

A Survey of Indigenous Raw Materials Available in Benue State for Making Cosmetics

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Abstract

The survey of indigenous raw material available in Benue state for making cosmetics formed the focus of the study. Two specific objectives guided the study, to identify the available raw materials for cosmetics and specifically those raw materials for cosmetics used for body cream, hair cream and face powder. Descriptive survey design was adopted in a population of one million, one hundred and sixty thousand, three hundred and ninety nine (1,160,399) women of 18 to 80 years were used and formed the population of indigenous cosmetics sellers' and cosmetologists. Using a multistage sampling technique, 270 women were proportionately selected from six Local Government Areas of Benue state using the Taro Yamane formula. A structured questionnaire was developed and titled "Raw Materials for Cosmetics Questionnaire" (RMCQ) was tested and found reliable. The data collected was analyzed using SPSS version 23 to obtain mean and standard deviation for research question 1 and 2. While the hypothesis was tested using t-test at 0.05 level of significant. The findings reveals indigenous raw materials for making cosmetics, including, Shea butter "Chamen", Coconut oil, "Mkurem makyewe", Palm Kernel Oil "Ate", Calabar Chalk "Inyajoo", Kohl "Togii", Teak "Kpav", Lele "Lele" From the result, Shea Butter "Chamen" Coconut oil "Mkurem makyewe" Palm Kernel Oil "Ate" were specified for making body and hair creams. The null hypothesis tested at 0.05 level of significant was therefore rejected. It was concluded that the use of indigenous raw materials for making cosmetics, will reduce the cost of these items and revive cosmetic companies. The findings of this study could be useful study could find application in schools home Economics education curriculum at all levels of learning, and at the training centers where women will be trained on how to use indigenous raw materials to make cosmetics.

Key Words: *Cosmetics, Raw Material, 'Chamen', Calabar Chalk, 'Ate'*

Introduction

Cosmetics are substances applied on the body mainly on the skin, in order to improve natural features and protect the skin (Anyakoha, 2016). It is any substance with mild action on the human body which are intended to be applied through rubbing and sprinkling to clean, beautify and increase the attractiveness; promote good health, alter the appearance or to keep the hair and body in good condition (Rannou, 2015). Cosmetics include perfumes, powders, creams, pomades, eye darkener, and lipsticks. It is essentially anything that a person needs, to help give an individual identity, enhance best features and cover

blemishes. It also improves an individual appearance, improve or eliminate body odor (Nicolas and Jacob, 2010).

In the process of making cosmetics, raw materials are required, mostly the raw materials are either natural or synthetics raw materials depending on the types of cosmetics to be produced. These raw materials can either be gotten from foreign or indigenous. The foreign raw materials are those ones that are imported from other places or countries and not locally sourced, while the indigenous ones are those, which originates or are sourced/ found in a particular locality, (Anyakoha, 2016). These raw materials, includes a

variety of chemicals, fragrances, essential oils thickening, surfactants, preservatives, colorants and active ingredients. In this study, the indigenous raw materials are those sourced locally which are available in Benue state and are used in making cosmetics

Several industries in Nigeria operates in the manufacturing of Cosmetics with a good market for its' products. In Benue State, a few of the efforts in using raw materials for the making of cosmetics is noticeable signifying a business venture for unemployed youths. Some of these efforts deal in the preparation of cosmetics, apart from some petty trading efforts that are made in the sale of the raw materials. Majority of these companies get there raw materials from other countries as they are imported into the country (Klim, 2014). Thus, the high cost of importation translates to high cost of production, making the finished cosmetic product seemingly expensive.

The high cost of procurement of foreign raw materials has arbitrarily increased the cost of these products leading to the dearth of many cosmetics industries. Meanwhile, some of these raw materials can be identified or sourced locally from plants, animals, natural mineral extractions, chemicals and water. Therefore, the need for identifying raw materials for use for cosmetics in Benue State is timely.

Objectives of the Study

The main objective of this study was to Survey the Indigenous Raw Materials Available in Benue State for making Cosmetics. Specifically, the study sought to;

1. identify the indigenous raw materials for making cosmetics in Benue state.
2. determine the major indigenous raw materials for making body

cream, hair cream and face powder

Methodology

Research Design

The study adopted a descriptive survey research design which involves a systematic and comprehensive collection of information about the opinions, attitudes, feelings beliefs and behaviors of people (Nworgu, 2015). This was deemed appropriate for the study because elicited information from women, local cosmetics sellers, and cosmetologist, about the indigenous raw materials available in Benue State.

Area of the Study

The study was carried out in Benue State, which has 23 Local Government Areas (LGAs) in the three senatorial Zones A, B & C. Most of these local governments are endowed with raw materials for cosmetics and are sold in the local markets. The choice for Benue state was considered due to the number of raw materials available which can be explored for producing cosmetic at a cheaper rate.

The Population for the Study

The population for this study was 859. This figure is made up of 780 women from ages 18 to 80, (National population commission, 2006), Five cosmetologists in Benue state (Ministry of Trade, commerce and industry Benue state 2017-2018) 22 registered local cosmetics sellers. (Benue State Internal Revenue Service (BIRS) 2015 -2017).

The researcher's choice of women for the study was based on the observation that, women are synonymous with the use of cosmetics so they spend more money on cosmetics. The cosmetologists are experts in cosmetics making, so they

are of help in the identification of these raw materials. The local cosmetic sellers became necessary because they are the people who deal with these raw materials directly and have the knowledge of most of the raw materials used for the production of cosmetics.

Sample and Sampling Technique

The sample size was 270 which was determined using Taro Yamane formula of $n = N / (1 + N(e)^2)$. Multistage sampling technique was used to arrive at 6 selected local government areas of Benue State which includes : Kwande, Ukum, Buruku, Guma, Otukpo and Oju. All the 22 local cosmetics sellers from the six selected local governments were used, likewise all the 5 cosmetologists.

Instrument for Data Collection

Raw Materials for Cosmetics Questionnaire (RMCQ), was developed by the researcher based on the review of related literature. The questionnaire was divided into two parts A and B. Part A was structured to elicit information on personal data of the respondents, while part B had 40 items and elicited information on the indigenous raw materials for making cosmetics and the raw materials that can be used for body cream, hair cream and face powder. The RMCQ had a four point's scale of Strongly Agree, Agree, Disagree and Strongly Disagree, with values 4, 3, 2, and 1 assigned.

Three experts face validated the instruments; one lecturers from Home Economics and hospitality Management department, faculty of Vocational and Technical Education, one lecturer from

industries chemistry Faculty of physical sciences and one from pharmaceutical Faculty of Pharmacy all from University of Nigeria Nsukka. The experts were asked to add or remove any items of the instrument that are considered not useful to the study. Based on their corrections and suggestions, amendments were made on the instrument before it was used for data collection.

The RMCQ was trial tested on 20 persons in Enugu State who were not part of the study, Cronbach Alpha method was used to determine the internal consistency of the instrument, the results shows the reliability coefficient of 0.75, and this was considered reliable.,(2011).

Data collection Technique

The questionnaire were purposively administered by hand to the respondents of women between the ages of 18 -80, local cosmetics sellers and cosmetologists in the six selected Local Governments' Areas, with the help of the three research assistants (RAs) who were briefed by the researcher on how to administer the questionnaire to the respondents so as to ensure safe handling and returning of the instruments. Two hundred and seventy copies were administered.

Method of Data Analysis

Descriptive analysis (Mean and standard deviation). Any item with a mean of 2.5 and above was regarded as agreed, while, any item with less than 2.5 was rejected. The hypothesis was analyzed with t- test at 0.05 level of Significance. The Statistical package of Social Science (SPSS) Version 23 was used.

Results and Discussion

Table 1: Mean Responses on the Indigenous Raw Materials Available in Benue State for Making Cosmetics 270

S/NO	Raw Materials with their Local names	Used for making	— X	Remark
1.	Sheabutter "Chamen"	B & H C	3.74	A
2.	Coconut oil "Mkurem makyewe"	B & H C	3.78	A
3.	Traditional palm kernel oil "Ate"	B & H C	3.64	A
4.	Calabash chalk "Inyajoo"	FC	3.80	A
5.	Kohl "Togii"	FC	3.88	A
6.	Teak "Kpav"	FC	3.46	A
7.	Corn starch "Mwem ma kureke"	FC	3.39	A
8.	Lamp dirt "Iimenge, Zajee"	FC	2.17	D
9.	Lele "Lele"	BC	3.38	A
10.	Orange peel "Apusu alum"	BC	3.50	A
11.	Locust beans flower "Bembinune"	BC	3.46	A
12.	Soya beans oil "Mkurem masuyabin"	BC	3.46	A
13.	Pawpaw fruit "Mbuee"	BC	3.50	A
14.	Yam peels "Apusu iyou"	BC	3.03	A
15.	Mango nut "Akemongolo"	BC	3.13	A
16.	Cow fat "Ahumabua"	BC	2.59	A
17.	Groundnut Oil "Mkurem ma abum"	BC	3.13	A
18.	Pork Oil "Mkurem ma Igoo"	BC	3.02	A
19.	Beniseed oil "Mkurem ma ishuar"	BC	2.81	A
20.	Cassava peels "Apusu alogo"	BC	2.84	A
21.	Sectional Mean A		3.28	

Key: N = Number of respondents X = mean of the respondent SD = standard deviation of the respondent, A = Agree, D = disagree. B & HC = Body and Hair Cream, FC = Face cosmetics, BC = Body Cosmetics, 1 = Kwande, 2 = Ukum, 3 = Buruku, 4 = Guma, 5 = Otukpo, 6 = Uju. LGA = Local Government Area

Table 1 shows the Mean Responses and Standard Deviation on the Indigenous raw materials for making cosmetics in Benue State, the LGA identified, and the type of cosmetics they can produced. The result reveals all the items to have the mean

above 2.5. This indicates that the items in Table 1 are raw materials for making cosmetics, except item 15 which is Lamp dirt (2.17) and is below the average mean of 2.5. This indicates that the respondents disagreed with this item as been a raw material for making cosmetics.

Table 2: The Mean of the Respondents on the Indigenous Raw Materials Available in Benue State that can be used to produce body cream, Hair cream and Face powder N=270

S/No	Raw Materials with their Local names	BC			HC			FP		
		X	SD	R	X	SD	R	X	SD	R
1	Sheabutter "Chamen"	3.57	0.50	A	3.66	0.47	A	1.26	0.44	D
2	Coconut oil "Mkurem ma kyewe"	3.55	0.52	A	3.81	0.39	A	1.30	0.46	D
3	Traditional palm kernel oil "Ate"	3.01	0.81	A	3.70	0.53	A	1.31	0.46	D
4	Calabash chalk "Inyajoo"	1.34	0.60	D	1.37	0.57	D	3.76	0.56	A
5	Kohl "Togii"	1.30	0.58	D	1.32	0.53	D	1.26	0.44	D
6	Teak "Kpav"	1.09	0.32	D	1.31	0.48	D	1.35	0.48	D
7	Lele "Lele"	1.29	0.46	D	1.27	0.48	D	1.30	0.51	D
8	Orange peel "Apusu alum"	1.36	.53	D	1.23	0.42	D	1.28	0.53	D
9	Locust beans flower "Bembinune"	1.27	0.45	D	1.34	0.54	D	1.24	0.49	A
10	Soya beans oil "Mkurem masuyabin"	1.33	0.53	D	1.31	0.52	D	1.16	0.48	D
11	Pawpaw fruit "Mbuee"	1.32	0.64	D	1.29	0.54	D	1.24	0.44	D
12	Corn starch "Mwem ma kureke"	1.30	0.53	D	1.37	0.53	D	3.50	0.60	A
13	Yam peels "Apusu iyou"	1.16	0.36	D	1.00	0.00	D	1.48	0.67	D
14	Mango nut "Akemongolo"	1.15	0.40	D	1.31	0.52	D	1.28	.65	D
15	Lamp dirt "Iimenge,Zajee"	1.06	0.24	D	1.18	0.39	D	1.44	0.75	D
16	Cow fat "Ahumabua"	1.44	0.70	D	1.14	0.38	D	1.54	0.82	D
17	Groundnut Oil "Mkurem ma abum"	1.41	0.73	D	1.19	0.39	D	1.50	0.73	D
18	Pork Oil "Mkurem ma Igoo"	1.45	0.68	D	1.25	0.49	D	1.40	0.70	D
19	Beniseed oil "Mkurem ma ishuar"	1.34	.47	D	1.17	0.40	D	1.49	0.78	D
20	Cassava peels "Apusu alogo"	1.10	0.31	D	1.33	0.52	D	1.43	0.71	D
21	Sectional Mean B	1.59	0.00		1.63	0.00		1.58	0.00	

Key: N = Number of respondents X = mean of the respondent SD = standard deviation of the respondent, A = Agree, D = disagree, R = remarks, BC = body cream, HC = hair cream, FP = face powder.

Data presented in Table 2 reveals that items number 1, 2 and 3 had their mean values 3.57, 3.55, and 3.01 respectively which is above 2.5 mean averages. These three items are the only one on the list of the indigenous raw materials for making body creams agreed by the respondents. Likewise, these same items were

agreeable by the respondents that are raw materials for making hair cream with the average mean of 3.66, 3.81 and 3.70 respectively. Also item 4 and 12 on the Table above show the mean of 3.76 and 3 respectively, this mean indicated that the respondents agree with the items that are the raw materials for making cosmetics. The items number 4 to 20 shows the mean

of less than 2.5, this indicates that these indigenous raw materials are not for making body and hair creams. On the other hand all other items on the Table are not raw materials for making face powder apart from items 4 and 12 as responded.

Hypothesis H_{01} : There is no significant difference in the mean responses of the women in the urban and rural areas on the indigenous raw material available in Benue State for making body cream.

Table3: The t-test Analysis for Comparing Data Obtained from Urban and Rural Women on the Indigenous Raw Materials Available in Benue State. for Making Cosmetics

S/No	Raw Materials with their Local names	X1 Urban women	X2 Rural women	SD1	SD2	df	t- test	P. Value	Remark
1	Sheabutter "Chamen"	3.58	3.54	0.49	0.50	268	0.52	0.60	NS
2	Coconut oil "Mkurem makyewe"	3.54	3.58	0.53	0.50	268	-0.58	0.56	NS
3	Traditional palm kernel oil "Ate"	3.03	2.97	0.80	0.82	268	0.64	0.56	NS
4	Calabash chalk "Inyajoo"	1.31	1.39	0.56	0.68	268	-0.99	0.32	NS
5	Kohl "Togii"	1.29	1.32	0.55	0.63	268	-0.37	0.71	NS
6	Teak "Kpav"	1.07	1.13	0.25	0.43	268	-1.61	0.11	NS
7	Lele "Lele"	1.28	1.32	0.45	0.47	268	-0.76	0.45	NS
8	Orange peel "Apusu alum"	1.39	1.30	0.54	0.48	268	1.39	0.17	NS
9	Locust beans flower "Bembinune"	1.27	1.29	0.44	0.46	268	-0.39	0.70	NS
10	Soya beans oil "Mkurem masuyabin"	1.32	1.37	0.50	0.59	268	-0.73	0.47	NS
11	Pawpaw fruit "Mbuee"	1.29	1.37	0.63	0.64	268	-0.88	0.96	NS
12	Corn starch "Mwem ma kureke"	1.31	1.30	0.52	0.53	268	0.08	0.94	NS
13	Yam peels "Apusu iyou"	1.17	1.13	0.37	0.34	268	0.71	0.45	NS
14	Mango nut "Akemongolo"	1.13	1.17	0.38	0.44	268	-0.91	0.36	NS
15	Lamp dirt "Iimenge, Zajee"	1.05	1.07	0.22	0.27	268	-1.29	0.99	NS
16	Cow fat "Ahumabua"	1.40	1.52	0.64	0.81	268	-1.29	0.26	NS
17	Groundnut Oil "Mkurem ma abum"	1.45	1.34	0.74	0.67	268	-0.23	-0.32	NS
18	Pork Oil "Mkurem ma Igoo"	1.43	1.49	0.68	0.69	268	-0.63	0.53	NS
19	Beniseed oil "Mkurem ma ishuar"	1.32	1.37	0.47	0.47	268	-0.73	0.47	NS
20	Cassava peels "Apusu alogo"	1.10	1.11	0.30	0.32	268	-0.28	0.78	NS
21	Sectional Mean B	1.59	1.57	0.00	0.00	268	0.50	0.00	S

Key: N =Number of respondents, X1 = Mean of Urban women, X2 = Mean of Rural women, SD1 = Standard Deviation Urban women, SD2 = Standard Deviation Rural women, t = t- value on spss, df= degree of freedom, p = significant Level at 0.05 NS = Not significant, S = Significant.

Data presented in Table 3 reveals that all the items had significant values ranging from 0.11 to 0.99, indicating probability values higher than 0.05 levels of significance. This implies that, there is a significant difference in the mean responses between the urban and rural women on the indigenous raw materials for making indigenous cosmetics. Since all of the items in Table 3 have their significant values higher than p-value 0.05 level of significance, the null hypothesis of no significant difference in the mean responses of urban and rural women on the indigenous raw materials for making indigenous cosmetics was upheld. But sectional mean value shows 0.00 which is less than the p value of 0.05. Therefore the hypothesis was rejected.

Discussion of the Findings

The finding of this study were organized and discussed in accordance with the research questions and the null hypothesis tested. The results in table 1. show that the respondents had, agreed to all the items except item 15 (lamp dirt) as indigenous raw materials for making cosmetics in Benue State. This finding agrees with Amubode, Suliat & Olajide (2015), that the raw materials for making cosmetics in Yoruba to be Ori, Adin dudu, Adinagbon Osun. The identification also is in line with Anyakoha (2016) who mentioned indigenous raw materials in Igbo as 'uhi' 'utire' and 'otangele Nzu, and Edo or Odo.

The finding further reveals that 17 out of the 20 items in Table 2 are not indigenous raw materials for making body and hair creams in Benue State. However the findings of items 1, 2 and 3 established that shea butter, Coconut oil and palm kernel oil, can be used for making body and hair creams in Benue

State. This is in congruence with of Amubode et al., (2015) who listed ori and other raw materials used to smoothen the body. The result also affirm with Nurah , wmadb , Ranil, Isona ,& vijay.(2017) who stated, that coconut oil cut across a variety of uses ranging from food to body cream. Akihisa (2010) explains that Shea butter is rich in vitamins A and E and nourishes the skin. The result also reveals that corn starch and calabash chalk are raw materials for making face powder, this agrees with Obioma, Frank, Ikpendu, & Michael. (2015)

This result share the views of Gunther, Sven, Jorg, walt, Uwe, Hartmut, Annegret, Xenia, Wolf, Hellmut, & waters, (2005), who stated castor oil beeswax, olive oil, and rose water as raw materials for making body creams.

Conclusion and Recommendations

Based on the findings of the current study, it is concluded that for Nigeria to be saved from the high cost of millions of naira that are spent on importing raw materials for the cosmetic industry, attention be rather focused on the use of indigenous raw materials for making cosmetics, this will reduce the cost of these items and revive the ailing companies. The study identified shea butter, coconut oil, and traditional palm kernel oil as the raw materials for making body creams. Based on the conclusion, the following recommendations were made:

1. Indigenous manufacturers and cosmetologists should exploit the available raw materials for use into various purposes; this will build in skills and increase the employment of women and the youths.
2. Seminars, conferences, workshops, extension works, advertisements and posters should be organized

by Home Economists on the local production of these products from the raw materials within the community, thus reducing the dependence on foreign cosmetics resulting into improved economy.

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