

# The Pattern and Impact of Social Media Use among Orthodontists and Orthodontic Resident Doctors in Nigeria

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## Abstract

**Background:** This study aims to assess the orthodontists'/orthodontic resident doctors' use of social media, social variables such as gender and age grouping and the impact of social media use on orthodontic practice.

**Methodology:** This descriptive cross-sectional study was conducted among Orthodontists and orthodontic residents in the country. This study involved a convenient sampling. A self-administered questionnaire was used for data collection on socio-demographics, social media use and its perceived impact on orthodontic practices. Data was analyzed using statistical software package for Social Sciences-Chicago version 20. Statistical significance was set at  $p < 0.05$ .

**Results:** The study consisted of 44 participants made up of 45.5% male and 54.5% female Orthodontists and orthodontic residents in Nigeria with majority (84.1%) being between 31 – 50years age group. The prevalence of use of social media was 100% in the study population. Most (81.8%) of the respondents understood social media as a means of communication, others (18.2%) defined it as a means of obtaining information. Whatsapp (100%) and Facebook (77.3%) were the mostly used social media. All the participants reported that social media did not affect their practice negatively and that it has led to an improvement in patient's compliance with instructions (81.8). Only a few (20.5%) of the respondents felt social media was a distraction.

**Conclusion:** The prevalence of use of social media was 100%. Whatsapp was the most frequently used social media and it was used mostly for social interaction. The use of social media was not perceived by any of the participants to negatively affect orthodontic practice.

**Keywords:** Social Media; Orthodontic Practice; Orthodontists; Orthodontic.

## Introduction

Social media refers to websites and applications that allow individuals to participate in networking socially<sup>[1,2]</sup>. It includes platforms such as Facebook, YouTube, LinkedIn, Twitter, whatsapp etc<sup>[3,4]</sup>. Doctors use social media to disseminate knowledge acquired through treating patients and working with colleagues and other health care workers; furthermore, it can also be used to send notifications for workshops and conferences<sup>[3,5]</sup>.

In the last 10 years, the use of Social media has increased exponentially<sup>[6,7]</sup>. The use of social media in the United States has been found to increase across all age groups and professions; it has increased from 8% in 2005 to about 72% in present day<sup>[6,8]</sup>.

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Studies conducted in the United states<sup>[9]</sup> and South Africa<sup>[10]</sup> reported Facebook as the most frequently used social media channel among dentists. Orthodontists are Dental surgeons who possess Bachelor of Dental Surgery (BDS) degree and have also undergone post graduate residency training for a period ranging from 4 to 6 years<sup>[11]</sup> to become specialists in treating patients with mal-occlusion which has various aetiological factors, clinical presentations and treatment modalities. Orthodontic resident doctors refer to Dental surgeons (BDS holders) who are still undergoing training to become Orthodontists.

There is paucity of studies that assess the orthodontists' and orthodontic resident doctors' use of social media in the dental literature. No study was found to address the use of social media among orthodontists/orthodontic resident doctors in Africa. This study aims to assess the use of social media, social variables such as gender and age grouping and the perceived impact of social media use on orthodontic practice of Orthodontists/orthodontic resident doctors.

### Methodology

Ethical approval was obtained from the Research Ethics Committee of the institution and informed consent was obtained from individual participants.

This descriptive cross-sectional study was conducted among attendees of the Annual General meeting/Scientific conference (AGM) of the Nigerian Association of Orthodontists (NAO) in Ile-Ife, Osun state, Nigeria who were either Orthodontists or orthodontic resident doctors. The AGM of the Association is usually held once a year and it is attended by most Orthodontists and orthodontic resident doctors available in the country at the time.

This study involved a convenient sampling of available participants who were Bachelor of Dental surgery (BDS) holders and were either undergoing residency training to become Orthodontists or are done with residency training and practicing as Orthodontists in Nigeria.

A self-administered questionnaire was used for collection of data concerning sociodemographic characteristics, social media use and their individual perceived impact of use of social media on their orthodontic practices. Data was processed and analyzed using statistical software package for Social Sciences-Chicago (SPSS) version 20. Results were

presented in tables and figures. Statistical significance was set at  $p < 0.05$ .

### Results

The study consisted of 44 participants made up of 20 (45.5%) male and 24 (54.5%) female orthodontists and orthodontic residents in Nigeria. Majority (84.1%) of the respondents were between 31 – 50 years age group working mostly (77.3%) in government institutions. (Table 1).

The prevalence of use of social media was 100% in the study population. The number of years of use of social media ranged from 1 to 23 years with a mean of  $9.1 \pm 3.6$  years. While most 36 (81.8%) of the respondents understood social media as a means of communication, others (18.2%) defined it as a means of obtaining information. Majority (65.9%) of the respondent got to know about social media through the internet. Other sources of knowledge about social media were through friends (18.2%), family member (11.4%) and TV/Radio (4.5%). Whereas most (81.8%) of the respondents used social media for four hours or less daily, only a few (6.8%) used social media for above eight hours daily. (Table 2).

Figure 1 shows that the mostly used social media channel by the respondents were: WhatsApp(100%), Facebook (77.3%), Instagram (54.5%) and Blackberry message (54.5%). Other social media used were LinkedIn, Twitter, Telegram, WeChat and 2go message.

Figure 2 shows that social media was mainly used by the respondents for social interaction (86.4%), family interaction (81.8%), interaction with colleagues on patient management (79.5%), entertainment (72.7%), reading of news (70.5%) and interaction with colleagues on latest professional development (61.4%). Other reported uses in this study are tele-conferencing (25%), patient education (47.7%), and interaction with colleagues on research collaboration (43.2%) and religious interaction (45.5%).

Table 3 shows that most (97.7%) of the respondents felt social media had an effect on the orthodontic practice. Majority of them reported that social media lead to an improvement in patient's compliance with instructions (81.8%), kept them abreast of professional trends (93.2%), encouraged patients to easily communicate with them (84.1%) and that it did not affect their practice negatively (100%). Only a few (20.5%) of the respondents felt it was a distraction.

**Table 1:** Socio-demographic characteristics of the respondents:

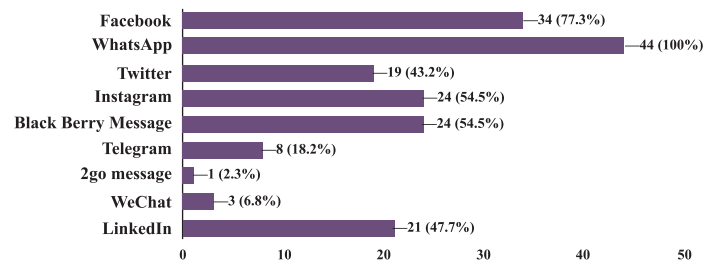
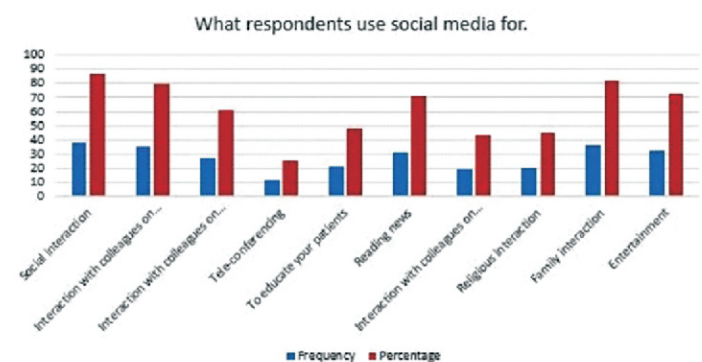
Characteristic	Frequency	%
<b>Gender</b>		
Male	20	45.5
Female	24	54.5
<b>Total</b>	<b>44</b>	<b>100.0</b>
<b>Age groups (Years)</b>		
21-30	3	6.8
31-40	27	61.4
41-50	10	22.7
51-60	4	9.1
<b>Total</b>	<b>44</b>	<b>100.0</b>
<b>Marital status</b>		
Single	6	13.6
Married	37	84.1
Widow(er)	1	2.3
<b>Total</b>	<b>44</b>	<b>100.0</b>
<b>Number of years post BDS graduation</b>		
<10	17	38.6
11-20	20	45.5
21-30	6	13.6
31-40	1	2.3
<b>Total</b>	<b>44</b>	<b>100.0</b>
<b>Place of practice in Nigeria</b>		
Government institution	34	77.3
Private institution	2	4.5
Both government and private	8	18.2
<b>Total</b>	<b>44</b>	<b>100.0</b>
<b>Current professional status</b>		
Consultant/Fellow	15	34.1
Senior resident	17	38.6
Junior resident	12	27.3
<b>Total</b>	<b>44</b>	<b>100.0</b>

**Table 2:** Sources of Knowledge and Daily Duration of use of Social Media

Social media	Frequency	%
<b>How did you know about social media?</b>		
Internet	29	65.9
TV/Radio	2	4.5
Family member	5	11.4
Friends	8	18.2
<b>Total</b>	<b>44</b>	<b>100.0</b>
<b>Number of hours spent on social media daily</b>		
0-4	36	81.8
5-8	5	11.4
9-12	3	6.8
<b>Total</b>	<b>44</b>	<b>100.0</b>

**Table 3:** Perceived Effect of the use of Social Media on Orthodontic Practice

S/N	Concerning effect of social media on orthodontic practice	Total: 44 (100.0)	
		No	Yes
1	No effect	43 (97.7)	1 (2.3)
2	Improvement in patient's compliance with instructions	8 (18.2)	36 (81.8)
3	It kept me abreast of current professional trends	3 (6.8)	41 (93.2)
4	Encouraged patients to easily communicate with me	7 (15.9)	37 (84.1)
5	It affected my practice negatively	44 (100.0)	0 (0.0)
6	It affected my practice positively	11 (25.0)	33 (75.0)
7	It is a distraction	35 (79.5)	9 (20.5)

**Figure 1****Figure 2**

## Discussion

The present study assessed the prevalence, most frequently used, purpose of use and the impact of use of social media by orthodontists/orthodontic resident doctors on orthodontic practice.

There were more females than male participants in this study which is similar to the study by Khalid et al<sup>[3]</sup> concerning the attitudes toward social media among practicing Dentists and Dental Students in clinical years in Saudi Arabia but in contrast with the study by Abed et al<sup>[12]</sup> and another Nigerian study by Nathaniel<sup>[7]</sup> concerning how Ophthalmologists and Ophthalmologists-in-training in Nigeria used the social media. The difference may be due to more females being in the orthodontic profession in Nigeria.

One form of social media or the other was used by all the participants, giving a prevalence of 100% for use of social media. This may be due to easy access to

internet services especially on the mobile phones. All the participants were able to give an appropriate definition of social media. A high prevalence of social media use was also reported among physicians in other studies<sup>[13,14]</sup>. The prevalence reported in this study was higher than what was reported in a Saudi Arabian population<sup>[12]</sup> among dental practitioners. The differences may be due to cultural and governmental policy differences.

Whatsapp (100%) and Facebook (77.3%) were the most commonly used social media in this study population. This is also likely due to access to internet especially on the mobile phones as most orthodontic practices are located in the urban areas of the country. This is consistent with the report<sup>[15]</sup> on the most commonly used social media in Nigeria and some other countries<sup>[7,9,16]</sup>. It is however in contrast with the study on a Saudi Arabian<sup>[12]</sup> population which reported Twitter as the most commonly used social media.

This study also shows that social media was mostly used for social and family interactions, interaction with colleagues on patient management, entertainment, reading of news, interaction with colleagues on latest professional development, teleconferencing, patient education, interaction with colleagues on research collaboration and religious interaction which are in decreasing order of use. Social and family interactions being the most used purpose of social media was also reported in the study among Ophthalmologists<sup>[7]</sup> and physicians<sup>[17]</sup>. The finding in this study is in contrast with some other studies which reported the primary purpose of use of social media in their populations as education<sup>[12]</sup> and marketing<sup>[12,16]</sup>.

Majority (97.7%) of the respondents in this study felt that social media had an effect on the orthodontic practice. Most of them reported that social media kept them abreast of professional trends (93.2%) and encouraged patients to easily communicate with them. This is similar to the report in other studies<sup>[7,17]</sup>. Henzell et al<sup>[18]</sup> reported Facebook as the most frequently used social media among the orthodontic patients they studied; facebook can therefore be targeted to solve the important concern of orthodontists which is to effectively convey information to their patients in order to enhance their knowledge concerning different aspects of their health<sup>[19]</sup>.

The results of this study can help orthodontists, orthodontic residents, dental practitioners and policy

makers to understand the most frequently used social media which are Whatsapp and Facebook and then target them for use in dissemination of educational materials. The positive impact of the use of social media on orthodontic practices cannot be over-emphasized.

One of the strengths of this study is that it is the first study in Nigeria to assess the usage and effects regarding professional orthodontic practice in the use of social media among Orthodontists and orthodontic resident doctors in training. This study will help Orthodontists, dental associations and government to organize trainings on the positive use of social media in patient management and also serve as a tool for telemedicine.

One of the limitations of this study is the relatively small sample size when compared with studies from other parts of the world. The small sample size is because the total number of Orthodontists in Nigeria was less than fifty<sup>[20]</sup> as at 2015 and about seventy by 2019<sup>[21]</sup> for a population of over 200 million people and not all of them are practicing in the country.

### Conclusion

The prevalence of use of social media among Orthodontists and orthodontic resident doctors in the study population was 100%.

Whatsapp, Facebook and Instagram/Blackberry were the top three most frequently used social media in the study population.

Social media was mostly used for social and family interaction as well as interaction with colleagues on patient management by the Orthodontists and orthodontic resident doctors studied.

The use of social media was not perceived by any of the participants to negatively affect orthodontic practice.

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