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Impact Of Electronic And Conventional Educational-Interventions On Perceived Self-Efficacy And Practice Of Breast Self-Examination Among Women In Oyo State

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ABSTRACTS:
Breast self-examination (BSE) is one of the strategies for early detection of breast cancer, but there are dearth of information on various intervention particularly education that could improve the efficiency and practice of BSE. This study was designed to investigate the impact of electronic and conventional educational-interventions on knowledge, attitude, perceived self-efficacy and practice of breast self-examination (BSE) among women in Oyo State. This study was conducted among 426 women selected using multistage sampling techniques. The study involved pre-interventional, interventional and post-interventional phases. The pre-intervention includes a 3 week familiarity and selection of participants in line with inclusion criteria. Educational-intervention was designed and presented using electronic (experimental group) and conventional media (control group) for 3 weeks. Structured questionnaire adapted from existing standardized and validated questionnaires was adopted as instrument for data collection. Data were analyzed using frequency, percentage and charts aspects of descriptive statistics. This study revealed that, 76.60% participants from conventional group have adequate BSEK compared with electronic group (57.70%). Also, 56.80% participants from conventional group have positive BSEA compared with electronic group (9.40%). Furthermore, this finding revealed that, 57.70% participants from conventional group have better BSEPSE compared with electronic group (36.60%). More respondents from conventional group (50.20%) have good BSEP compared with electronic group (12.20%). The study concluded that, conventional method for disseminating health information is more effective to improve knowledge, attitude, perceived self-efficacy and practice of BSE compared to electronic method. This study recommended that, health sectors should make policies that would ensure strategic replacement of conventional methods of health information dissemination on BSE with electronic methods toward prevention of breast cancer. This would ensure proper initiation of the masses into technologically information driven society.
Keyword*: Knowledge, Attitude, Perceived Self-Efficacy, Practice, Breast Self-Examination*

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I. Introduction

The consistent rise in global prevalence of cancer of the breast (Kıssal & Kartal, 2019). The steady rise in the breast cancer incidence deters the preventive efforts of the international donor agencies like International Cancer Agency. The increasing rate of breast cancer is more evident in developing nations like Nigeria (Ossai et al., 2019). Also, recent global health initiative has continued to canvass for adoption of prevention techniques as a means to curtail recent increasing infections (Wegene, 2019). Therefore, there is a need to ensure appropriate preventive measure towards curtailing the rise in prevalence of cancer of the breast. The best technique for expanding the pace of endurance in cancer of the breast growth is early detection and interventions. Breast self-examination (BSE), clinical breast examination and mammography are techniques utilized for the early determination of cancer of the breast growth (Mbiere & Etumnu, 2021). However, the most cost-effective for early detection methods among the three is the breast self-examination (BSE).

The breast is an organ with a link with development of secondary sexual characteristic in female. It develops during adolescents' stage, which is one of the symbols of reproductive ability of female adolescents. It is associated with sexual stimulation site for the production of milk for infant development. The tissue is a common site for the development of cancer and can as well be infected. Therefore, periodic breast self-examination is adequate for the early detection of the disease. In a survey conducted by WHO in 2016 and 2017 respectively, they found that, every year, 22,000 women developed breast cancer, out of which 17,000 (77%) of them don't survive it. Jumbo (2019) foresaw that, by the year 2035, there would be more than 2.5 million new

cases of cancer of the breast annually. Herndon and Holland (2019) reported that, death due to Cancer of the breast in Nigeria occurs in every 25 reported cases. Also, WHO (2018) projected that, breast cancer cases may rise to 42 million by 2020 in the country. Therefore, the death rate due to cancer incidence is a growing challenge that shouldn't be taken lightly. Yet previous studies have reported low practices of breast self-examination among women of all ages. Okeke (2018) estimated that in increased number of women universally die each year from cancer of the breast and the greater part of all cancer of the breast cases happening overall are in low-income class nations of the world.

Although practice of BSE is easy, studies conducted among women of different ages show that, practice of BSE is either regularly or avoided (Chia et al, 2020). Udoh et al. (2020) gave reasons for low practices to include but not limited to inadequate knowledge of BSE, lack of time, lack of self-efficacy in practice of BSE, fear of likelihood of discovering a lump, and embarrassment associated with handling of the breast. Invariably, Ossai et al., (2019) observed that, Nigerian patients present advanced breast cancer stage when little or no benefit can be derived from any form of therapy.

According to Kıssal and Kartal, (2018), educators need to critically evaluate the effectiveness of breast cancer education and re-examine the content of any training for effectiveness. This is due to increasing low practice of BSE reported. Since women can discover breast cancer symptom themselves, it is important that they are well informed, to have adequate knowledge regarding any change in the breast tissue for early presentation. Desseminating right information about breast cancer will adequately impart women towards observing and identifying symptoms before the disease starts to spread and the patient begins seeking for medical assistance (Mbiere & Etumnu, 2020). Beyond educating women about importance of BSE, strategies used to deploy that information is vital to effectiveness. Okeke (2018) explains that, breast cancer prevention is not just about educating and empowering women, it also include equipping health workers with the appropriate skills and attitude through specialist educating methods. This is important towards evaluation of educational competence of nurses (Kıssal & Kartal, 2018). Based on the above, the researcher considers it necessary to examine the impact of conventional and electronic educational- interventions on perceived self-efficacy and practice of breast self-examination among women in Oyo State.

Statement of the Problem

The increase rate of breast cancer among women is worrisome, hence the need for re-strategizing public enlightenment. Therefore, it is evidence that, several studies have been conducted on prevention of cancer of the breast, some of which critically investigate the breast self-examination (Akpanekpo, 2017; Abeje et al., 2019). However, most of these studies are descriptive in nature, which would not out rightly be effective for policy formulation. This is because descriptive studies are opinion and may not necessarily reflect the true picture of individual actions. More so, recent studies conducted on breast self- examination are focused on knowledge, attitude and perception (Udoh et al. 2020; Asmare et al., 2022), without a critical review of strategies for information dissemination, which should be most appropriate for policy reform. Therefore, this study is expected to fill the gaps left in the studies by investigating relative inpact of conventional education and electronic-based education models on practice of breast self- examination as well as their perceived self-efficacy

II. Methodology

This study adopted true experimental research design. The need for this study was based on the fact that, the study is bent on investigating cause-effect relationship in a concomitant variation pattern. This study sample size was 426 and participants were selected using multi stage sampling techniques. This study adopted multistage sampling technique to select respondents across Oyo State. The study adopted a validated Breast Self-Examination Scale as described by Doshi and colleagues (2012). The scale consisted of five sections. The reliability of the questionnaire (BSEQ) was 0.8. Breast Self- Examination was measured by 5 parts questionnaires. (1) Socio-demographic Characteristics Questionnaire, (2) BSE Knowledge Scale, (3) BSE Attitude Scale, (4) BSE Perceived Self-Efficacy scale and (5) BSE Practice Scale. The aspect of the demographic characteristics was analysed using frequencies (f) and percentages as well as mean, aspect of descriptive statistics. Data related to research questions were also analysed using frequencies (f) and percentages as well as mean, aspect of descriptive statistics, chart was used to summarise the result for each variable.

III. Results and Discussion

Table 1: Demographic Characteristics of Respondents

Variable	Frequency (n=426)	Percentage (100%)
Age		
Below 20 years	31	7.3
20- 39 years	196	45.8
40- 59 years	139	32.8

60-79 years	58	13.6
80 years and above	2	.5
Marital status		
Single	57	13.4
Cohabiting	7	1.6
Married	328	77.0
Separated	34	8.0
Religion		
Christianity	216	50.7
Islam	200	46.9
African traditional religion	10	2.3
Educational attainment		
Non-formal education	80	18.8
Primary	86	20.2
Secondary	140	32.9
Tertiary	100	23.5
Informal education	20	4.7
Occupation		
Full house wife	40	9.4
Civil servant	47	11.0
Self employed	212	49.8
Health workers	52	12.2
Private company's employee	12	2.8
Others	63	14.8
Locations		
Urban	213	50.0
Rural	213	50.0
Monthly Income		
Below #10,000	49	11.5
#10,000- #30,000	289	67.8
#31, 000- #60,000	61	14.3
#61,000- #99,000	8	1.9
#100,000 and above	19	4.5

Table 1 above present results on demographic, on age, below a tenth (7.3%) were below 20 years, below half (45.8%) were 20-39 years, close to a third (32.8%) were 40-59 years, over a tenth (13.6%) were 60-79 and 0.5% were 80 years and above. On marital status, over a tenth (13.4%) were single, 1.6% were cohabiting, majority (77.0%) were married and below (8.0%) were separated. On religion, half (50.7%) practice Christianity, almost half (46.9%) practice Islam and just 2.3% practice any of the African traditional religion. On education attainment, almost a fifth (18.8%) had non-formal education, a fifth (20.2%) had primary education, almost a third (32.9%) had secondary education; below a quarter (23.5%) attended tertiary education and only 4.7% had Informal education. On occupation, almost a tenth (9.4%) were full house wife, over a tenth (11.0%) were civil servants, almost a half (49.8%) were self-employed and over a tenth (12.2%) were health workers, 2.8% were Private company's employee and 14.8% were into various occupation. On Location, both rural and urban were half (50.0%). On monthly income, over a tenth (11.5%) earn below #10,000, majority (67.8%) earn between #10,000- #30,000, over a tenth (14.3%) earn #31, 000- #60,000, 1.9% earned #61,000- #99,000 and 4.5% earned #100,000 and above.

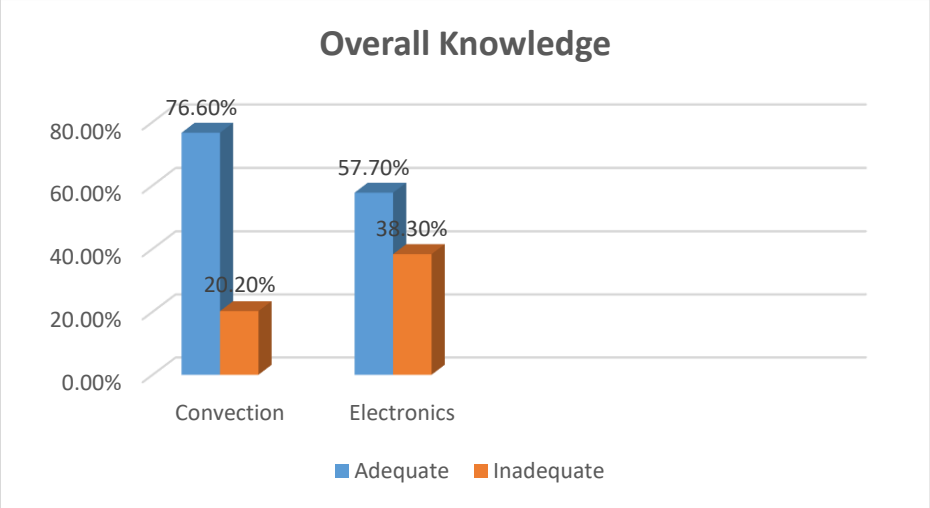
Research Question 1: What is the knowledge level of conventional and electronic group on breast self-examination among women in Oyo State?

Table 3: Knowledge of Conventional and Electronic Groups on Breast Self-Examination

ITEMS	**Convention (n=213)**		**Electronic (n=213)**	
	Freq	**Percent**	**Freq**	**Percent**
Have you ever heard of breast self-examination before?				
Yes	196	92.0	122	57.3
No	17	8.0	91	42.7
Where did you hear it from?				
Health Workers	186	87.3	41	19.2
Parents	13	6.1	4	1.9
Media	7	3.3	146	68.5
Friends	5	2.3	22	10.3
Others	2	.9	0	0.0

Who should perform BSE?				
Self	155	72.8	99	46.5
Health workers	41	19.2	110	51.6
Husband	17	8.0	4	1.9
How often should breast self-examination be performed?				
Weekly	36	16.9	29	13.6
Daily	36	16.9	48	22.5
Monthly	129	60.6	64	30.0
Yearly	12	5.6	72	33.8
One of these is not an appropriate method to perform BSE?				
Standing in front of a Mirror	24	11.3	13	6.1
Lie down with a pillow under your left shoulder	33	15.5	31	14.6
Standing up with your left hand behind your head and feel your breast with the pads of the 3 middle fingers of your right hand	30	14.1	107	50.2
Sitting	126	59.2	62	29.1
Breast Self-examination is carried out in other to look for the following except one?				
Changes in the shape and size of the breast	15	7.0	109	51.2
Breast Lump	147	69.0	104	48.8
Abnormal discharges from the breast nipple	20	9.4	0	0.0
Nipple Changes	18	8.5	0	0.0
Breast Sagging	13	6.1	0	0.0
Where will you go, if there are any symptoms of breast cancer				
Traditional Healer	16	7.2	19	8.9
Religious Homes	21	9.5	61	28.6
Health Facility	170	76.6	31	14.6
Self-Medication	6	2.7	102	47.9

Majority (92.0%) of the respondents from the conventional group have prior information about breast self-examination, which is far more than over half (57.3%) who heard about it from electronic group. Majority (87.3%) of the respondents from the conventional group got information about BSE through health workers, while majority (68.5%) from electronic group got information about BSE through media. Majority (72.8%) of the respondents from the conventional group knew that, BSE should be performed by individual, which is far more than below half (46.5%) who had same knowledge. Majority (60.0%) of the respondents from the conventional group knew that BSE is performed monthly, compared to below a third (30.0%) who had same knowledge. Majority (59.2%) of the respondents from the conventional group knew that sitting is not a method of BSE, compared to 29.1% from electronic group who had same knowledge. Majority (69.0%) of the respondents from the conventional group knew that BSE is carried out to look for breast lump, while below half (48.8%) had same knowledge for electronic group. Majority (76.6%) of the respondents from the conventional group knew where to go, if any symptoms of breast cancer is noticed, while above a tenth (14.6%) had same knowledge for electronic group.



Results shows that respondent's knowledge for conventional group (76.6%) was more compared to electronic group (57.7%).

Research Question 2: What is the attitude of conventional and electronic group on breast self-examination among women in Oyo State?

Table 3: Attitude towards Breast self-Examination between Conventional and Electronic Groups

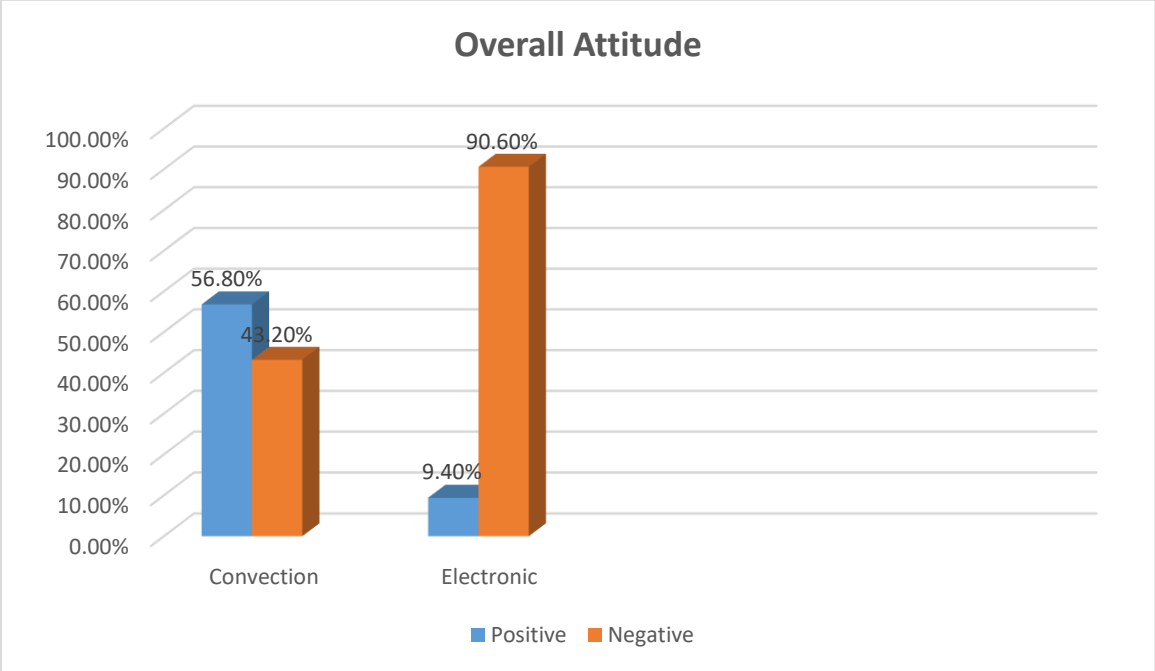
		Convention		Electronic	
Items		**RR**	**WR**	**RR**	**WR**
Every woman should do breast self-examination	**F**	212	1	213	0
	%	99.5	.5	100	0.0
I really care about my breast.	**F**	209	4	203	10
	%	98.1	1.9	95.3	4.7
Interested in doing breast self-examination	**F**	206	7	206	7
	%	96.7	3.3	96.7	3.3
Always search for information regarding breast self-examination from the internet, magazine and newspapers.	**F**	161	52	210	3
	%	75.6	24.4	98.5	1.5
Discuss breast self-examination with my friends often	**F**	176	37	211	2
	%	82.6	17.4	99.1	.9
Performing Breast self-examination makes me feel so funny	**F**	91	122	5	208
	%	42.7	57.3	2.4	97.6
Breast self-examination will be embarrassing to me	**F**	161	52	6	207
	%	75.6	24.4	2.8	97.2
Breast self-examination is time wasting	**F**	151	62	2	211
	%	70.9	29.1	.9	99.1
I am pre-occupied with work/activities, may not even remember breast self-examination	**F**	148	65	4	209
	%	69.5	30.5	1.9	98.1
Doing BSE makes me feel unpleasant	**F**	139	74	8	205
	%	65.3	34.7	3.8	96.2
Feel uncomfortable, can't do BSE once in a month	**F**	139	74	2	211
	%	65.3	34.7	.9	99.1
I still don't think breast self-examination is necessary	**F**	148	65	4	209
	%	69.5	30.5	1.9	98.1
Breast self –examination should be performed only if one feel pain in the breast	**F**	55	158	210	3
	%	25.8	74.2	98.6	1.4
If I ever detected a lump, I prefer to get treatment from a traditional healer	**F**	57	156	203	10
	%	26.8	73.2	95.3	4.7
Avoid breast self- examination I worry about having breast cancer	**F**	163	70	43	170
	%	67.1	32.9	20.2	79.8
Performing breast self-examination interferes with my daily actives	**F**	162	61	24	189
	%	71.4	28.6	11.3	88.7
Don't have enough privacy to do breast self-examination	**F**	141	72	46	167
	%	66.2	33.8	21.6	78.4
Even with breast self-examination, whoever will have cancer will still have it.	**F**	145	68	94	119
	%	68.1	31.9	44.1	55.9

RR-Right response; WR- Wrong response

Almost all (99.5%) of the respondents from the conventional group agreed that, every woman should do breast self-examination, while all (100.0%) the respondents in electronic group also agreed. Majority (98.1%) of the respondents from the conventional group care about their breast, which is more than (95.3%) who agreed from electronic group. Majority (96.7%) of the respondents from the conventional group affirmed that, they are interested in doing breast self-examination, also (96.7%) affirmed from the electronic group. Majority (75.6%) of the respondents from the conventional group always search for information regarding breast self-examination from the internet, magazine and newspapers, which is far less than (98.5%) from electronic group. Majority (82.6%) of the respondents from the conventional group discussed breast self-examination with their friends often, compared to a higher percentage (99.1%) who also agreed from electronic group. Below half (42.7%) of the respondents from the conventional group comformed that performing breast self-examination makes them feel so funny, compared to a few (2.4%) from electronic group. Majority (75.6%) of the respondents from the conventional group affirmed that breast self-examination will be embarrassing to them, while a few (2.8%) also affirmed from the electronic group. Majority (70.9%) of the respondents from the conventional group held that, breast self-examination is time wasting, while a lower percentage (0.9%) also affirmed from electronic group. Majority (69.5%) of the respondents from the conventional group disagreed that they are pre-occupied with work/activities and may not even remember breast self-examination, compared to (1.9%) who also disagreed from the electronic group. Majority (65.3%) of the respondents from the

conventional group disagreed that BSE makes them feel unpleasant, while a few percentage (3.8%) in electronic group also disagreed. Majority (65.3%) of the respondents from the conventional group disagreed feeling uncomfortable and can't do BSE once in a month, while a few (0.9%) disagreed from electronic group.

Majority (69.5%) of the respondents from the conventional group didn't think breast self-examination is necessary, while a few (1.9%) also disagreed from the electronic group. A quarter (25.8%) of the respondents from the conventional group disaffirmed that, Breast self –examination should only be performed only if one feel pain in the breast, while majority (98.6%) disaffirmed from electronic group. Over a quarter (26.8%) of the respondents from the conventional group knew that if they ever detected a lump, they would get treatment from a traditional healer, compared to majority (95.3%) who had same premonition from electronic group. Majority (67.1%) of the respondents from the conventional group affirmed that they worry about having breast cancer, while a fifth (20.2%) from electronic group also worries. Majority (71.4%) of the respondents from the conventional group affirmed that, breast self-examination interferes with their daily actives, compared to (11.3%) from electronic group. Majority (66.2%) of the respondents from the conventional group don't have enough privacy to do breast self-examination, compared with (21.6%) from electronic group. Majority (68.1%) of the respondents from the conventional group believes that whoever will have cancer will still have it, compared to (44.1%) from electronic group.



Results shows that respondents' attitude for conventional group (56.8%) was better compared to electronics (9.4%).

Research Question 3: What is the perceived self-efficacy of conventional and electronic group towards breast self-examination among women in Oyo State?

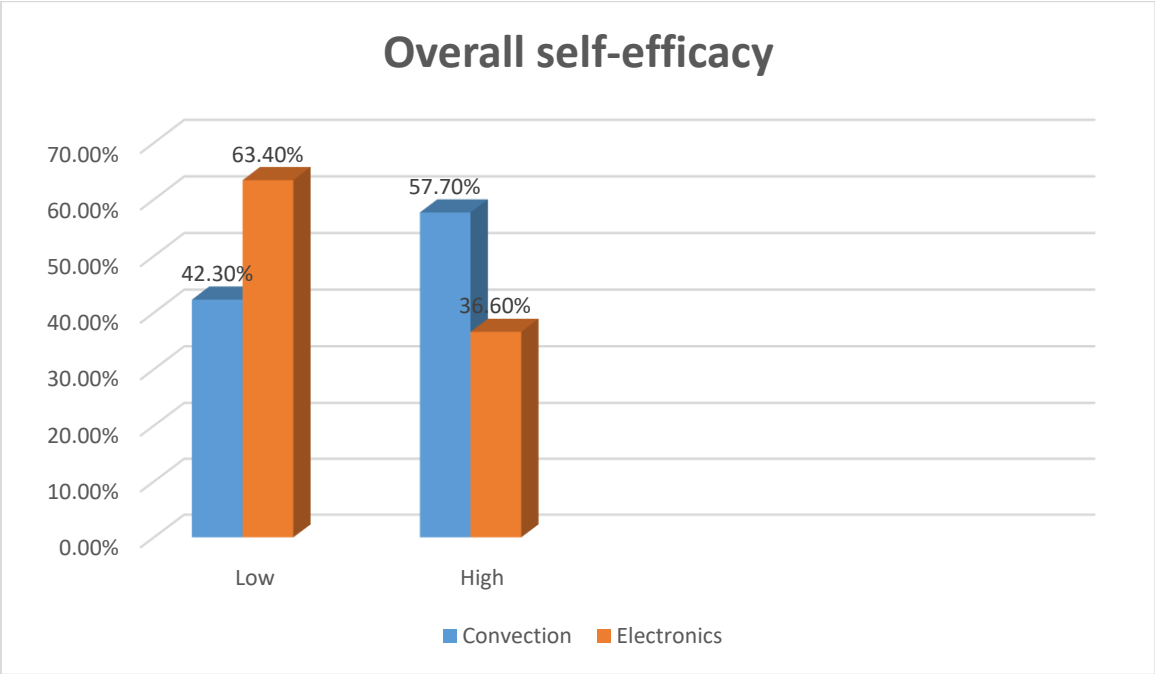
Table 4: Perceived Self-Efficacy of Conventional and Electronic Groups towards Breast Self-Examination

		Convention		Electronic	
Items		**RR**	**WR**	**RR**	**WR**
Confidence to visually examine my breast to see if any unusual things about them	**F**	198	15	89	124
	%	93.0	7.0	41.8	58.2
Can boldly pick, if any of my breast look differently than they usually look	**F**	198	15	94	109
	%	93.0	7.0	44.1	55.9
Certainly, I can use the right fingers when examining my breast tissue	**F**	194	19	87	126
	%	91.1	8.9	40.8	59.2
Confidence to use the pads of my fingers to check my breast for any changes	**F**	170	43	98	105
	%	79.8	20.2	46.0	54.0
Confidence to use the middle three fingers to feel for lumps or masses.	**F**	202	11	78	135
	%	94.8	5.2	36.6	63.4
Confidence to use three different level of pressure to feel my breast for lumps or masses	**F**	208	5	82	131
	%	97.7	2.3	38.5	61.5

Confidence to use the pads of my fingers to check all the breast tissues that needs to be checked on each breast	**F**	209	4	63	150
	%	98.1	1.9	29.6	70.4
Confidence to figure out the normal tissues from my own breast	**F**	207	6	76	137
	%	97.2	2.8	35.7	64.3
Confident to identify lumps or mass that need to be reported to the physician	**F**	204	9	84	129
	%	95.8	4.2	39.4	60.6
Confident to decide what abnormal breast tissues or signs are when checked.	**F**	204	9	99	114
	%	95.8	4.2	46.5	53.5
Confident to report any changes in the breast that the physician should know	**F**	207	6	148	65
	%	97.2	2.8	69.5	30.5
Confident to tell the physician about the concerns I have after checking the breast	**F**	209	4	202	11
	%	98.1	1.9	94.8	5.2
Confident to know what I would do if I feel a lump while doing BSE	**F**	201	2	176	37
	%	94.4	5.6	82.6	17.4
Confident to perform BSE because I can manage my time to perform the exercise	**F**	206	7	192	21
	%	96.7	3.3	90.1	9.9
Confident to perform breast self examination because I have my privacy	**F**	207	6	173	40
	%	97.2	2.8	81.2	18.8
Confident to perform BSE because I am not afraid to find a lump or any abnormality	**F**	207	6	189	24
	%	97.2	2.8	88.7	11.3
Confident to perform breast self examination because I do not feel embarrassed to do so	**F**	208	5	194	19
	%	97.7	2.3	91.1	8.9
Confident to do BSE because I do not feel any pain whenever I practice it	**F**	204	9	204	9
	%	95.8	4.2	95.8	4.2
Confident to perform BSE because I can maintain it monthly	**F**	203	10	178	35
	%	95.3	4.7	83.6	16.4
Confident to choose the best time to perform BSE I know the history of my menstruation periods	**F**	197	16	208	5
	%	92.5	7.5	97.7	2.3

Majority (93.0%) of the respondents from the conventional group had confidence to visually examine their breast to see any unusual changes about the breasts compared to below half (41.8%) of the respondents in electronic group affirmed. Majority (93.0%) of the respondents from the conventional group can boldly identify, if any of their breasts look differently from their usually look, compared to (44.1%) that affirmed from electronic group. Majority (91.1%) of the respondents from the conventional group affirmed that, they can use the right fingers when examining their breast tissue compared to (40.0%) from the electronic group. Majority (79.8%) of the respondents from the conventional group had confidence to use the pads of their fingers to check their breast for any changes, compared to (46.0%) from electronic group. Majority (94.8%) of the respondents from the conventional group had confidence to use the middle three fingers to feel for lumps or masses, compared to a lower percentage (36.6%) from electronic group. Above half (97.7%) of the respondents from the conventional group had confidence to use three different level of pressure to feel their breast for lumps or masses, compared to a few (38.5%) from electronic group. Majority (98.1%) of the respondents from the conventional group had confidence to use the pads of their fingers to check all the breast tissues that need to be checked on each breast compared to (29.6%) from electronic group. Majority (97.2%) of the respondents from the conventional group had confidence to figure out the normal tissues from their own breast, compared to (35.7%) from electronic group. Majority (95.8%) of the respondents from the conventional group had confidence to identify lumps or masses that need to be reported to the physician, compared to (39.4%) from electronic group. Majority (95.8%) of the respondents from the conventional group had confidence to decide what abnormal breast tissues or signs are when checked compared to (46.5%) with electronic group. Majority (97.2%) of the respondents from the conventional group had confidence to report any changes in the breast that the physician should know compared (69.5%) with electronic group. Majority (98.1%) of the respondents from the conventional group had confidence to tell the physician about the concerns they have after checking the breast compared (94.8%) with electronic group. Majority (94.4%) of the respondents from the conventional group had confidence to know what they would do if they feel a lump while doing BSE compared to (82.6%) from electronic group. Majority (96.7%) of the respondents from the conventional group had confidence to perform BSE because they can manage time to perform the exercise, compared to (90.1%) from electronic group. Majority (97.2%) of the respondents from the conventional group had confidence to perform breast self-examination because they have their privacy, compared to (81.2%) from electronic group. Majority (97.2%) of the respondents from the conventional group affirmed that they have confidence to perform BSE because they not afraid to find a lump or any abnormality compared to (88.7%) from electronic group. Majority (97.7%) of the respondents from the conventional group affirmed that, they have confidence to perform breast self-examination because they do not feel embarrassed to do so, compared to (91.1%) from electronic group.

Majority (95.8%) of the respondents from the conventional group had confidence to perform BSE because they do not feel any pain whenever they practice it, compared to (83.6%) from electronic group. Majority (95.3%) of the respondents from the conventional group had confidence to perform BSE because they can maintain it monthly, compared to (95.3%) from electronic group. Majority (92.5%) of the respondents from the conventional group had confidence to choose the best time to perform BSE because they know the history of their menstruation period, compared with (97.7%) from electronic group



Results shows that respondents' perceived self-efficacy for conventional group (57.7%) was better compared to electronics (36.6%).

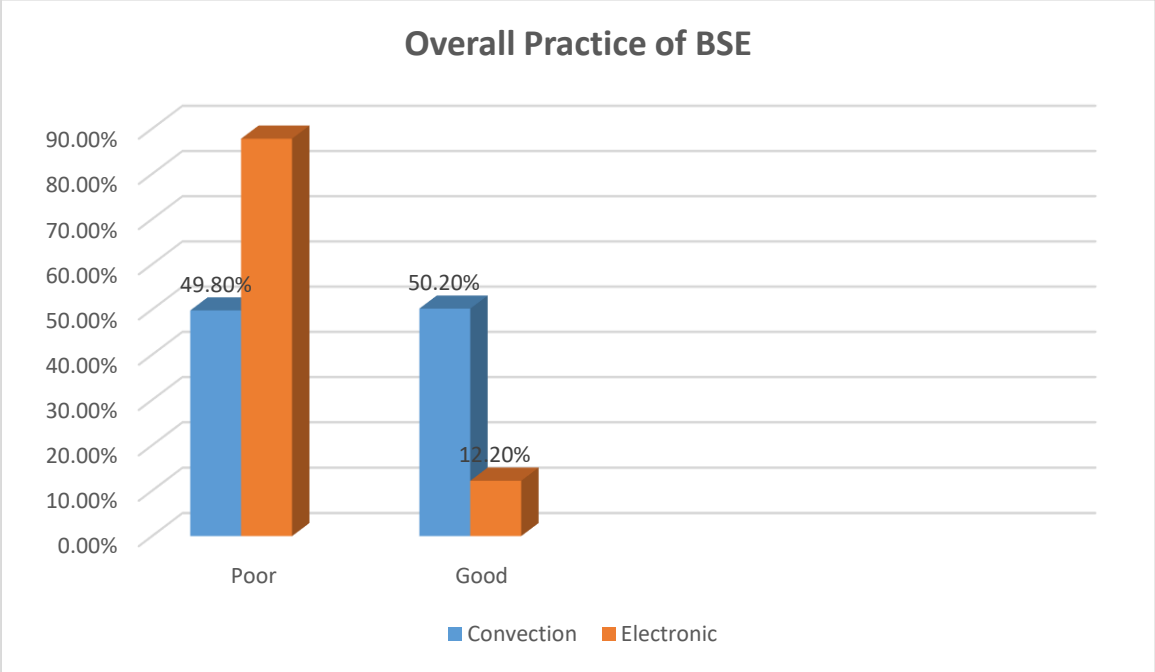
Research Question 4: What is the practice of BSE among the conventional and electronic group among women in Oyo State?

Table 5: Practice of BSE among the Conventional and Electronic Groups

			Convention		Electronic	
s/n	**Items**		**RR**	**WR**	**RR**	**WR**
23	Do you practice breast self-examination	**F**	109	104	11	202
		%	51.2	48.8	5.2	94.8
24.	Do you practice breast self-examination once a month.	**F**	111	102	1	212
		%	52.1	47.9	.5	99.5
25.	Any of your children/ relative practice breast self-examination	**F**	81	132	4	209
		%	38.0	62.0	1.9	98.1
26.	Any of your friend practice breast self-examination	**F**	58	155	12	201
		%	27.2	72.8	5.6	94.4
27.	Avoid learning the correct method of breast self –examination	**F**	148	165	191	24
		%	69.5	30.5	89.7	10.3
28.	Parents or partner always advice to do breast self-examination	**F**	92	121	4	209
		%	43.2	56.8	1.9	98.1
29	Advise friends to do breast self-examination	**F**	65	168	21	192
		%	30.5	69.5	9.9	90.1
30	Discuss the importance of breast self–examination with friends	**F**	71	142	6	207
		%	33.3	66.7	2.8	97.2
31	Do you enjoy been taught on breast self-examination	**F**	158	65	6	207
		%	69.5	30.5	2.8	97.2
32	If you notice any breast abnormality, directly go to the health worker	**F**	56	157	10	203
		%	26.3	73.7	3.3	96.7

Wrong Response (WR); Right Response (RR)

Over half (51.2%) of the respondents from the conventional group practice breast self-examination compared to (5.2%) of the respondents in electronic group. Over half (52.1%) of the respondents from the conventional group practice breast self-examination once a month, compared to (0.5%) affirmed from electronic group. Over a third (38.0%) of the respondents from the conventional group affirmed that, children/ relatives practice breast self-examination compared to (1.9%) from the electronic group. Over a quarter (27.2%) of the respondents from the conventional group held their friend practice breast self-examination, compared to (5.6%) from electronic group. Majority (69.5%) of the respondents from the conventional group avoid learning the correct method of breast self –examination, compared to a higher percentage (89.7%) from electronic group. Below half (43.2%) of the respondents from the conventional group, affirmed that, parents or partner always advise them to practice breast self-examination, compared to a few (1.9%) from electronic group. About a third advise friends to practice breast self-examination compared to (9.9%) from electronic group. A third (33.3%) of the respondents from the conventional group had discussed the importance of breast self–examination with friends, compared to (2.8%) from electronic group. Majority (69.5%) of the respondents from the conventional group had enjoyed been taught breast self-examination, compared to (2.8%) from electronic group. Over a quarter (26.3%) of the respondents from the conventional group affirmed that, if they notice any breast abnormalities, they would report to the health worker compared to (3.3%) from electronic group.



Results shows that respondents' practice of BSE in conventional group (50.20%) was better compared to electronic (12.2%).

IV. Discussion

The study revealed that some respondents below 18 years old were at risk of breast cancer. This is due to the fact that, some 18 years or 19 years were found to have breast lump and other breast diseases. This result is at variance with Obaji et al., (2013) who found that breast cancer occurs in women from age 20 years and above. The probable reason for this is that, lifestyles are changing and have contributed to risk factors for breast cancers. Agbonifoh (2016) held that, lifestyles are major factors contributing to breast cancer. More findings revealed that, majority of the respondents are married, which could either facilitate or serve as a barrier to breast self-examination. In the context that, marriage brings more responsibility (as seen in the responses on occupation), which subsequently reduce the time they have to care for self and thereby could reduce practice of BSE. Obaji et al., (2013) found that, BSE is affected by responsibilities and occupation.

Education has been a major factor that promotes practice of BSE over time. Aside that education gives access to information; it also ensures understanding of the importance of preventive strategies. This study further revealed that, majority of the respondents were educated such as had primary education, secondary education and higher education. However, below a quarter of the respondents had tertiary education; this is an indicator that, only a few of the respondents would have prior knowledge of BSE, especially as english is our

lingual franca and language policies have not been widely accepted across schools in Nigeria. This also brings to note that, method of information dissemination should be those supported by a population who are not much educated (like conventional methods). this result is at variance with Jabeen et al., (2018) who found that, upon adjusting age, marital status, family history and education, group A (p=0.001) remained significant, while the level of education (p=0.116) became non-significant.

In this part of the world several factors determine family type individual belongs. Some of these factors include, religion, background among others. This study revealed that, close to half of the participants belong to polygamy. This implies that, most of the participants are at risk of poor practice of BSE. Amannah and Ugwu (2018) affirmed that, major reason why women do not comply with BSE is due to lack of privacy which is one factor particular to those polygamists. This also explained the influence of large family size and higher number of children recorded in this study.

The finding in this study revealed that, respondents from conventional group have better knowledge of BSE compared to respondents from electronic group. This finding is in line with the study of Asmare et al., (2022) which deduced that, 56% of women had adequate knowledge. The probable reason for this is that, respondents in conventional group got the information within the same medium the facilitator was, which ensured direct transmission of information and easy ability of the respondents to access the facilitator. This is unlike the situation in the electronic group, where the respondents had to receive the information through electronic medium (Zoom). This shows that, the type of teaching where the teacher disseminates information to the students directly (conventional) is better compared to where the students learn electronically. This finding was corroborated by the study of Jumbo (2019) on breast self-examination which deduced that, the level of exposure to the campaign on breast self-examination was low and that the women mostly accessed information on breast self-examination via radio and face-to-face communication channels.

There is more evidence in the results presented in table 4.2. After both groups had been subjected to educational interventions on BSE. It was revealed that, higher percentage of respondents from conventional group understood BSE compared to those from the electronic group. Finding revealed higher percentage from convention group, compared to electronic group. Only sitting method is not a technique of practicing BSE, the major reason for BSE is to find breast lump, when symptoms of breast cancer surfaces patient should go to health care facilities. Mbiere and Etumnu (2021) found that, less than half indicated that the extent of breast cancer awareness campaign influences the practice of breast self-examination among women is low economy.

Finding from the study revealed that, majority of the respondents have higher positive attitude from conventional group, while below a tenth had positive attitude towards BSE from electronic group. Although only slightly above half among respondents from conventional group had positive attitude and for electronic group, only below a tenth had positive attitude. The implication is that, on general note the attitude towards BSE before intervention is not encouraging. Olanrewaju, and Usman (2020) found that, those with unfavorable attitude are one time less likely to perform breast self-examination (OR = 1.025 CI = 0.949 -1.107). This is evident in the results presented in table 4.3 where below half of the respondents expressed that, performing breast self-examination makes them feel so funny, is embarrassing and time wasting among others.

The findings revealed that, a higher percentage of conventional group had high self-efficacy compared to electronic group. Although, only about over half of the respondents from the conventional group had high self-efficacy, while slightly above a third of the electronic group had high self-efficacy. The implication is that, on general note self-efficacy of respondents is not very good. This supports Kıssal and Kartal (2018) who found that, implementing the educational program was found to be statistically insignificant for the Health Belief Model on BSE. Individual confidence towards the practice of BSE is important to increase its compliance. Didarloo et al., (2017) found that, perceived severity [OR = 2.38, 95% CI = (1.02–5.54)], high perceived benefits [OR = 1.94, 95% CI = (1.09–3.46)], and high perceived self-efficacy [OR = 13.15, 95% CI = (3.64–47.51)] were better predictors of BSE behaviour ($P < 0.05$) than low perceived severity, benefits, and self-efficacy. Yet perceived self-efficacy depends on some factors which include, educational background, knowledge among others.

This could be because most of the respondents are just getting to understand BSE for the first time. Although some might have heard about BSE, but not quite understand how to go about the practice. From the findings, the conventional method of education is more effective in promoting good self-efficacy among women on BSE, compared to electronic group. Ohaeri and Aderibigbe (2019) found that, there were significant associations between knowledge, level of education and use of BSE and mammogram ($p<0.05$) This is evident in the result presented in table 4.4 where majority from conventional group compared to few from electronic group have confidence to visually examine breast to see if any abnormalities exist.

Findings revealed that, a higher percentage of respondents from conventional group have good practice of BSE compared to electronic group. Kıssal and Kartal (2018) found that, the percentage of students practicing regular BSE was determined as 14.6% before training, 45.8% after 6 months, and 28.1% after 1 year. Breast self-examination is believed to be one of the preventive measures for breast cancer. It also serves as a means for

early detection of breast cancer. Therefore, the practice of breast self-examination is important towards ensuring reduction of breast diseases and timely presentation of breast cancer.

Although only a half of the respondents from conventional group had good practice of BSE and slightly above a tenth had good practice of BSE from electronic group. The probable reason to this is that, majority of the respondents do not practice BSE during pre-intervention. This corroborates Udoh et al., (2020) who found that, BSE practice is still a challenge in SSA. Therefore, the conventional method was more effective compared to electronic method.

V. Conclusion and Recommendations

This study highlighted the need for nurses to implement measures that would significantly promote electronic and conventional educational interventions of breast self-examination, perceived self-efficacy and practice of BSE in preventing breast cancer morbidity and mortality among women in Oyo State. Furthermore, nurses should be able to disseminate information to the government on the importance of empowering other allied health workers like community Health workers, village health workers and health volunteers to adopt the use of electronic media in disseminating health information to the community since they are the health workers closer to the masses in the rural areas. Based on the findings which show higher knowledge within the conventional group and especially in the rural areas, nurses posted to these areas should not do away with the use of local mobilization and communication methods. This implies if nurses and other health workers would adopt electronic information dissemination, they should do it strategically and not sudden. Based on the findings of the study, the conventional method of information dissemination is mostly preferred and more effective to increase knowledge, improve attitude, enhance self-efficacy and promote good practices of breast self-examination among women. Therefore, Policy makers should ensure the creation of more breast imaging units and it would be necessary to include screening BSE in the National Health Insurance Scheme. This would increase the practice of BSE thereby reducing mobility and mortality associated with breast cancer disease. Also, there is need for downward review of age used in previous research to cater for contributions of intending factors such as lifestyle or environmental factors. Therefore recent research in the field of health science should endeavour to do downwards review of minimum age range of participants used in their study.

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