

Ọṣẹ́ Dúdú: Exploring the Benefits of Yoruba Indigenous Black Soap in Southwest, Nigeria

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Résumé de l'article

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***Ọṣẹ́ Dúdú*: Exploring the Benefits of Yoruba Indigenous Black Soap in Southwest, Nigeria**

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Ọṣẹ́ Dú dú: Exploring the Benefits of Yoruba Indigenous Black Soap in Southwest, Nigeria

Abstract

This study explored the benefits of the production, sale, and consumption of Indigenous black soap (*ọṣẹ́ dú dú*) in southwest Nigeria. A multistage sampling technique was used to select 71 participants from Oyo, Ogun, and Lagos states. Participants were extensively interviewed, and their responses were analyzed and placed into themes. The study found certain economic- and health-related benefits attached to the production, sale, and consumption of black soap. These benefits could help drive sustainable development in Indigenous communities in Nigeria and the model could be used in Indigenous communities in other countries. *Ọṣẹ́ dú dú* was also a major ingredient, in conjunction with other herbs, in medicines that were perceived to have important health benefits. Policy recommendations are suggested.

Keywords

Indigenous knowledge, entrepreneurship, Nigeria, Yoruba, sustainable development, black soap (*ọṣẹ́ dú dú*)

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Disclaimer

The purpose of this study was to explore how Yoruba Indigenous communities use the production, sale, and consumption of the Indigenous black soap to drive sustainable development. While the medicinal uses of the soap by the Yoruba are a central part of this article, the article is not intended to give medical treatment advice. No medical treatment should be undertaken without consulting a qualified health practitioner. The black soap producers requested that details about the production of black soap be kept confidential. The authors have honoured this request and have only shared details that were approved by the producers who participated in the research.

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***Oṣe Dúdú*: Exploring the Benefits of Yoruba Indigenous Black Soap in Southwest, Nigeria**

The interaction of Indigenous people with their lands, territories, and natural resources produces knowledge that is not only community-based but also capable of providing the social, cultural, and economic information necessary for growth and survival (Kalafatic, 2007; Tharakan, 2015). To a large extent, Indigenous Peoples also have collective rights recognized by international law, which include the right to retain their own languages and other cultural foundations such as their traditional forms of livelihood via biocultural rights¹ arrangements (Bavikatte & Bennett, 2015). The ability of the Indigenous people to identify and utilize context-based solutions has, thus, led many authors, national policymakers, and foreign development donors to either direct their attention to or renew their interest in the potentiality of Indigenous livelihoods in propagating development (Dube & Musi, 2002; Olutayo & Akanle, 2009), especially for a sustainable one (Aluko, 2018; Olutayo et al., 2017; Rist et al., 2011).

However, despite the evidence and recognition of the potentiality of Indigenous knowledge in societal development, there persists a notion that the producers of this local knowledge wield little power (Ostberg, 1995; World Bank, 2004), especially because, from a colonial perspective, the knowledge is considered to be inferior to that of the West (Eriksen, 2007; Riseth, 2007; World Bank, 2004). As a result of this presumed inferiority, experts are still divided over the usefulness of Indigenous knowledge partly because of its epistemology and an assumed lack of rigour in the observations and “experimentation” involved in its production (Kolawole, 2001) and partly because of its practicality, which is based on trial and error (Briggs, 2005). Yet, scholars have demonstrated that these bits of Western and Indigenous knowledge exist side by side and form part of each other’s knowledge (Chambers, 1983; Peters, 2002; Sinclair & Walker, 1999). For instance, Chambers (1983) demonstrated how Indigenous knowledge has contributed to the advancement of science: For example, farmers discovered, based on their observations, that the sprouting of potatoes in storage was inhibited by diffused light. Scientists learnt from farmers on this occasion and disseminated their findings worldwide.

Based on the foregoing argument, it is not surprising that Western knowledge systems have been criticized for an inability to holistically address the socio-economic and cultural challenges in meeting basic human needs (Tharakan, 2015, Olutayo et al., 2017). This is because the solutions offered by foreign knowledge frameworks do not fit well into local knowledge systems, lack autonomy, and are inappropriately incorporated into development plans (Akanle et al., 2017). Several authors and experts have stressed that societal growth and development will be achieved if, and only if, the development plans of less-developed nations acknowledge the prevailing Indigenous knowledge systems in these societies (Aluko, 2018; Breidlid, 2009; Briggs, 2005; Hoppers, 2002; Kothari, 2007; Magni, 2016; Olutayo et al., 2017; Sillitoe, 2006; Rist et al., 2011; Tharakan, 2015).

Nigeria is enormously blessed with both natural and human resources (Kalejaiye et al., 2015). In terms of natural resources, Waziri (2017) noted that Nigeria could as well be the biblical Promised Land: a land endowed with large deposits of 44 different minerals spread across the country, with a favourable topographical terrain. In a country of over 180 million persons (National Bureau of Statistics, 2015), Nigeria is still faced with developmental challenges despite these enormous human and material endowments (Kalejaiye et al., 2015). Some of these endowments, especially forest resources, have been

¹ These are collective rights of communities to carry out traditional stewardship roles vis-à-vis nature, as conceived of by Indigenous ontologies (Bavikatte & Bennett, 2015).

found to have a close association with rural economic and health activities (Oluyole & Adeogun, 2005). Hence, they can only realize their full potential when their development is integrated into that of agriculture, large forest industries, natural resources development, rural manufacturing, and health-based enterprises (Oluyole & Adeogun, 2005). For instance, researchers have identified that non-timber forest products, such as firewood and sawdust ash, are being used, alongside agro-processing waste from agro-processing enterprises, by small-scale industries to produce consumer products such as black soap (Oluyole & Adeogun, 2005; Yusuf & Okoruwa, 1995).

The major aim of this study was to examine the developmental benefits attached to the production, sale, and consumption of *ose dúdú* in selected states in southwest Nigeria. This is mainly predicated on the fact that *ose dúdú* is an important Indigenous resource that is used for cutaneous bodily adornment and as a medical supplement in the southwestern region of Nigeria (George et al., 2006). The soap occupies a critical place within the web of Indigenous knowledge of the Yoruba people. It creates a means of livelihood and is used as a health supplement in the western part of Africa in age-old Yoruba communities. *Ose dúdú* is an essential tool for social and economic development in Nigeria due to its ability to cater to local development needs (Olatokun & Ayanbode, 2008). The next section of this article is aimed at familiarizing readers with the history, production, and uses of *ose dúdú*.

The History, Production, and Use of *Ose Dúdú*: A Review of Literature

Historically, black soap production constitutes one of the major occupations of the Yoruba people (Adewusi, 2018). As of 2006, the Yoruba population was approximately 42 million, which was about 35% of the entire Nigerian population (Ogundele, 2007). Some Yoruba are also located in the modern-day Republic of Benin and Republic of Togo in West Africa, as well as in Cuba and some Caribbean countries (Abimbola, 2006).

Ose dúdú originated from age-old Yoruba communities in the western part of Africa. However, the knowledge of how to produce this soap was not kept within the founding communities: women in other countries in West Africa were taught how to make it. For instance, the Ghanaians named the soap *alata samina*. This nomenclature originated from a Yoruba sub-group in what is now the Republic of Benin (Ogunbor, 2016). It is believed that the Yoruba women introduced *ose dúdú* recipes to the Ghanaians whilst trading pepper (Ogunbor, 2016). Pepper in one Yoruba dialect is called *ata* and those who sell pepper are called *alata* (i.e., pepper traders) and soap is called *samina* by Ghanaians. This formed the origin of the Ghanaian's black soap nomenclature that is referred to as *alata samina*, which in a Ghanaian dialect means "the pepper traders' soap."

Largely produced by women (Alo et al., 2012; Oluwalana et al., 2012), the making of *ose dúdú* from agro-based wastes, such as ash-derived alkali, has been an age-old craft in Nigeria and other West African countries. The production of the soap can be done with ease because it requires little capital and simple technology (Ukwendu, 2019). The resource is produced using wholesome ingredients that are essentially considered by the Indigenous Peoples as the "fruits of the earth," making black soap production very different than Western soaps. For instance, Kathy (2009) revealed that soap contains different ingredients such as palm oil, coconut oil, palm kernel oil, ash from various plants (including shea tree bark, cocoa pods, banana husk, and plantain leaves), and water. Also significant is the fact that Indigenous soap is used to prevent and/or treat health-related issues. Soaps produced from wood ash,

such as *ose dúdú*, are recognized and used in many different cultures around the world due to its efficient bactericidal and dermatological properties. Of utmost importance here is the study by Yusuf and Okoruwa (1995) who reported that the local manufacturing of *ose dúdú* increases the capacity of entrepreneurs to profit from it, which contributes to the productivity of the country and generates employment opportunities. Despite the criticality of this small enterprise for socio-economic development and the small amount of capital required for *ose dúdú* enterprise start-ups, it is most appalling that this enterprise has been hijacked by industrialists who exploit these resources to produce a more refined packaged black soap for the consumption of Nigerians.

Indigenous black soap is well known in African cultures as an ancient remedy for healthy skin. *Ose dúdú* enjoys a reputation for improving or eliminating uneven skin tone and reducing razor bumps caused by ingrown hairs and skin rashes (Ukwendu, 2019; Lin et al., 2017) better than the modern industrial-made soaps (Oyekanmi et al., 2014). The soap is also used in the treatment of many infectious diseases caused by microorganisms (Ikpor et al., 2012). In traditional medicine, the soap is a very common vehicle for the application of medicinal plants and also for the treatment of skin diseases (Ahmed et al., 2005; Ajaiyeoba et al., 2003; Ajose, 2007; Erinoso et al., 2016).

Furthermore, the affordable price of *ose dúdú*, as a traditionally produced commodity, enables people from different tribes and economic statuses to buy and use it; it is a commodity that supports local economies in poor communities. Additionally, folklore medicine in Nigeria, particularly skin-associated therapies, rely on *ose dúdú* as a medium for applying traditional medicines (Anyakoha, 2011). Despite its widespread availability, medicinal benefits, and “almost free” prices, nearly all the traditional methods of bodily adornment and Indigenous medical remedies in southwestern Nigeria are facing competition from more expensive alternatives that are either produced by foreign industrialists in Nigeria or imported from other countries (George et al., 2006). Locally produced black soap is natural and organic with high medicinal value; yet, fewer people are purchasing or marketing it (Olayide & Heady, 1982). It is against this backdrop that this study explored how the production, sale, and consumption of *ose dúdú* could help contribute to sustainable development in Indigenous communities in southwest Nigeria. In broad terms, the insights provided by this article will stress the importance of Indigenous knowledge as a pathway to achieve sustainable development in local economies.

Methods

Recruitment of Participants

A total of 2 producers, 24 sellers, and 45 consumers of black soap participated in this study. The study adopted a multistage sampling technique to recruit participants. First, Nigeria was clustered into the six major geopolitical zones. The southwest zone was purposively selected because the study was interested in *ose dúdú*, which is largely produced by the Yoruba in this region. More so, the Yoruba are known to be domiciled in the southwestern part of the country (Olutayo, 2014). The southwest region was further clustered into manageable units (states) out of which Oyo, Ogun, and Lagos were purposively selected. At this stage, major production sites and markets for Yoruba-made black soap were selected through purposive and snowball sampling techniques in order to locate producers and sellers of black soap. However, only 2 producers out of the 12 that were contacted were willing to participate in the study. A major reason for non-participation, according to the producers, was to safeguard the knowledge of black

soap production from knowledge scavengers. In order to locate consumers, the selected states were further clustered into senatorial districts. Three senatorial districts within each state were selected, totalling to nine senatorial districts. Within each district, five black soap consumers were identified via purposive and snowball sampling techniques.

Data Collection and Analysis

Qualitative methods were used to gather data from the field. The adoption of qualitative methods was predicated on the fact that little is known on the subject matter, and qualitative methods allow research participants to express themselves in an unrestricted manner, which allows the research to gain new insights into the subject of interest. Furthermore, qualitative methods have the major strength of incorporating richness, depth, nuance, multi-dimensionality, and complexity into the research, which are needed for exploratory research of this nature (Mason, 2002; Ritchie & Lewis, 2003).

The instrument for data collection was an in-depth interview guide. The guide was examined by three Yoruba experts within the field of social anthropology and Indigenous livelihoods to ensure the suitability of the interview questions. Their suggestions were incorporated into the guide. Also, a pilot study was conducted to identify and correct and/or remove ambiguous items in the interview guide. The interviews with producers and sellers of Indigenous black soap were mainly conducted in the Yoruba language by research assistants who were highly proficient in the language. This is because *ose dúdú* entrepreneurs in this geographical area had little or no formal education; thus, they were more comfortable conversing in their local language. In addition to the Yoruba language, the research assistants made use of Pidgin English to conduct interviews among black soap consumers. Interviews took place in July of 2018. Interview sessions were tape recorded and transcribed into the English language by experts proficient in all three languages (i.e., Yoruba, English, and Pidgin). These transcripts were rechecked by language experts to ensure that the original meaning was retained.

Using a grounded theory approach, data were reduced; that is, they were selected, simplified, classified, and connected. A key element of this stage is coding the data and organizing the codes around the emerging themes of the study. In order to code the data, the researchers familiarized themselves with the transcripts and reflected on the meaning in order to identify the structure of the data's themes (Mason, 2002). Recurring themes and ideas about the benefits of *ose dúdú* were searched for and identified. This coding process was done using Atlas.ti Version 6.2.

Ethical considerations such as anonymity, privacy, voluntariness, and non-maleficence were adhered to during the research work. These were discussed with participants as part of the introduction to the study and oral consent was obtained from all participants. However, data on the production process of the black soap was kept confidential due to its importance to the producers of the soap. This, according to the participants, was to prevent knowledge scavenging.

Results and Discussion

Producers

In order to understand the role of *ose dúdú* and various nuances in its production, sale, and utilization, it is pertinent to examine the sociodemographic distribution of participants (Table 1).

Table 1. Socio-Demographic Characteristics of Yoruba Producers of *Ọṣẹ Dúdú* in the Study

Variables	Responses	
	Participant 1	Participant 2
Sex	Female	Female
Age	41 years	85 years
Highest level of education	Primary education	No formal education
Duration in business	32 years	47 years
Net worth of business	₦25,000 (US\$69.40)	₦17,000 (US\$47.20)
Frequency of production per month	6	3
Average income per production	₦2,200 (US\$6.10)	₦2,000 (US\$5.60)

In this study, both participants who were producers in black soap were Yoruba women. Among producers of *ọṣẹ dúdú* in Nigeria, the majority are women (Alo et al., 2012; Oluwalana et al., 2012) because it has historically been perceived as a feminine occupation (Ogunbor, 2016); hence, it is seen by many Yoruba as an occupation meant only for women in the context of their traditional beliefs (Osunwole, 2018). The *ọṣẹ dúdú* producers in this study had relatively low levels of education (see Table 1). The average age of producers in the study was 63 years, indicating that *ọṣẹ dúdú* is predominantly produced by older women. Meanwhile, the average worth of the participants' businesses was ₦21,000 (US\$58.30). Ukwendu (2019) found that the production of black soap requires little capital, which means it is accessible to people who have fewer resources with which to start a business. In addition, the *ọṣẹ dúdú* producers in this study made an average of ₦2,100 (US\$5.80) per production, totalling an average of ₦9,600 (US\$26.70) per month, which is 53.3% of the country's statutory minimum wage. The profits from the production and sale of *ọṣẹ dúdú* are largely dependent on the frequency of production. Therefore, higher production frequency attracts higher profit.

Sellers

Similar to the producers, the vast majority of sellers of *ọṣẹ dúdú* in this study were female (96%, Table 2). However, this is not to say that the males were not found engaging in the business, but they were far fewer in number. In probing this finding, we asked the only male participant to describe his motivation for venturing into a business that was presumed by many to be feminine in nature. He stated that the business was initially run by his mother. He decided to venture into the business after his mother's death because she had established a sizable customer base. He said:

... my mum sold these kinds of stuff at a point in time and I would usually assist her at the market whenever I returned from school during my childhood days. It was after her demise that I decided to venture into the business since we still had some of those that patronize her business coming around... I've been doing it ever since then. (Male, seller, 54 years, Lagos State)

Table 2. Socio-Demographic Characteristics of Yoruba Sellers of *Ọṣẹ Dúdú* in the Study

Variables and Categories	Frequency	Percentage
Sex		
Male	1	4.2
Female	23	95.8
Age ($M=65$)		
Less than 50 years	3	12.5
50 years or more	21	87.5
Highest Level of Education		
No formal education	18	75.0
Primary education	1	4.2
Secondary education	5	20.8
Marital Status		
Single	1	4.2
Married	4	16.7
Separated or divorced	2	8.3
Widowed	17	70.8
Position Held		
Business owner	22	91.7
Apprentice or employee	2	8.3
Number of years in business		
Less than 10 years	1	4.2
10 to 20 years	2	8.3
More than 20 years	21	87.5
<i>N</i>	24	

The majority of participants (approximately 88%) were aged 50 years or more (see Table 2), which has been found in other studies (Olaolorun & Lawoyin, 2009). Hence, the majority of *ọṣẹ dúdú* sellers in the study were older women. The domination of older women selling *ọṣẹ dúdú* was explained by the use of the soap by Indigenous health and spiritual experts, such as *babalawo*, *alfa*, *onisegun*, and pastors, who prefer to purchase *ọṣẹ dúdú* from women who are post-menopausal:

When any *babalawo*, *alfa*, *onisegun*, or pastor wants to buy *ọṣẹ dúdú*, they prefer to buy it from an elderly woman because they would not want to patronize a woman that still observes her menstrual cycle. This is because buying the soap from the latter will adversely affect the functionality of what they intend to use it for. (Female, seller, 75 years, Lagos State)

It is, therefore, likely that the purchasing preferences of the experts may have influenced the proportion of older women in the *ọṣẹ dúdú* selling business. However, it is worthwhile to note that, just like the

producers, the majority of black soap sellers (about 75%) had no formal education. Furthermore, the majority (70.8%) of sellers were widows, which indicates that the sale of *ọṣẹ dúdú* constitutes an important economic opportunity for widows in southwestern Nigeria (see Table 2). Also, of note is that, based on our findings, the *ọṣẹ dúdú* selling business is dominated by the Yoruba. This may be linked to the fact that the study was conducted in a geographical space that is considered to be part of the Yoruba nation (Olutayo, 2014). The majority of business owners in this study were against the idea of engaging apprentices or employees in their businesses (91.7%) because candidates were perceived to lack sufficient knowledge on the subject matter due to the fact that they were generally quite young. Lastly, Table 2 shows that the majority of participants have been in the black soap business for more than two decades. This buttresses the point that the *ọṣẹ dúdú* business is a form of Indigenous entrepreneurship that is often passed from one generation to the other (Ogunbor, 2016).

Consumers

As shown in Table 3, the majority of *ọṣẹ dúdú* consumers were male. Consumers also tended to dwell in urban settlements and were relatively young. The data show that 40.0% of consumers had a secondary school-level of education. It is interesting to note that, while producers and sellers of *ọṣẹ dúdú* are largely older, rural women with relatively low levels of education, the soap is largely consumed by young, moderately educated urban dwellers. The *ọṣẹ dúdú* entrepreneurs in the study were still working beyond the mandatory working age for the private and public sectors, which is 55 and 60 years respectively. In addition, they possessed relatively low levels of formal education, which is often a requirement to secure decent employment. When asked if they would consider starting an *ọṣẹ dúdú* business, most consumers perceived it as being incongruent with the identity of urban millennials and felt that the profits would not be sufficient to meet their material needs. In fact, many consumers viewed the soap business as “crude”; hence, it did not fit with their level of educational attainment and social status. *Ọṣẹ dúdú* consumers were primarily Yoruba and more than half were married. Finally, the majority (73.1%) of respondents earned ₦18,000 (US\$50) or more. This implies that few in the consumer group earned less than the statutory wage in Nigeria. The foregoing suggests that *ọṣẹ dúdú* is in demand among (a) males, (b) those who are married, (c) those who identify as Yoruba, (d) those who were born between the 1960s and 2000s, and (e) those with a secondary level of education.

Table 3. Socio-Demographic Characteristics of Consumers of Qşę Dúdú in the Study

Variables and Categories	Frequency	Percentage
Sex		
Male	24	53.3
Female	21	46.7
Place of Residence		
Rural	14	31.1
Urban	31	68.9
Age ($M=43$)		
Less than 50 years	30	66.7
50 years old or more	15	33.3
Highest Level of Education		
No formal education	1	2.2
Primary education	9	20.0
Secondary education	18	40.0
Tertiary education	17	37.8
Ethnic Affiliation		
Yoruba	35	77.8
Igbo	4	8.9
Hausa	1	2.2
Edo	5	11.1
Marital Status		
Single	12	26.7
Married	28	62.2
Divorced or separated	2	4.4
Widowed	3	6.7
Average Monthly Income		
Less than ₦18,000 ($>US\$50$)	12	26.7
₦18,000 or More ($\leq US\$50$)	33	73.3
<i>N</i>	45	100.0

The Benefits of *Ose Dúdú* Production and Sale

Profitability

Producers of *ose dúdú* emphasized the profitability of the business. However, one participant stressed that substantial knowledge was required to make a good income from selling *ose dúdú*. People may want to invest in the black soap business because of its potential profits, but without sufficient knowledge the result can be an outright collapse of the venture:

The *ose dúdú* business is a very profitable venture if, and only if, one is very knowledgeable about the whole business. If you invest ₦2,500 in the black soap business, you should expect a minimum of ₦7,500 in profits. But, if it were to be those that buy for use or those that want to resell, they can make up to ₦14,000. However, you must not venture into it without having good knowledge about the business. (Female, producer, 41 years, Oyo State)

Similarly, a participant asserted that *ose dúdú* businesses must be very profitable because a woman she knew who ran a black soap business out of her home had built a new house within a short period of time:

... it was the business she did that she was able to build a house for herself. She produces and sells *ose dúdú*. Occasionally, I usually help her sell whenever she goes out to collect money from other customers. (Female, consumer, 23 years, Ogun State)

Furthermore, a participant argued that her engagement in the *ose dúdú* business had given her the financial means to send her children to school abroad. However, while stressing her achievement as an *ose dúdú* entrepreneur, she also stated that the income generated from the business was largely dependent on the amount of money that was invested in it:

I generate a lot of income from the *ose dúdú* business to the extent that I am rich enough to send some of my children to study abroad. However, the quantum of profit gained from this soap business is dependent on the amount invested in it. When you invest a lot, it tends to draw large customers to you who you sell to at lower prices. For instance, when you gain ₦50 in a stock of soaps you sell for ₦1,000 to 500 customers each, you already gain ₦25,000. But when you buy in small quantities, you can't expect large volume buyers to patronize your business because the quantity you sell is not much. Besides, those who buy in small quantities sell their soap at higher prices than those who buy in large quantities. (Female, seller, 61 years, Lagos State)

Another participant explained that the *ose dúdú* business was a lucrative one. This participant stated that she restocks her shop every 9 days, which is an indication that selling *ose dúdú* is a fast-moving business:

All the people you see here have been engaging in the business full-time since 1965. Nine days cannot pass by without travelling to Oyo State, specifically Oja Oba, Oja Boode, and one new market they just created, to buy at least a basket [of black soap]. (Female, seller, 70 years, Ogun State)

Source of Employment

In addition to large profits, another set of participants stated that *oṣẹ dúdú* businesses created employment opportunities for interested persons. Specifically, one of the participants stated that the processing of the soap involved a number of different stages, which required a number of people with the requisite skill to successfully make it:

Oṣẹ dúdú creates employment opportunities for people that are interested in learning and being their own boss because soap is an essential commodity that is used on daily basis; we cannot do anything without using soap for healthy living and for perfect cleanliness. Also, the production of black soap has a lot of processes in it, so it cannot be done by one person. It needs many hands for it to come out perfectly; in this case, it creates employment opportunities. (Female, producer, 85 years, Oyo State)

Participants stressed that businesses selling *oṣẹ dúdú* also created employment opportunities. One participant shared that, in her experience, *oṣẹ dúdú* is a business venture that creates employment opportunities and is also very profitable:

It is a good product and a product that can create employment for the unemployed . . . I am happy to tell you that the income from *oṣẹ dúdú* sales made at my mother's shop has made her a landlady. Therefore, the business is highly profitable. Imagine a business from which my mother could build a house and also she used it to send her children to tertiary institutions. That tells you that is a profitable product. (Female, seller, 60 years, Ogun State)

One of the consumers of *oṣẹ dúdú*, who had close contacts in the *oṣẹ dúdú* business and was quite knowledgeable about it, supported the assertion that it was profitable. In particular, he stated that *oṣẹ dúdú* sellers tend to make more money than producers. Based on this fact, he stressed that many women from villages and towns in Osun State had abandoned other handiwork to venture into the *oṣẹ dúdú* business:

Those selling black soap gain more profits than those producing it. Before a black soap producer builds one house, a black soap wholesaler or retailer would have built two houses. The majority of the ladies in Ikirun and Ada have their respective handiwork. However, they now abandon their handiwork for *oṣẹ dúdú* because the selling aspect of the business is very profitable. (Male, consumer, 73 years, Ogun State)

The foregoing showed that the production of *oṣẹ dúdú* has two major economic benefits: high profitability and the creation of employment opportunities across all stages of the production process. However, the profitability of the business is dependent on the investor's knowledge of *oṣẹ dúdú*. Job opportunities were often related to producing the components used in making *oṣẹ dúdú*, as well as making the product itself. For instance, making *eyin aro* (mordant water), which is one of the main ingredients in *oṣẹ dúdú* production, created jobs for local people.

Furthermore, the same benefits, profitability, and employment creation, were attached to the sale of *oṣẹ dúdú*. Selling was considered to be more profitable than producing *oṣẹ dúdú*. The level of profitability of *oṣẹ dúdú* selling business was seen as being largely dependent on the amount of money invested in it.

Entrepreneurs with relatively large investments in their *ọṣẹ dúdú* business often obtained the funds from a cooperative organization and/or thrift society. Proximity to consumers also determines profitability, with wholesalers and retailers that were closer to consumers profiting more. These findings corroborate those of Yusuf and Okoruwa (1995) who reported that locally manufactured *ọṣẹ dúdú* was capable of financially supporting black soap entrepreneurs, generating employment opportunities for local people, and contributing to the revenue of countries.

The Benefits of *Ọṣẹ Dúdú* Utilization

Health Benefits

Participants described how they used *ọṣẹ dúdú* for its perceived health benefits during the in-depth interview sessions. One of the participants, who is a producer, stated that *ọṣẹ dúdú* can be used for what is known as *first child syndrome*. Specifically, it involves the belief in Yorubaland that, when a mother becomes pregnant, the pregnancy will affect the health of her other children, which could manifest in the form of a fever. Several participants believed that *ọṣẹ dúdú* could be used to treat first child syndrome and similar conditions. However, one participant stated that the soap must be used in conjunction with certain herbs before the purported benefit can be derived:

When a woman is not only pregnant but has already borne children in addition to the pregnancy, it is believed that the pregnancy can affect one or more of the woman's children's health and can manifest in the form of several illnesses. All one needs to do is to meet local herb sellers (i.e., *elweomo*) and explain to them as they are very knowledgeable about the herbs needed to add to black soap for this purpose. (Female, producer, 85 years, Oyo State)

Participants stressed that *ọṣẹ dúdú* had curative and preventive benefits. They specifically argued that the soap could be used for curative purposes such as fever, *jedijedi* (haemorrhoids), and colds during Harmattan² season. A participant also stated that the soap was believed to play a role in purification and was used to treat infections in the blood:

Ọṣẹ dúdú can be used for several curative purposes including, but not limited to, treating fever and high body temperature, skin toning, and can be used as a coping tool during Harmattan. For instance, in the olden days, our mothers would take a very small portion of *ọṣẹ dúdú* and add it to water. When the water foams, they then removed the remaining particles of the soap. The foamy water is what made the elderly of those days healthy. This is because it kills all infections in the blood. During this period, when our mothers want to take this mixture, they probably just had sexual intercourse. The portion of *ọṣẹ dúdú* that has been added to water will never melt. (Female, seller, 75 years, Oyo State)

Participants also described using *ọṣẹ dúdú* for *opa eyin* (i.e, back pain) and stomach pain. Among the Hausa, *sabulun salo*, which translates as “drinking soap,” is a central health practice:

It cures stomach pain. That's why we mallams [Hausa men] use it. We cannot do without drinking it. That's the reason we call them *sabulun salo* and *sabulun wunka*. *Sabulun salo* means

² Harmattan is an atmospheric condition characterized by cool, dry wind that usually carries a large amount of dust.

“soap for drinking.” *Sabulun wunka* means “soap for bathing.” (Male, consumer, 50 years, Lagos State)

Furthermore, in the study, more than half of the participants agreed that *ose dúdú* is the best bathing soap; hence, must be used for every newborn’s first bath irrespective of the parents’ socioeconomic status. The practice of bathing newborns with black soap was to prevent the child from developing body odour later in life:

This is the soap that is used on a newly born baby. Other soaps can be used afterward but this is what they use first. This soap is used to wash the body, so the child won’t have body odour in years to come. (Female, seller, 60 years, Lagos State)

Another participant had this to say:

Yoruba call it *oyi*, a pungent odour that comes out from someone that sweats. At this point, the child is said to have developed *oyi*. This implies that the day the person was given birth to, was the day the person contacted that ailment because they didn’t bath him or her thoroughly as a newborn. That’s the reason we are expected to bath our children ourselves when we finish the hospital bathing. All this is to prevent the child from contacting *oyi*. (Female, seller, 75 years, Lagos State)

Another participant stated that *ose dúdú* mixed with other herbs or fruits was used to treat teething issues and measles among children:

It can serve many functions at a time. It can be used to prepare medicinal concoction for measles and teething among children et cetera. For instance, if you want to prepare a herbal cure for measles, the first thing you need is black soap with *ewe arere* [leaf of *Triplochiton scleroxylon* and *ewe eso* [leaf of *Lagenaria breviflora*]. For teething, you can use *ewe arika* [leaf of *Lecaniodiscus cupanioides*], especially the roasted species, with black soap. (Female, seller, 70 years, Lagos State)

For a teething pain treatment, another participant said:

You can make use of coconut water with *ose dúdú* to prepare a teething concoction for children. This concoction is to be used for bathing the child and you have to make sure that no one eats the coconut; the ailment will be transferred to anyone that eats the coconut. To prepare the teething concoction for children, you can also make use of corn tassels. (Male, consumer, 73 years, Ogun State)

A participant described how it was used for measles by saying:

For measles, we can use *tagiri gbigbe* [dried leaf of *Lagenaria breviflora*] and *ewe ririn* [leaf of *Peperoma pellucida*], with *ose dúdú*; we will mix everything together and use it to bathe the child and the child will be alright. (Female, seller, 30 years, Ogun State)

Instead of a mixture of herbs and *ọṣẹ dúdú*, another participant stated a different method used for measles:

Measles can be cured when one buys *ọṣẹ dúdú* and mixes it with alcohol or warm water. The liquid is then applied to the affected person's body and a little teaspoon is given to the same person. The person will defecate and thereafter regain his or her health status. By doing this, the measles element within the bloodstreams will be pulled out by drinking the concoction and those on the skin will dry off. This will work when you buy original. (Female, seller, 60 years, Ogun State)

The participant believed that *ọṣẹ dúdú* would only perform the aforementioned “wonders” if, and only if, authentic, unadulterated *ọṣẹ dúdú* is purchased.

Many participants prescribed several curative functions that *ọṣẹ dúdú* was said to have. A participant, who is a herb seller (i.e., *eleweomo*), stated that one can take *ọṣẹ dúdú* with a herb to cure feeling excessively cold. In addition, she also stated that the *ọṣẹ dúdú*, in addition to several roasted herbs, can be used to cure leg pains that are often experienced by the elderly, especially among women:

There are so many things you can mix with *ọṣẹ dúdú*. For instance, if one is cold, you take *ibon eta* [part of a civet, a mammal, located around its anus and testicles], mix it with black soap, bathe with it, and one will feel alright. Also, if something goes wrong with your leg, like *arun ese* [i.e., leg issues], we roast many things, mix it with soap, and package it in a plastic plate and one will use it to bathe. It will cure it. (Female, seller, 70 years, Ogun State)

A seller of *ọṣẹ dúdú* in Lagos state described what she believed to be a novel medicinal benefit in which *ọṣẹ dúdú* and lime water was used to treat fibroids. Fibroids are abnormal growths that develop in or on a woman's uterus. Sometimes these tumours become quite large and cause severe abdominal pain and heavy periods. The seller said that, in order to achieve a high level of functionality, the lime for the mixture must not be sourced from within the person's vicinity. She mentioned two major methods that could be used:

It can be used to cure fibroids. As it is, if you want to use it for fibroids, you'll take a little morsel and squeeze the lime. This lime must not be bought outside; you can either get it from your backyard or from someone's farm that is close to you with permission. You can swallow some portion of *ọṣẹ dúdú* and wash it down with the lime water. By going through this procedure, it is expected that the soap dissolves inside your stomach and correspondingly dissolve the fibroids gradually. For those that cannot go through the aforementioned process, the soap and lime water can be burnt to ashes and mixed with pap thereafter. (Female, seller, 50 years, Lagos State)

A young participant stated that *ọṣẹ dúdú* was used in the treatment of open wounds. She specifically said that the use of methylated spirits and disinfectants proved to be ineffective when she had an open wound on her feet, and she decided to give *ọṣẹ dúdú* a try. She described two benefits of this method: her wound dried quickly, which had the secondary benefit of sparing her the pain from chemical-made disinfectants:

I had an accident where I sustained several wounds. After a series of treatments, such as normal washing with spirits and disinfectants, the wound still maintained its freshness and it subjected me to serious pain. Then, I remembered what I learned in class about *ọsẹ dúdú* and I decided to give it a try. Lo and behold, the wound dried the next day. (Female, consumer, 25 years, Lagos State)

Among the Yoruba in southwest Nigeria, *ọsẹ dúdú* was seen as a critical medical supplement that was used to treat a wide range of conditions, including those commonly experienced by children, women, and the aged. Black soap was important part of their health practices because it was affordable. It was seen as being effective and efficient in terms of treatment time. A number of scholars who have studied traditional medicine have found that soaps are a very common vehicles for the application of medicinal plants, particularly for the treatment of skin conditions (Ahmed et al., 2005; Ajaiyeoba et al., 2003; Ajose, 2007; Anyakoha, 2011; Erinoso et al., 2016). According to participants, *ọsẹ dúdú* is used for health issues such as first child syndrome, fever, cold, stomach pain, body odour, measles, teething, fibroid, and as a disinfectant and drying agent. Ajaiyeoba et al. (2003) also found that black soap was used to treat a wide range of illnesses. Oyakanmi et al. (2014) examined the quality of *ọsẹ dúdú* with that of industrial-made soap and found the former to be of higher quality. However, the participants stressed the importance of using authentic *ọsẹ dúdú*, given the recent rise in knock-off black soap on the market. The benefits of *ọsẹ dúdú* were linked to its quality, which required that the proper procedures and rules were strictly followed and adhered to by the producer.

Skin Benefits

Participants also stressed that black soap has many skin benefits, particularly if a person uses black soap for regular bathing. A black soap seller stated that *ọsẹ dúdú* is chemical free with a natural and pleasant fragrance that is suitable for all skin types. This respondent stated that the soap was known to make the skin glow and could be used by people with rashes and acne. In her words:

It has several benefits because it has no chemicals added to it, it is so natural and ancient, and it does have a natural and pleasant fragrance that won't irritate even the most sensitive skin types. It smells nice and it contains some natural ingredients that make the skin beautiful and glowing. It contains no chemicals and is a valuable rashes fighter; it is also good for people with black acne. Such a person with body rashes and acne should use the *ọsẹ dúdú* at least twice a day to cleanse the body and face both in the morning and at night before bed for the best results. (Female, seller, 61 years Oyo State)

A consumer of black soap said:

... without mixing any [chemical] substance with black soap, when used, it makes the skin glow. The interesting part is that it works immediately on the skin because of the natural ingredients when compared to Western or modern soap. Black soap is used for all skin complexions. However, some people complain that, when they use black soap, they get darker; these people might have purchased the adulterated ones. The original *ọsẹ dúdú* enhances your natural complexion. (Male, consumer, 41 years, Lagos State)

Additionally, *ọsẹ dúdú* had a number of beauty applications:

Another thing is that there are some people using it as a bleaching condiment after they might have added *osun* (i.e., camwood) to *ọṣẹ dúdú*. It can also be used to remove stretch marks. I also heard that ladies mix *ọṣẹ dúdú* with Indian hemp to grow their hair. Being a local soap, one can mix other herbal condiments with it. (Male, consumer, 50 years, Ogun State)

One could say that *ọṣẹ dúdú* not only performs as a medical treatment, but it also plays a role in skin cleansing and beautification, especially when other natural substances were added to it. Ukwendu (2019) also found that *ọṣẹ dúdú* was used in the treatment of rashes and black acne on the face and body. Lin et al. (2017) found that black soap was used for a wide range of dermatologic conditions, including acne, dark spots, razor bumps, eczema, and fine lines. Ikpoh et al. (2012) compared the efficacy of different types of soap in treating skin conditions and found black soap worked significantly better than *detto*, *dudu osun*, and *zee* and *tura* soap. As in its medicinal uses, the skin benefits were linked to the use of authentic *ọṣẹ dúdú* used in conjunction with other ingredients.

Although, Western-based knowledge could inform these health-related treatments, it does not fit well into the belief system of Yoruba; hence, they consider it to be inappropriate (Akanle et al., 2017). Therefore, the use of *ọṣẹ dúdú* is perceived by the Yoruba as a culturally appropriate intervention that meets the health, hygiene, and beauty needs of people living in Yoruba communities (see also Erinoso et al., 2016).

Conclusion

This article explored the benefits associated with the production, sale, and use of *ọṣẹ dúdú* in southwest Nigeria. *Ọṣẹ dúdú* is a profitable business for producers and sellers that contributes to their livelihoods. *Ọṣẹ dúdú* is also used to treat a number of health conditions, such as first child syndrome, fever, cold, haemorrhoids, stomach pain, body odour, measles, teething, fibroid, and as a disinfectant and drying agent. However, *ọṣẹ dúdú* required extensive knowledge to use properly because it often had to be combined with other herbs in order to have the desired effect. *Ọṣẹ dúdú* provides income and employment for people who have fewer opportunities in the society, such as people with lower levels of education, widows, and older women, and enables people to address health-related issues using an accessible and affordable resource. *Ọṣẹ dúdú* and the Indigenous knowledge associated with it could help Indigenous people and communities improve their socio-economic conditions and health. Therefore, the use of *ọṣẹ dúdú* can help drive the UN's Sustainable Development Goals, especially Goal 1 (no poverty) and Goal 3 (good health), if they are well integrated into the sustainable development policy and programmes in Indigenous communities in southwestern Nigeria.

Policy Recommendations

The study shows that the sale and production of *ọṣẹ dúdú* is a critical Indigenous livelihood, particularly for older, widowed women with lower levels of education. At the production stage, there were entrepreneurial opportunities that could conveniently accommodate four value chain actors, which include: the supply of raw materials and agro wastes such as cocoa pod, locus bean pod, corn cob, and sawdust that forms the ash used in the production stage; direct supply of ash to be used in *ọṣẹ dúdú* production; building and supply of technical equipment used in the production process; and the production and supply of authentic *eyin or omi aro* (i.e., mordant water). In addition, there were at least two business opportunities at the market stage as *ọṣẹ dúdú* beauty experts or soap sellers, which was

found to be highly profitable. In achieving this, there is a need for interventions that will incorporate *oṣẹ́ dúdú* into policies and programmes aimed at Yoruba communities. For instance, vocational centres could be established to support entrepreneurs by teaching business and marketing skills. This study calls for an expansion of entrepreneurship curricula in order to accommodate Indigenous entrepreneurship praxis, especially among the economically vulnerable women across Africa.

Based on health-related benefits attached to the use of *oṣẹ́ dúdú*, the soap could also be integrated into health policies to improve health, particularly among children, nursing mothers, and the elderly. In achieving this, further research in partnership with Indigenous communities is required to understand the health remedies and their uses, their place within the culture, and how they can be incorporated into the economic and health policies of the Nigerian nation. This could help achieve sustainable development in Indigenous Yoruba communities in southwest Nigeria.

References

- Abimbola, K. (2006). *Yoruba culture: A philosophical account*. Iroko Academic Publishers.
- Adewusi, A. O. (2018). *Oṣẹ́ dúdú (Indigenous black soap) value chain in the southwest, Nigeria* [Unpublished master's thesis]. University of Ibadan.
- Ahmed, O. A., Odunukwe, N. N., Akinwale, O. P., Raheem, T. Y., Efiemokwu, C. E., Ogedengbe, O., & Salako, L. A. (2005). Knowledge and practices of traditional birth attendants in prenatal services in Lagos State, Nigeria. *African Journal of Medicine and Medical Sciences*, 34(1), 55-58.
- Ajaiyeoba, E. O., Oladepo, O., Fawole, O. I., Bolaji, O. M., Akinboye, D. O., Ogundahunsi, O. A., Falade, C. O., Gbotosho, G. O., Itiola, O. A., Happi, T. C., Ebong, O. O., Ononiwu, I. M., Osowole, O.S., Oduola, O. O., Ashidi, J. S., & Oduola, A. M. (2003). Cultural categorization of febrile illnesses in correlation with herbal remedies used for treatment in Southwestern Nigeria. *Journal of Ethnopharmacology*, 85(2-3), 179-185. [https://doi.org/10.1016/s0378-8741\(02\)00357-4](https://doi.org/10.1016/s0378-8741(02)00357-4)
- Ajose, F. O. (2007). Some Nigerian plants of dermatologic importance. *International Journal of Dermatology*, 46, 48-55. <https://doi.org/10.1111/j.1365-4632.2007.03466.x>
- Akanle, O., Adesina, J., & Fakolujo, O. (2017). *Jedijedi*: Indigenous versus Western knowledge of rectal haemorrhoids in Ibadan, Southwestern Nigeria, *African Studies*, 76(4), 530-545. <https://doi.org/10.1080/00020184.2017.1372121>
- Alo, R., Achem, B., Mohammed, B., & Abdulquadir, A. (2012). Profitability analysis of black soap production in Ekiti State, Nigeria. *Continental Journal of Agricultural Economics*, 6(3), 8-14.
- Aluko, Y. A. (2018). Women's use of Indigenous knowledge for environmental security and sustainable development in Southwest Nigeria. *The International Indigenous Policy Journal*, 9(3), 2. <https://doi.org/10.18584/iipj.2018.9.3.2>

- Anyakoha, U. (2011). *Home economics for junior secondary schools*. Africana First Publisher.
- Bavikatte, K. S., & Bennett, T. (2015). Community stewardship: The foundation of biocultural rights. *Journal of Human Rights & the Environment*, 6(1), 7-29. <https://doi.org/10.4337/jhre.2015.01.01>
- Breidlid, A. (2009). Culture, Indigenous knowledge systems and sustainable development: A critical view of education in an African context. *International Journal of Educational Development*, 29(2), 140-148. <https://doi.org/10.1016/j.ijedudev.2008.09.009>
- Briggs, J. (2005). The use of Indigenous knowledge in development: Problems and challenges. *Progress in Development Studies*, 5(2), 99-114. <https://doi.org/10.1191/1464993405ps105oa>
- Chambers R. (1983). *Rural development: Putting the last first*. Longman.
- Dube, M. A., & Musi, P. J. (2002). *Analysis of Indigenous knowledge in Swaziland: Implications for sustainable agricultural development*. Africa Portal. <https://www.africaportal.org/publications/analysis-of-indigenous-knowledge-in-swaziland-implications-for-sustainable-agricultural-development/>
- Eriksen, C. (2007). Why do they burn the 'bush'? Fire, rural livelihoods, and conservation in Zambia. *Geographical Journal*, 173(3), 242-256. <https://doi.org/10.1111/j.1475-4959.2007.00239.x>
- Erinoso, S. M., Fawibe, O. O., Oyelakin, A. S., Ajiboye, A. A., & Agboola, D. A. (2016). Herbal recipes used for the traditional management of infantile dermatitis in Odeda, southwestern Nigeria. *African Journal of Traditional, Complementary and Alternative Medicines*, 13(3), 33-43. <https://doi.org/10.4314/ajtcam.v13i3.5>
- George, A. O., Ogunbiyi, A. O., & Daramola, O. O. (2006). Cutaneous adornment in the Yoruba of south-western Nigeria—past and present. *International Journal of Dermatology*, 45(1), 23-27. <https://doi.org/10.1111/j.1365-4632.2005.02684.x>
- Hopper, C. A. O. (2002). Indigenous knowledge and the integration of knowledge systems. In C. A. O. Hoppers (Ed.), *Indigenous knowledge and the integration of knowledge systems: Towards a philosophy of articulation* (pp. 2-22). New Africa Books.
- Ikpo, I. S., Lennox, J. A., Agbo, B. E., Udoekong, N. S., Ekpo, I. A., & Iyam, S. O. (2012). Comparative studies on the effect of locally made black soap and conventional medicated soaps on isolated human skin microflora. *Journal of Microbiological Biotechnology*, 2(4), 533-537.
- Kalafatic, C. (2007). *Indigenous Peoples' sustainable livelihoods*. Food and Agriculture Organization of the United Nations. <http://www.fao.org/tempref/docrep/fao/010/aj033e/aj033e02.pdf>
- Kalejaiye, P. O., Sokefun, E., & Adedeji, A. O. (2015). Leadership and human resources development in Nigeria: Factors for national development. *The Nigerian Journal of Sociology and Anthropology*, 13(1), 127-144.

- Kathy, M. (2009). *Magazine on independent review of African black soap*, 6, 3-4.
- Kolawole, O. D. (2001). Local knowledge utilization and sustainable rural development in the 21st century. *Indigenous Knowledge and Development Monitor (Netherlands)*, 9(3), 13-15.
- Kothari, A. (2007). *Traditional knowledge and sustainable development*. International Institute for sustainable development. https://www.iisd.org/pdf/2007/igsd_traditional_knowledge.pdf
- Lin, A., Nabatian, A., & Halverstam, C. P. (2017). Discovering black soap: A survey on the attitudes and practices of black soap users. *The Journal of Clinical and Aesthetic Dermatology*, 10(7), 18-22.
- Magni, G. (2016). *Indigenous knowledge and implications for the sustainable development agenda*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000245623>
- Mason, J. (2002), *Qualitative researching* (2nd ed.). Sage.
- National Bureau of Statistics. (2015). *Annual abstract of statistics*. Federal Republic of Nigeria.
- Ogunbor, E. (2016). What is the beauty benefits of “black soap”? Lola OJ has all the answers. *Bella Naija*. <https://www.bellanaija.com/2016/03/lola-oj-has-answers-to-your-black-soap-questions-watch/>
- Ogundele, S. O. (2007). Aspects of Indigenous medicine in South Western Nigeria. *Studies on Ethno-Medicine*, 1(2), 127-133. <https://doi.org/10.1080/09735070.2007.11886305>
- Olaolorun, F. M., & Lawoyin, T. O. (2009). Experience of menopausal symptoms by women in an urban community in Ibadan, Nigeria. *Menopause*, 16(4), 822-830. <https://doi.org/10.1097/gme.0b013e318198d6e7>
- Olatokun, W. M., & Ayanbode, O. F. (2008). Use of Indigenous knowledge by rural women in the development of Ogun State: Agriculture and food production. *Indilinga African Journal of Indigenous Knowledge Systems*, 7(1), 47-63.
- Olayide, S. O., & Heady, E. O. (1982). *Introduction to agricultural production economics*. Ibadan University Press.
- Olutayo, A. O. (2014). ‘Verstehen’, everyday sociology and development: Incorporating African Indigenous knowledge. *Critical Sociology*, 40(2), 229-238. <https://doi.org/10.1177/0896920512446094>
- Olutayo, A. O., & Akanle, O. (2009). *Aso-oke* (Yoruba’s hand woven textiles) usage among the youths in Lagos, Southwestern Nigeria. *International Journal of Sociology and Anthropology*, 1(3), 62–69.
- Olutayo, A. O., Akanle, O., & Fadina, O. A. (2017). The socio-economic developments of *aso-oke* of South-western Nigeria. *Asian & African Studies*, 26(1), 41-68.

- Oluyole, K. A., & Adeogun, S. O. (2005). Determining the profitability level of black soap production from cocoa pod husk in Lagelu Local Government Area of Oyo State. *Journal of Agriculture, Forestry and the Social Sciences*, 3(1), 69-80. <https://doi.org/10.4314/joafss.v3i1.33707>
- Östberg, W. (1995). *Land is coming up. The Burunge of central Tanzania and their environments*. Stockholm Studies in Social Anthropology (Book 34). Coronet Books Inc.
- Osunwole, A. (2018). *Ọṣẹ dúdú: Traditional African soap in Youbaland*. Clemeve Media Konsult.
- Oyekanmi A., Adebayo, O., & Farombi, A. (2014). Physiochemical properties of African black soap, and its comparison with industrial black soap. *American Journal of Chemistry*, 4(1), 35-37
- Peters, E. (2002). The limits of knowledge: Securing rural livelihoods in a situation of resource scarcity. In C. B. Barrett, F. Place, & A. A. Aboud (Eds.), *Natural resources management in African agriculture: Understanding and improving current practices* (pp. 35-50). Cabi Publishing. <https://doi.org/10.1079/9780851995847.0000>
- Riseth, J. Å. (2007). An Indigenous perspective on national parks and Sámi reindeer management in Norway. *Geographical Research*, 45(2), 177-185. <https://doi.org/10.1111/j.1745-5871.2007.00449.x>
- Rist, S., Boillat, S., Gerritsen, P. R., Schneider, F., Mathez-Stiefel, S. L., & Tapia, N. (2011). Endogenous knowledge: Implications for sustainable development. In U. M. Wiesman, & H. Hurni (Eds.), *Research for sustainable development: Foundations, experiences, and perspectives* (pp. 119-146). Geographica Bernensia.
- Ritchie, J. & Lewis, J. (2003). *Qualitative research practice: A guide for social science students and researchers*. Sage.
- Sillitoe, P. (2006). Introduction: Indigenous knowledge in development. *Anthropology in Action*, 13(3), 1-12. <https://doi.org/10.3167/aia.2006.130302>
- Sinclair, L., & Walker, H. (1999). A utilitarian approach to the incorporation of local knowledge in agro-forestry research and extension. In E. Buck, P. Lassoie, & E. Fernandes (Eds.), *Agro-forestry research and extension* (pp. 245-275). Lewis Publishers.
- Tharakan, J. (2015). Indigenous knowledge systems—a rich appropriate technology resource. *African Journal of Science, Technology, Innovation and Development*, 7(1), 52-57. <https://doi.org/10.1080/20421338.2014.987987>
- Ukwendu, J. E. (2019). African black soap. *Bella Online*. <https://www.bellaonline.com/articles/art26846.asp>
- Waziri, A. (2017, October 8). Extractive sector transparency, value maximisation and Nigeria's economic recovery. *This Day*. <https://www.thisdaylive.com/index.php/2017/10/08/extractive-sector-transparency-value-maximisation-and-nigerias-economic-recovery-2/>

World Bank. (2004). *Indigenous knowledge, local pathways to global development —Marking five years of the World Bank Indigenous Knowledge for Development Program*.
<http://documents.worldbank.org/curated/en/981551468340249344/pdf/307350ENGLISH0ik0local0pathways.pdf>

Yusuf, A., & Okoruwa, O. (1995). Transforming wastes into money: The case of black soap making using cocoa pod husks. In A.J. Agegeye, & W.O. Ajayi (Eds.), *Cocoa revolution in Nigeria: Proceedings of a national seminar on revolutionizing Nigeria's cocoa industry* (pp. 101-112). Adaptive Research Group.