



Influence of Social Media Campaign Messages on Awareness and Knowledge of Cervical Cancer among Female Undergraduates in South-West Nigeria

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Abstract. Cervical cancer is a major global public health challenge, ranking as the second most prevalent cancer among women in Nigeria. Where screening programmes are available, lack of awareness and poor knowledge can lead to poor attitude towards the utilisation of such programmes. Deploying the mass media remains a viable health communication strategy in creating wide-spread awareness on cervical cancer. Particularly, with social media, being the most popular communication platform utilized by youths, it can be effective in promoting early detection of cervical cancer among young female adults who are susceptible to the disease once sexually active. Therefore, this study examined the awareness and knowledge of cervical cancer on social media by female undergraduates in South-West Nigeria. A total of 644 questionnaires were administered in eight universities using multiple sampling techniques. Mean, standard deviation and simple regression were used in the analysis of data gathered. Results revealed that social media campaign messages on cervical cancer had a significant influence on participants' awareness of cervical cancer (F -statistic = 51.114; p -value = 0.000), and knowledge of cervical cancer (F -statistic = 49.049; p -value = 0.000). The study concluded that exposure to social media campaign messages on cervical cancer can effectively shape awareness and knowledge of cervical cancer. It's recommended that health educators should strategically increase social media content that would bolster awareness on cervical cancer, particularly among the female youth demography.

Keywords: Social Media Campaign Messages, Awareness, Knowledge, Cervical Cancer, South-West Nigeria

1. Introduction

Cervical cancer is a type of cancer that develops in the cells of the cervix, the part of the uterus that connects to the vagina. It is caused by a virus known as the Human Papilloma Virus (HPV), especially of serotypes 16 and 18 (World Health Organization (WHO), 2017). This virus is sexually transmitted and persistent infections with it causes cervical cancer if not detected on time and treated. Infection with HPV has a slow progression of about 10 – 20 years from normal cells to pre-cancer cells then finally to invasive (WHO, 2021). The 10- to 20-year interval between pre-cancer and cancer provides sufficient opportunity to screen, detect and treat pre-cancer and avoid its developing into cancer. However, the progression in immune-compromised women (that is those living with HIV) is usually faster.

Cervical cancer is a major public health concern, globally; cervical cancer ranks the fourth most recurrent cancer in women with 570,000 new cases accounting for 6.6% of all female cancers, and 311,000 deaths from the disease recorded in 2018 (UNAIDS, 2019; WHO, 2019). Nigeria ranks 5th among countries when it comes to death count from cervical cancer, after India, China, Brazil and Bangladesh (Cervical Cancer Global Crisis Card, 2013). Current report indicates that yearly, 14, 943 women are diagnosed with cervical cancer and 10,403 die from the disease out of a population made up of 50.33 million women who are 15 years and above, and are at risk of coming down with cervical cancer (ICO/IARC, 2018; Bray, Ferlay, soerjomataram, Siegel, Torre Jemal, 2018). This situation is not encouraging because the target age range is useful to any given society, women of the stipulated age are usually at the peak of their career,

their expected time for meaningfully contribution towards social and economic growth of the society. It was also estimated that if cervical cancer prevention, screening and treatment are not immediately and urgently scaled up, there could be a 50% increase in mortality over 2018 levels by 2040 (UNAIDS, 2019).

Communication can be used to reduce the incidence of this disease by creating awareness through the use of social media especially among young female adults who are sexually active and heavily dependent on social media. Social media has been shown for the remarkable role that it plays as an effective communication and information dissemination tool (Sobaih, Hasanein, & Abu Elnasr, 2020; Farinloye, Wayne, Mogaji, & Watat, 2020). Several campaigns on social media exist to create awareness and provide the basic knowledge required to combating cervical cancer. For instance, "Cervical Cancer Awareness Campaign 2020" is an educational video on YouTube which is a community initiative by Zulekha hospital Dubai. The campaign announces that early detection of precancerous cells helps to prevent cervical cancer in adults and HPV vaccination can also check its occurrence in girls. Another is 'SmearMyWoman' - Cervical Cancer Campaign by Chain Reaction Nigeria, made up of a group of men who have decided to free the women in their lives of cervical cancer by educating them and offering free cervical cancer screening to them. Existing research has underscored the importance of the Internet and social media in catalysing access to information about cervical cancer (Banik, Naher, Rahman, & Gozal, 2020). However, effectiveness of cervical cancer campaign using social media faces a number of challenges in developing countries like Nigeria. These challenges include cost of Internet data, poor Internet access, cost of acquiring smartphones, and lack of technical knowledge, amongst other issues, continue to challenge the effectiveness of social media cervical cancer campaigns (Ali., 2011).

Therefore this study was carried out to examine the influence of social media campaigns on awareness and knowledge of cervical cancer prevention messages among female undergraduates in South-West Nigeria.

2. Empirical Review

2.1 Women's Awareness of Cervical Cancer

Existing literature had showed that awareness was possibly the biggest challenge public health and medical professionals face in the battle against cervical cancer worldwide. In Nigeria, studies

undertaken within the previous decade (2010 – 2019), also revealed that this challenge still exist in various regions and zones of the Country. For example, Oluwole et al. (2017) surveyed 400 rural women in Lagos, Nigeria, aged 38.9 ± 9.51 years on the average, to discover an awareness rate of 15%, while only 13.3% of this figure had ever undergone screening for the disease (none of which had been done within the prior three years). This conformed with the findings of Abiodun et al. (2017), in surveying 318 women in another south-western Nigerian State (Oyo), wherein was discovered that only 22.6% were aware of cervical cancer. 17.9% were aware of screening tests as a preventive measure for the disease, while only 1.6% had ever undergone screening tests; even though 5.7% believed that they may be at risk of cervical cancer.

In a related study, Akanbi, Iyanda, Osundare, and Opaleye (2015) sampled 737 women who were randomly picked from the general population in two south-western States of Nigeria and recorded that awareness level of HPV among women in southwest Nigeria is low (18.5%). Respondents were more knowledgeable on cervical cancer than HPV (64.3%), they had the idea that the primary cause of cervical cancer is HPV (27.5%). This aspect of the study of participants being more aware of cervical cancer contrasts the studies of (Hyacinth, et al 2012; Ndikom and Ofi 2012.; Bisi-Onyemaechi, 2018) which reported that participants awareness of cervical is low. The study also revealed that respondents' information source was through the media, and that getting information through health care system was very poor. Health workers stand the chance of educating their clients when they come to the hospital for consultation. However, this study reveals that much of this is not done. Based on the result that in south western Nigeria, knowledge of HPV and cervical cancer is low, the researchers recommended that Nigerian women of child-bearing age should be educated on cervical cancer since they are not likely to get regular Pap smear tests. Also, there is the need to increase immunization facilities and make it available across the country (Akanbi, et al, 2015).

However, some studies have reported that in their area of study, awareness of cervical cancer, screening and HPV vaccines were high. For example Okunowo, Daramola, Adaiyah, & Soibi-Harry, (2018) reported a high level of awareness of cervical cancer and Pap smear test as 80% and 55.1% respectively among a sample of 205 pregnant and non-pregnant women attending antenatal and gynaecological out-patient clinics at the Lagos. And this high level of awareness is attributed to the fact that majority of the

participants are educated. This was not the case of Olubodun et al (2019) as their study reported low level of awareness of cervical cancer because majority of their study subject had just secondary education. However, the high level of awareness of cervical cancer in this study did not translate into knowledge as the study recorded a low level of knowledge of cervical cancer as only 40.0% and 15.6% could identify the symptoms and risk factors of cervical cancer respectively. Okunowo, *et al.*, (2018) also recorded a low level of Pap smear uptake, only 22.9% of the respondent had ever done Pap smear test and the commonest reason given was lack of awareness and non-recommendation from the doctor ().

2.2 Women's Knowledge of Cervical Cancer

Extant literatures have evidences that knowledge on cervical cancer is a major challenge as it concerns the battle against cervical cancer. Studies conducted in and outside of Nigeria reveal that knowledge on cervical cancer which includes but not limited to its risk factors, symptoms and preventive measures, just to mention a few is low. Whereas knowledge of cervical cancer and its risk factors are important elements in deciding for uptake of screening, most women lack this knowledge so they do not perceive that they are susceptible to the disease (Oche, et al 2013, Ubajaka, et al., 2015; Yi-Jung, et al., 2015).

Existing literature shows that most women lack knowledge of cervical cancer which has translated into poor attitude and negative attitudes towards preventive measures. For example, Olubodun, et al., 2019 sampled a total of 305 women, only (12.8%) had heard of cervical cancer. Only a few per cent of the women could identify a risk factor of cervical cancer and the symptoms. This low level of knowledge could be attributed to their level of education as most of the women had attained only secondary school education. Aweke, et al., (2017), investigated women of childbearing age in Ethiopia and found out that (46.3%) of the respondents did not have all-inclusive knowledge of cervical cancer. Ogbonna (2017) also revealed that only (10.8%) reported that they have knowledge of cervical cancer and 42.5% of students were not able to recognize the danger factors of cervical cancer, while others were in some measure confident in making out the risk factors of cervical cancer.

However, some studies reported high knowledge of cervical cancer risk factor, symptoms and preventive measures. For instance, Neji, *et al.*, 2019; Toye, *et al.*, 2017;) reported that many of the respondents in their study area had good knowledge about cervical

cancer and screening, and risk factors associated with the development of cervical cancer.

3. Theoretical Framework

Theoretical underpinnings were drawn from Blumler and McQuail's (1969) Uses and gratification theory which deals with their classification of what motivated audience for watching political programs during the election of 1964 election in the United Kingdom and Ajzen and Fishbein's (1980) theory of planned behaviour. In summary, the uses and gratification theory is based on social communication, it is audience focused. It seeks to know why people look out for media and what it is used for rather than what the media do to them. Uses and gratification theory (UGT) posits that individuals have power over how they use the media, rather than placing individuals as inactive consumers of media, it positions them as very active. The theory is relevant to this study in the sense that the viewers or users of the social media have needs they need to gratify so they choose the medium of their choice to gratify these needs. If the audience member has a health need, he has a lot of options before him to choose, so he has the power to choose the option that soothes him most. So users of the social media who decided to view these educational videos on cervical cancer did this because they had health needs they needed to gratify and among all the options available to them, they chose the social media and vice versa.

On the other hand, the main crust of this the theory of planned behaviour is that individuals make rational, sound decisions to engage in a particular behaviour by assessing the information available to them (Sarah, 2010). This means that every human behaviour is based on voluntary control by the individual, before an individual takes any action, he has to consider it first, weigh the threats and benefits before acting. He does not just act; he evaluates the information he is already exposed to.

4. Research Materials and Methodology

The setting of the study was the south-west geopolitical zone of Nigeria made up of six states namely; Oyo, Lagos, Ekiti, Ondo, Ogun and Osun. The multiple sampling techniques were used for this study. Firstly, three states were purposively selected (Ogun, Oyo, and Ondo States) because they have more number of universities when compared with the remaining states that make up the south western states. Furthermore, the universities in the three states were stratified by ownership into public and private respectively; and then randomized using an

alphabetical sort. Thereafter, systematic sampling technique was adopted to select every third university from the list of universities per stratum, afterward; cluster sampling technique was used to select the schools and random sampling to select the respondents.

A pretested structured questionnaire was used for the study. The researchers with two trained research

assistants administered a total of 776 copies of the instrument between February and March, 2022. Completed instruments were analysed using descriptive and inferential statistical tools of mean, standard deviation and frequencies, while hypothesis was tested using simple regression. Ethical approval was obtained from Babcock University Health Research Ethics Committee (BUHREC).

5. Results

From the administered and retrieved instrument, 644 were validated for analysis, resulting in 82.9% response rate. The Cronbach’s alpha value from the reliability analysis of variables included in the study was 0.851.

Table 1: Demographic characteristics of respondents

Variable	N = 644	(%)
Age (years)		
16 – 18	171	26.6
19 – 21	297	46.1
22 – 24	122	18.9
25 – 27	45	7.0
28 and above	9	1.4
Level		
100	126	19.6
200	122	18.9
300	236	36.6
400	130	20.2
500	30	4.7
Religion		
Christianity	466	72.4
Muslim	161	25.0
Others	3	.5

(Field Survey, 2022)

Table 1 shows that most of the respondents (46.1%) are within the age range of 19 and 21 years, while 26.6% of the respondents are within the age range of 16 and 18 years. Also, the results show that 18.9% of the respondents are between the ages of 22 and 24 years. However, only 8.4% of the respondents are above the age of 25 years.

Results further reveal that 36.6% of the respondents are in 300 level in their studies, and 20.2% are in 400 level. Also, 19.6% and 18.9% of the respondents are in 100 level and 200 level respectively. However, only 4.7% of the respondents are in level 500 of their studies.

The details also show that majority of the respondents 72.4% are Christians, while 25% are Muslim. However, 0.5% of the respondents indicated that they belong to other religions besides Christianity and Islam.

RQ1: What is the awareness of female undergraduates regarding social media cervical cancer campaigns?

Table 2: Respondents’ awareness of social media campaigns on cervical cancer

Variable	N = 644	(%)
Have you come across any cervical cancer campaigns on various social media?		
Yes	310	48.1
No	317	49.2

Table 2 reveals that about half of the respondents i.e. 49.2% indicated that they have not come across any cervical cancer campaign on any social media platform. However, 48.1% of the respondents reported to have seen cervical cancer campaigns on social media.

Table 3: Respondents’ awareness of social media campaign messages on cervical cancer/Awareness of cervical cancer disease

	Mean	Std. Dev.	Percentiles		
			25 th	50 th	75 th
Social media campaign awareness score	5.0575	2.8292	3.00	5.00	8.00
Awareness of cervical cancer disease	2.3727	.89108	2.00	3.00	3.00

The result further reveals that the respondents on average have moderate awareness of social media campaign messages on cervical cancer disease (Mean = 5.0575, Std Dev = 2.829). More details on Table 3a

Table 3a: Social media cervical cancer campaigns awareness score

	Mean	Std. Dev.	Percentiles		
			25 th	50 th	75 th
Make the commitment campaign	.7298	.44440	.00	1.00	1.00
MAX AND PIA for cervical cancer prevention	.6242	.48470	.00	1.00	1.00
Healthier Scotland fight cervical cancer campaign	.6273	.48389	.00	1.00	1.00
Cervical Cancer Prevention AD	.6180	.48625	.00	1.00	1.00
Save Lives Campaign	.6475	.47812	.00	1.00	1.00
Cervical cancer 'I-did' Campaign	.5466	.49821	.00	1.00	1.00
What is HPV Cervical Cancer Campaign	.6366	.48134	.00	1.00	1.00
Smear my Woman - Cervical Cancer Campaign	.6273	.48389	.00	1.00	1.00
Average social media campaign awareness score	5.0575	2.8292	3.00	5.00	8.00

RQ2: How do social media cervical cancer messages influence female undergraduates’ awareness of the disease?

Table 4: Social media cervical cancer awareness/awareness of cervical cancer disease

	Mean	Std. Dev.	Percentiles		
			25 th	50 th	75 th
Social media campaign awareness score	5.0575	2.8292	3.00	5.00	8.00
Awareness of cervical cancer disease	2.3727	.89108	2.00	3.00	3.00

Table 4 reveals that the 50th percentile score of 5.0 further indicate that 50% of the respondents had moderate to high awareness of the disease via social media campaigns. Also, the respondents have on average moderate level of awareness of cervical cancer disease (Mean = 2.3727, Std Dev = .89108). Details on Table 4a

Table 4a: awareness of cervical cancer disease

	Aware	Not Aware
	Freq. (%)	Freq. (%)
Are you aware that the cervical cancer disease is preventable?	535 (83.1)	109 (16.9)
Are you aware that the cervical cancer disease can be treated if detected early?	502 (78.0)	142 (22.0)
Are you aware that certain risk factors predispose you more to contracting the cervical cancer disease?	491 (76.2)	153 (23.8)

RQ3: What is the influence of social media cervical cancer campaigns on the knowledge of female undergraduates about cervical cancer?

Table 5: Knowledge of cervical cancer risk factors, symptoms, and prevention.

	Mean	Std. Dev.	Percentiles		
			25 th	50 th	75 th
Risk Factors of Cervical Cancer	6.267	1.716	5.00	6.00	8.00
Symptoms of Cervical Cancer	3.135	1.152	2.00	3.00	4.00
Prevention of Cervical Cancer	6.404	1.661	6.00	7.00	7.00
Average Knowledge score	15.807	3.107	14.00	17.00	18.00

Table 5a: Decision rule for the measurement of cervical cancer disease knowledge

Variables	Expected weighted score	Decision rule
Risk Factors	9	Score < 4.5 = low, 4.5 – 6.49 = moderate, 6.5 – 9 = high
Symptoms	9	Score < 2.5 = low, 2.5 – 3.49 = moderate, 3.5 – 5 = high
Prevention	5	Score < 4.5 = low, 4.5 – 6.49 = moderate, 6.5 – 9 = high
Overall Knowledge	23	Score < 11.5 = low, 11.5 – 18.49 = moderate, 18.5 – 23 = high

Applying the decision rules as specified in table 5a, details in table 5 reveals that the respondents on average have moderate knowledge of the risk factor of cervical cancer disease (Mean = 6.267, Std Dev = 1.716). The 25th percentile score of 5.0 further supports this result, as it shows that 75% of the respondents had scores greater than 5 which is between moderate to high level of knowledge. Also, the respondents on average have moderate knowledge of the symptoms of cervical cancer disease (Mean = 3.135, Std Dev = 1.152). The 50th percentile score 3.0 reveals that 50% of the respondents had scores between moderate and high knowledge of the symptoms of cervical cancer disease. The results further reveals that the respondents on average have moderate knowledge of the preventive measures of cervical cancer disease (Mean = 6.404, Std Dev = 1.661). And the 25th percentile score of 6.0 further illustrates that 75% of the respondents have between moderate to high knowledge of the preventive measures for avoiding cervical cancer disease.

The overall knowledge score of the respondents, reveal that on the average they have moderate knowledge of cervical cancer disease (Mean = 15.807, Std Dev = 3.107). And the 25th percentile score of 14.0 also shows that 75% of the respondents have between moderate to high knowledge on cervical cancer disease. Details on Table 5b.

Table 5b: Knowledge of cervical cancer risk factors, symptoms, and prevention

	Mean	Std. Dev.	Percentiles		
			25 th	50 th	75 th
Risk Factors of Cervical Cancer	6.267	1.716	5.00	6.00	8.00
Having many different sexual partners predisposes one to cervical cancer.	0.8711	.33533	1.00	1.00	1.00
Smoking is a risk factor for cervical cancer.	.6708	.47029	0.00	1.00	1.00
An early first sexual experience is a predisposing factor for cervical cancer.	0.7764	.41698	1.00	1.00	1.00
Giving birth to many children is a risk factor for cervical cancer.	0.5505	.49783	0.00	1.00	1.00
Eating too much carbohydrate is a risk factor	.4224	.49432	0.00	0.00	1.00
Early detection and treatment of the causative human papilloma virus (HPV) reduces the risk of cervical cancer.	0.7857	.41064	1.00	1.00	1.00
Having multiple sexual partners predisposes one to cervical cancer.	0.7935	.40512	1.00	1.00	1.00
Poor nutrition that weakens the body's immune system is a risk factor for cervical cancer.	0.7267	.44600	0.00	1.00	1.00
I can have cervical cancer if any of my parents or grandparents have ever had the disease.	0.6724	.46972	0.00	1.00	1.00
Symptoms of Cervical Cancer	3.135	1.152	2.00	3.00	4.00
Irregular menstrual flow is a symptom of cervical cancer.	.6770	.46798	0.00	1.00	1.00
High Fever is a symptom of cervical cancer	.4224	.49432	0.00	0.00	1.00
Bleeding after intercourse is a symptom of cervical cancer.	.7764	.43879	1.00	1.00	1.00
Red eyes indicate the presence of cervical cancer in the body	.5652	.49611	0.00	1.00	1.00
Foul smell from the vagina is a symptom of cervical cancer.	.6988	.48869	0.00	1.00	1.00
Prevention of Cervical Cancer	6.404	1.661	6.00	7.00	7.00
Cervical cancer is deadly and preventable.	.8385	.36827	1.00	1.00	1.00
The Pap smear screening helps to detect precancerous cells in the cervix, thereby preventing cervical cancer.	0.8416	.36539	1.00	1.00	1.00
Regular screening for sexually active females helps prevent cervical cancer.	0.8059	.39581	1.00	1.00	1.00
Drinking local herbal mixtures help to prevent cervical cancer.	.4503	.51631	0.00	0.00	1.00
Delaying the onset of sexual experience is a way of preventing cervical cancer.	0.6491	.47763	0.00	1.00	1.00
The human papilloma virus (HPV) vaccine is a sure prevention for cervical cancer.	0.7531	.43154	1.00	1.00	1.00
Avoiding multiple sexual partners is a way of preventing cervical cancer.	0.7686	.42203	1.00	1.00	1.00
Engaging in regular fasting and prayers helps to prevent cervical cancer, regardless of my lifestyle.	0.4953	.50037	0.00	0.00	1.00
Eating lots of vegetables and fruits boost the immune system and helps prevent cervical cancer.	0.8028	.39820	1.00	1.00	1.00
Average Knowledge score	15.807	3.107	14.00	17.00	18.00

Test of hypothesis

H₀1: There is no significant influence of social media cervical cancer campaigns on female undergraduates' awareness of the cervical cancer disease

Table 6: Regression results of the influence of social media cervical cancer campaign on the awareness of cervical cancer disease

	Unstandardized Coef		Standardized Coef	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.940	.069		27.990	.000
Cervical cancer social media campaign	.086	.012	.272	7.149	.000

Dependent Variable: Awareness of cervical cancer disease
 R = 0.272 R² = 0.074 F = 51.114 Sig. = 0.000

(Field Survey, 2022)

Table 6 shows that the influence of social media cervical cancer campaigns among female undergraduates on their awareness of cervical cancer disease is statistically significant at 1% level of significance [F-statistic = 51.114; p-value = 0.000]. This implies that respondents' exposure to cervical cancer messages on social media influenced their awareness of cervical cancer.

H₀2: There is no significant influence of social media cervical cancer campaigns on female undergraduates' knowledge of cervical cancer.

Table 7: Regression results of the influence of social media cervical cancer campaign on the knowledge of cervical cancer disease

	Unstandardized Coef		Standardized Coef	T	Sig.
	B	Std. Error	Beta		
(Constant)	14.328	.242		59.186	.000
Cervical cancer social media campaign	.293	.042	.267	7.003	.000

Dependent Variable: Knowledge of cervical cancer risk factors
 R = 0.267 R² = 0.071 F = 49.049 Sig. = 0.000

(Field Survey, 2022)

Table 7 reveals that the influence of social media cervical cancer campaigns among female undergraduates on their knowledge of cervical cancer disease is statistically significant at 1% level of significance [F-statistic = 49.049; p-value = 0.000]. This implies that respondents' exposure to cervical cancer messages on social media influenced their knowledge of cervical cancer.

6. Discussion

This study investigated the influence of social media cervical cancer messages on awareness and knowledge of female undergraduates in South-West Nigeria. The result shows (83.1%) of the respondent are aware that cervical cancer is preventable, (78%) are aware that cervical cancer can be treated when detected early while (76.2%) are aware that certain risk factors predispose them more to contracting the disease. This present study confirms the studies of Shafei *et al.*, 2013; Biobaku, *et al.*, 2015; Okunowo *et al.*, 2018; Adejuyigbe, *et al.*, 2015; Owoeye & Ibrahim 2013) as they recorded high awareness of cervical cancer. Okunowo *et al.*, (2018) reported a high level of awareness of cervical cancer and Pap

smear test as 80% and 55.1% respectively among a sample of 205 pregnant and non-pregnant women attending antenatal and gynaecological out-patient clinics at the Lagos. Similarly, Adejuyigbe, *et al.*, (2015) investigated medical students in Southwest Nigeria and discovered that 95.4% of the respondents reported that they were aware of cervical cancer. But contradicts some previous studies that have mentioned lack of awareness as a major reason for non-compliance to preventive messages on cervical cancer (Eze *et al.*, 2012; Oluwole *et al.*, 2017; Karaimu & Kimotho, 2016; Hyacinth, *et al.*, 2012; Balogun *et al.*, 2012, Ndikom & Ofi, 2012; Abiodun *et al.*, 2013; Abiodun *et al.*, 2017; Bisi-Onyemaechi, 2018) Ezeanochie and Olasimbo (2020) reported an awareness rate of 3%.

On knowledge of cervical cancer, the findings of this study agree with the results of (Biobaku, *et al.*, 2015; Oche *et al.*, 2013; Ubajaka *et al.*, 2015; Neji, *et al.*, 2019; Toyee, *et al.*, 2017;) who reported that many of the respondents had good knowledge about cervical cancer and screening, and risk factors associated with the development of cervical cancer. The moderate high knowledge in this study could be attributed to

the fact that since respondents are in an academic environment, they may have read about cervical cancer or been taught about it in class. But contrasts the studies of Khan, *et al.*, 2016; Ogbonna, 2017; Okunowo *et al.*, 2018; Mruts & Gebremariam 2018; Oluwole *et al.*, 2017; Isa *et al.*, 2016, Olubodun *et al.*, 2019), as they reported low levels of knowledge of cervical cancer. For instance, Ogbonna (2017) revealed that only (10.8%) reported that they have knowledge of cervical cancer and 42.5% of students were not able to recognize the danger factors of cervical cancer, while others were in some measure confident in making out the risk factors of cervical cancer.

7. Conclusion

This study examined the influence of social media cervical cancer messages on awareness and knowledge of female undergraduates in South-West Nigeria and that respondents' awareness and knowledge about cervical cancer is moderate. This implies that the awareness and knowledge about this disease is neither low nor high. This indicates a middle ground suggestive of the fact that more conscious effort be put in place to increase or induce more awareness.

8. Recommendations

With the significant influence social media campaigns on cervical cancer had on creating awareness about cervical cancer and knowledge on cervical cancer, the use of social media for creating awareness is recommended to the Nigerian ministry of health, Public health organizations, non-governmental organizations and all health educators and communicators.

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