

## EFFECT OF SOCIAL MEDIA ON THE SERVICE DELIVERY AND PRODUCTIVITY OF FOUR SELECTED PHARMACEUTICAL COMPANIES IN MINNA AND ILORIN, NIGERIA

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### Abstract

*The study investigated the effect of innovative service delivery, social media and information dissemination on the productivity of four selected pharmaceutical companies in Minna and Ilorin, Nigeria. Part of the objectives of the study was to investigate the level of social media awareness on service delivery and productivity of pharmaceutical companies in Minna and Ilorin and the extent of social media proficiency on the pharmacists innovative services delivery on drug production in pharmaceutical companies in Minna and Ilorin, Nigeria. Survey research design was adopted for the study and purposive (judgmental) random sampling technique was used to select two (2) pharmaceutical companies in Minna and Ilorin respectively. A total number of eighteen (18) pharmacists were selected from the sampled companies. Descriptive and inferential statistics were used to analyse the data collected. Part of the findings revealed that there is high awareness on the use of social media for service delivery in pharmaceutical companies and that there is high proficiency on the use of social media for innovative service delivery by pharmaceutical companies. The study concluded that there is strong correlation between the use of social media, information services delivery and the productivity of pharmacists in the pharmaceutical companies selected for the study. The study recommended amongst others that pharmacists should deploy all forms of social media that are up to date in their service delivery with the hope of boosting their productivity in this information driven age.*

**Keywords:** pharmaceutical companies, productivity, service delivery, social media; Minna and Ilorin, Nigeria.

### Introduction

Information is a vital and indispensable resources that is used to boost the productivity of all organisations including pharmaceutical companies. The need for the deployment of appropriate technology in form of social media for enhanced service delivery could not be over emphasized. If the services of the pharmaceutical companies would receive a boost, there is need for innovation and creativity in this information driven age.

Equally, information is one of the vital tools for effective and efficient production and distribution of goods and services in any sector of the economy including pharmaceutical companies. In this information age, social media has gained enough ground as a means of disseminating information as well as delivery service. Similarly, social media is considered as the greatest and best innovative means of information dissemination and delivering service. Social media is a collection of online technologies that allow users to share information, insights, experiences and opinions with one another; the sharing can be in the form of text, audio, video or multimedia (Safko & Brake, 2009). However, social media is the combination of two word; social and media which simply means the process of interaction between two or more people, group and society with the aid of Internet and computer or electronic devices like multimedia



handsets, tablets and so on. The Internet and the World Wide Web are a remarkable innovation that allows access to an almost infinite storage of information (Wangu, 2014).

Pharmaceutical company is one of the major sectors that deal with the health of human life and life seizes to exist without the existence of living souls especially human beings. In pharmaceutical companies, research would help in producing new and effective drugs according to the needs of the communities or users/patients. The medicine and other related treatment equipments produced by pharmaceutical companies in Minna and Ilorin to suit the needs of the patients could not be accurate without adequate information. Information need could not be accessed without the use of social media to acquire authentic, accurate, relevant and current information as well as disseminate it.

### **Statement of the Problem**

Information is the bedrock for successful production of any company including pharmaceutical companies. Use of social media as a mean of acquiring new knowledge and ideas and disseminating information by the pharmacists is necessary for effective production of medicines and other related treatment tools in pharmaceutical companies. However, it is obvious that some pharmaceutical companies produce sub-standard medicines such as panadol, ibuprofen, anti-malarial medicines, ampiclox to mention but a few; and when these drugs are taken to cure an illness they occasionally fail the patients. One wonders what could be the reasons behind this horrible experience, especially as the pharmaceutical companies deal with health of humans and other living beings. Similarly, it is expected that the pharmaceutical companies should engage professional pharmacists whose versatility in the use of social media applications and production of medicines could help to meet the various health challenges of humans.

The pharmaceutical companies are expected to provide original and effective drugs and other treatment materials in actualisation of the mission and vision of the national and global pharmaceutical body. This expectation is yet to be actualised especially as earlier stated that some sub-standard drugs exist in Nigerian hospitals. This could be due to lack of use of social media applications in acquiring up-to-date, innovative information bearing resources in the production of drugs in Minna and Ilorin.

The study therefore, investigates the effect of social media on the service delivery and productivity of pharmaceutical companies in Minna and Ilorin, Nigeria.

### **Objectives of the Study**

The main objective of the study is to investigate the effect of social media on the service delivery and productivity of pharmaceutical companies in Minna and Ilorin, Nigeria. The specific objectives are to:

- (i) Investigate the level of social media awareness on productivity of the pharmaceutical companies in Minna and Ilorin, Nigeria.
- (ii) ascertain the extent of social media proficiency on the pharmacists service delivery on drug production in pharmaceutical companies in Minna and Ilorin Nigeria.



### Research questions

To archive the forgoing objectives, the following research questions were raised:

- (i) What is the level of social media awareness on productivity of the pharmaceutical companies in Minna and Ilorin?
- (ii) What is the extent of proficiency on the use of social media for service delivery on pharmaceutical companies in Minna and Ilorin?

### Hypotheses

The following null hypotheses were tested in the study at 0.05 level of significance:

H1: There is no awareness in the observed frequencies of the level of awareness of social media for productivity in pharmaceutical companies.

H2: There is no proficiency in the observed frequencies of the extent of proficiency on the use of social media for service delivery in pharmaceutical companies.

### Scope of the Study

The study covered all the four (4) pharmaceutical companies in Minna and Ilorin, Nigeria and the entire pharmacists found in the companies. The study also determine the extent to which social media and information dissemination affect innovative service delivery and productivity of the pharmaceutical companies in Minna and Ilorin, Nigeria.

### Research Methodology

Survey research method was adopted for this study and purposive (judgemental) random sampling technique was used to select two (2) pharmaceutical companies in Minna and Ilorin respectively. The researchers found this research survey as a means to retrieve, describe and interpret the data on the effect of social media on the service delivery and productivity of pharmaceutical companies in Minna and Ilorin. According to Ponto (2015) survey research method could be used by quantitative research strategies (use of questionnaires with numerical rated items).

The total population of this study is eighteen (18) pharmacists from four pharmaceutical companies selected in Minna and Ilorin, Nigeria as shown in Table 1.

**Table 1: Population of the study**

S/N	Name of pharmaceutical companies	No of pharmacists
1	Dana Pharmaceutical Ltd, Minna	7
2	Bioraj Pharmaceutical Ltd, Ilorin	3
3	Tuyil pharmaceutical industry Ltd, Ilorin	4
4	Leyjay Pharmaceutical Ltd, Minna	4
<b>Total</b>		<b>18</b>

**Source: Field survey, 2018.**

Table 1 shows the four pharmaceutical companies that were studied in the two towns and the population of pharmacists in each pharmaceutical companies.



A closed ended questionnaire was used for the study. The research instrument designed for the study was a self-designed questionnaire. Questionnaire was the most appropriate instrument that was used for the study due to the fact that it is cost effective and the administration and collection of data could be achieved within a stipulated time (Ibrahim, 2013).

This study used descriptive statistics to analyse part A, which is the demographic variables of respondents; inferential statistics of Chi square test for goodness of fit was used in part B which consist of two research hypotheses. Chi square test was used to investigate the effect of the difference between the observed frequencies and that expected frequencies of social media on the service delivery and productivity of pharmaceutical companies. Test Statistics is defined as:

$$\chi^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

where  $O_i$  ( $i = 1, 2, \dots, k$ ) is the set of observed frequencies on  $k$  classes and  $E_i$  ( $i = 1, 2, \dots, k$ ) is the corresponding set of expected hypothetical frequencies. The Statistic  $\chi^2$  follows  $\chi^2$  distribution with  $(k-1)$  degrees of freedom. Level of significance ( $\alpha$ ) and critical region  $\chi^2 > \chi_{\alpha, (k-1)}^2$ , such that  $P\{\chi^2 > \chi_{\alpha, (k-1)}^2\} = \alpha$ .

If  $\chi^2 \leq \chi_{\alpha, (k-1)}^2$ , we conclude that the data do not provide us any evident against the null hypothesis and hence it may be accepted  $H_0$  at  $\alpha$  % level of significance. Otherwise reject  $H_0$  or accept  $H_1$ .

Level of significance  $\alpha = 0.05$  and Critical value:  $\chi_{0.05, 3}^2 = 7.815$  are used.

## Results and Discussion

### Descriptive statistics of demographic variables

Table 2: Summary of Descriptive Statistics

Gender	Age	Academic Qualification	Marital Status	Department	Rank
Males= 12	Min = 22	BSc = 9	Married=11	Blister = 2	Assist P = 7
Females=6	Median = 30.5	MSc = 6	Single = 7	Compression=2	Manager P=3
	Mean = 32.6	PhD = 3		Inspection = 3	Pharmacist=8
	Max = 53			Parking = 4	
				Tablets = 4	

The demographic variables of the respondents used for the study are described in Table 2. It is an evident from Table 2 that there are twelve (12) males against six (6) females. Nine (9) of the respondents have First Degree and are within the age range of 21-30 years (Min), while six (6) with Masters Degree are within the age range of 31-40 and three (3) with Ph.D are within the age range of 41 and above. The Table equally shows that eleven (11) of the respondents are married, while seven (7) are single with varied ranks and departments.

**Research question 1:** What is the level of awareness of social media on the effect of productivity in pharmaceutical companies studied?

### Research hypothesis 1

$H_0$ : There is no significant difference between the level of awareness of social media and productivity in pharmaceutical companies.



**H<sub>1</sub>:** There is significant difference between the level of awareness of social media and productivity in pharmaceutical companies.

**Table 3:** Chi square test for level of awareness of social media on productivity in four pharmaceutical companies

Response Type	Coded Ratio	Frequency		$(O_i - E_i)^2$	$\frac{(O_i - E_i)^2}{E_i}$
		Observe( $O_i$ )	Expected( $E_i$ )		
Highly Aware	4	196	180	256	1.42
Aware	3	130	135	25	0.19
Low Aware	2	89	90	1.000	0.01
Not Aware	1	35	45	100	2.22
<b>TOTAL</b>	<b>10</b>	<b>450</b>	<b>450</b>		<b>3.84</b>

**Conclusion:** Since  $\chi^2 = 3.84$  is less than  $\chi^2_{0.05, 3} = 7.815$ , the study concluded that the data do not provided us with enough evidence against the null hypothesis  $H_0$ . Hence,  $H_0$  is accepted at 5% level of significance and concluded that there is no significant difference between the level of awareness of social media and productivity in pharmaceutical companies. That is, there is high level of awareness of social media which automatically has good effect on productivity in pharmaceutical companies studied.

**Research question 2:** What is the extent of proficiency on the use of social media for service delivery in pharmaceutical companies studied?

### Research hypothesis 2

**H<sub>0</sub>:** There is no significant difference between proficiency extent of social media and service delivery of drugs in pharmaceutical companies studied.

**H<sub>1</sub>:** There is significant difference between proficiency extent of social media and service delivery of drugs in pharmaceutical companies studied.

**Table 4:** Chi square test for extent of proficiency on the use of social media for service delivery in four pharmaceutical companies

Response Type	Coded Ratio	Frequency		$(O_i - E_i)^2$	$\frac{(O_i - E_i)^2}{E_i}$
		Observe( $O_i$ )	Expected( $E_i$ )		
Highly Profici	4	174	180	36	0.2
Proficient	3	128	135	49	0.36
Low Proficien	2	86	90	16	0.18
Not Proficient	1	62	45	289	6.42
<b>TOTAL</b>	<b>10</b>	<b>450</b>	<b>450</b>		<b>7.16</b>

**Conclusion:** Since  $\chi^2 = 7.16$  is greater than  $\chi^2_{0.05, 3} = 7.815$ , the study concluded that the data do not provide us with strong evidence against the null hypothesis  $H_0$  and therefore,  $H_0$  is accepted at 5% level of significance. That is, there is no significant difference between proficiency extent of social media and service delivery of drugs in pharmaceutical companies



studied. This means that there is proficiency on the use of social media for service delivery in pharmaceutical companies studied.

### **Conclusion**

It is apt to conclude from the study that there is high awareness on the use of social media for service delivery of pharmaceutical companies and that service delivery could be enhanced through the use of social media.

### **Recommendations**

In view of the findings from the study, the following recommendations are made.

- (i) Pharmacists should deploy the latest social media technologies that could boost their services delivery and productivity.
- (ii) In this information age, pharmacists and pharmaceutical companies should organize workshops, seminars and researches that could improve the knowledge base of the pharmacists with the hope of boosting their service delivery in this information age.

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