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Comparative Study of Research Publication among Professionals in Nigeria: A Study of Engineers and Medical Laboratory Scientists in Edo Central, Edo State, Nigeria

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Abstract:

In this research work, 100 professional were administered with well-structured questionnaire in Edo central of Edo state, Nigeria to determine the level of publications of research findings by professional that is engineers and medical laboratory scientists, it was found out that 45(90%) out of the 50 MLS examined published their work while 35(70%) out of the 50 engineers published their work and it was found that those with PhD and Masters published most of their work and the distributions of publications by qualification was not statistically significant($p>0.05$) and many factors such as lack of finances, lack of knowledge of the use of the new available cutting edge technology as constrict to publications of research findings.

1. Introduction

Publication is a technical term in legal contexts and especially important in copy right legislation. To publish is to make content available to the general public (BC, 2010), while the use of the term may varies from country to another, but it is usually applied to text images others like audio-visual content on any of the traditional medium including catalogs, newspapers, journals, serials and so on (Hawksworth, 2011). An engineer is a professional practitioner of engineering, concerned with applying scientific knowledge, mathematics, and ingenuity to develop solutions for technical problems. Engineers design materials, structures, and systems while considering the limitations imposed by practicality, regulation, safety, and cost (BLS, 2006; NSPE, 2006). The work of engineers forms the link between scientific discoveries and their subsequent applications to human needs and quality of life (BLS, 2006) In short, engineers are versatile minds who create links between science, technology, and society (Robinson, 2010). while A medical laboratory scientist or clinical laboratory scientist is a professional that carry out diagnosis, analysis and evaluation on clinical specimens in order to get information about the health of a patient as pertaining to the diagnosis, treatment, and prevention of disease (Farr et al., 2004), MLS professionals provide up to 70 percent of patient laboratory testing to physicians so they can provide an accurate diagnosis and treatment plan, according to a 2002 study in clinical leadership and management review titled “the value of the laboratory professional in the continuum of care” in that study author Rodney Forsinon, Administrative Director Emeritus of the Mayo Clinic Medical Laboratories and president of the Clinical management Association stated that 94 percent of the objective medical data in the patient record carries from the laboratory professionals (ASCLS, 2014), 7.25 billion laboratory tests are conducted annually in the USA according to the centers for Medicare and Medicaid services (Rodney, 2014). They are also concern with the role of carrying out researches on these specimens or correlate the large among of data available for them to enable the concerned authorities formulation policy to control or prevent a specific disease or illness (CDC,2012) and pertaining to engineering as it concerns research they are into designing and producing new innovations that needs to be make available for the industries, governments, private sectors and the general public that are the end uses of such innovations (NSPE, 2006), which are only made possible through research sharing via by publications in journals, conferences and soon. Therefore this paper look at the attitudes of

professionals through research publication in journals and other medium in Nigeria, although no such work has been done to the best of our ability and humbly want to contribute to the very scarce literatures that are available pertaining to research publications in Nigeria and all over the globe.

2. Research Methods

2.1. Study Area and Populations

This research work was carried out among Engineers and Medical or Clinical Laboratory Scientists in Edo central comprises of Esan West, Esan Central, Esan north East, Esan South East and Igueben, local government areas in Edo state Nigeria with a population of over 800000 according to the NPC, 2007 report.

2.2. Inclusion and Exclusion Criteria

Data used in this research was collected from engineers that had registered with Nigerian society of Engineers with their Seal and from medical or clinical laboratory scientists registered with Medical Laboratory Council of Nigeria with their RA numbers while those without RA numbers, data were not collected from them.

2.3. Method of collection and Analysis of Data

The data were collected from the subjects using a well-structured questionnaire, which were administered and collected from them, the information was then correlated and their level of significant, mean and standard deviation were determined using SPSS version 20 and it was then interpreted as $p > 0.05$ as not statistically significant while $p < 0.05$ as statistically significant.

3. Results

Out of the 50 Engineers, 30(60%) were males and 20(40%) were females and out of 50 medical or clinical laboratory scientists, 28(56%) were males and 22(44%) were females and when the sex distribution between the two professionals were compared statistically it was found not to be significant ($p > 0.05$). In this work, in term of qualification, 29(58%), 11(22%) and 10(20%) had bachelors in engineering, masters in engineering and doctor of philosophy (PhD) among the engineers while 30(60%), 13(26%) and 7(14%) had bachelors in medical laboratory sciences or associate of medical laboratory sciences respectively, and when the qualification distribution among the two professions were compared statistically it was significant ($p > 0.05$). And the percentage distribution of years of experiences were also compared and it found not to statistically significant ($p > 0.05$) as shown in table1 below. In table2, out of the 50 engineers that were involved in this study, 35(70%) had published their research findings in journals, books or conference papers and for the medical laboratory scientists, out of the 50 subjects involved this study, 45(90%) had published their works in journals, books or conference papers, but it was observed that medical laboratory scientists had more of their research findings published than their engineers counterparts in this study.

Table3 shows the percentage, mean and standard deviation of the numbers of research done, numbers of such research published and the numbers of the various medium of publications by the various professions studied and their comparison inclusive.

PARTICULARS	ENGINEERS	MLS OR CLS	p-value, χ^2 , df and signif
SEX MALE FEMALE	30(60%) 20(40%)	28(56%) 22(44%)	0.696, 0.164, 1 and $p > 0.05$
QUALIFICATION B.ENG/BMLS OR AMLS M.ENG/MSc PhD	29(58%) 11(22%) 10(20%)	30(60%) 13(26%) 7(14%)	0.700, 0.713, 2 and $p > 0.05$
YEARS OF EXPERIENCES 0-5 6-10 11-15 16-20 >20	10(20%) 5(10%) 11(22%) 17(34%) 3(6%)	15(30%) 10(20%) 12(24%) 8(16%) 5(10%)	0.147, 6.794, 4 and $p > 0.05$

Table 1: demographic representation of the studied professions

- Keys: χ^2 =chi-square, df= degree of freedom, Signif= Significant, MLS=Medical Laboratory Scientists, CLS=Clinical Laboratory Scientists, B.ENG=Bachelor degree in Engineering, M.ENG=Master's degree in Engineering, BMLS=Bachelor degree in medical laboratory Scientist, AMLS=Associate degree in Medical laboratory Scientists, MSc= Master's degree in Sciences, PhD= Doctor of Philosophy

ENGINEERS		MLS OR CLS	
N/Examined	N who published/ %	N/Examined	N who published/ %
50	35(70)	50	45(90)

Table 2: numbers and percentage of published and examined

- Keys: N=Number, MLS=Medical Laboratory Scientists, CLS=Clinical Laboratory Scientists.

PARTICULARS	ENGINEERS	MLS OR CLS
	%and Mean± standard deviation	% and Mean± standard deviation
Number of Research undertook	(98%)17.5±15.31	(100%)15.8±6.47
Number of Research published	(70%)15.2±10.82	(90%)16.7±11.47
Medium Of Publication		
Numbers in Conferences	(30%)9.5±6.21	(32%)8.2±6.37
Numbers in Books	(10%)3.1±1.32	(3%)13.2±2.32
Numbers in Journals	(60%)13.6±10.34	(65%)16.34±4.87
Numbers in Local journals	(65%)15.2±6.21	(70%)14.5±5.34
International journal	(35%)10.4±3.56	(30%)12.2±5.42

Table 3: the comparison of parameters among the studied professions

- Keys: MLS=Medical Laboratory Scientists, CLS=Clinical Laboratory Scientists, %=Percentage

4. Discussion

An action research is research that is made available to the general public which neither made changes to their former knowledge nor conform to it by the virtue of the findings in such research (Uzairue, 2014). On the basis of sex, research and publication among the studied profession, was statistically significant which can be attributed to the policy of the government of Nigeria that gives equal opportunities to both males and females to choose their profession and the little deviation noticed on the sexes, could be due to the physical strength needed in such profession and the sample size used also, has effect of the overall percentage distribution as was opines in research methodology by Kothari, (2004).

It was observed that those who had PhD and Masters degrees had most of their work published, it may be attributed to the fact that, number of publications being one of the criteria requires for promotions and also the award of professorship in academics, but it differs greatly from those not in academics who neither do not do research or do not share the findings of research if they take part. It was observed that medical laboratory scientists published 90% of their research findings than those in engineering profession who published about 70% in this research work, the reason may be due to the regulation by the medical laboratory science council of Nigeria (MLSCN) who is statutorily empower by ACT11 of 2003 to license the practice of medical laboratory science in Nigeria, MLSCN made is mandatory of a practitioner of MLS to published at least one paper annually in a journal before the renewal of license to practice (MLSCN, 2012).

Some of the factors that could be militating against publication of research findings by professionals, could be finances and lack of proficiency in the use of the cutting edge technology such as, computers, internet and others ICTs devices which is still averagely low as was opined by Osawe and Uzairue, (2013), it was also observed that, professional tend to published their research findings in journals and mainly in local journal than international one, this may not be due to finances required and medium of payment for publication fees in international journal which most time, requires the author to have a domiciliary account and most of such journals ,refuse the use of master card and other ways of payment (Research corner, 2013).

4.1. Conclusion and Recommendations

Research publications had been found among the studied professional to be high, that is 70% among the engineers and 90% among the medical laboratory scientists, but, this is not the total overall view in the country Nigeria because of the population size used.

It is therefore recommended that professionals should be more proactive in researches and publications of such findings, professional regulatory bodies should ensure researches undertaken and publications of the finding as criteria for licensure. Professional bodies should made it mandatory for her members to engage in researches and also ensure that the findings of such research, is shared through publications. Continuous professional development (CPD) in the area of the use of the new cutting edge technology should be ensured and government on her part should provide research grants for professionals. Professional bodies should also set up their local journal to encourage her members to publish their research findings.

5. References

1. Bureau of Labor Statistics, U.S. Department of Labor (2006). "Engineers" (<http://www.bls.gov/oco/ocos027.htm>). Occupational Outlook Handbook, 2006-07 Edition. Retrieved 2006-09-21
2. Center for Disease Control (CDC), (2010). Laboratory medicine, available at <http://www.cdc.org>, retrieved on 4th January, 2010.
3. Farr, J. Michael; Laurence Shatkin (2004). Best jobs for the 21st century (<http://books.google.es/books?id=xBRWAAAAMAAJ>). JIST Works. p. 460. ISBN 1-56370-961-9
4. Kothari, (2004). Research methodology (Methods and Techniques), New Age International Limited Publishers: New Delhi
5. Medical Laboratory Science Council of Nigeria (MLSCN), (2012). Criteria for license renewal, available at <http://www.mlscn.gov.ng>, retrieved on the 1st of January, 2014.
6. National Society of Professional Engineers (2006). "Frequently Asked Questions about Engineering" <http://www.nspe.org/media/mr1-faqs.asp>, Retrieved 2014-01-21
7. Osawe, R.E and Uzairue, L.I. (2013). The Relevance of Information and Communication Technologies in Libraries Services and Librarianship Profession in the 21st Century. International journal of basic and innovative research, 2(1)10-14.
8. Research corner (2013). Factors against research publication in Nigeria, a paper presented at the center for research strength in Nigeria at her first public forum, available at www.researchcorner.spotblog.com.
9. Robinson, M. A. (2010). An empirical analysis of engineers' information behaviors. Journal of the American Society for Information Science and Technology, 61(4) 640–658.
10. Rodney, E.R. (2014): The profession that saves life, available at <http://www.elsevier.com/connect/www.txtstate.edu~rr33>, retrieved on 18th February, 2014.
11. Uzairue, L.I. (2014). Cost of publications in Nigeria, available at <http://www.uzairueleonard.spotblog.com>, retrieved on 3rd January, 2014