ROLE OF PROFESSIONALISM IN AWARENESS OF FOETAL ALCOHOL SYNDROME AMONG HEALTH PRACTITIONERS IN SOUTH-WEST NIGERIA

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ABSTRACT

Foetal Alcohol Syndrome (FAS) is a medical defect or condition which affects children as a result of excessive alcohol consumption by the mother during pregnancy. Studies have shown that one of the problems concerning treatment for foetal alcohol syndrome (FAS) is a lack of awareness of the implications of related risk behaviours. The present study therefore investigated the extent to which health practitioners are aware of the prevalence of FAS in Nigeria and the psychological factors involved therein. The study was conducted among health practitioners in two towns in South-Western Nigeria using a cross-sectional field survey. Two hundred and forty-three participants were drawn from four health institutions in Lagos and Ibadan. Data were analysed using descriptive analysis, multiple regression, t-test for independent samples and chi-square test of differences. Results show that professionalism influenced participants' awareness of foetal alcohol syndrome, with such awareness tilting more towards theoretical than experiential knowledge [$F(1,242) = 10.95$, $p<.01$]. Professional status and years of experience had no influence on FAS awareness, probably because much of the awareness reported was not on-the-job awareness but awareness that is related more to professionalism. It

is recommended that health professionals in Nigeria, especially gynaecologists, should pay more attention to the creation of awareness on FAS among themselves and the general public through institutional campaigns and screening of clients for history of alcohol consumption. This awareness will guide them in the screening of patients – a routine which should also be made part and parcel of pre-natal investigations in our health establishments as well as during routine medical consultations.

Key words: Professionalism, Awareness, Foetal Alcohol Syndrome, Health Practitioners, South West Nigeria.

JEL classification: Y800

1. Introduction

The prevalence and growing reports of foetal alcohol syndrome (FAS) and other foetal alcohol syndrome disorders (FASDs) in many countries of the West have raised a lot of curiosity in African countries concerning the state of the disease on the continent. This concern is grave for many reasons; the most salient being the level of awareness of the disease by health professionals, educationists, family members and other social sectors saddled with the responsibility of child health and development. We align our discussion with professionalism because professionalism and communication skills constituted important components of the integral formation of physicians, which has repercussions for quality of health care and medical evaluation (Abadel & Hattah, 2014). Professionalism symbolizes a person's expertise due to many years of training, practice and ultimate experience – illustrating the adage that "practice makes perfect". This applies to health workers, teachers (who watch the moods and responses of children) and even parents whose "professional" experience can qualify them as traditional birth attendants. However, in this study, health practitioners include doctors and other auxiliary workers who attend to patients in relevant areas of medical care. FASDs are a group of conditions that can occur in a person whose mother drank alcohol during pregnancy. They are lifelong birth defects and developmental disabilities caused by prenatal alcohol exposure (CDC, 2009). Any presentation of FASD is a 'hidden disability' because most people affected by FASD are not diagnosed until adolescence, adulthood or not at all

(NOFAS, 2012). At other times, school-aged children may be identified because they are referred for a learning disability or attention deficit hyperactivity disorder (ADHD).

Foetal alcohol syndrome is usually diagnosed medically by a physician specifically trained in the assessment of birth defects. In other instances, other professionals like nurses may be required to assist in identifying children whose mothers have maternal drinking histories or suspected problems. FAS can present in different ways, such as craniofacial anomalies, growth retardation, neurological abnormalities, cognitive impairment, and birth defects (Wozniak, Riley, & Charness, 2019). As a result of differential presentation of FAS across racial lines, diagnostic personnel need to be sensitive to the characteristics of the group they are examining.

Few African studies, report the epidemiology of foetal alcohol syndrome as an indication of some level of awareness among the people. For example, May et al. (2000) found that the highest prevalence of FAS worldwide was reported among first grade children in a wine-growing region in the Western Cape Province of South Africa. The features of FAS are not dichotomous (i.e. being present or absent) but each feature is on a continuum, from clearly within the normal range to clearly the features of FAS. Throughout childhood and young adulthood, patients with FAS are known to remain short and their heads have abnormally small circumferences (Streissguth et al., 1991). Recently, an observation has been made about Nigeria's underdeveloped status in medical education, poor infrastructure, poor funding, poor per capita contribution to world knowledge, plagiarism of medical research and even poor reading culture among Nigerian doctors (Anyanwu, 2010). These may have an impact on the generation and dissemination of information on the prevalence of foetal alcohol syndrome in Nigeria.

One indication that some effort has been made on knowledge about foetal alcohol syndrome in Nigeria is a study that investigated the detrimental effect of alcoholic content on the cerebral cortex of pregnant rats (Eluwa, Njoku, Ekanem & Akpanntah (2009). In the study, it was revealed that alcoholic beverages taken during pregnancy were detrimental to the growth and development of the developing foetus. These features are usually accurately

diagnosed between the ages of 3 to 12. A recent meta-analysis on the level of alcohol ingestion by Nigerian lactating women and how that has resulted in the manifestation of FAS in children (Ottu & Ottu, 2013) yielded scanty results. In another report, Rendal-Mkosi et al. (2008) documented that there is very few studies on foetal alcohol syndrome in South Africa. But the overwhelming pool of such studies in the West raised questions on professional awareness of the disease in Nigeria and the level of continence of Nigerian women in relation to alcohol intake. Such questions include: Are health professionals in Nigeria and Africa overly aware of the aetiology and presentation of this disease to be able to identify it through diagnosis? On the other hand, are Nigerian health officials and pregnant women aware that foetal alcohol syndrome and other FASDs mostly occur due to alcohol intake during pregnancy? Even though FAS is one of the most preventable birth defects, knowledge about FAS is low among women, particularly among those without college education (CDC, 1994a; 1994b).

Research has reported that in the United States, although many pregnant women will first contact an obstetrician or gynaecologist regarding prenatal care, many of these physicians often fail to inquire adequately about the expectant mothers' drinking practices (NIAAA, 2005), and the situation appears worse in Africa. The present study attempts an investigation into the influence of professionalism on awareness about foetal alcohol syndrome and other FASDs among Nigerian health workers. Even in developed countries, Kathy Michell of the National Organization on Foetal Alcohol Syndrome (NOFAS) had observed that "Many physicians and health clinics still do not screen women for alcohol use, do not educate them on the hazards of drinking while in pregnancy, and do not even recognize FASD in their patients" (Chicago Tribune, 2009). A similar observation was made recently by women during a survey in two wine-growing regions of South Africa (Parry et al., 2012).

Foetal alcohol syndrome is not like HIV, and cannot be diagnosed with a blood test (Schwarzlose, 2014). Doctors rely on a characteristic pattern of facial abnormalities, growth delays, and neural and mental problems, often in addition to evidence of prenatal alcohol exposure. Furthermore, children affected by alcohol do not always show these symptoms. Criteria for diagnosis vary and are better defined for FAS than other conditions within the spectrum, so it is not surprising that prevalence figures are a challenge to

establish due to differing definitions, poor accuracy in self-reporting of alcohol consumption and sometimes reluctance to make or accept diagnosis.

2. Efforts at Prevention and Management of FAS

Prevention of foetal alcohol syndrome and related disorders is of tremendous public health importance, but this depends much on the level of professionalism among practitioners. Interestingly, professionalism is a multidimensional concept, incorporating three intuitively relevant perspectives: values, skill and organization (Butter & Hermanns, 2011). Klemenc-Ketis & Vrecko (2014) describe professionalism as the foundation of the health professional's contract with society on which attitudes, values, behaviours and relationships of health practitioners are based. However, in recent years, the medical profession has witnessed a series of sharp practices among its practitioners. This has raised a series of criticisms for perceived and real breaches of professionalism and ethics indicating the promotion of self-interest rather than the best interests of patients by the practitioners (Amritha, Vanishree, Chandra & Babu, 2019). In response to this, increased attention has been given to the concept of professionalism in preserving, promoting, teaching, assessing, and researching medical professionalism (Mueller, 2009). In doing this, the elements of the framework of professionalism, which include clinical knowledge and skills, communication skills, ethics, accountability, altruism, excellence, and humanism, should be intentionally taught (Amritha et al., 2019) right from the classroom and encouraged in the work environment. Professionalism is considered as a social contract between the professionals/practitioners and the patients by putting the best interests of the patients at the centre of everything because without the patients, there would not be professionals – doctors, nurses, etc. (Trathen & Gallagher, 2009; Barnhoorn & Youngson, 2014).

Therefore, it is expected that professionals, guided by these perspectives, would provide adequate guidance for health care practitioners to identify and diagnose cases of foetal alcohol syndrome disorders, especially foetal alcohol syndrome and foetal alcohol effects, explore its aetiology and provide guidance on prevention. These efforts are geared towards monitoring the prevalence of FAS in order to understand the full magnitude of the problem.

Generally, primary care providers and others who care for children do not routinely or consistently identify individuals with FAS, which hinders efforts to account for these children in the diagnosis of birth defects and developmental disabilities monitoring programmes (NCBDDD, 2004). The situation is further compounded by numerous criteria commonly used in arriving at diagnostic inferences which, however, basically include documentation of three facial abnormalities – smooth philtrum, thin vermillion border and small palpebral fissures; documentation of growth deficits, documentation of Central Nervous System (CNS) abnormalities (structural, neurological or functional, or combination thereof); and probing the drinking of alcohol during pregnancy by women. Doctors and agencies now define FAS as the extreme end of a spectrum of disorders caused by prenatal alcohol exposure. The full spectrum, called foetal alcohol spectrum disorders (FASDs), includes milder forms of the illness that involve subtler cognitive or behavioural problems and lack of classic facial features of the full-blown syndrome. This position is not without discontent, as others say it is just a subset that can be positively identified rather than the most severe condition (Clarren & Astley, 1993).

Milder cases of FASD are usually hard to identify. Paediatricians can miss the signs altogether, and there is cyclical difficulty in diagnosing the mildest cases of FASD, just as prenatal alcohol exposure seems to manifest in the foetuses of older mothers or poor mothers compared to others. It therefore appears that the low levels of detection of FAS in the past may be associated with the complex diagnostic criteria currently in place.

For instance, in Nigeria, the last facet of these problems is further compounded by the fact that the drinking behaviour of women is either yet to be deeply understood or the rate of women's involvement with alcohol is perceptibly very low. Few studies have investigated the drinking habit of women in Nigeria (Dumbili, 2013; Ajiboye & Abimbola, 2012; Gureje et al., 2007). Generally, factors attributed to women's consumption of alcohol are medical and cultural in nature (Dumbili, 2013, Ajiboye & Abimbola, 2012; Mannella, 1999). Whereas 9-12% of pregnant women and half of all women of childbearing age (18-44 years) in the United States report consuming alcohol, such statistics are not readily available in Nigeria due perceptibly, to the culture of secrecy emanating from the fears of stigmatization. There is another hidden snag: the fact that not all women who drink alcohol may

deliver children with FAS. Although some studies (Adebiyi, Mukumbang, Cloete & Beytell, 2018; Howlett, Mackenzie, Strebie, Rankin & Gray, 2019; Choate, Badry, MacLaurin, Ariyo & Sobhani, 2019) have examined issues relating to FAS, sufficient efforts have not been made to investigate professional and industry-based awareness of foetal alcohol syndrome among medical practitioners in Nigeria. Thus, FAS cannot rank among HIV/AIDS, tuberculosis, malaria, Ebola and recently corona virus in terms of level of awareness.

The actual prevalence of FAS is unknown, but recent estimates suggest a rate of 1.4% – 44% identified as the best estimate in Canada (Flanigan, Unsworth & Harding, 2018). It is also reported that the Republic of South Africa appears to have the highest recorded prevalence of all countries (Adebiyi, Mukumbang & Beytell, 2019). In addition to these, Howlett et al. (2019) have reported that lack of awareness of FAS by the National Health Service in the United Kingdom is responsible for the small percentage of FASD found among children in the United Kingdom. Recently, however, Bulut & Kennedy (2021) conducted a study to re-evaluate an existing 2017 study of FAS awareness in Alberta, Canada. The results provided a promising instrument to evaluate future public awareness of FASD, with a suggestion of further improvement to make valid conclusions about FASD awareness.

With these directions, FAS is gradually being demystified as a highly threatening disease with very low profile. The reasons the disease lacks awareness as a high profile disease are complex ranging from the lack of deliberate efforts by health institutions to create public awareness (due to its relatively unknown status) to some countries complicated relationship with liquour (e.g. the U.S.A.). It is estimated that in the United States, about 40,000 children are born each year with suspected symptoms of FASD with consequential risks. According to the National (USA) Organisation on Fetal Alcohol Syndrome (NOFAS) (2012). Children exposed to alcohol in uterogestation are prone to poor judgment, impulsivity, and are often unable to grasp cause and effect. Since Nigeria is also among many nations with learning disabilities in children and many other problems associated with FAS, educating health professionals and the general public regarding foetal alcohol syndrome and foetal alcohol spectrum disorders across many health

and allied fields in Nigeria becomes expedient. This is the objective which this study was designed to achieve.

In addition, for many years, other nations and research bodies, especially the US National Institute on Alcohol Abuse and Alcoholism, have supported research to understand how alcohol exposure during pregnancy interferes with foetal development and how foetal alcohol spectrum disorders can be identified and prevented. One of such approaches has been the collaboration of many countries of the world in the observation of September 9th of every year as International Foetal Alcohol Spectrum Disorders Awareness Day, a reminder that all nine months of pregnancy should be alcohol free for the health of the child. This awareness day and other awareness programmes are not commonly observed in Nigeria, indicating that meaningful attention is yet to be paid to the raising of awareness about this condition, not only to health workers but also to the general population. However, it is expected that medical personnel who work directly with patients should possess fair or sufficient knowledge of this condition for diagnosis and detection towards treatment. Based on this, we hypothesize that:

(a) Professionalism, job type and experience will significantly, jointly and independently predict FAS awareness among health professionals;

(b) Participants with higher level of professionalism will report significantly higher levels of FAS awareness.

3. Method

Design: The study was a descriptive and cross-sectional study. Thus, we administered relevant measures of the independent variables to participants since they were not manipulated as in the case of an experiment.

Setting: Selected health institutions in the south west of Nigeria, namely Navy Hospital, Kirikiri, Lagos; University Health Services (UHS), University of Ibadan; Military Cantonment Hospital (MCH), Ojo, Ibadan; and University College Hospital (UCH), Ibadan, served as the setting for the study.

Sample/Participants: Four medical establishments were purposively sampled for the study. Participants in the establishments were then selected through a simple random sampling technique. Three hundred questionnaires

were randomly administered and two hundred and forty-three (243) were fully completed and returned indicating more than 80% response rate.

Participants were health workers in these institutions comprising 103(42.4%) nurses/midwives 72(29.6%) medical doctors, and 27(11.1%) from other professions. The participants were grouped into young (less than 55 years) and old (55 years and above) based on their reported ages, with a mean age of 55 years. Years of experience were also grouped into long (15 – 35 years) and short (1 – 14 years).

Instruments: A structured questionnaire was used to collect data from participants. Section A of the questionnaire probed participants' demographic indices such as age, gender, marital status, socio-economic status, etc, while sections B and C measured professionalism and FAS awareness respectively.

The Addenbrookes Hospital FAS Questionnaire was used to measure awareness of FAS among the participants. It is a 25-item, Likert-type scale on a 5-point format ranging from "Strongly Disagree = 1" to "Strongly Agree = 5". Item types include: "Foetal Alcohol Syndrome can be diagnosed at birth", and "Advising women who are planning to become pregnant in the near future to avoid binge drinking may reduce Foetal Alcohol Syndrome". The scale was revalidated with a scale reliability test and found to have adequate reliability with a coefficient of $\alpha = .75$ to adapt to the Nigerian context.

The Butter & Hermann's Professionalism scale was used to measure health workers' professionalism based on their job experience. This is a 10-item Likert type scale on a 5-point format from "totally disagree = 1" to "totally agree = 5". Sample items include: "In my work, I am supported by adequate instruments and methods, "In my work, I often have to react adequately to unexpected situations that occur" and "My work stimulates exchange of ideas with colleagues from relevant other organizations". The scale has three-subscales: Professional ethos (4 items) with Cronbach's alpha of .77, professional facilitation (4 items) (α =.71) and professional challenge (2-items) (no alpha reported). The authors adapted and revalidated the scale for Nigerian use using a scale reliability test and reported a reliability coefficient of $\alpha = .67$.

Procedure: The researchers sought written approval from the respective managements of the hospitals to carry out the study in their establishments. Criteria for inclusion in the study were: being a medical doctor, nurse, nurse/midwife and/or other health worker (social worker). Respondents were reached through supervisors who helped in introducing them to the researchers on group bases. Apart from the University Health Services, University of Ibadan (UHS) and Military Cantonment Hospital (MCH), Ojo, Ibadan, where participants returned fewer questionnaires (MCH: 9 out of 40; UHS 25 out of 50) the other institutions returned almost all entries administered (Navy Hospital, Lagos, 109 out of 120 and UCH, Ibadan, the entire 100 entries). Table 1 indicates the number and percentage of participants from each health institution. The data were analysed using multiple regression analysis, t-test for independent samples and Chi-square test for observed differences.

4. Results

The results from analyses of the data are presented in Tables 1 to 6.

Table 1. Demographic characteristics of participants

Variables/Sources	N	%
Age		
Young	109	44.9
Old	111	45.7
Missing	23	9.5
Gender		
Male	69	28.4
Female	174	71.6
Marital Status		
Single	80	32.9
Married	162	66.7
Others	1	.4
Education		
ND	12	4.9
HND/B.Sc	129	53.1
MBBS	68	28.0
M.Sc	14	5.8
Others	20	8.2

Variables/Sources	N	%
Professional Types		
Nurse	41	16.9
Nurse/Midwife	103	42.4
Medical Doctor	72	29.6
Others	27	11.1
Years of Experience		
Short	105	43.2
Long	113	46.5
Missing	25	10.3
Institutions		
UCH, Ibadan	100	41.2
Navy Hospital, Lagos	109	44.9
UHS, UI, Ibadan	25	10.3
Military Hospital, Ibadan	9	3.7
Total	243	100.0

Table 2. Frequency Distribution of Professional Types on FAS Awareness

Professional Status	FAS Awareness		Total
	Low	High	
	Frequency (%)	Frequency (%)	Frequency (%)
Nurse	20 (48.8)	21 (51.2)	41 (100.0)
Nurse/Midwife	44 (42.7)	59 (57.3)	103 (100.0)
Medical Doctor	38 (52.8)	34 (47.2)	72 (100.0)
Others	13 (48.1)	14 (51.9)	27 (100.0)
Total	115 (47.3)	128 (52.7)	243 (100.0)

Table 3. Frequency Distribution of Professional Types on Professionalism

Professional Status	Professionalism		Total
	Low	High	
	Frequency (%)	Frequency (%)	Frequency (%)
Nurse	17 (41.5)	24 (58.5)	41 (100.0%)
Nurse/Midwife	36 (35.0)	67 (65.0)	103 (100.0%)
Medical Doctor	34 (47.2)	38 (52.8)	72 (100.0%)
Others	14 (51.9)	13 (48.1)	27 (100.0%)
Total	101 (41.6)	142 (58.4)	243 (100.0%)

Table 4 shows a multiple regression analysis on the influence of job status, years of experience and professionalism on awareness of foetal alcoholic syndrome (FAS) among medical practitioners. The result showed that there was a significant joint influence of job type, years of experience and professionalism on awareness of FAS among health workers [F(217) = 4.044, p < .01)]. However, only the independent contribution of professionalism was significant to the prediction of awareness of FAS (β = 0.217; t = 3.223; p <.01). Further, the result showed that the independent variables accounted for more than 5% of variance of prediction of FAS awareness (R^2 = 0.054) with a positive correlation coefficient of 0.232.

Table 4. Multiple Regression Showing Influence of Job Status, Experience and Professionalism among Health Workers

Variable	Beta	t-value	Sig	R	R^2	F	P
Job Type	-0.061	-0.859	.391				
Years of Experience	-0.006	-0.082	.934	0.232	0.054	4.044	.008
Professionalism	0.217	3.223	.001				

Dependent variable: FAS Awareness

Table 5. Descriptive Statistics of the Influence of Professionalism on Foetal Alcoholic Syndrome (FAS) Awareness

Variable	N	Mean	SD
Professionalism			
Low	101	83.03	10.01
High	142	87.54	10.80

The descriptive statistics in Table 5 show that participants with high level of professionalism contributed significantly to the influence of professionalism on awareness of FAS ($\bar{X}$ = 87.54, SD = 10.80, n = 142) compared to those with low level of professionalism ($\bar{X}$ = 83.03, SD = 10.01, n = 101) to establish the significant influence of professionalism on awareness of foetal alcohol syndrome. The result implies that the level of professionalism of different health workers in medical care significantly predisposes them to know and be aware of FAS, a medical diagnosis in children related to maternal alcohol consumption.

As a way of further understanding the result, professionalism was examined using a t-test for independent samples as shown in Table 6 below.

Table 6. T-test showing Difference in Levels of Professionalism on FAS Awareness

Variables	N	Mean	SD	DF	T	P
Professionalism						
Low	101	83.03	10.01	241	3.309	.001
High	142	87.54	10.80			

Table 6 shows that there was a significant difference across the two levels of professionalism on FAS awareness [t(241) = 3.309, p < .01)]. The result further revealed that participants with high level of professionalism reported a higher score in FAS awareness ($\bar{X}$ = 87.54, SD = 10.80, n = 142) compared to people with low professionalism who reported low on FAS awareness ($\bar{X}$ = 83.03, SD = 10.01, n = 101).

In order to further test the association among levels of FAS awareness and years of experience and professional status, chi-square tests were performed and the results are as presented in Tables 7 and 8 respectively.

Table 7. A 2x2 Cross-Tabulation for Chi-Square Test of Difference in FAS Awareness across Years of Experience

Variables	Levels	N(%)	FAS Awareness		Total	X^2	DF	P
			Low	High				
Experience	Short	Count	47	58	105			
		%	44.8	55.2	100.0			
	Long	Count	53	60	113	0.100	1	.428
		%	46.9	53.1	100.0			
Total		Count	100	118	218			
		%	45.9	54.1	100.0			

Table 7 shows that there was no significant difference in FAS awareness based on workers' years of experience (X^2 = 0.100; DF = 1; P > .05). The result reveals that out of 105 participants with short years of professional

practice, 58(55.2%) reported high FAS awareness while 47(44.8%) reported low awareness. Also out of 113 participants with long years of practice, 60(53.1%) reported high level of FAS awareness while 53(46.9%) reported low awareness of FAS. This means that both participants with short and long years of practice had the same level of FAS awareness.

Table 8: A 4x2 Cross-Tabulation of Chi-Square Test of Difference in FAS Awareness across Professional Status

Variables	Levels	%	FAS Awareness			X^2	DF	P
			Low	High	Total			
Professional Type	Nurse	Count	20	21	41	1.778	3	.620
		%	48.8	51.2	100.0			
	Nurse/Midwife	Count	44	59	103			
		%	42.7	57.3	100.0			
	Medical Doctor	Count	38	34	72			
		%	52.8	47.2	100.0			
	Others	Count	13	14	27			
		%	48.1	51.9	100.0			
Total		Count	115	128	243			
		%	47.3	52.7	100.0			

In the same way, table 8 shows that there was no significant difference in professionals' FAS awareness across professional type (X^2 = 1.778; DF = 1; P > .05). The result revealed that out of 41 nurses, 21(51.2%) reported high FAS awareness while 20(48.8%) reported low awareness. Also out of 103 nurses/midwives, 59(57.3%) reported high level of FAS awareness while 44(42.7%) reported low awareness of FAS. Of the 72 medical doctors, 34(47.2%) reported high while 38(52.8%) reported low FAS awareness. Lastly, out of the 27 participants in related profession, 14(51.9%) reported high FAS awareness while 13(48.1%) reported low FAS awareness. This means that awareness of FAS was the same across categories of professional status.

5. Discussion

The current study is (one of) the first to investigate professional awareness of foetal alcohol syndrome among health practitioners in Nigeria. The study

sought professionals' report on how their skills and knowhow have helped them in the recognition and management of foetal alcohol syndrome in Nigerian hospitals. The multiple regression analysis and mean scores showed that participants who are high in professional knowledge also showed high level of awareness of FAS. Based on the findings, foetal alcohol syndrome is fairly known among professionals in the medical sector, not precisely through diagnosis but mostly through health training and information. In most of the health institutions surveyed, professionals have however verbally expressed doubt about the prevalence of the condition with only a few officers confirming practical knowledge of the disease. This finding is therefore consistent with previous non-Nigerian evidence that although there is reasonable level of awareness of foetal alcohol syndrome, insignificant level of awareness and diagnosis still remain a problem (NOFAS, 2012; Rendal-Mkosi, et al, 2008; CDC, 1994a, 1994b; Parry et al, 2012). The study also revealed that worker's years of experience and professional type made no difference in the level of awareness reported by professionals. This has thrown up the issue of the synergy between theoretical professional knowledge which doctors and other health personnel acquire in their respective medical schools and practical professional knowledge obtained from day-to-day engagement in their occupations, in which the latter shows more expression than the former. This can be explained by the fact that the number of doctors surveyed were far less in number than other types of professional health workers. As seen from the demographic characteristics of the study, out of the 243 health practitioners, only 72 were medical doctors and a greater number of those who expressed inadequate knowledge of foetal syndrome may be found among other professional types. This low level of practical professional awareness may therefore, be risky for the general population because it may be that other professionals merely take FAS for granted and do not bother to engage in laboratory investigation with the condition when they interact professionally with pregnant and lactating women as well as their children.

6. Conclusion

The present study has revealed that the knowledge of FAS among professional health practitioners and the general public though fairly available is still very low. The low awareness may either mean that the condition is not prevalent or is prevalent without adequate public knowledge due, also, to inadequate investigation. This calls for sustained research to understand the presentation of the disorder among the populace. Since no known study has been identified on the prevalence of FAS in Nigeria and professionalism in the medical field has been identified to aid the knowledge of FAS, it is therefore highly recommended that further studies be carried out by health practitioners. Moreover, practical skills of medical professionals in the identification of FAS in Nigeria should be examined since professional expertise comes with hands-on experience.

It is important for these investigations to be mounted because a lot of women may not know the extent to which they may go concerning what they "consume" during pregnancy and lactation. It may be necessary to intensify efforts in this direction in order to prevent unintentional harm to uninformed mothers and their unborn children. Most times, we may not know to what extent local gossip goes round communities and are taken as professional advice. In this investigation, we have come across several evidence that some women take alcohol in order to reduce the size of the foetus for easy delivery (Eluwa, Njoku, Ekanem and Akpantah, 2009). This is a risky health behaviour by pregnant women because such children may develop birth defects that may leave them as permanent burdens to the society. Although foetal alcohol syndrome is a disability arising from serious effect of alcohol on children, it can be inferred that simple cases of persistent poor memorization of the multiplication table as well as poor time-telling abilities can be linked to foetal alcohol effects. So, even though it appears foetal alcohol syndrome disorders may not be commonly diagnosed in the Nigerian population, such disorders may silently be wreaking havoc on the social and intellectual capabilities of our children and permanently disabled adults.

7. Specific Recommendations

Based on these findings, it is recommended that with sustained effort, Nigerians would be able to know and understand the dangers of alcoholism

on the long-term health and wellbeing of our children and society at large. Therefore, similar studies should be carried out across sectors of the country among health practitioners and pregnant/lactating mothers.

Also, training of health workers on FAS, and other issues related to substance abuse should be carried out at regular intervals as well as provision of regular updates by relevant authorities. The standard screening of pregnant women during antenatal clinics for alcohol and other substance-related disorders by means of standard screening tools should be included in screening protocols of mothers or women of child-bearing age visiting any of our health facilities.

References

Abadel, F.T., and Hattab, A.S. (2014). Patients' assessment of professionalism and communication skills of medical graduates. *BMC Medical Education*, *14*, 28. Doi:10.11.86/1472-6920.14-28

Adebiyi, B. O., Mukumbang, F. C., Cloete, L. G., & Beytell, A. M. (2018). Exploring service providers' perspectives on the prevention and management of fetal alcohol spectrum disorders in South Africa: a qualitative study. *BMC Public Health*, *18*(1), 1-18.

Adebiyi, B.O., Mukumbang, F.C., & Beytell, A.M. (2019). A guideline for the prevention and management of Foetal Alcohol Spectrum Disorder in South Africa. *BMC Health Services Research*, *19*(1), 809. https://doi.org/10.1186/s12913-019-4677-x

Ajiboye, O.E., & Abimbola, A.K. (2012). Socio-cultural factors affecting pregnancy outcome among the Ogu speaking people of Badagry area of Lagos State, Nigeria. *International Journal of Humanities and Social Science*, *2*(4) 133-144.

Amritha, N., Vanishree, M. K., Chandra, K. M., & Babu, P. (2019). Assessment of dental students' attitudes and perceptions toward professionalism. *Journal of Indian Association of Public Health Dentistry*, *17*(1), 19.

Anyanwu, S.N. (2010). Medical education in Nigeria: Status and travails of medical publications. *Nigerian Journal of Medicine, 51*, 66-69.

Barnhoorn, P.C., & Youngson, C. (2014). Refining a definition of medical professionalism. *Academic Medicine*, *89*(12), 1579.

Bulut, O., & Kennedy, K. (2021). Measuring and understanding public awareness of foetal alcohol spectrum disorders in Alberta, Canada. *Journal of Public Health*, 1-8.

Butter, R., & Hermanns, J. (2011). Impact of Experienced Professionalism on Professional Culture in Probation. *European Journal of Probation, 3(3)* 31-42.

Centers for Disease Control and Prevention. (1994a). Frequent alcohol consumption among women of childbearing age – Behavioural Risk Factor Surveillance System 1991. *MMWR Morbidity Mortality Weekly Report, 43*, 328-329, 335.

Centers for Disease Control and Prevention. (1994b). Prevalence and characteristics of alcohol consumption and foetal alcohol syndrome awareness – Alaska, 1991 and 1993. *MMWR Morbidity Mortality Weekly Report, 43*, 3-6.

Centers for Disease Control and Prevention. (2009). Alcohol use among pregnant and nonpregnant women of childbearing age United States 1991–2005. *Morbidity and Mortality Weekly Report,* 58 (19), 529–532.

Chicago Tribune Families. (2009). Battle an 'invisible disability, Sept. 9, available at http://archives.chicagotribune.com/2009/sep/09/local/chi-090909-fetal-alcohal-syndrome-story

Choate, P., Badry, D., MacLaurin, B., Ariyo, K., & Sobhani, D. (2019). Foetal alcohol spectrum disorder: what does public awareness tell us about prevention programming? *International Journal of Environmental Research and Public Health*, *16*(21), 4229.

Clarren, S.K. & Astley, S.J. (1993). *A screening guide for foetal alcohol syndrome.* University of Washington.

Dumbili, E. (2013). Changing patterns of alcohol consumption in Nigeria: An exploration of responsible factors and consequences. *Medical Sociology Online, 7* (1) 20-33.

Eluwa, M.A., Njoku, C., Ekanem, T.B., & Akpantah, A. (2009). Teratogenic effect of beer and palm wine on histology of fetal cerebral cortex of Wistar rats. *Int J Health*, *9*, 1.

Foetal Alcohol Syndrome: Guidelines for Referral and Diagnosis. (2004). In: Julie Louise, Gerberding Jose, Cordero & R. Louise Floyd (Director) Department of Health and Human Services, National Center on Birth Defects and Developmental Disabilities in Collaboration with National (U.S.). Task Force on Foetal Alcohol Syndrome and Foetal Alcohol Effect of the American Academy of Pediatrics.

Flanigan, K.; Unsworth, K.; Harding, K. (2018). The Prevalence of Foetal Alcohol Spectrum Disorder. CANFasd Network.. Available online: https://canfasd.ca/wp-content/uploads/sites/35/2018/08/Prevalence-1-IssuePaper-FINAL.pdf (accessed on 31 August 2021).

Gureje, O., Degenhardt, L., Olley, B., Uwakwe, R., Udofia, O., Wakil, A., ... & Anthony, J. C. (2007). A descriptive epidemiology of substance use and substance use disorders in Nigeria during the early 21st century. *Drug and alcohol dependence*, *91*(1), 1-9.

Howlett, H., Mackenzie, S., Strehle, E. M., Rankin, J., & Gray, W. K. (2019). A survey of health care professionals' knowledge and experience of Foetal Alcohol Spectrum Disorder and alcohol use in pregnancy. *Clinical Medicine Insights: Reproductive Health*, *13*, 1179558119838872.

Klemenc-Ketis, Z., & Vrecko, H. (2014). Development and validation of a professionalism assessment scale for medical students. *International Journal of Medical Education*, *5*, 205.

Mannella, J.A. (1999). The transfer of alcohol to human milk: Sensory implications and effects on mother-infant interaction (pp. 199-228). In: J.H. Hannigan, N. Spear, L. Spear, and C.R. Goodlett (Eds). *Alcohol and alcoholism: Brain and development.* New Jersey: Lawrence Erlbaum Associates, Inc.

May, P.A., Brooke, L.E., Gossage, J.P. et al (2000). Epidemiology of foetal alcohol syndrome in a South African Community in the Western Cape Province. *American Journal of Public Health 90(2)* 1905-1912.

Mueller, P.S. (2009). Incorporating professionalism into medical education: the Mayo Clinic experience. *The Keio Journal of Medicine*, *58*(3), 133-143.

National (USA) Center for Birth Defects and Development Disabilities (US). (2004). In Coordination with National Task Force on Foetal Alcohol Syndrome and Foetal Alcohol Effect. Foetal Alcohol Syndrome: Guidelines for referral and Diagnosis.

National (USA) Institute on Alcohol Abuse and Alcoholism (NIAAA). (March 2005) Module 1: Epidemiology of Alcohol Problems in the United States. Participant Handout.

National Organisation on Foetal Alcohol Syndrome (2012). *FASD.* Retrieved from http://www.nofas.org/.

Ottu, I.F.A. & Ottu, I.I. (2013). Alcohol during Pregnancy and Lactation: Bridging discordant and equidistant views on maternal and child outcomes. Paper presented at National symposium on substance abuse on drug control in Nigeria with the theme: Enhancing capacity for Substance Abuse Research in Nigeria held at Governor's Office Annex, Willington Bassey Way, Uyo, 15-16 August, 2013.Ibadan Journal of the Social Sciences, 13(1), 97 – 111.

Parry, C.D.H., Gossage, J.P., Marais, A., Banard, R., de Vries, M., Blankenship, J., Seedat, S., May, P.A. (2012). Comparison of Baseline drinking practices, knowledge, and Attitudes of Adults residing in communities taking part in the FAS Prevention Study in South Africa. *African Journal of Drug & Alcohol Studies, 11*(2), 65-76.

Rendal-Mkosi, K., London, L., Adnams, C., Morojele, N., McLoughlin, J., & Goldstone, C. (2008). Foetal Alcohol Spectrum Disorders in South Africa: Situational and Gap Analysis. University of Pretoria/Unicef/ MRC Collaborative paper.

Schwarzlose, R. (2014). Brains, Pregnancy and Science: Why no one can say exactly how much is safe to drink while pregnant. Garden of the mind webpage.

Streissguth A.P., Aase, J.M., Claren S.K., Randels, S.P., LaDue, R.A. & Smith, D.F. (1991). Foetal Alcohol Syndrome in adolescents and adults. *JAMA, 265,*(15), 1961-1965.

Trathen, A., & Gallagher, J. E. (2009). Dental professionalism: definitions and debate. *British Dental Journal*, *206*(5), 249-253.

Wozniak, J.R., Riley, E.P., & Charness, M.E. (2019). Clinical presentation, diagnosis, and management of foetal alcohol spectrum disorder. *The Lancet Neurology*, *18*(8), 760-770.