie-Ogoli | Ebedei  (Ebedei-Obi, Umueziogoli) | Benin, Ndosumili towns (Akarai, Aboh, Ogume); Northern Nigeria (i.e., Igala) | N.A.I. File No. 26769. 1931; Okolugbo, 2004; Nzei, 1997 |
|  | Akoku/Obeti/  Umuaja | Ute (Ika), Northern Nigeria (i.e., Igala) Ukwuani town (Abbi), Western Igbo (Ogwashi Ukwu) | N.A.I. File No. 26769; Uti, 2006 |
| Effe [Effi], Amai, Ekwum, Nge, Aguma, and Osele | Amai | Benin, Igbo land (Achalla), Aboh; Northern Nigeria (i.e., Igala) | N.A.I. File No. 26769, 1931; Forde & Jones, 1950; Okolugbo, 2004 |
| Amacha, Aninta, Okolo, Ogwazi, Ewolokpo, Okpara Ogwezi, Owolukpo, Udu | Abbi | Igbo land (Achalla) | N.A.I. File No. 26769, 1931; Forde & Jones, 1950; Okolugbo, 2004 |
| Utu | Umutu | Ukwuani town (Abbi) | N.A.I. File No. 26769; Author, name deleted, 2017a |
| Ukwata, Ezike, Akwata, Ugbome, Uguru, Obia | Umukwata | Benin, Igbo land (Achalla) | N.A.I. File No. 26769, 1931; N.A.I. File No. 29300, 1939; Forde & Jones, 1950; Okolugbo, 2004 |
| Akashiada, Okpor, Onumgbunum, Ossai, Odumegwu, Anie | Eziokpor | Benin, Eastern Nigeria (Igbo land), Western Igbo (Ejeme) | N.A.I. File No. 26769, 1931; Okolugbo, 2004; Umukoro & Oweniwe, 2022 |
| Akashiada, Ezhie, Onuma, Ossai, Odumegwu, Osele, Ine [Anie], Osumili, Ughomeh, Ezeogbu | Ezionum | Western Igbo (Ejeme, Asaba), Ndosumili towns (Utchi, Afor) | Author, name deleted, 2017a; Nzei, 1997; Umukoro & Oweniwe, 2022 |
| Akashiada, Ebu | Umuebu | Eastern Nigeria (Igbo land), Western Igbo (Ejeme, Asaba), Northern Nigeria (i.e., Igala) | Author, name deleted, 2017a; Nzei, 1997; Umukoro & Oweniwe, 2022 |

Table 2 summarises the count for each ethnic group or sub-group from which the forebears of the Ukwuani/Ndosumili people originated, as captured in their oral traditions and archival documents shown in Table 1. From the summarised data of the counts, Benin is the source accounting for the largest share of emigration to Ukwuani/Ndosumili. The next source is the Igbo heartland, followed by internal migrations to new settlements from the Ukwuani/Ndosumili area. Many early settlers to Ukwuani/Ndosumili land appear to have come from Enuani and Northern Nigeria (i.e., Igala). Table 1 shows that a few early settlers came from the Ijaw and Isoko/Urhobo lands. This fact is often neglected, with greater emphasis being placed on the Benin and Igbo origins of the Ukwuani/Ndosumili people.

Table 2. Breakdown of the sources of the Origins of Ukwuani/Ndosumili settlements

|  |  |  |
| --- | --- | --- |
| **Ethnic or Sub-ethnic group** | **Count** | **Percentage (%)** |
| Benin | 17 | 22.4 |
| Igbo heartland | 15 | 19.7 |
| Western Igbo (Enuani/Ika) | 10 | 13.2 |
| Northern Nigeria (i.e., Igala) | 10 | 13.2 |
| Isoko/Urhobo | 8 | 10.5 |
| Ijaw | 2 | 2.6 |
| Within Ukwuani/Ndosumili settlements | 14 | 18.4 |

The Ukwuani/Ndosumili people do not speak Bini or bear Bini names (Ogedengbe, 1971; Ozah, 2010, 2021); why is Benin overrepresented in their origin traditions? Plausible answers lie in the old Benin Kingdom’s prestige, which many ethnic groups and sub-groups from Southern Nigeria want to be associated with (Afigbo, 1981; Mordi & Opone, 2009). Furthermore, the Benin Royal House seeks to project power and influence in Ukwuani/Ndosumili land (Egharevba, 1934), despite its marginal status (Ohadike, 1994; Okolugbo, 2004). Wars fought between the two sides did not result in total Benin dominance over the people (Ohadike, 1994).

Another reason the Ukwuani/Ndosumili people clamour for Benin links may be their folklore, which is replete with grandiose and extraordinary deeds in the Benin kingdom (Ogedengbe, 1971; Okpewho, 1999). As well as the role of the British colonial ruler, perhaps in the bid to indirectly govern conquered Ukwuani/Ndosumili people, forged and falsified accounts of the latter’s origins to make it easy to place them under Benin sovereignty, which was done in the 1930s (N.A.I. File No. 28384, 1933; N.A.I. File No. 26769, 1931).

The events leading to and during the Nigerian Civil War in the 1960s helped to amplify and solidify the Benin heritage narrative; many from Ukwuani/Ndosumili and similar ethnic sub-groups in Southern Nigeria faced with the choice of death instinctively clung to a false narrative that offered a chance of life in lieu of death (Mordi & Opone, 2009; Nwaokocha, 2015; Nwanze, 2020).

A shadow of doubt is also cast on the many accounts of Ukwuani/Ndosumili’s traditions of origin, where the tale of migration always begins in Benin and then heads to Igbo towns around the Niger (e.g., Asaba, Onitsha) before settling in Ukwuani/Ndosumili settlements. This is the case of Aboh, Ossissa, Afor, Ase, Ushie, Utagba, Onicha Ukwuani, Ogume, Okpai, Ase, and others (Okolugbo, 2004). This makes the Benin origin narrative by the people doubtful. Historians (e.g., Okpevra, 2015) from a neighboring ethnic group (Isoko) have made a similar observation and reached the same conclusion about the veracity of such narratives. The fable does not add up. Perhaps the people concocted aspects of their traditions to justify a link to Benin, which appears like a make-believe afterthought.

Even if Benin were to be accurate as a source of significant migrations to the area, many have shown that migratory parties such as the Eze Chima group originating from Benin to Enuani and Onitsha – many Ukwuani/Ndosumili settlements are linked to Onitsha -were not Bini but people from the Igbo heartland retreating to familiar territories after conflicts with the Benin Kingdom (e.g., Opone, 2017a; Mordi & Opone, 209; Ogedengbe, 1971; Ohadike, 1994; Ijomah, 2010; Nwaokocha, 2015). The vivid description of the flight of the Eze Chima group from Benin and their awaited fate if caught by the Bini, provided by Azikiwe (1930, p. 475), does not suggest kingship between both groups. A senior chieftain of Benin (the late Chief David Edebi, the Esogban of Benin Kingdom) further supports this view by noting that “Eze Chima is not Bini” (Nnaa Mehn TV, 2023).

# Genetic Testing and Ancestry Tracing

Genetics is the study of genes at all levels, including how they act in the cell and are transmitted from parents to offspring. DNA is found inside genes, and genes are located within chromosomes. Essentially, DNA is organized into 23 separate pieces called chromosomes. According to NIST.gov (2024), “Human DNA is nearly identical from person to person, but there are small differences unique to each individual” that are tied to health conditions, ancestry, and other information. These differences are called variants, which scientists measure to determine ancestry. In brief, our genes reveal who we are (Elliott & Brodwin, 2002).

Genetic testing comes in different forms, including molecular tests (encompassing genome sequencing), chromosomal, and biochemical tests (MedlinePlus, 2024). Some of these tests have been used to study the migrations and histories of populations worldwide. For example, using genetic testing, Torres et al. (2012) studied the lineages in African American men of West African descent. Yao et al. (2002) established genetic relationships among some Chinese ethnic populations using genetic testing. The history of click-speaking populations of Africa was inferred from genetic analysis (Tishkoff et al., 2007). Many of these studies have used Y-chromosomes and mitochondrial (mtDNA) DNA tests.

In the post-Human Genome Project era, recent advances in genetic ancestry testing have made inexpensive genotyping tools accessible. This has facilitated the emergence of companies (e.g., AncestryDNA, MyHeritage, Family Tree DNA) offering customers direct-to-consumer (DTC) personalized genetic services. These DTC companies use their databases and public databases, such as the 1000 Genomes Project, for their analyses. Regalado (2019) indicates that more than 25 million people have taken DTC genetic tests, and over 100 million are expected to take these tests in the next few years. Nonetheless, using the services of DTC companies presents some challenges or limitations, some of which relate to accuracy (as some DTC genetic testing companies do not consider all possible genetic variations) and privacy issues (risks of information disclosure) (Mendoza & Diallo, 2024).

Due to financial resource and knowledge constraints, our study will use a simple genetic testing technique, DNA relative matching, which some DTC genetic testing companies provide. DNA relative matching, utilizing the services of DTC genetic testing companies, has been employed in other contexts to determine individuals' ethnicity and kinship (Heinemann & Lemke, 2012; Keung, 2018). It has been used by some authorities and governments to track wanted individuals and confirm the identities of deceased persons (Shah, 2011; McNeil Jr. & Belluck, 2011).

To meet the objective of this study, we selected the services of AncestryDNA, one of the leading DTC genetic testing companies, based on expert opinions (Mendoza & Diallo, 2024). Regarding accuracy, AncestryDNA uses comprehensive microarray-based autosomal DNA testing. For security purposes, the company employs industry-standard security practices to store DNA samples, which are processed without disclosing customer names or other identifying information. The company also does not share DNA data with third parties. Next, we provide information on how the company performs its DNA analysis (and relative matching).

## AncestryDNA: DNA analysis and relative matching

Ancestry.com (2024) notes that it “uses an autosomal DNA test that surveys a person’s entire genome,” unlike the Y-chromosome (which reflects the direct father-to-son path) or mitochondrial (which reflects the direct mother-to-child path) DNA tests. The DNA technology used by AncestryDNA focuses on ethnic history—not ancient history, unlike the Y-chromosome and mtDNA tests, which focus on 10,000 to 50,000 years of history. Thus, studies using Y-chromosome and mtDNA tests report findings regarding haplogroups, a family of maternal or paternal lineages that descend from a common ancestor (Veeramah et al., 2010).

Unfortunately, studies of the haplogroups of some southern Nigeria’s ethnic groups, including the Yoruba, Igbo, and Cross River natives, indicate few genetic differences among these ethnic groups (Tishkoff et al., 2007; Veeramah et al., 2010). The human Y-DNA haplogroup of southern Nigeria’s ethnic groups is E1b1a1-M2; the percentage of this gene observed in the Igbo and Yoruba populations is 89.3% and 92%, respectively (Tishkoff et al., 2007; Veeramah et al., 2010). Using another DNA analysis technique, Titilayo et al. (2018) also reported no genetic variations between the Igbo and Yoruba populations. A recent study by Joshi et al. (2023) demonstrated that Yoruba, Ibibio, Bini, Igbo, and Izon [Ijaw] are all genetically similar.

The preceding information permits using DNA relative matching to suit this study’s objective. DNA relative matching is the process of sequencing and comparing a person’s DNA with that of other individuals in a database. The company website further notes, “Ancestry has more than 25 million DNA samples, which enable us to compare your DNA saliva sample to samples from around the world”. An extensive database increases the odds of successful matches.

Information obtained from the DTC genetic testing company, AncestryDNA, used for this study, notes that “the AncestryDNA test results identify places your ancestors may have lived about 5-20 generations ago.” Generally, a generation is about 20–⁠30 years. With an average of 25 years and using the upper limit of AncestryDNA’s 20 generations, we are looking at a 500-year period. This timeline aligns with our study’s scope, as significant migrations into the Ukwuani/Ndosumili area occurred between the 15th and 19th centuries (Okolugbo, 2004; Author, name deleted, 2017a, 2017b).

Centimorgans (cM) are units of genetic linkage between two given individuals; thus, the higher the cM between two persons, the more genetically connected they are. The AncestryDNA autosomal test details centimorgans and identifies shared matches throughout a person’s entire family tree. Thus, “When a person with a significant amount of DNA that is identical to yours is found, that can indicate that you have a common ancestor” (MyHeritage.com. 2024). The more DNA you share with a person, the more recent your common ancestor; most of the matches found in our study were unknown distant families of the study’s participants.

## Research Methods

## DNA relative matching of Ukwuani/Ndosumili participants

Nigerians are taking DNA tests (News Agency of Nigeria (2024) to suggest this study would find DNA matches for its participants from Nigerian ethnic groups, including those close to the Ukwuani/Ndosumili area. Using the convenience sampling technique, we contacted and recruited 31 participants from diverse clans/communities in Ukwuani/Ndosumili land. The settlements (towns/communities) from whence they came are shown in Table 1.

Table 3 presents the participants’ demographic information and their respective towns or communities. Information about their DNA Ethnicity Estimate is also provided. AncestryDNA has more than 2,600 global regions with which to compare DNA samples. One of their ethnicities is Nigeria [Nigerian]; this information may confuse a Nigerian who most likely has matches from the geographical territory of the Nigerian state. On the other hand, an African American whose genetic makeup may vary by several countries (geographical territories) of Africa (Torres et al., 2012) may not find the information confusing. Nevertheless, the information presented in Table 3 confirms that the study’s participants are predominantly Nigerian, with a percentage above 95%.

Table 3. Study Participants’ Demographics and DNA Ethnicity Estimate

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Participant** | **Gender** | **Age** | **DNA Ethnicity estimate** | | | | | **Settlement: town/village** |
| Nigeria | Nigeria—East Central | Benin & Togo | Ivory Coast & Ghana | Cameroon, Congo & Western Bantu Peoples |
| INDI\_AA | Male | 62 | 96% |  | 3% |  | 1% | Afor |
| INDI\_BB | Female | 43 | 98% |  | 2% |  |  | Amai |
| INDI\_CC | Male | 43 | 99% |  | 1% |  |  | Eziokpor |
| *INDI\_DD* | Female | 28 | 97% |  | 2% | 1% |  | Kwale (Ogbe-ani)/ Umuaja |
| INDI\_EE | Male | 52 | 98% |  | 1% |  |  | Ogbe-Ogume |
| INDI\_FF | Female | 49 | 95% | 4% | 1% |  |  | Onuabo |
| INDI\_GG | Male | 40 | 98% | 1% | 1% |  |  | Onya |
| INDI\_HH | Male | 60 | 98% | 1% | 1% |  |  | Ugiliamai |
| INDI\_II | Male | 55 | 100% |  |  |  |  | Umuaja |
| INDI\_JJ | Male | 53 | 95% | 1% | 3% |  | 1% | Utchi |
| INDI\_KK | Male | 55 | 95% |  | 2% |  | 3% | Aballa |
| INDI\_LL | Female | 53 | 97% |  | 2% |  | 1% | Ase |
| INDI\_MM | Male | 40 | 97% | 1% | 2% |  |  | Azagba |
| INDI\_NN | Male | 56 | 96% | 2% | 2% |  |  | Obiaruku/ Umuebu |
| INDI\_OO | Male | 55 | 97% |  | 3% |  |  | Okpai |
| INDI\_PP | Female | 49 | 95% | 1% | 4% |  |  | Onicha Ukwuani |
| INDI\_QQ | Female | 27 | 99% |  | 1% |  |  | Umukwata |
| INDI\_RR | Male | 40 | 94% | 1% | 4% |  |  | Umutu |
| INDI\_SS | Male | 63 | 92% | 1% | 7% |  |  | Ushie |
| INDI\_TT | Male | 53 | 99% |  | 1% |  |  | Kwale (Utagba- Ogbe) |
| INDI\_UU | Female | 31 | 97% | 1% |  |  | 1% | Abbi |
| INDI\_VV | Male | 60 | 99% |  | 1% |  |  | Aboh |
| INDI\_WW | Male | 33 | 97% | 1% | 2% |  |  | Ebedei |
| INDI\_XX | Male | 69 | 97% |  | 3% |  |  | Emu-Ebendo |
| INDI\_YY | Male | 53 | 96% |  | 4% |  |  | Ossissa |
| *INDI\_ZZ* | Male | 53 | 96% | 2% |  | 1% | 1% | Ashaka/Afor |
| INDI\_AB | Male | 55 | 95% |  | 5% |  |  | Emu-Obodeti |
| INDI\_AC | Male | 56 | 96% | 2% | 2% |  |  | Utagba-Uno |
| INDI\_AD | Female | 28 | 99% |  |  |  | 1% | Utagba-Oliogo |
| *INDI\_AE* | Female | 55 | 93% | 5% |  |  |  | Ebedei/  Utagba-Ogbe |
| INDI\_AF | Male | 39 | 98% | 2% | 1% |  |  | Ezionum |

*Notes*: Italic fonts indicate individuals with parents from two unrelated Ndosumili/Ukwuani clans or communities.

The study participants were unrelated; only individuals whose parents are from the same community/town were sought. To be included in the study, participants must be able to trace their ancestry to the same clan or community as far back as their grandparents. Most participants met the set criteria, except for three participants whose parents came from neighbouring or closely related communities.

The study obtained clearance from the Research Ethics Board of the lead author’s university. The risks and benefits of participating in the study were communicated to participants, and their informed consent was obtained. As part of signed informed consent, each participant was asked to share the results of their DNA relative matches—copied onto MS Word files—with the study. As the study was voluntary, only consenting participants were included; those who did not accept were excluded, and new participants were sought.

The study's authors bought DNA testing kits from AncestryDNA, which were given to all participants. Saliva samples were collected from each participant and sent to the DTC company for analysis. One benefit is that each participant owns their test results. Participants were encouraged to contact their DNA matches on the testing platform individually using AncestryDNA.com's communication facilities to help accurately identify the tribal groups of matches. Communication between participants and their matches is shared with the lead researcher only.

Participants were asked to record the number of matches they could correctly classify by surnames to include Ukwuani/Ndosumili and neighbouring tribes or ethnic sub-groups: Edo, Isoko/Urhobo, Ijaw, Yoruboid (i.e., Itsekiri), Enuani/Ika, Igbo heartland, and Northern Nigeria (i.e., Igala). Using surnames to identify ethnicity or ethnic groups is not novel; past research has used this approach (e.g., Lauderdale, & Kestenbaum, 2000; Harris, 2015; Mateos, 2017). For example, Mateos (2017, 49) states:

“*A surname links the bearer with her or his ancestors for many generations, at least those on the paternal lineage. Therefore, a surname “automatically” signals an individual’s ancestry and identity. However, when individuals are aggregated together into population groups according to the “cultural proximity” of their surnames, they can be useful as proxies for such shared past and group identity*.”

The preceding proposition underpins this study’s effort. Thus, to be recorded as a match, the following criteria were used: a) Only males with recognisable surnames from the areas of interest were selected; b) females with both first and surnames (e.g., Ngozi Chukwuma or Eloho Ovie) from ethnic groups of interest were included; c) females with English first names and local surnames from all ethnic groups were initially excluded but are considered only when confirmation of their tribal identities is established (done through communication with matches). This is done to avoid identity errors of, say, an Igbo woman marrying a Benin man and taking the spouse’s surname; d) matches with surnames from faraway lands and tribes, e.g., Ghana (Mensah) or Efik or Ibibio (Asuquo) were not considered; e) those using alphanumeric identification (Chales123) and generic nomenclature (Bluesky Mama) were not included in the study, and f) only matches identified as Distant Family (i.e., fifth generation and above) were included in the study. Participants were asked to categorise their matches by tribe, ethnicity, or subgroup.

The lead researcher worked with each study participant to remove entries (matches) that did not meet the selection or inclusion criteria. Notably, the researchers are familiar with the nuances of surnames among the Igboid groups. For example, a surname may have different variations depending on the region in which it is used. For example, for someone born on *Orie* day, the person is known as Okoye in Anambra State, Okoli (in Eastern Igbo areas), Okorie (in most Igbo lands), and Okolie (in Anioma land). When in doubt about a match’s origin, participants were asked to contact the match to clarify. Table 4 shows some of the towns/villages and States in Nigeria from which matches came.

Table 4. Some Towns and Villages in Nigeria where Study Participants have DNA Matches

|  |  |
| --- | --- |
| **State** | **Towns and Villages** |
| Delta (excluding Ndosumili/Ukwuani towns) | Issele-Uku, Asaba, Okpanam, Ekuku Agbor, Nsukwa, Warri, Aradhe, Owhelogbo, Ovrode, Ofagbe, Iyede, Igbide, Ozoro, Ellu, Okpe, Orogun, Orerokpe, Isiokolo, Oghara |
| Anambra | Oraukwu, Adazi, Nnukwu, Ezinkeje, Umuikwu Anam, Abagana, Onitsha, Nnobi, Igbo Ukwu, Akwa, Obosi, Amawbia, Nkitaku, Agulu, Ihiala, Akamili Umudim, Otuocha, Umunuko Ukpor, Amichi, Nibo, Nawfia, Aguleri, Ossomari, Oba |
| Imo | Owerri, Orlu, Urualla, Dikenafia, Obollo, Uga, Amakohia, Umu Ezeala, Amaigbo, Nkwerre |
| Kogi | Idah, Okene |
| Edo | Abudu, Ugbeze, Bennin City, Ugo, Urhonigbe, Umoghun Nokhua, Ewusse, Ubazogbe |
| Ogun | Ijebu-Ode, Ode-Remo |
| Enugu | Mmaku |
| Rivers | Ndoni |
| Bayelsa | Oloibiri |

Participants sent the lead researcher the final MS Word files containing their matches, which were then shared with the co-researchers. The three researchers also classified the matches by ethnicity. Appendix A provides information on the researchers’ classification efforts and assessments, as well as on each researcher’s expertise and the external resources used.

Participants’ assessments of their matches were generally consistent with those of the researchers, but differed at other times. We used SPSS 28.0 software to provide Kendall's *W[[2]](#footnote-2)* statistic for concordance among researchers’ assessments. The study did not include participants’ assessments in the concordance evaluation because not all of them sent back their breakdown of the ethnic classification of their matches. The results of Kendall's coefficient of concordance among the assessors (Table 5) indicate statistically significant agreement on their categorisation of the matches by tribes, ethnicities, or subgroups.

Table 5. Kendall's coefficient of concordance results for assessors’ evaluations

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Origins** | | **Yoruboid** | **Igobid** | | | **Edoid** | | **Ijoid** | **Northern Nigeria (i.e., Igala)** |
| Igbo heartland | Ukwuani/  Ndosumili | Enuani/  Ika | Urhobo/  Isoko | Bini |
| **Statistics** | Kendall’s W | 0.27 | 0.42 | 0.51 | 0.68 | 0.64 | 0.43 | 0.26 | 0.37 |
| Chi (ᵡ) square | 16.46 | 26.30 | 31.22 | 40.99 | 39.67 | 26.89 | 15.90 | 22.77 |
| df | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Sig. | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |

### **Discussions of Findings**

It is important to sound this note of caution: The matches obtained in this exploratory study do not represent the overall populations of ethnicities or ethnic groups of interest to this effort; instead, the matches reflect the results of unknown people from the ethnic groups of interest to this study’s objective who incidentally took the AncestryDNA genetic tests. That being noted, a study of this nature has inherent shortcomings, which we acknowledge.

The assessor's entries (participants’ matches) for each ethnicity or subgroup were averaged from the data provided in Appendix A, and a pie chart (Figure 2) was subsequently created.

A pie chart with different colored circles

Description automatically generated

Figure 2. Breakdown of ethnic and sub-ethnic groups observed in the study

The pie chart shows that the ethnic group with the largest matches (507.3) for our sampled Ukwuani/Ndosumili participants is the Igbo heartland (29%). The next ethnic sub-group with many matches for the study’s participants is Ukwuani/Ndosumili (490.6), with 28%. The third largest matches (312.3) were observed for the Urhobo/Isoko, representing 17% of the total. The rest of the results are presented as follows: Bini (Edo) (120.5 [7%]), Enuani/Ika (81.9 [4%]), Ijoid (46.9 [3%]), Yoruboid (i.e., Itsekiri) (171 [10%]), and Northern Nigeria, i.e., Igala (39.5 [2%]).

The high incidence of matches or relatives from Yoruba land is inconsistent with the oral traditions of the origins of Ukwuani/Ndosumili communities (Table 1). A reason for this anomaly is the higher level of enlightenment among Yoruba regarding taking DNA tests (News Agency of Nigeria, 2024), and many of the study’s matches contacted noted genetic links to Ukwuani/Ndosumili land through a parent. This indicates a recent kingship, which is not the focus of this study.

The result showing that the study’s participants have more matches or are more related to people in the Igbo heartland is consistent with the information provided in Table 1, which indicates that the region is among the top sources of past migrations into the Ukwuani/Ndosumili land. This result somewhat acquiesces with the reality of Ukwuani/Ndosumili being placed within the Igboid culture area (Forde & Jones, 1950; Okwu, 2024; Onwuejeogwu, 1975; 1978; Boise, 2024). The result contradicts the view suggesting that Ukwuani/Ndosumili people are unrelated to those from the Igbo heartland.

Evidence from the DNA relative matching results, with more matches observed among Ukwuani/Ndosumili people, also lends credence to noted internal migrations within the area, consistent with details provided in Table 1. The low matches for the study's participants with people from Northern Nigeria (i.e., Igala) are noticeable compared to the information from Table 1, indicating that many of the forebears of Ukwuani/Ndosumili people originated from that part of Nigeria. The observed low matches for Northern Nigeria (i.e., Igala) could be attributed to the low DNA testing participation among people from Northern Nigeria (News Agency of Nigeria, 2024) and the DTC not having many testers from that part of Nigeria.

The result indicates that the Edoid sub-ethnic group with which the sampled Ukwuani/Ndosumili participants have the third-largest matches (17%) or are more related is Urhobo/Isoko. Memories and undisputable accounts of past and recent migrations from Urhobo/Isoko to Ukwuani/Ndosumili abound (e.g., Izuogu, 2019; Okolugbo, 2004). The information from the DNA data analysis suggests that more Ukwuani/Ndosumili people may have more genetic ties to Isoko/Urhobo people than to the Bini.

Given the marginally low Bini relative matches observed in the study (7%) and cultural and linguistic dissonance between the Ukwuani/Ndosumili and the Bini (Ozah, 2010; Afigbo, 1980; Ogedengbe, 1971; Northcote, 2017), one is impelled to challenge the espoused narrative that the present settlers of Ukwuani/Ndosumili lands are mainly Bini migrants on the land (e.g., Egharevba, 1934; N.A.I. File No. 26769; 1931; N.A.I. File No. 29300, 1939). There seems to be an apparent disconnect between pushed narratives of Benin origins highlighted in Table 1 and evidence from the DNA relative match testing suggesting a Ukwuani/Ndosumili person, on average, is likely to have more relatives, as would be expected from within its locality, and from the Igbo heartland.

The Igboid groupings (i.e., Igbo heartland, Enuani/Ika, and Ukwuani/Ndosumili) collectively have 61% of the matches (relatives) for the study. The DNA relative matching results appear to lend credence to oral traditions indicating that pre-eminent and most pervasive settlers in Ukwuani/Ndosumili land are generically Igboid to corroborate observations espoused by others who vehemently challenge the Benin origin narrative for Ukwuani/Ndosumili settlements and people (e.g., Afigbo, 1981; Author, name deleted, 2017a, 2017b; Ogedengbe, 1971; Ohadike, 1994; Ijomah, 2010; Nwaokocha, 2015).

**Study limitations and future research avenues**

The sample size of thirty-one (31) individuals used in this study is small. We noted that this is an exploratory study in the area. Future studies could consider using larger samples to gain deeper insights. Reliance on results obtained from DTC genetic testing services related to accuracy should be done cautiously (Mendoza & Diallo, 2024). However, the authors' attempts to verify the accuracy and reliability of results provided by the employed DTC genetic testing company are satisfactory. Namely, known relatives of the lead author of various levels (i.e., first, third, fourth cousins, and parent(s)-child) who took the company’s DNA tests were correctly identified. Another area for improvement is that some surnames might have been incorrectly classified. Using several trained local linguists could be a rewarding exercise for this work. Not all potential matches of the study's participants are likely included in this work because, with the advent of Christianity in Nigeria, some locals, including Ukwuani/Ndosumili people, adopted foreign surnames (Odili, 2008).

To advance insights in the area, future research on the subject could consider using other testing techniques, such as Random Amplified Polymorphic DNA (RAPD), a fingerprinting technique based on the polymerase chain reaction (PCR), which Titilayo et al. (2018) note can be used to differentiate closely related ethnic groups. Forensic archaeology could benefit future studies on the origins of the Ukwuani/Ndosumili people. Future studies, using any suitable technique, could compare the genes of equal numbers of individuals from Benin, Ukwuani/Ndosumili, and the Igbo heartland to enrich the knowledge of Ukwuani/Ndosumili past migrations.

# Conclusion

This study has focused on one of Nigeria's small ethnolinguistic groups, the Ukwuani/Ndosumili people, which is scarcely mentioned in the literature. The central hypothesis regarding their past is that they are Benin immigrants who settled in a *terra nova* close to the Igbos. Some Ukwuani/Ndosumili people have argued that they are unrelated to the Igbos. This work also notes that some heartland Igbos struggle to accept Ukwuani/Ndosumili as Igboid. This ensuing confusion informed the initial exploratory study, which sought to answer the question: Where are the ancestors of the Ukwuani/Ndosumili people from, and who are they more closely related to in Nigeria?

Evidence from sourced documents suggests that Benin and the Igbo heartland are the two primary areas from which the apical ancestors of the present-day Ukwuani/Ndosumili communities originated. However, the Benin connection is suspect, given that the names of the apical ancestors of many Ukwuani/Ndosumili communities are predominantly Igbo. Furthermore, this study drew attention to the work of others who have raised doubts regarding the historicity of the accounts of the Benin origins of the Ukwuani/Ndosumili. The evidence in this study does not bear out the Benin origin narrative as the sole or major source of migrations to Ukwuani/Ndosumili land. Nevertheless, discounting some past migrations from Benin into Ukwuani/Ndosumili land would be disingenuous. We opine that migrations from Benin are marginal at best.

This study's findings support others' viewpoint, suggesting that more extensive migrations to the Ukwuani/Ndosumili area arose from the Igbo heartland (e.g., Ohadike, 1994; Opone, 2017a). To prop this view, we indicated that the Ukwuani/Ndosumili people belong to the same cultural area as the Igbos (Onwuejeogwu, 1975, 1978) and have several shared cultural manifestations and artifacts with the Igbo heartland. Nonetheless, the study noted some socio-cultural differences between the two groups.

Beneficial insights from the emerging DNA relative matching technique shed more light on the discourse. The analysis of matches (distant relatives) of the study’s participants enlisted from select Ukwuani/Ndosumili communities who took tests with a DTC genetic company used for this work indicates that the participants are mainly related to Igboid groupings (i.e., the Igbo heartland, Enuani/Ika, and Ukwuani/Ndosumili) with whom they share more recent common ancestors. Namely, 61% of the matches (relatives) of the study’s participants are people of the Igboid gene pool.

Remarkably, the participants’ matches are not primarily with the Bini, as proponents of the Benin origin would want to proclaim. Instead, the data analysis suggests that Ukwuani/Ndosumili people are more Igboid than Bini. To an extent, this evidence helps to dispel the mispresented, misaligned, or fabricated account suggesting a predominant Benin heritage for the Ukwuani/Ndosumili people. It also deposes proclamations from some Ukwuani/Ndosumili elites, arguing that they have no connection with the Igbo heartland. In the same vein, assumptions among some heartland Igbos who doubt whether those referred to as Delta Igbos (including the Ukwuani/Ndosumili) are related to them need rethinking.

Another fact presented in this work is that Ukwuani/Ndosumili have genetic links with other Nigerian ethnic sub-groups in their locality. Ethnic sub-groups like Ukwuani/Ndosumili that seek new identities in the Nigerian state can foster such. However, it would be a travesty of Ukwuani/Ndosumili history to denigrate the import of preeminent primordial attributes, i.e., genetics and ancestral worship traditions, among others that define most of its people, by discounting their link to their closest ethnic group, the Igbo. Perhaps prominent past Ukwuani/Ndosumili leaders (e.g., Chief F. Oputa-Otutu) and academics (e.g., Prof. B.I.C. Ijomah) who affiliated with Igbo unions in the 1950s and allied with the 1970s pan-Igbo organisations did so because they knew who they were, and which ethnic groups are blood relations of their people.

This study could serve as a valuable resource for the Ukwuani/Ndosumili people, especially their youth, as they navigate their identity crises in Southern Nigeria. Importantly, this endeavour offers empirical information about whom the Ukwuani/Ndosumili people are by showcasing that most of their eponymous forebears came from the Igbo heartland, and many of their present inhabitants have close genetic links with Igbo people from Enuani and across the Niger. They seem to have more genetic relationships with other Delta State ethnic groups like the Isoko and Urhobo than they do with the Bini. This is not the final word; other perspectives are needed.

**References**

Adewoyin, L. (2010). Nigeria: Ndokwa - the People and Their Burden. *This Day*, August 10, 2010.

Afigbo, A.E. (1981). The ‘Bini Mirage’ and the History of South-Central Nigeria. *Nigeria Magazine* 137, 17–24.

Afigbo, A.E. (1998). Oral Tradition and Historical Explanation: A Case Study from Central Southern Nigeria in *The MultiDisciplinary Approach to African History: Essays in Honour of Ebiegberi Joe Alagoa,* edited byNkparom C Ejituwu, 63-68. Port Harcourt: University of Port Harcourt Press.

Alagoa, E.J. (2004). *The Uses of Hindsight as Foresight: Reflections on Niger-Delta and Nigerian History.* Port Harcourt: Onyoma Research Publication.

Alagoa, E. J. (1993). Oral Tradition and Oral History in Africa In *African Historiography: Essays in Honour of Jacob Ade Ajayi***,** edited byToyin Falola. Lagos: Longman.

Ancestry.com. 2024. How is the AncestryDNA® test different from other DNA tests? <https://www.ancestry.com/c/dna-learning-hub/how-does-ancestrydna-test-differ-from-others#:~:text=The%20Y%2DDNA%20test%20only,path%20in%20your%20family%20tree>.

Atanda, J.A. (1984). The Origins of the Yoruba Reconsidered. *Odu: A Journal of West African Studies* 25, 3– 19.

Atanda, J.A. (1980). The Historian and the Problem of Origins of Peoples in Nigerian Society. *Journal of the Historical Society of Nigeria* 10(3), 63-77.

Azikiwe, B.N. (1930). Fragments of Onitsha History. *The Journal of Negro History* 15(4), 474-497.

Blank NEWS Online. 2014. Ibabu/Iselegu Feud: Ugiliamai Shares Boundary with Iselegu, not Ibabu -Says Ugiliamai Community. <https://blanknewsonline.wordpress.com/2014/08/06/ibabuiselegu-feud-ugiliamai-shares-boundary-with-iselegu-not-ibabu-says-ugiliamai-community/>.

Basden, G.T. (1938). Niger Ibos: A Description of the Primitive Life, Customs and Animistic Beliefs, & c., of the Ibo People of Nigeria by One Who, for Thirty-five Years, Enjoyed the Privilege of Their Intimate Confidence and Friendship. London: Seeley, Service & Company, Limited.

Boise, C.O.O. (2024). The concept of Anioma State: Anioma is culturally and sociologically miles apart from the Eastern Igbos. Asaba Online Community. <https://www.asabaonline24.com/2024/09/23/the-concept-of-anioma-state-anioma-is-culturally-and-sociologically-miles-apart-from-the-eastern-igbos-chris-o-o-biose/>

Boston, J.S. (1960). Notes on Contact between the Igala and the Ibo. *Journal of Historical Society of Nigeria* 2(1), 51-68.

Chisholm, H. (1911). "Clan". Encyclopædia Britannica. Vol. 6 (11th ed.). Cambridge: Cambridge University Press.

Egharevba, J.U. (1934). *A Short History of Benin*. Lagos: Church Mission Society Press.

Ehret, C. (1972). Bantu Origins and History: Critique and Interpretation. *Transafrican Journal of History*. 2(1), 1-9.

Ejiofor, E.U. (2015). The Ukwuani Language/Dialect Question: Linguistic and Socio-political Perspectives. *Awka Journal of Linguistics and Languages* 9(1), 71-92.

Elliott, C., & Brodwin, P. (2002). Identity and Genetic Ancestry Tracing. *BMJ* 325(7378), 1469–1471.

Ethnologue.com (2024). Nigeria. <https://www.ethnologue.com/country/NG/>.

Ezekwugo, C.M. (1991). Omenana and Odinana in the Igbo World: A Philosophical Appraisal". Africana Marburgensia. 24(2), 3–18.

Felix-Obianu, I. (2015). Ushie-Aboh Relations up to the 19th Century. A Long Essay, Department of History and International Studies, Delta State University.

Forde, D., & Jones, G.I. (1950). *The Igbo and Ibibio-speaking Peoples of South-Eastern Nigeria*. London: International Africa Institute.

Harris, A.J. (2015). What’s in a Name? A Method for Extracting Information about Ethnicity from Name. *Political Analysis* 23, 212–224.

Heinemann, T., & Lemke, T. (2012). Suspect families: DNA Kinship Testing in German Immigration Policy. *Sociology* 47(4), 810–26.

Hubbard, J.W. (1948). *The Sobo of the Niger Delta*. Zaria: Gaskiya Corporation.

Igwara, O.P. (1993). Ethnicity, Nationalism and Nation-Building in Nigeria, 1970-1992. PhD diss., LSEPS, University of London.

Ijomah, O.J. (2010). *Igbo Origins and Migrations*. Nsukka: Great AP Express Publishers.

Ikime, O. (2006). *History, the Historian and the Nation: The Voice of a Nigerian Historian*. Ibadan: Heinemann.

Ikwuazom, A.C.S (1993). The Background History of Ndoni. Owerri: Totan Publishers Limited.

Isichei, E. (1976). *A History of the Igbo People*. London: Macmillan.

Izuegbu, I. (2003). *Utagba-Uno: A Political History AD 1600 – 2001.* Ibadan: Spectrum Books.

Izuegbu, I. (2011). Ossissa at a Glance, A Paper Presented at the Coronation Ceremony of Eze Omezulu Nelson Bini, Ossissa, Nigeria, Apri 23, 2011.

Izuogu, S. O. (2019). *A Critical Analysis of the History of Azagba (Ndokwa East LGA, Delta State)*. Aboh: Brainhill Publishers.

Jack Jackson T.C.B (2015). *The Institution of the Family, Marriage, Kinship and Descent*. In Abasi-Ekong Edet (ed.); Selected Topics in Nigeria Peoples and Culture. Benin City, Dimaf Publishers.

Joshi, E., Biddanda, A., Popoola, J., Yakubu, et al. (2023). Whole-genome sequencing across 449 samples spanning 47 ethnolinguistic groups provides insights into genetic diversity in Nigeria. Cell Genomics. 3(9):100378. doi: 10.1016/j.xgen.2023.100378.

Keung, N. (2018). Border agents using DNA databases like familytree.com and ancestry.com to ID detainees, track relatives. *The Star*, 6 August 2018. https://www.thestar.com/news/gta/2018/08/06/border-agents-using-dna-databaseslike-familytreecom-and-ancestrycom-to-id-detainees-track-relatives.html.

Klein, N.A. (1996). Toward a New Understanding of Akan Origins. *Africa: Journal of the International African Institute* 66(2), 248-273.

Lauderdale, D.S., & Kestenbaum, B. (2000). Asian American Ethnic Identification by Surname. *Population Research and Policy Review* 19(3), 283–300.

Lewis, H.S. (1966). The Origin of the Gala and Somali. *Journal of African History* 7(1), 27–46.

Mateos. Pablo 2014. *Names, Ethnicity and Populations: Tracing Identity in Space*. Berlin, Heidelber: Springer-Verlag.

McNeil Jr., D. G. & Belluck, P. (2011). The New York Times. Experts Say DNA Match Is Likely a Parent or Child. https://www.nytimes.com/2011/05/03/science/03dna.html.

MedlinePlus. (2024). What are the Different Types of Genetic Tests? <https://medlineplus.gov/genetics/understanding/testing/types/>.

Mendoza, B., & Diallo, A. (2024). The Best DNA Testing Kit. *New York Times,* 30 January 2024. <https://www.nytimes.com/wirecutter/reviews/best-dna-test/>.

MyHeritage.com 2024. How Does DNA Matching Work? <https://education.myheritage.com/article/how-does-dna-matching-work/#:~:text=DNA%20Matching%20is%20the%20process,you%20have%20a%20common%20ancestor>.

N.A.I. File No. 26769. 1931. CSO 26/5, Nigeria. Vol. 1. Intelligence Report on the Benin – Aboh Clans, Ibo Tribe, Warri Province by G.B. Williams.

N.A.I. File No. 29300. 1939. Intelligence Report on the Kwale-Ibo Clans, Kwale Division, Warri Province by R.S. Mallison.

N. A. I. File No. 28384. 1933. C.S.O. 26, Intelligence Report on the Ishago [Ishiagu] Clan of Afikpo by H. Waddington.

News Agency of Nigeria (2024). New DNA survey shows 53% participation from Yoruba, 33% from Igbo; Hausa only 1.2%. <https://gazettengr.com/new-dna-survey-shows-53-participation-from-yoruba-33-from-igbo-hausa-only-1-2/>.

NIST.gov. (2024). How Do Companies Measure DNA to Discover Your Ancestry? <https://www.nist.gov/how-do-you-measure-it/how-do-companies-measure-dna-discover-your-ancestry>.

Nnaa Mehn TV. (2023). Eze Chima was never a Benin man, explained by a Benin high chief. https://www.youtube.com/watch?v=3UfbFEiz7DE.

Northcote, W.T. (2017). Anthropological Report on the Edo-Speaking Peoples of Nigeria. Part II: Linguistics. Victoria, Australia: Leopold Classic Library.

Nwaokocha, O.A. (2015). An Interrogation of the Anioma Identity. *Journal of the Historical Society of Nigeria* 24, 14-36.

Nwaozuzu, G.I. (2008). *Dialects of Igbo language*. Nsukka: University of Nigeria Press.

Nzei, A.A. (1997). Women and Power: A Case Study of The Ndokwa-Igbo Speaking People West of River Niger, Nigeria. M.Sc. Thesis, University of Nigeria.

Nzimiro, I. (1972). Studies in Iba Political Systems: Chieftaincy and Politics in Four Niger States. London: Frank Cass.

Nwachukwu, O. (2010). When the Empire mis-writes history. <https://www.vanguardngr.com/2010/06/when-the-empire-mis-writes-history/>

Nwanze, C. (2020). Anioma v Igbo. <https://www.vanguardngr.com/2020/05/anioma-v-igbo/>.

Odili, J.U. (2018). Indigenous agents and socio-religious changes in Ukwuaniland (Delta State) 1841-1941. *Igwebuike: An African Journal of Arts and Humanities*, 4(3), 60-73.

Ogedengbe, K.O. (19710. The Aboh Kingdom of the Lower Niger, C. 1650-1900. Ph.D Thesis, University of Wisconsin.

Ohadike, D.C. (1994). *Anioma: A Social History of the Western Igbo*. Athens: Ohio University Press.

Ojieh, C.O. (2003). The Ukwuani and their Neighbours in Precolonial Times. *Benue Valley Journal of Humanities*, 5: 87-96.

Okafor, C.E. (2006). Rebuttal to Article Titled: Ndokwa Not Igbo. *Nigeriaworld*, November 25, 2006. <https://nigeriaworld.com/feature/publication/okafor/112506.html#google_vignette>.

Okecha, S.A. (1995). *Ndokwaland: Waiting for the Coconut to Fall*. Owerri, Nigeria: T'Afrique International Associates (W.A.).

Okecha, S.A. (2024). Anioma State: Is it a reality? Ukwuani Trumpet’s Facebook post. <https://www.facebook.com/photo/?fbid=899318882209411&set=a.414985767309394>.

Okpevra, U.B. (2015). Is Ozoro and Uzere Clans’ Traditions of Origin Edoid or Igboid? Nsukka Journal of the Humanities, 23 (2), 12-30.

Okpewho, I. (1999). *Once Upon a Kingdom: Myth, Hegemony, and Identity*. Bloomington, Indiana: Indiana University Press.

Okolugbo, E.O. (2004). *The History of the Ukwuani and Ndosumili People of the Niger/Delta*. Benin City: Ethiope Publishing Corporation.

Okwu, I.D. (2024). Igbo Dialects and Igboid Languages. <https://okwuid.com/2020/04/22/igbo-dialects/>

Omenuwa, R.O. (2010). Ulor Festival in Owelle Okwumedo. A long Essay, Department of History and International Studies, Delta State University.

Onwuejeogwu, A.M. (1975). Some Fundamental Problems in the Application of Lexicostatistics in the Study of African Languages. *Paideuma: Mitteilungen zur Kulturkunde* 21, 6-17.

Onwuejeogwu, M. A. (1978). Evolutionary Trend in the History of the Development of the Igbo Civilization, in the Culture Theatre of Igboland in Southern Nigeria. Ahiajoku Lecturer, Owerri: Culture Division Publication, Government Press.

Opia, F.M. (2023). The Ogume Clan Development Association and Security Challenges Up To. A Long Essay, Department of History and International Studies, Delta State University.

Ozah, M.O. (2010). *Proudly UKWUANI: A History and Culture*. Lagos: Canal Paper Converters.

Ozah, M.O. (2021). Ukwuani: An Ethnic People and Language. *The Guardian*, September 26, 2021. <https://guardian.ng/opinion/ukwuani-an-ethnic-people-and-language/>.

Regalado, A. (2019). More Than 26 Million People Have Taken an At-Home Ancestry Test. MIT Technology Review. <https://www.technologyreview.com/2019/02/11/103446/more-than-26-million-people-have-taken-an-at-home-ancestry-test/>.

Seixas, P.C. (2004). *Theorizing Historical Consciousness*. Toronto: University of Toronto Press.

Shah, S. (2011). Theguardian.com. CIA organised fake vaccination drive to get Osama bin Laden's family DNA. https://www.theguardian.com/world/2011/jul/11/cia-fake-vaccinations-osama-bin-ladens-dna

Tishkoff, S.A., Gonder, Katherine M., Henn, Brenna M., Mortensen, Holly, Knight, Alec, Gignoux, Christopher, Fernandopulle, Neil, Lema, Godfrey, Nyambo, Thomas B., Ramakrishnan, Uma, Reed, Floyd A, Mountain, Joanna L. 2007. “History of Click-Speaking Populations of Africa Inferred from mtDNA and Y Chromosome Genetic Variation.” *Molecular Biology and Evolution* 24 (10): 2180–2195.

Titilayo, O.A., Samuel, A.O., David, O.O., & Adewunmi, T.I. (2018). Genetic variations among three major ethnic groups in Nigeria using RAPD. *Mol Biol Res Commun.* 7(2), 51-58. doi: 10.22099/mbrc.2018.26098.1280.

Torres, J.B., Doura, M.B., Keita, S.O.Y., & Kittles, R.A. (2012). Y Chromosome Lineages in Men of West African Descent. *PLoS One* 7(1), e29687. doi: 10.1371/journal.pone.0029687.

Uwechue, R. (2013). Origins of Delta Ibo. <https://nigeriaworld.com>.

Uti, O.J. (2006). *Umutu History, Culture and Development*. Agbor: Krisbec Press.

Veeramah, K.R., Connell, B.A., Pour, N.A. et al. Little genetic differentiation as assessed by uniparental markers in the presence of substantial language variation in peoples of the Cross River region of Nigeria. BMC Evol Biol 10, 92 (2010). <https://doi.org/10.1186/1471-2148-10-92>.

Williamson, K. (1973). The Lower Niger languages. *Oduma* 1(1), 32–5.

Williamson, K., & Blench, R.M. (2000). African languages: An introduction. Cambridge University Press.

Yao, Y-G., Long, N., Harpending, H., Fu, Y-X., Yuan, Z-G., & Zhang, Y-P. (2002). Genetic relationship of Chinese ethnic populations revealed by mtDNA sequence diversity. *American Journal of Physical Anthropology* 118(1), 63-76.

Appendix A: Researchers’ classification of DNA matches by ethnic groups *Notes*:

A table of numbers and letters

Description automatically generated with medium confidenceA table of information with numbers

Description automatically generated with medium confidenceA table of numbers with a number in the middle

Description automatically generated with medium confidenceA table of information with numbers

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1. Biafra is a defunct West African state with about 70% inhabitants from the Igbo heartland. [↑](#footnote-ref-1)
2. Kendal’s null hypothesis is *W* = 0 (i.e., there is no agreement among the assessors). If the test statistic *W* is 1, then all assessors agreed unanimously. If *W* is 0, then there is no agreement among the assessors. [↑](#footnote-ref-2)