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Preference Patterns of Selected Diaper Brands Among Rural Households in Abia State, Nigeria

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ABSTRACT

The study assessed the preference patterns of selected diaper brands among rural households in Abia State, Nigeria. Specifically, the study described the socio-economic characteristics of respondents and assessed the preference patterns of selected diaper brands among rural households in the study area. Simple random sampling technique was used to select 160 respondents for the study. Data were collected using structured questionnaire and analyzed using descriptive statistics such as frequency counts, percentages, mean and standard deviation while ordinary least square regression (OLS) was employed in testing the null hypothesis at 5% level of significance. The results showed that the mean age of the respondents was 43 years. Majority (79.4%) of the respondents were females while 20.6% were males. The results also showed that Soft care (= 4.13) and Kiss kids (= 4.12) were often preferred by rural households while Molfix (= 3.31), Virony (= 3.15), Unbranded (= 3.09) and Good fit (= 3.06) were sometimes preferred by rural households in the study area. The result also revealed that Dr Brown's (= 3.83) and Unbranded (= 3.40) were often preferred by rural households. The OLS results showed that level of education (2.967***), estimated annual income (2.510**) and household size (2.318**) significantly influenced the preference patterns of diaper brands among rural households at 1% and 5% levels of probability. The study concluded that rural households sometimes preferred majority of the selected baby and adult diapers in the study area. Therefore, it recommended among others that there is need for Non-governmental organizations, Ministry of health, foreign donor agencies and other relevant stakeholders to direct more efforts to the provision of baby and adult diaper brands that were often preferred by rural households in the study area.

INTRODUCTION

Health and hygiene are the primary requirements to live comfortably, as young babies form a most vulnerable group of the society, ensuring their good health is of prime concern to all members of the society (Srivastava and Verma, 2017). In Nigeria, the use of diapers is common among care givers due to increased birth rate and awareness in hygiene and demand for sanitary products (Ikon, Nwokeocha, Akpan and Brown, 2025; Zakari, Maisalati, Abdullahi, Yakubu and Madu, 2024).

Diapers are clothed or synthetic disposable materials which contain absorbent chemicals that allow discreet defecation or urination (Eja, 2014). Diapers are made from natural fibers like cotton, muslin, bamboo, wool, linen, jute, as well as artificial fibers such as non-woven polypropylene, polyethylene, nylon, polyester and other materials (Udoh, Ibeh, Nwosu, Arum and Okoli, 2024). Diapers are primarily worn by infants, toddlers, and by children who experience bedwetting. They are also used by adults with incontinence or in certain circumstances where access to a toilet is unavailable (Eshitemi, Lakati and Karama, 2023).

Brands driving the consumption of diapers in Nigeria are Pampers by Procter & Gamble, Huggies by Kimberly Clark, Molfix by Hayat Kimya, and Kiss Kids by Bordargroup (Raymond, 2018). In Abia State, there are also local brands like Dr. Brown's by Wemy Nigeria

Limited, Huggies, produced by Huggies Nigeria, and other players alike. There are several important drivers in brand preference patterns in Nigeria. For lower socio-economic classes, especially rural households, there is a close association between diapers preference patterns and affordability (Raymond, 2018). Smaller pack sizes of diapers offer the advantage of smaller cash outlays, thereby promoting higher usage and they are also a key factor in purchase decisions, especially among rural households (Ikon *et al.*, 2025). The management of excreta among vulnerable groups, such as babies, the sick, and the elderly, is a critical public health and dignity issue, particularly in rural areas in Nigeria. Limited access to diapers due to poverty, inadequate infrastructure, and restricted healthcare services compounds these challenges (Ikon *et al.*, 2025). In addition to economic and environmental challenges, cultural and socioeconomic factors heavily influence the preference patterns of diapers among rural households in Nigeria. Specifically, research studies (Auna, 2022; Mbiereagu and Etumnu, 2021; Eze, 2021) revealed that income, education, and cultural background shape caregivers' preferences for diaper types. From the foregoing, it is evident that there are a lot of factors that influence the preference patterns of diapers among rural households. Nevertheless, there still exists a dearth of empirical information on the preference patterns of selected diaper brands among rural households in Abia

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State, hence the study. Specifically, the study described the socio-economic characteristics of respondents and assessed the preference patterns of selected diaper brands among rural households in the study area.

Hypothesis: Socio-economic characteristics of rural households do not significantly influence their preference patterns of diaper brands in the study area.

MATERIALS AND METHODS

The study was carried out in Abia State, Southeast Nigeria. The State is made up of seventeen (17) local government areas. The projected population growth of the State at 2.6% from 2006 population figures is 116,567 persons (NPC, 2024). The State lies between Longitudes 7023' and 802' East of the Equator and Latitudes 4047' and 6012' North of the Greenwich Meridian. It also occupies a land mass of 5,833.11km² (Abia State Planning Commission (ABSPC), 2018).

Simple random sampling technique was adopted for the study. In the first stage, simple random sampling technique was used to select two (2) senatorial zones

(Abia Central and Abia South) out of the three (3) senatorial zones in Abia State. In the second stage, simple random sampling technique was also employed in the selection of two (2) local government areas each from the sampled senatorial zones. Osisioma and Ikwuano local government areas were selected from Abia Central senatorial zone while Ukwu West and Ugwuagbo were selected from Abia South senatorial zone. This gave a total of four (4) local government areas. In the third stage, four (4) communities were also selected from each of the sampled four (4) local government areas using simple random sampling technique. This gave a total of sixteen (16) selected communities. In the final stage, ten (10) households were randomly selected from each of the selected communities. This gave a sample size of one hundred and sixty (160) respondents for the study (See Table 1). Primary data were obtained with the aid of structured questionnaire, and analyzed using descriptive and inferential statistics such as frequency, percentages, means, standard deviation and ordinary least square regression.

Table 1: Sample size distribution of rural households in the study area

Senatorial zone	Local government area	Communities	Number sampled
Abia Central	Osisioma	Amauzu	10
		Uratta-Amaekpu	10
		Mgboko Umuette	10
		Umuara	10
Sub-total			40
	Ikwuano		Ndoro
		Ogbuebule	10
		Ekebedi	10
		Ariam	10
Sub-total			40
Abia South	Ukwu west	Igiri ukwu	10
		Isi Etitioha	10
		Umuokpara	10
		Ipu West	10
Sub-total			40
	Ugwunagbo	Ihie	10
		Asa-Umunka	10
		Asa Nnentu	10
		Umugo	10
Sub-total			40
Grand total			160

Model Specification

To assess the preference patterns of selected diaper brands among rural households was realized using a Likert scale of; always preferred = 5; often preferred = 4; sometimes preferred = 3; rarely preferred = 2 and never preferred = 1. In using the Likert scale, a mid-point was obtained by adding 5, 4, 3, 2 and 1 which gives 15 and when divided by 5 gave a mean score of 3.0. It was considered necessary

to further categorize the preference patterns of diaper brands among rural households. For the purpose of decision making, the maximum weighted score of 5 was further divided by 3 to obtain the class interval of 1.67. Thus the class interval (1.67) was successively deducted from the maximum mean score (5) to obtain the three categories of diaper preference patterns. As a result, class ranges for the three categories emerged as follows;



0.00 – 1.66 = never preferred; 1.67 – 3.33 = sometimes preferred; and 3.34 – 5.00 = often preferred.

The hypothesis testing for the significant relationship between selected socio-economic characteristics of rural households and their preference patterns of diaper brands in the study area was estimated using ordinary least square regression analysis.

The Ordinary least square (OLS) regression model is expressed implicitly as;

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9) \dots \dots \dots (1)$$

The four functional forms of OLS in explicit form are specified as;

Linear function

$$Y = \beta + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 \dots \beta_n x_n + e_i$$

Exponential function

$$\text{Log} Y = \beta + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 \dots \beta_n x_n + e_i$$

Semi-log function

$$Y = \beta_0 + \beta_1 \ln x_1 + \beta_2 \ln x_2 + \beta_3 \ln x_3 + \beta_4 \ln x_4 + \beta_5 \ln x_5 \dots \beta_n \ln x_n + e_i$$

Double log function

$$\text{Log} Y = \beta_0 + \beta_1 \ln x_1 + \beta_2 \ln x_2 + \beta_3 \ln x_3 + \beta_4 \ln x_4 + \beta_5 \ln x_5 \dots \beta_n \ln x_n + e_i$$

Where,

Y = Preference patterns of diaper brands (mean score)

X₁ = Age (number in years)

X₂ = Sex (male = 1; female = 0)

X₃ = Level of education (years of schooling)

X₄ = Marital status (married = 1; otherwise = 0)

X₅ = Household size (number of persons living in a household)

X₆ = Estimated annual income (₦)

X₇ = Membership of social organizations (measured in level of participation; always = 4, often = 3, rarely = 2 and never = 1)

X₈ = Frequency of extension contact (number of extension visits)

X₉ = Occupation (farming = 1, trading = 2, artisan = 3, formal occupation = 4 and unemployed = 5)

e_i = error term.

The choice of the lead equation was determined by the magnitude of the coefficient of the multiple determination (R²), number of significant variables, level of significance and the sign of the significant variables as they conformed to a priori expectation.

RESULTS AND DISCUSSION

Objective 1: Describe the socio-economic characteristics of respondents.

Table 2 showed that the majority (43.1%) of the respondents in the study area were within the age bracket of 31-40 years, while 38.1% were within the age bracket of 41-50 years. The mean age of the respondents in the study area was 43 years. This implies that the majority of the respondents in the study area were still in their active age and could influence their preference patterns of diaper brands in their households. This finding is in agreement with Mbindyo (2022) who reported that the majority (59.3%) of sampled respondents were within the age bracket of 31-40 years. The results also showed that the majority (79.4%) of the respondents in the study area were females while 20.6% were males. This is a clear indication that females are more involved in the use of diapers than males in the study area. This finding is in consonance with Eshitemi *et al.* (2023) who reported that the majority (93.1%) of sampled caregivers were females while 6.9% were males. Table 2 further showed that 47.5% of the respondents in the study area had secondary education, while 20.0% of them had tertiary education. This implies that there was relatively high level of literacy among the respondents in the study area. High level of literacy could also influence rural households' preference patterns of diapers in the study area. Educated individuals and households are thus better positioned to make good choices on the diaper brands that are compatible with their caregiving needs. This finding is in consonance with Okotto-Okotto, Asamoah, ThomasPossee, Dzodzomenyo, Hornuvo, Okotto and Wright (2024) who reported that the majority (69.5%) of sampled respondents in their study were educated. Table 2 also revealed that the majority (53.1%) of the respondents in the study area had a household size of 6-10 persons, while 23.1% of them had a household size of 1-5 persons. The mean household size of the respondents in the study area was 5 persons per household, implying that the respondents had relatively large household sizes. Large household sizes could influence the preference patterns of diapers in the study area.

Objective 2: Assess the preference patterns of selected diaper brands among rural households in the study area.

Table 2: Distribution of respondents according to their socioeconomic characteristics

Socioeconomic characteristics	Frequency (n = 160)	Percentage (%)	Mean ± SD
Age (years)			
21-30	5	3.1	
31-40	69	43.1	
41-50	61	38.1	
51-60	18	11.3	
61-70	7	4.4	43 ± 9.486
Sex			
Male	33	20.6	
Female	127	79.4	



Marital status			
Single	28	17.5	
Married	122	76.2	
Widowed	7	4.4	
Divorced	3	1.9	
Household size (number of persons)			
1-5	37	23.1	
6-10	85	53.1	
≥ 10	38	23.8	5 ± 2.5058
Level of education (years)			
No formal education	25	15.6	
Primary education	19	11.9	
Secondary education	76	47.5	
Tertiary education	32	20.0	
Adult education	8	5.0	12 ± 2.143
Estimated annual income (₦)			
≤ 100000	18	11.3	
100001-500000	53	33.1	
500001-1000000	64	40.0	
≥ 1000000	25	15.6	513536.25 ± 495609.07
Membership of social organization			
Always	40	25.0	
Often	34	21.3	
Rarely	46	28.7	
Never	40	25.0	
Frequency of extension contact (no of visits)			
0 – 3	107	66.9	
4 – 7	53	33.1	3 ± 1.619
Occupation			
Farming	38	23.7	
Trading	65	40.6	
Artisanship	22	13.8	
Formal occupation	19	11.9	
Unemployed	16	10.0	
Religion			
Christianity	140	87.5	
Islam	9	5.6	
Traditional	11	6.9	

For baby diapers, the result in Table 3 revealed that Soft care (= 4.13) and Kiss kids (= 4.12) were often preferred by rural households while Molfix (= 3.31), Virony (= 3.15) and Unbranded (= 3.09) were sometimes preferred by rural households in the study area. This finding is in line with those of Schenck, Chitaka, Tyrrell and Couvert (2023) who reported that rural households often preferred Kiss kids and Baby step diapers. For adult diapers, the result revealed that Dr Brown's (= 3.83) and Unbranded (= 3.40) were often preferred by rural households while Adult select (= 3.18), Angels (= 2.43) and Dry love (=

= 2.34) were sometimes preferred by rural households in the study area. The implication of this finding is that rural households often preferred disposable adult diapers to cloth diaper in the study area. This finding is similar to that of Lamola (2023) who reported that the majority (99.1%) of sampled respondents preferred disposable diapers to cloth diapers due to the fact that disposable diapers absorb more liquid and do not require frequent changes during use.

Hypothesis: Test for significant relationship between selected socio-economic characteristics of rural



Table 3: Distribution of respondents according to their preference patterns of selected diaper brands

S/N	Diaper Brand	Always preferred	Often preferred	Sometimes preferred	Rarely preferred	Never preferred	X	SD	Remarks
	B a b y diapers								
1	Kiss kids	67(41.9)	63(39.4)	18(11.3)	6(3.8)	6(3.8)	4.12	1.01	Often
2	Tozzie	4(2.5)	27(16.9)	48(30.0)	26(16.3)	55(34.4)	2.37	1.19	Sometimes
3	Soft care	81(50.6)	44(27.5)	19(11.9)	6(3.8)	10(6.3)	4.13	1.15	Often
4	Veesper	16(10.0)	24(15.0)	49(30.6)	40(25.0)	31(19.4)	2.71	1.23	Sometimes
5	Maya	15(9.4)	23(14.4)	56(35.0)	42(26.3)	24(15.0)	2.77	1.16	Sometimes
6	Yara	13(8.1)	15(9.4)	58(36.3)	48(30.0)	26(16.3)	2.63	1.11	Sometimes
7	Molfix	42(26.3)	41(25.6)	26(16.3)	27(16.9)	24(15.0)	3.31	1.41	Sometimes
8	Virony	21(13.1)	60(37.5)	28(17.5)	24(15.0)	27(16.9)	3.15	1.38	Sometimes
9	Good fit	18(11.3)	39(24.4)	54(33.8)	32(20.0)	17(10.6)	3.06	1.15	Sometimes
10	Lebrace	14(8.8)	25(15.6)	24(15.0)	37(23.1)	60(37.5)	2.35	1.18	Sometimes
11	Unbranded	34(21.3)	20(12.5)	61(38.1)	17(10.6)	28(17.5)	3.09	1.23	Sometimes
12	C l o t h diaper	7(4.4)	23(14.4)	47(29.4)	49(30.6)	34(21.3)	2.50	1.11	Sometimes
	G r o u p mean						3.02	1.19	Sometimes
	A d u l t diapers								
13	Tozzie	4(2.5)	24(15.0)	25(15.6)	20(12.5)	87(54.4)	1.99	1.24	Sometimes
14	D r Brown's	70(43.8)	47(29.4)	13(8.1)	5(3.1)	25(15.6)	3.83	1.56	Often
15	Angels	26(16.3)	29(18.1)	15(9.4)	8(5.0)	82(51.2)	2.43	1.62	Sometimes
16	Dry love	23(14.4)	30(18.8)	13(8.1)	6(3.8)	88(55.0)	2.34	1.61	Sometimes
17	A d u l t select	32(20.0)	49(30.6)	21(13.1)	32(20.0)	26(16.3)	3.18	1.37	Sometimes
18	Comfort	8(5.0)	21(13.1)	21(13.1)	7(4.4)	103(64.4)	1.90	1.32	Sometimes
19	Unbranded	48(30.0)	43(26.9)	23(14.4)	17(10.6)	29(18.1)	3.40	1.23	Often
20	C l o t h diaper	5(3.1)	8(5.0)	25(15.6)	32(20.0)	90(56.3)	1.79	1.08	Sometimes
21	Rags	2(1.3)	2(1.3)	2(1.3)	12(7.5)	142(88.8)	1.19	0.64	Never
	G r o u p mean						2.45	1.30	Sometimes
	G r a n d m e a n score						2.74	1.25	Sometimes

Note: figures in parenthesis = percentages; figures outside parenthesis = frequency; = Mean responses; SD = Standard deviation 0.00 – 1.66 = never preferred; 1.67 – 3.33 = sometimes preferred; and 3.34 – 5.00 = often preferred

households and their preference patterns of diaper brands in the study area.

The result in Table 4 revealed that the coefficient of level of education (2.967***) was significant at 1% and positively related to the preference patterns of baby diaper brands among rural households in the study area. This implies that the educational level of rural households significantly influences their preference patterns of baby diaper brands in the study area. This result is in agreement with Asia, Qaiser and Ali (2015) who noted that the level

of educational attainment was a major determinant of consumer preferences of branded goods. The coefficient of estimated annual income (2.510**) was significant at 5% and positively related to the preference patterns of baby diapers among rural households. This implies that the income of rural households significantly influences their preference patterns of baby diaper brands in the study area. Increased income of rural households would enable them to afford diaper brands that are highly preferred by them in the study area. This finding is in line with Anteneh



(2020) who noted that income is a significant factor that influences consumer preferences of diaper brands. The coefficient of household size (2.318**) was statistically significant at 5% and positively related to the preference patterns of baby diaper brands among rural households in the study area. This implies that household sizes significantly influence the preference patterns of baby diaper brands among rural households in the study area. The coefficient of level of education (3.217***) was also

significant at 1% and positively related to the preference patterns of adult diaper brands among rural households in the study area. This implies that the educational level of rural households significantly influences their preference patterns of adult diaper brands in the study area. This result is in agreement with Anjali and Kumar (2017) who noted that consumers' level of education influences their preference patterns of products/services.

Table 4: Ordinary Least Square (OLS) multiple regression result of the significant relationship between selected socio-economic characteristics of rural households and their preference patterns of diaper brands in the study area

Variable	B a b y Diapers				A d u l t Diapers			
	Linear	Exponential	D o u b l e - log+	Semi-log	Linear	Exponential	Double-log	Semi-log+
Constant	1.503 (2.907)***	0.526 (2.907)***	0.756 (0.613)	0.433 (0.578)	2.797 (8.919)***	0.992 (8.790)***	3.455 (4.721)***	-0.163 (-0.264)
Age	0.002 (-1.124)	0.002 (0.196)	-0.012 (-0.026)	0.163 (0.796)	0.011 (1.733)*	0.004 (2.019)**	0.312 (0.684)	0.133 (0.527)
Sex	-0.246 (-1.214)	0.246 (1.714)*	-0.019 (1.929)*	0.049 (1.011)	-0.209 (-1.736)*	0.073 (1.682)*	-0.145 (-1.729)*	0.022 (2.456)**
Marital status	0.022 (0.121)	0.021 (0.258)	0.016 (0.332)	0.054 (0.319)	-0.045 (-0.411)	0.034 (0.871)	0.133 (0.886)	0.123 (0.752)
Level of education	0 . 2 6 4 (3.536)***	0.264 (3.131)***	0.119 (2.967)***	0.209 (1.513)*	0.119 (2.682)**	0.040 (2.485)**	0.286 (2.120)**	0.119 (3.217)***
Household size	0.090 (-2.466)**	0.090 (2.466)**	0.051 (2.318)**	0.011 (0.407)	-0.070 (-1.909)*	-0.054 (-1.123)	-0.076 (-1.026)	0.153 (2.031)*
Estimated annual income	6.084E-8 (0.362)	7.396E-8 (0.629)	0.022 (2.510)**	0.019 (2.217)**	1.15E-7 (1.157)	4.781E-8 (1.327)	0.031 (2.325)**	0.015 (2.872)***
Frequency of extension contact	0.104 (2.339)**	0.023 (2.461)**	0.128 (3.094)***	0.143 (3.182)***	-0.051 (1.924)*	0.019 (1.157)	0.236 (2.742)***	0.215 (2.239)**
Membership of social organization	-0.021 (-0.274)	0.023 (0.501)	-0.051 (-0.882)	0.010 (0.483)	0.053 (1.176)	-0.018 (-0.142)	0.081 (0.765)	-0.056 (1.875)*
Occupation	0.072 (-1.132)	0.009 (1.224)	0.109 (3.312)***	0.054 (2.230)**	0.071 (1.103)	0.022 (1.701*)	0.091 (0.171)	0.024 (0.325)

R ²	0.466	0.427	0.532	0.506	0.427	0.503	0.498	0.595
Adjusted R ²	0.425	0.408	0.415	0.489	0.406	0.489	0.476	0.573
F-statistic	4.612***	4.229***	7.114***	3.895***	6.063***	5.075***	6.321***	6.787***

Source: Computed from field survey data, 2025

Note: ***, **, and * indicate statistically significant at 1%, 5% and 10% levels of significance respectively. + = Lead equation

Decision: H_0 rejected.

CONCLUSION

Based on the findings of this study, the study therefore concluded that majority of the selected baby and adult diapers were generally preferred by rural households in the study area. Socioeconomic characteristics such as level of education, household size, estimated annual income and frequency of extension contact significantly influenced the preference patterns of baby and adult diapers among rural households in the study area. Therefore, it recommended that:

1. Non-governmental organizations, Ministry of Health, foreign donor agencies and other relevant stakeholders can assist in the provision of baby and adult diaper brands that were preferred by rural households in the study area. This will help to increase the availability of diaper brands that were preferred by rural households in the study area.
2. There is need to intensify efforts in increasing the frequency of extension visits to rural households in the area in order to assist them in making informed decisions on their preference patterns of diaper brands. This is due to the fact that rural households generally had poor contact with extension agents in the study area and frequency of extension contact significantly influenced the preference patterns of baby and adult diapers.

REFERENCES

- Abia State Planning Commission (ASPC) (2018). *Abia State economic empowerment development strategy report. Bi-annual review*. Government House Press, Umuahia.
- Anjali, T. K. and Kumar, S. (2017). An analysis of the environmental impact of disposable diapers and its management. *International Journal of Engineering Management and Social Sciences*, 3(5), 1–7.
- Anteneh, M. (2020). *Determinant of consumer's brand preference: Case of diaper market in Addis Ababa*. Masters Thesis, St. Mary's University, Addis Ababa, Ethiopia.
- Asia, N. I. Qaiser, S. and Ali A. (2015). Determinants of Consumer preferences of Branded Goods: A Case Study of Selected Districts of Punjab Pakistan. University Faisalabad. *Journal of Marketing and Consumer Research*, 14, 63-72.
- Auna, O. A. (2022). Crafting narratives: The role of storytelling in infomercials for diapers in Nigeria. *Journal of Communication Studies*, 28(1), 45-60.
- Eja, M. E. (2014). Waste disposal. In *Water pollution and sanitation for developing countries* (2nd ed., pp. 148–153). Seasprint (Nig.) Co.
- Eshitemi, S., Lakati, A. and Karama, M. (2023). Determinants of disposal of disposable diapers among caregivers in Kisumu City, Kenya. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, 68(1), 163–175.
- Eze, I. (2021). The impact of endorsements in promotional advertisements: A study on diaper infomercials. *Nigerian Journal of Marketing Research*, 13(2), 105-120.
- Ikon, A. O., Nwokeocha, I. M., Akpan, U. A. and Brown, G. N. (2025). Perceived influence of infomercials on the patronage of select diaper brands among nursing mothers in Uyo. *Indiana Journal of Arts & Literature*, 6(8), 17–24.
- Lamola, M. J. (2023). *Used diaper disposal practices by mothers/caregivers in the Capricorn District Municipality, Limpopo Province, South Africa* (Master's dissertation). University of Limpopo.
- Mbiereagu, A. and Etumnu, U. (2021). The influence of caregiver education on diaper choices: An application of the Health Belief Model. *African Journal of Health Promotion*, 6(2), 67-79.
- Mbindyo, D. K. (2022). *Influence of Country of origin on consumer based brand equity of baby diapers in Nairobi County*. A Masters Thesis submitted to the Faculty of Business and Management Sciences, University of Nairobi. 74pp.
- National Population Commission (NPC), (2024). *Estimated population figures for Abia State, Nigeria*.
- Okotto-Okotto, J., Asamoah, M., Thomas-Possee, M. L. H., Dzodzomenyo, M., Hornuvo, R., Okotto, L. G. and Wright, J. A. (2024). Disposable diaper consumption and waste in urban Ghana and Kenya: The role of manufacturing, distribution, and branding. *PLOS Water*, 3(12), e0000315.
- Raymond C. (2018). Africa baby diaper market: Africa's diaper market has finally reached the tipping



- point. Nonwovens Industry Magazine.
- Schenck, C. J., Chitaka, T. Y., Tyrrell, H. and Couvert, A. (2023). Disposable diaper usage and disposal practices in Samora Machel Township, South Africa. *Sustainability*, 15(12), 9478.
- Srivastava, M. E. and Verma, K. A. (2017). A study on satisfaction of mothers with the usage of baby diapers. *International Journal of Research in Humanities, Arts and Literature*, 5(5), 25-32.
- Udoh, I. P., Ibeh, G. E., Nwosu, E. O., Arum, E. C. and Okoli, I. C. (2024). Isolation, identification, and antibiotic susceptibility profile of bacterial isolates from unused diapers sold in major markets in Enugu Metropolis: Clinical and policy perspectives. *African Journal of Reproductive Health*, 28(8), 118–127.
- Zakari, N., Maisalati, M., Abdullahi, I. K., Yakubu, V. and Madu, I. E. (2024). Effect of the use of baby diapers on public and environmental health of Dutse, Jigawa State, Nigeria. *Journal of Healthcare in Developing Countries*, 4(2), 66–69.