



Dissemination of False Information on Social Media in Nigeria: Call for Re-Orientation and User-Education for Emerging Technologies

Okpidi-Urhibo, Emo
Law Library,
Delta State University,
Oleh Campus, Delta State, Nigeria

ABSTRACT

There is a consideration for a bill to regulate social media (SM) use in Nigeria as a result of its indiscriminate use for the dissemination of false information. Thus, it is important to find out the most used SM handles, file formats used, level of verification and factors promoting this practice. Survey design and descriptive statistics were adopted using a self-structured questionnaire. A sample of 400 randomly selected respondents was drawn from six cities since the actual population of SM users is not known presently. With a 96.5% return rate, results show that SM is used largely in disseminating misinformation through graphic illustrations, doctored videos, edited photos with captions and voice notes/recordings (original and computer-animated forms). The major platforms in decreasing the rate of use are WhatsApp, Facebook, YouTube and Instagram. Ignorance, lack of media and information literacy skill, cultural perspectives and unawareness were identified to be key facilitating factors. Verification and validation of information on social media were found to be extremely low. The emergence and continual dissemination of false information need to be dealt with culturally by imbuing societal value re-orientation for SM users, building users understanding of information literacy and educating the masses are pertinent. The stringent legislature, mass orientation and rapid response debunking should suffice. If this is not done, it could cause socio-political tension. A system (algorithm) of information check should be developed.

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INTRODUCTION

The emergence of social media (SM) has enhanced the travel of information around the world almost in a split second. It has been used to resolve widespread social problems and facilitated moral decadence in a society. This phenomenon has made it a growing conundrum according to Alemoh and Ishima (2013). False information is fast becoming a topic of debate, deliberation and research consideration for social scientists and educators. False information is classified by intent or knowledge content asserts Kumar and Shah (2018). By intent, mean spreading misinformation and disinformation. Misinformation is information created with the no prior intentions to mislead probably due to misinterpretation of the original message, while disinformation is distinguished by an intention

to mislead people in making uniformed decisions. The knowledge content based aspect is categorised into opinion-based and fact based. Opinion based in the sense that a no ground truth is embedded in a composed text to be dished out either knowingly or unknowingly (e.g. false reviews on a product), while that of fact based are fabricated, and contradictory facts or lies about an entity to cover a truth values (basically hoaxes) (Kumar & Shah, 2018). This study summarily deals with all forms of false information on social media, and takes holistic look at several areas concerning dissemination of false information. The negative impact of spreading false information is diverse ranging from hampering social economic growth, building political tension, causing chaos to distorting trust on information regarding real time terrorism and



natural disasters (Gupta *et al.* 2013; Friggeri *et al.* 2014; Fisher *et al.* 2016).

Understanding how and why the menace of false information is sporadically propagated is important in raising awareness for the need for legislature in combating this social threat. Today, people solely rely on social media as their news source, relegating the conventional TV and radio stations (Shearer and Gottfried, 2017) and this has propelled the frequency and extent to which people are deceived by social media. The high impact of gossips and disinformation has prompted the Uguandan President Yoweri Museveni to support a bill on taxing SM users in order to reduce the incidence of excessive use of it in spreading misinformation, although some argue that it is a way for the government to restrict freedom of criticism. Facebook, WhatsApp and Twitter were specifically mentioned in this report as frequently used (MSN News, 2018). This spread is easily carried out since most human have very poor judgement of falsified information, thus deciphering unauthentic information could be difficult due to lack of education, and low media and information literacy levels (Kumar & Shah, 2018).

Lombrozo (2018) reported in his article that one of the factors responsible for the viral spread of fake news is the lack of time for fact-checking. Elebeke (2018) reported that the Federal Government of Nigeria (FGN) the capacity of its Ministry of Information has started a campaign against fake news or what they called deliberate disinformation which is perpetrated by some unscrupulous elements on SM and sometimes mainstream print media. FGN lamented that unchecked fake news is fast becoming an epidemic and a serious threat to global peace, human existence, democracy and security worse than any ever recorded incidence of plague. Becoming more reflective upon receipt of any information on social media is pivot to personally identifying fake information argues Lombrozo (2018). This will help reduce the dissemination of fake news a bit amidst other verification attempts. Interestingly, Okon (2017) reported that one of the ways to verify information is to ask of the date, source and method(s) of the data collection. These techniques will effectively improve human cognitive ability in identifying misinformation. In that report, some of recent

efficient methods adopted in developed countries in verifying information included the use of Google Reverse Image Search engine for pictorial verification, Video Vaults for edited videos and Wolfram Alpha for cross examining SM posts. To detect false information, a well-structured and developed featured, graphic and propagation-model based algorithm can be used (Kumar & Shah, 2018). Finkel *et al.* (2017) averred that a more aggressive fact-checking across social media platforms and monitoring of users behaviour on checking sources of information are models to be employed in the fight against disinformation.

FALSE INFORMATION IN SOCIAL MEDIA: REVIEWS FROM NIGERIA

Reviews are presented in the following paragraph have been carried out in Nigeria on the perception of people on the dissemination of false information hovering on the SM network, although there are no online publication that have been documented systematically to show people's opinion on the matter through a statistically evaluated research. Okon (2017) also reported that personal interests and political propaganda are some of the reasons why misinformation is fuelled whilst she advocated for a verification model pivot to solving the information crises in Nigeria. This is aided by the use of special file formats as review in the following lines. The use of photos with captions illustrating different events to mislead people had been earlier by Tabia (2018^a). She reported that the case of the adopted Christian Dapchi girl whose photograph was circulated on SM was found to be untrue of her person. The erroneously portrayed person in the photo had no connection to the adopted girl and was never even close to the scene of the event. This supports the assertions of this paper on the high frequency of use of photos with captions for spreading misinformation on SM. Even the use of the photo of south Sudanese rebels carrying riffles as herdsmen which has been used by several news agents as Nigerian Fulani herdsmen who invaded farming settlements in the north east, middle belt and south eastern Nigeria supports this study finding on file format used for misinformation. Tabia mentioned that WhatsApp specifically has been used to spread misinformation through the use of doctored video recordings.



Photos with misleading captions were used for misinforming Nigerians that the Nigeria Police Force accosted truck load of fire arms in Nnewi, southeastern, Nigeria allegedly purchased by the Independent People of Biafra (IPOB) which was originally a photo taken in the United States of America whilst offloading weapons retrieved from criminals in Rancho, Cucamonga, California to be melted into steel bars as reported in Okon (2017).

Tabia (2018^b) clearly averred that majority of Nigerians who have different social media accounts do not have the expected level of information literacy, psychological training on the identification of a fake news and sometimes do not even have technical expertise in accrediting controversial information disseminated on SM thus making it easier to draw their attention away from the main focus or bone of contention, although, the dissemination of misinformation was not primarily meant to ascertain the level of information literacy by social bots as reported herein. Tabia (2018^a) also affirmed that ignorance of active SM users was another issue which is yet to be tackled since it is one factor promoting the incidence of misinformation. This again clearly defines the assertion of respondents who said they were ignorant and unaware of the importance of verifying controversial information on SM. The use of stringent measures to check misinformation on social media in Nigeria has been highly deliberated upon by the National Council on Information and the National Orientation Agency in 2017 (Nwachukwu, 2017; Tarpel, 2017), however, the effort has not showed any positive result. As pointed out by Finkel *et al.* (2017), disinformation are capable of sowing discord, reduce trust in people and institutions, has serious implications for civic discourse and found that about 64% of Americans were misinformed over one political topic or the other during the 2016 presidential electoral tussle.

Justification of the Study

Lombrozo (2018) in his web-based opinionated newsletter asked some crucial questions on the generation, propagation and challenges of misinformation disseminated on social media. Some of these questions were; what impact it has on human psychology and what methods can be used to tackle the issue?

There has been a consideration for the promotion of a bill to regulate the use of social media in Nigeria. This is as a result of the use of social media for the dissemination of information without proper validation and authentication causing tension and enhancing the dissemination of false information. It is important for a preliminary study to be carried out on this growing phenomenon. According to Legit.ng (2019), 6% of 29.3 million of social media users are on LinkedIn, 7% on Skype, an unknown number in SnapChat, Twitter and Google+, 25% on YouTube, 41% for Facebook, 25% on Instagram and 41% on WhatsApp. It is exactly not known which medium is most frequently used even with this numbers.

Objectives of the Study

The study generally focused on the misinformation in Nigeria through social media platforms; however, it sought to find out the following;

1. Ascertain the extent to which SM is used for information dissemination.
2. Determine the file formats used in perpetrating and disseminating false information.
3. Find out the factors promoting the propagation of false information on SM platforms.
4. Ascertain the level of verification by SM users for misleading information
5. Determine the perceived consequences if false information continuous to strive in the society through social media and
6. Find out if there are any possible remedial attempts to curb the social menace of information.

METHODOLOGY

The survey design was adopted since the study requires a collection of data on the opinions of a vast majority of social media users. At the time of this study, there was still no consensus on the exact population of social media users in Nigeria supporting the assertion of Poynter (2010). Therefore, a simple random sample of 400 active social media users were drawn from tertiary institution in six major cities (Ibadan, Lagos, Port Harcourt, Warri, Awka, and Enugu) from states (Oyo, Lagos, Rivers, Delta, Anambra and Enugu States respectively) in Nigeria. This choice was informed by the fact that most social media



users that are very active are domiciled in cities and among students in tertiary institutions. Clement (2019) reported that about 29 million Nigerians are on one social media network or the other. Krejcie and Morgan (1970) opined that a sample of 384 and above can be drawn for a population running into millions; hence, the suitability of using a sample of 400.

The data was collected through a self-constructed questionnaire, validated by test and measurement experts. The instrument was administered by hand to smart phone owners with active social media accounts found on the spot chatting inside tertiary institution and also along recreational/leisure centres in the various cities. Oral consent was first obtained politely before the instrument was administered. Each respondent was given considerable time say about 20 minutes to fully fill in their opinion on the questionnaire. Research four assistants were included in the research for the collection of data.

A total of 386 (96.5%) was returned with appropriate responses. This was considered statistically sufficient and thus descriptive statistics was employed in answering research questions using Microsoft Excel 2010. Criterion means were set to interpret all measured parameter. The result of the study is presented in the Tables and Figure below. Their difference in the mean extent of use was depicted in Figure 1 and 2 showing WhatsApp, Facebook, Instagram and YouTube are used more than others like 2go, Iml, Pinterest and BBM among social media users.

The file format use for the dissemination of misinformation on SM was investigated (Table 1) and it revealed that voice notes were mostly used (4.18) while this was followed by photos with misleading captions (4.04) and routine chats (2.41) and SMS (2.32) are used at a low frequency and MMS never used (1.11). Video accompanied by text captions and voice notes are also used at high frequency. Graphic illustrations were moderate in their frequency of use (2.89). Respondents mean level of verification was sought in Table 2, with lesser tendencies on 2go (1.20), Google+ (1.04) and Iml (1.09). Verification levels were found to be higher on Facebook (2.77), Instagram (2.24) and Twitter (1.99). However, the level of verification on WhatsApp was found to be much reduced as

48% of respondents never verify if the information received is true or false. The dynamism in the level of verification shall be discussed in the following section.

Respondents were asked the mean factors promoting misinformation in Table 3, they carefully averred that the information received seem too important and urgently needed to be shared (3.39), the static mind-set that the information received is genuine (3.17) and the lack of awareness that some crucial information needs verification (3.15). Some said the regard they have for the people who shared the information makes them feel it is good and valid (3.11). Looking at the consequences of the dissemination of misinformation on SM by some bots or fraudsters in Table 4, the listed consequences are possible if the actions of these social bots are not curtailed. It was opined by respondents that misinformation can lead to assassination of personality (mean of 3.19), loss of fund and infrastructure (3.15), could ignite tension politically (3.12) and can impair judgement by misleading people (3.11). Monitoring the activities of these social bots through programed software (3.40) can be one strategy to be employed as shown in Table 5. Others say talking about the dangers of misinformation to the public will reduce the incidence (mean = 3.26).

DISCUSSION

Over time in Nigeria, social media especially Instagram, Facebook and WhatsApp have been used to expose many criminal acts. Talents and skills have been discovered via viral videos and graphics. Benevolent acts from well-meaning citizens have not excluded from the list. However, some elements have used these same platforms for the wrong act. This paper had examined the frequency of use of social media in the dissemination of false information, the type of file formats used, the basic reasons why these misleading and fake information find their way into social media networks, pending problems this act can pose and how to tackle the menace. From the population of SM users on the various networks, Facebook and WhatsApp share a larger percentage of over 40% while YouTube and Instagram have about 20% each (Legit.ng, 2019).



This could not have been unconnected to the reason why these social media networks are more frequently used than others. Finkel *et al.* (2017) reported disinformation on Facebook, and Twitter and found that Twitter user do not verify information because the users accounts are verified by Twitter administration team which makes users believe every information is verified since it came from a verified account. Twitter users in Nigeria in this survey were found also to have the habit of not verifying information disseminated within the platform which may also be the reason for this attitude (Table 3). However, a more sensitized population is found among Twitter users which may not have been the case in Facebook or WhatsApp. The ease in the use of WhatsApp can be attributed to its flexibility in sharing videos, and graphics as quick as possible. Users of this social media can forward multiple media contents without any form of verification by the administrators which is usually not the case in Twitter.

The study revealed that a lack of unawareness on the importance of verifying information was a major cause of the prolong spread of false information. This draws a clue from the assertions of Kumar and Shah (2018) that low media and information literacy skills could promote the unintentional dissemination of falsehood in SM. This is evident from the responses of some on Table 2 who claim that information illiteracy is a causal factor. Cultural factors were also identified in aiding the spread of false information. Respect of older ones or friends who intentionally or unintentionally share false information was noticed in Table 2. African and its culture of respect have influenced its administrative as found also in

politics. Respondents clearly opined that if checks and balances are not carried by relevant authorities, the consequences will avail. Their views were exactly same with that of Gupta *et al.* (2013) and Tabia (2018^{a,b}) (Table 4). With reference to Brown (2018), social media is used to vent anger on precisely any part of social life including politics. Hence, users of SM may freely disseminate information as a way of easing their stress opinion based false information either to steer tension or assassinate political opponent's character. These were noted by respondents in the consequences which may have been ongoing. Useful information on a developmental plan from an opposing party may be stopped by social bots in an attempt to slow down their progress. Nigeria political administrators upholds political parties more than the welfare of its citizens, hence, the consequences mentioned in Table 4 stand to gain more weight if interventions are not started. National growth status is made based on comparison by performance of political parties in their governance. This factor poses serious threats to co-existence as individuals, pressure groups and organizations may leverage on this through cyber-bullying, dissing, flaming, denigration and outing to cause mayhem. Although, social media users in Nigeria as sampled in this study opined that creating a platform for authentication may not be needed, Finkel *et al.* (2017) reported in contrast that having an enhanced verification system and terms of use may reduce the misinformation proliferation attempt by bots on social media. This method may curtail the activities of bots.

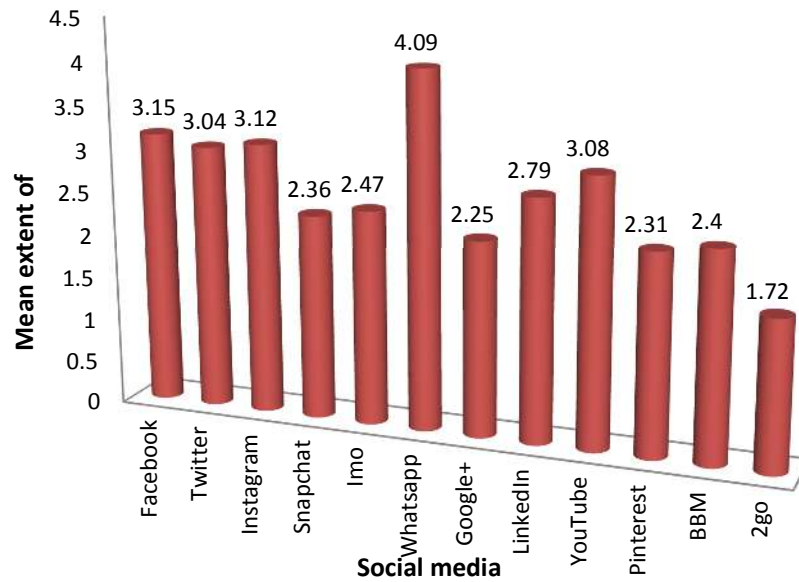


Figure 1: Mean use of social media

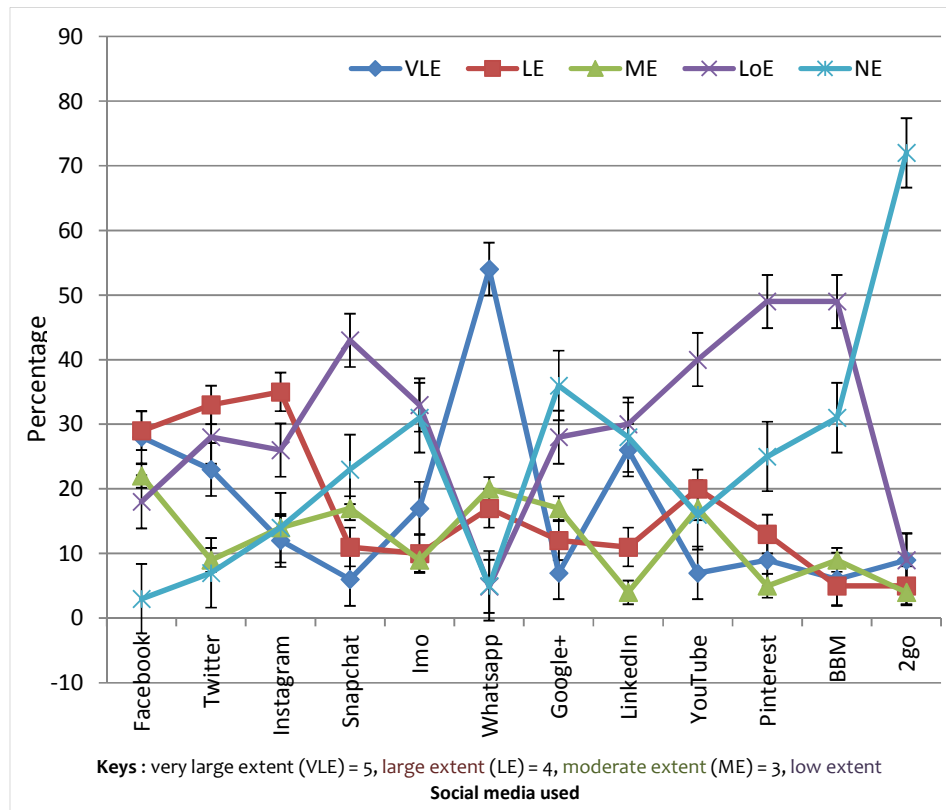


Figure 2: Use of social media among youths in Nigeria



Table 1: File format used for disseminating misinforming people on SM

Format	VHF	%	HF	%	MF	%	LF	%	NU	%	Mean	SD	Frequency of use
Routine chat	23	6	55	14	89	23	108	28	111	29	2.41	1.21	Low
SMS	47	12	64	17	12	3	107	28	156	40	2.32	1.45	Low
MMS	0	0	0	0	0	0	42	11	344	89	1.11	0.31	Never
Voice recording/note	204	53	106	27.5	27	7	33	8.5	16	4	4.18	1.12	High
Video	123	32	134	35	44	11	32	8	53	14	3.63	1.38	High
Graphic illustration	22	6	43	11	211	55	87	22	23	6	2.89	0.89	Moderate
Photo + text caption	186	48	118	30.6	32	8.3	10	2.6	40	10.5	4.04	1.27	High
Video + text caption	158	41	145	38	22	6	16	4	42	11	3.92	1.30	High
Video + Voice recording	68	17.6	227	58.9	46	11.9	19	4.9	26	6.7	3.76	1.02	High

*Class boundary; 1 – 1.49 (NU), 1.5 – 2.49 (LF), 2.5 – 3.49 (MF), 3.5 – 4.49 (HF), 4.5 – 5 (HVF).

*Criterion mean= 3.0, SD = standard deviation, % = percentage.

Keys and codes: very high frequent (VHF) = 5, high frequency (HF) = 4, moderate frequency (MF) = 3, low frequency (LF) = 2, and never uses (NU) = 1. N = 386.

Table 2: Factors promoting the spreading of false information on social media

Statement	SA	%	A	%	D	%	SD	%	Mean	StDev	Remark
Time consuming to verify information received on social media.	92	24	33	8.5	135	35	126	33	2.24	1.15	Disagree
Lack of knowledge on the use of social media to aid disinformation.	18	5	65	17	117	30	186	48	1.78	0.89	Disagree
Unawareness of the importance of verification.	207	54	87	22.5	34	9	58	15	3.15	1.09	Agree
Internet connectivity problems and/or cost of verifying it on a different browser.	54	14	12	3	133	34	187	48	1.83	1.02	Disagree
Respect and regard for people who shared the information to you.	227	59	45	12	44	11	70	18	3.11	1.19	Agree
Fear of the unknown especially with some threat that comes with the misinformation.	37	10	89	23	119	31	141	37	2.06	0.98	Disagree
The emergency or urgency involved as sometimes instructed.	53	14	33	8.5	166	43	134	35	2.01	0.99	Disagree
Relevance of the information and the need to quickly share it.	221	57	107	28	44	11	14	4	3.39	0.83	Agree



Statement	SA	%	A	%	D	%	SD	%	Mean	StDev	Remark
Perceived guilt in ignoring the instruction on the received information.	99	26	157	41	68	18	62	16	2.76	1.01	Agree
Preconceived mind-set that the information received is valid and need no verification.	155	40	176	46	20	5	35	9	3.17	0.89	Agree
Information illiteracy.	19	5	38	10	105	27	224	58	1.62	0.86	Disagree

, **Keys and codes:** SA = strongly agree; 4, A = agree; 3, D = disagree; 2, SD = strongly disagree; 1. N = 386, *Criterion mean= 2.50, StDev = standard deviation, % = percentage

Table 3: Level of verification on the validity of information on social media

Social media	IM	%	FMH	%	OW	%	AF	%	NV	%	Mean	SD	LV
Facebook	34	9	55	14	124	32	138	36	35	9	2.77	1.08	OW
Twitter	14	44	22	6	105	27	28	7	217	56	1.99	1.18	NV
Instagram	8	2	18	5	123	32	148	38	89	23	2.24	0.93	AF
Snapchat	0	0	0	0	0	0	52	13	334	86	1.13	0.34	NV
Imo	0	0	0	0	0	0	34	9	352	91	1.09	0.28	NV
WhatsApp	18	5	22	6	25	6	134	35	187	48	1.83	1.08	AF
Google+	0	0	0	0	0	0	18	5	368	95	1.04	0.211	AF
LinkedIn	8	2	16	4	12	3	134	35	216	56	1.62	0.89	AF
YouTube	37	10	28	7	12	3	102	26	207	54	1.93	1.31	AF
Pinterest	0	0	0	0	0	0	48	12	338	88	1.12	0.33	NV
BBM	0	0	0	0	78	20	22	6	286	74	1.46	0.81	NV
2go	0	0	0	0	0	0	8	2	378	98	1.02	0.14	NV
Weighted mean											1.60		AF

*Class boundary; 1 – 1.49 (NV), 1.5 – 2.49 (AF), 2.5 – 3.49 (OW), 3.5 – 4.49 (FMH), 4.5 – 5 (IM).
 *Criterion mean= 3.0, SD = standard deviation, % = percentage, LV = level of verification. **Keys and codes:** immediately (IM) = 5, few minutes or hours (FMH) = 4, once a while (OW) = 3, almost forgets (AF) = 2, and never verifies (NV) = 1. N = 386

Table 4: Consequences of misinformation on social media

Statement	SA	%	A	%	D	%	SD	%	Mean	StDev	Remark
Capable of causing national crises.	124	32	198	51	22	6	42	11	3.05	0.90	Accept
Could ignite socio-political tension.	188	49	105	27	43	11	50	13	3.12	1.05	Accept
Able to cause fright and trouble within the immediate environment or concerned region.	149	39	153	40	55	14	29	7	3.09	0.90	Accept
Promote ethno-religious tussle.	116	30	179	46	33	8.5	58	15	2.97	0.90	Accept
Highly misleading in decision making.	128	33	206	53	19	5	33	8.5	3.11	0.84	Accept
Lead to loss of fund and infrastructure.	156	40	148	38	66	17	16	4	3.15	0.85	Accept
Slow down	68	18	95	25	146	38	77	20	2.39	0.99	Accept



Statement	SA	%	A	%	D	%	SD	%	Mean	StDev	Remark
developmental efforts by government and firms.											
Injurious to peaceful co-existence.	203	52.5	76	20	33	8.5	74	19	3.06	1.17	Accept
Deleterious to psychological wellbeing.	123	32	112	29	56	14	95	25	2.68	1.16	Accept
Has no serious implication that could be detrimental.	63	16	43	11	176	46	104	27	2.17	1.00	Reject
Can lead to assassination of character.	167	43	147	38	49	13	23	6	3.19	0.88	Accept

*Criterion mean= 2.50, StDev = standard deviation, % = percentage, **Keys and codes:** SA = strongly agree; 4, A = agree; 3, D = disagree; 2, SD = strongly disagree; 1. N = 386

Table 5: Intervention strategies to curb misinformation on social media

Statement	SA	%	A	%	D	%	SD	%	Mean	StDev	Remark
Provide a system to verify information on social media	54	14	27	7	176	46	129	33	2.02	0.98	Reject
Create an authentication model before sharing of information	11	3	168	43	57	15	150	39	2.10	0.96	Reject
Educate the masses through the mass media	188	49	147	38	35	9	16	4	3.13	0.84	Accept
Provide counter information as a rapid response for debunking	167	43	111	29	50	13	58	15	3.23	0.84	Accept
Via a counter information reporting to be explicitly broken down to digestible format	147	38	163	42	25	6.5	51	13	3.03	1.02	Accept
Approve and sign into law stringent policies, regulations and punishment for social bots	168	44	156	40	43	11	19	5	3.22	0.84	Accept
Put in place a layout on how information is to be shared	26	7	187	48	38	10	135	35	2.30	1.02	Reject
Monitor, identify and incept misinformation through social media software or programming.	211	55	126	33	39	10	10	3	3.40	0.77	Accept
Public sensitization how to recognise misinformation.	166	43	127	33	22	6	71	18	3.01	1.11	Accept
Propagate the dangers	184	48	143	37	34	9	25	6.5	3.26	0.88	Accept



Statement	SA	%	A	%	D	%	SD	%	Mean	StDev	Remark
of false information on social media											

*Criterion mean=2.50, StDev = standard deviation, % = percentage, **Keys and codes:** SA = strongly agree; 4, A = agree; 3, D = disagree; 2, SD = strongly disagree; 1. N = 386

CONCLUSION

From the study, WhatsApp, Facebook, Instagram and YouTube are mostly used while Snapchat, Pinterest, Google+ and 2go are least used in decreasing order of preference. Photo and videos with misleading captions, voice recording and routine chats are used in spreading false information by active social media users. The emerging trend of disinformation is supported by unawareness, trust for people who shared such delicate information and the pre-conceived mind-set that the information received or disseminated are valid. Social media users almost forget or sometime never verify information. The deleterious effect of false information includes psychological disorientation, socio-political tension creation and threat to national unity. Mass orientation, monitoring and interception of misleading information, rapid debunking response and prosecution of defaulters can be some intervention strategies to be used. A multidimensional effort needs in agreement with Lazer *et al.* (2018) has it in place to solve or manage the outburst of misinformation on SM. Public campaigns, advocacy, sensitization as recommended by the stop, reflect, verify Initiative of YALI Network is embraceable. The launch of the YALICHECKS must be encouraged in different countries.

RECOMMENDATION

The following recommendations were forwarded;

1. A system of algorithm based verification for graphics, edited videos, photos should be developed by the concerned agencies.
2. Information check should be developed for the Nigeria's popularly used social media which include Facebook, WhatsApp, Instagram, YouTube and Twitter.
3. Stringent measures must be put in place to tackle social bots to reduce the incidence of misinformation.
4. More research is needed to explain data on misinformation in Nigeria.

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