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Full Length Research Paper

Contraceptive Knowledge and Compliance with Guidelines for Providing Contraceptive Services by Patent Medicine Vendors In Ibadan North Local Government Area, Nigeria

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ABSTRACT

Previous studies conducted in Nigeria have shown that Patent Medicine Vendors (PMVs) provide a substantial proportion of contraceptive services. The Federal Ministry of Health (FMOH) provided guidelines for the delivery of contraceptive services by PMVs. This study was therefore designed to identify types of contraceptives dispensed by PMVs and determine their compliance with the FMOH guidelines in Ibadan North Local Government Area. An observational check-list and a validated interviewer administered questionnaire containing a 47- point knowledge scale were used for data collection. Data were analysed using descriptive and Chi-square statistics. Respondents' mean age was 32.8±7.0 years, 80.9% were females, 63.5% were West African School Certificate holders. Most respondents (98.2%) were trained through the apprenticeship system. Only 17.4% were formally trained on the provision of contraceptive services. Contraceptive- related services offered by PMVs as stipulated by the guidelines were: counselling (96.5%), community sensitization (46.3%) and referral (96.4%). Virtually all (98.6%) respondents had ever dispensed contraceptives. A large proportion (72.7%) of respondents dispensed oral contraceptives contrary to the FMOH guidelines. The contraceptives ever dispensed by respondents included: male condoms (96.1%), female condoms (4.3%), doufem (72.3%), pregnon (18.8%), spermicide (4.9%) and intrauterine device (1.8%). Respondents' mean knowledge score was 25.9±5.8. Mean knowledge score on the provision of contraceptives services among males and females were 27.7±5.9 and 25.6±5.7 respectively. On compliance 3.7% of respondents complied fully with the FMOH guidelines on contraceptive service delivery. Compliance with stipulated guidelines by the Federal Ministry of Health on the provision of contraceptive services was low among the study population. The patent medicine licensing authorities should ensure that all patent medicine vendors are provided with the Federal Ministry of Health guidelines relating to the dispensing of contraceptives. Patent Medicine Vendors should be trained on the effective use of the guidelines.

Key words: Patent medicine vendors, Contraceptive, Contraceptive Guidelines, Birth control.

INTRODUCTION

Contraception is an effective means of combating the problem of unwanted pregnancy and unsafe abortion, it is an effective means of family planning and fertility control and therefore very important in promoting maternal and child health (Adewole *et al*., 2002).

Contraception is the prevention of pregnancy by artificial methods such as condom, birth control pills or natural methods such as avoidance of sex during a woman's known fertile period (Microsoft Encarta Dictionary, 2008). Contraceptives are devices used to achieve contraception through prevention of fertilization of a woman's ovum (Microsoft Encarta Dictionary, 2008).Contraceptives methods can be divided into two

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broad categories namely fertility awareness-based method and modern methods.

In developing countries like Nigeria, unwanted pregnancies, unsafe/induced abortions, high fertility rates, high mortality rates, and sexually transmitted infections including HIV/AIDS poses very serious reproductive health problems, which require urgent attention (Henshaw *et al*., 1998; Adewole *et al*., 2002;Otoide *et al*., 2001; Sedge *et al*., 2006). Primary prevention, based on reducing the numbers of at-risk pregnancies through health education and effective contraception, provision and accessibility of contraceptives are important approaches to overcoming these challenges (Okonofua *et al*., 2009).

Nigeria has one of the highest Maternal Mortality (MM) Rates in the world as revealed by the 2008 National Demographic Health Survey (NDHS) as 545 deaths per 100,000 live births. Shettima, (2007) and WHO, (1999) documented that MM is significantly attributed in part to unsafe abortions (a practice that ranks among the top five major causes of maternal deaths in the country).

The World Health Organization - WHO (2002) documented that approximately 46 million abortions occur worldwide annually; more than 76.0% of which are in developing countries. In Nigeria, a country where abortion is illegal except to save the mothers life, an estimated 760,000 abortions occur yearly (Boniface *et al*., 2006; Okpani and Okpani, 2000; Otoide *et al*., 2001; Oye-Adeniran and Umoh, 2002). Twenty-five percent of such abortions lead to serious complications such as sepsis, pelvic abscess, anemia, cervical tear, chemical virginities, uterine perforations, laceration of the vaginal wall, vesico-vaginal fistula (VVF) and death (Ladipo and Akinso, 2005, The Population Council, 2004 Okpani and Okpani, 2000, Okonofua and Ilumoka, 1992).

A strategy by the Department for International Development documented that accessible and effective family planning may avert up to 35% of maternal deaths. However, difficulties with access to quality family planning services and health concerns about contraceptives were among the reasons stated by developing countries for low contraceptive prevalence (Natalie *et al*.,2001; Orji and Onwudiegwu, 2002).

Family planning (FP) was introduced into Nigeria in the 1960s and the country has been signatories to several programmes such as Safe Motherhood Initiative, which seek to promote the use of family planning as part of essential obstetric care. However, majority of the Nigerian population live in rural communities and are unaware of the benefits of family planning, because the official distribution channels of FP commodities are restricted to government health clinics and hospitals, which are not within geographical reach in such communities (Bamgboye and Ladipo, 1992; Price, 1994).

In an attempt to redress the following: the lopsided distribution of the very few public and private health care facilities that are available in the country and the unwholesome activities of quacks and untrained vendors (who peddle fake and adulterated products in open markets). The licensing of non-pharmacists (Patent Medicine Vendors - PMVs) to stock, market and sell simple medicinal remedies was entrenched in the Pharmacists Council of Nigeria Act 91 of 1992 (PCN, 2003).

Patent Medicine Vendors are people without formal training in pharmacy, selling orthodox pharmaceutical products on a retail basis for profit and duly licensed to sell patent and proprietary medicine (Brieger *et al*., 2004; Goodman *et al*., 2007). PMVs are usually the first choice in health care and a recognized primary source of orthodox drugs for both rural and urban population in Nigeria, they are however an informal part of her health care system (Iweze, 1987; Salako *et al*.,2001)

The requirements for obtaining a patent medicine license as contained in the pharmacy law is that the licensee must have attained twenty-one years of age with his/her application supported by two referees (Federal Ministry of Health, 1946). The law however does not specify any minimal educational qualifications. In Nigeria PMVs plays an important role in promoting contraceptive uptake due to affordable and accessible services as well as flexibility in their opening hours (Okeke *et al*., 2006; Goodman *et al*., 2007; Okonofua *et al*., 2009). This importance is also buttressed by their geographical accessibility, shorter waiting times, more reliable drug stocks, greater confidentiality, more personable social interaction, ease of seeking advice, lower cost, flexible pricing policies and no separate fee charged for consultation or advice (Brugha and Zwi, 2002).

Although their ethics and competence have been greatly challenged (Iweze, 1987), PMVs ability to provide accessible services, even in remote areas cannot be doubted. It is therefore ironic that while government doctors and medical assistants are more knowledgeable than PMVs, they spend more time and displays a friendly attitude towards their clients than the staff of the formal health sector (Wolf-Gould *et al*.,1991)

The contraceptive service provided by PMVs offer an added advantage in providing the high demand for anonymity by most clients (especially the youth and the catholics) which is impossible in health institutions because of the inbuilt-record keeping systems (Northrup, 1990; Price, 1994, Okonofua *et al*., 2009).

Several authors in a community-based study on contraceptive behavior in Nigeria reported that at first use of contraceptives, 16.4% of respondents' procured them from Patent Medicine shops. The members of that community also opined that they prefers the PMVs, not only because of convenience and personalized service but because they have faith in the effectiveness of their medicines (Oshiname and Brieger (1992), Boniface *et al*., (2006)

In 2004 however, the Federal Ministry of Health (FMOH) developed a guideline for the provision of family planning services. According to the guidelines, the roles of PMVs are to motivate the community on Family Planning (FP); counsel clients; refer clients; supply non-prescriptive FP commodities known as over-the-counter (OTC) commodities and re-supply of oral pills (FMOH, 2004).

Akinyemi (2007) stated that PMVs recently received approval by the FMOH to sell Emergency Contraceptive Pills (ECP). They have since become key players in the sale of contraceptives. The purpose of this study was to assess PMVs compliance with the guidelines and their knowledge on contraceptives/contraceptive services.

METHODOLOGY

Study design: This study is a descriptive cross-sectional survey conducted in Ibadan North Local Government Area (LGA) of Oyo state to assess and document PMVs knowledge and compliance with FMOH guidelines on the provision of contraceptive services. The study population consisted of all (Two-hundred and eighty-two) PMVs in the study site who were registered members of the PMVs Association in 2009 and thus constituted the sample size. PMVs in the LGA comprise of four zones namely Agbowo, Ashi, Bodija/Kara and Yemetu zones.

Study site: Ibadan North LGA has a population of 306,795: 153,039males and153,756females (NPC, 2006). Founded on September 27, 1991, it was carved out of the former Ibadan Municipal Government. It is a transitional urban area with its headquarters at Quarters 8, Government Reserved Area (GRA) Agodi.

The LG consists of multi-ethnic groups, predominantly the Yorubas, others include the Igbos, Edos, Urhobos, Itsekiris, Ijaws, Hausas, Fulanis and foreigners from Europe, America, Asia and other parts of the world. Majority of the population in the LGA works in the informal sector, mainly traders and artisans while a good number are civil servants.

Measures: The standardized questionnaire and an observational checklist were used for data collection. The questionnaire used for data collection was semi-structured, interviewer-administered divided into four sections. Section A focused on demographic information of respondents, section B explored types of reproductive health services respondents offer, types of contraceptives respondents had in stock at the time of the study, number of customers respondents have provided with contraceptive service in the week preceding the study and the place of purchase of contraceptives materials that respondents had in stock. Section C contained (9) statements aimed at exploring respondents' conformation to FMOH guidelines on the provision of contraceptive services. Respondents were expected to answer "True", 'False' or "Not Sure'. Section D assessed respondents' knowledge of contraceptives practices, which included questions on types of contraceptives respondents know of, sources of information on contraceptives, contraceptives use and side effects.

The following observational check-list was included to verify and authenticate every claim made by respondents in their mode of operation and service provision:

1. Possession of the job description mini book by the FMOH
2. Possession of the approved Patent Medicine list by Pharmacist Council of Nigeria;
3. Availability of referral forms, and
4. Possession of license

The researcher observed the items where they were hung and in few cases where they were not hung, respondents were asked to produce them.

Data collection procedures: The following procedures were followed for data collection: Firstly, assess to the PMV was sought from chairperson of the Association of PMV's in the LG. Secondly; a list of all members and their addresses was collected form the chairperson. This list enabled the researcher to trace each member to their said location. Thirdly, visits were made to each PMV shop where verbal consent was obtained and lastly, the interview was conducted with each PMV who gave informed consent. The criterion used for eligibility to participate in the study was that the PMV must be a retailer who sells contraceptives.

Data Management and Analysis: The data collected were checked for accuracy and completeness and cleaned for missing values and scores. Each respondent had the same serial number for both instruments (observational check-list and questionnaire), number

was assigned to each question for easy identification and correct entry which helped to develop a coding guide. Analysis was done using the Statistical Package for Social Sciences (SPSS) 16.0.

The questionnaire contained a total of 47 questions on knowledge and 20 questions on compliance. Each item was given a score/point. One mark was given to each correct response on knowledge and compliance; every wrong response had zero mark. Maximum obtainable score on knowledge was 47 points. Respondents that scored less than 26 were categorized as having a poor knowledge of contraceptives, those that scored between 26 and 29 were categorized as having a fair knowledge, while those that scored 30 and above were categorized as having a good knowledge of contraceptives.

Respondents' compliance with the Federal Ministry of Healths' guideline on the delivery of contraceptive services was assessed using the 4 point job description which includes: counseling, referral, community sensitization and the re-supply of OC. The number of respondents involved in all 4 points was used to document compliance to the guidelines. Mean scores and frequency tables were generated while relationships between some key variables were determined using chi-square statistics.

Reliability and Validity: Validity of the research instruments was ensured by developing a draft with the help of colleagues and lecturers of the Department of Health Promotion and Education, and then a pre-test was carried out with the draft in one of the zones in the study site to determine their effectiveness. A test –retest reliability test with the measures gave a P value of 0.826. Pre-testing revealed areas that needed modifications in the measures and thus were corrected immediately, also the need for translating the measures intoYorubalanguage (Local dialet of the ethinic group where the study took place)was realized. This was ensured with the help of some staff of the University College Hospital (UCH) Family planning unit, a colleague in the Department of Health Promotion and Education. A University of Ibadan graduate of Yoruba did the translation of the measure into Yoruba language.

Ethical Issues/Approval: Approval for the research was obtained from the University of Ibadan/ University College Hospital (UI/UCH) ethical review board. Assess to the respondent was gained by the researcher in form of advocacy visit to the zonal chairman of the PMV association in the LGA, which comprise of the researcher giving a thorough explanation to the said authority about the aim of the research. After the visit was made to the chairperson and he in turn had sentisized his people, subsequent visits had to be made to each zone on specific days of the association's general meeting to meet key officials and members. This was necessary to further solicit participation and to clarify the nature of the research, the issue of confidentiality, voluntary participaton and informed consent.

RESULTS

Demographic Characteristics of Respondents: Majority (80.9%) were females, 19.1% were males. The ages of respondents ranged between 19 and 60, mean age was 32.8 ±7.0. Most respondents (48.2%) were between the ages of 30 and 39; while those aged 40 and above (18.8%) were the least.

Almost all (94.7%) respondents were Yorubas, while the rest (5.3%) were Igbos. Religious inclinations include Christianity and Islamic religion. Majority (78.8%) of respondents were married, 20.2% were single. Majority (63.5%) of respondents had Senior SSCE and a few (13.8%) possessed OND /NCE. Almost all (98.6%) respondents owned the shops, the rest (1.4%) were apprentices. Almost all (98.2%) respondents were trained through apprenticeship system; Majority (66.4%) of respondents had been in the profession between 1 and 2 years, 5.1% for a period of 5 years and above. Few (17.4%) respondents had formal training on contraceptive delivery, duration of which ranged from one (1) day to two (2) months. The trainings were organized by Adeoyo state hospital (0.4%), University of Ibadan (0.7%), Association of Reproductive and Family Health (14.2%) and Oyo State Ministry of Health (1.6%). See Table 1 for details.

Contraceptive Services and Sales: The distributions of respondents in the study site are shown in figure 1 below. In Agbowo zone there were 80 (28.4%) respondents, 82(29.1%) in Ashi and 120 (42.6%) in Yemetu respectively.

The percentages of respondents dispensing contraceptives at the time of the study are shown in Figure 2 below. All respondents (100.0%) in Agbowo zone were dispensing contraceptives at the study, 98.6% in Yemetu and 96.3% in Ashi zones respectively.

The most frequently sold contraceptives were the Male Condom (96.1%) followed by OC: *Duofem* (72.3%), the least sold were the IUD (1.8%) and *Diaphragm* (2.8%). Details are presented in Figure 3.Most respondents (96.8%) offered counseling services, almost all (98.6%) offered referral services, (43.6%) sensitized people in their community on the use

of contraceptives and (72.7%) supplied oral pills as presented in Figure 4.

Table 1:
Demographic characteristics of respondents (N=282)

Characteristics	Number	%
Sex		
Male	54	19.1
Female	228	80.9
Age		
20 - 29	93	33.0
30 - 39	136	48.2
40 – 49	48	18.8
50 – 59	5	
Marital Status		
Single	57	20.2
Married	222	78.7
Divorced	2	0.7
Widowed	1	0.4
Ethnic group		
Yoruba	267	94.7
Igbo	15	5.3
Educational Qualification		
Primary six	48	17.0
SSCE/GCE	179	63.5
OND/NCE	39	13.8
HND/First Degree	14	5.0
Other Professional qualification	2	0.7
Status		
Shop owner	278	98.6
Apprentice	4	1.4
Religion		
Christianity	151	53.5
Muslim	131	46.5
Mode of training: Apprenticeship		
Yes	277	98.2
No	5	1.8
Period of apprenticeship		
1-2 years	182	64.5
3-4 years	78	27.7
5 years and above	14	5.0
Duration of practice		
Less than 5 years	96	34.0
5 – 9 years	103	36.5
10 – 14 years	50	17.7
15 years and above	25	8.9
Previous training on contraceptives	49	17.4
Yes	233	82.6
No		
Reported weekly Client Patronage	76	27.0
1-4	39	13.8
5-9	63	22.3
10-14	33	11.7
15-19	34	12.1
20-24	28	9.9
25 and above		

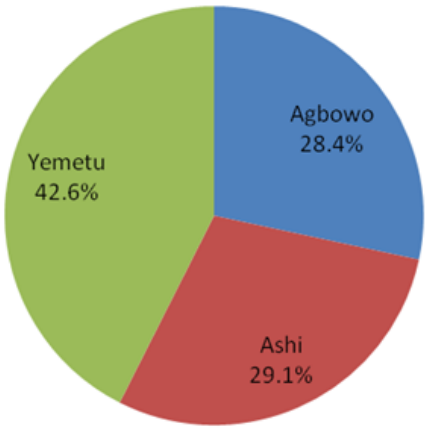

Fig.1:
Distribution of respondents

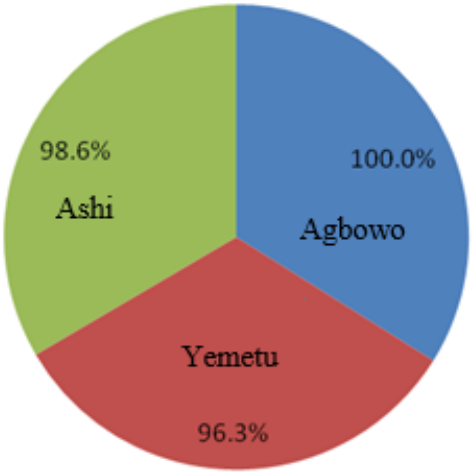

Fig.2:
Percentage of respondents' that ever dispensed contraceptives

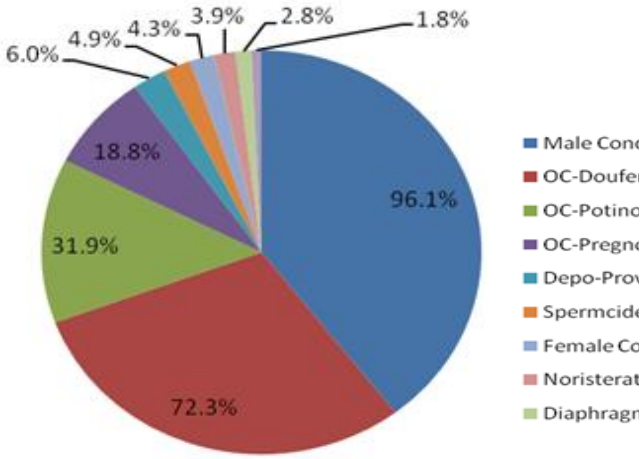

Fig. 3:
Type of contraceptives sold by respondents

Fig.4: Types of Contraceptive Services respondents provide

Knowledge on Contraceptives

Low knowledge on contraceptives was observed among 48.2% of respondents; 19.1% and 32.6% showed fair and high knowledge respectively. Among total respondents less than 30 years of age (33.0%), approximately twenty-one percent (21%) recorded a low knowledge level, this however was not significant with age (P>0.05). There was a significant difference (P<0.05) in level of knowledge among respondents across the zones. Details are presented in Table 2.

Among total respondents between the ages of 30 and 39 (48.2%), approximately forty-two percent (41.8%) did not comply with FMOH guideline on the provision of contraceptive delivery, also among respondents who possessed Senior Secondary School Certificate (63.5%), aapproximately fifty-five percent (54.5)% did not comply. Compliance was however not significant (P>0.05) with age, gender and educational qualification. Details are presented in Table 3.

On the whole, 3.5% 0f respondents complied fully with the FMoH guidelines on the delivery of contraceptive services as follows: Eighty percent of total respondents sold contraceptives that were not approved, 56.4% were involved in community mobilization, 96.8% counselled cuntomers on contraceptive issues, 98.6% were referring customers (though 7.4%) had referral forms (fig. 7).

Table 2:
Respondents' Knowledge on Contraceptives by age- group, sex and educational qualification and location

Demographic variables	Knowledge of contraceptives			Total	X^2	P - value	Df
Age	High	Fair	Low	Total			
< 30 years	23(8.2%)	12(4.3%)	58(20.6%)	93(33.0%)			
30 – 39 years	50(17.7%)	33(11.7%)	53(18.8%)	136(48.2%)	12.82	0.012	4
40+ years	19(6.7%)	9(3.2%)	25(8.7%)	53(18.8%)			
Total	92(32.6%)	54(19.1%)	136(48.2%)	282(100.0%)			
Sex							
Male	22(7.8%)	9(3.2%)	23(8.2%)	54(19.1%)	2.00	0.367	2
Female	70(24.8%)	45(16.0%)	113(40.1%)	228(80.9%)			
Total	92(32.6%)	54(19.1%)	136(48.2%)	282(100.0%)			
Educational level							
Primary School	13(4.6%)	11(3.9%)	24(8.5%)	48(17.0%)			
WASC/GCE	52(18.4%)	34(12.1%)	93(33.0%)	179(63.5%)	9.38	0.153	6
OND/NCE	20(7.1%)	6(2.1%)	15(5.3%)	39(13.8%)			
FirstDegree/HND	7(2.5%)	3(1.1%)	4(1.4%)	14(5.0%)			
Others	2(0.7%)	-	-	2(0.7%)			
Total	94(33.3%)	54(19.1%)	136(48.2%)	282(100.0%)			
Location							
Agbowo	32(11.3%)	20(7.1%)	28(10.0%)	80(28.5%)			
Ashi	27(9.6%)	14(5.0%)	41(14.5%)	82(29.0%)	8.6	0.069	4
Yemetu	33(11.7%)	20(7.1%)	67(23.7%)	120(42.5%)			
Total	92(32.6%)	54(19.1%)	136(48.2%)	282(100.0%)			

Table 3:
Respondents compliance with FMOH guideline on provision of contraceptive services by age, sex and educational qualification

Demographic variables	Compliance		Total	P – value	X^2	Df
	Yes	**No**				
Age						
Less than 30 years	17 (6.0%)	76 (26.9%)	93(33.0%)			
30 – 39 years	18 (6.4%)	118 (41.8%)	136(48.2%)	0.482	5.99	2
40 years and above	10 (3.5%)	43 (15.2%)	53(18.8%)			
Total	45(16.0%)	237(84.0%)	282(100.0%)			
Sex						
Male	9 (3.2%)	45 (15.9%)	54(19.1%)	0.874	3.84	1
Female	36 (12.8%)	192 (68.1%)	228(80.9%)			
Total	45(16.0%)	237(84.0%)	282(100.0%)			
Educational status						
Primary School	10 (3.5%)	38 (14.5%)	48(17.0%)			
SSCE/GCE	24 (8.5%)	155 (54.9%)	179(63.5%)	0.369	7.81	3
OND/NCE	7 (2.5%)	34 (12.1%)	41(14.5%)			
First Degree/HND	4 (1.4%)	10 (3.5%)	14(5.0%)			
Total	45(16.0%)	237(84.0%)	282(100.0%)			

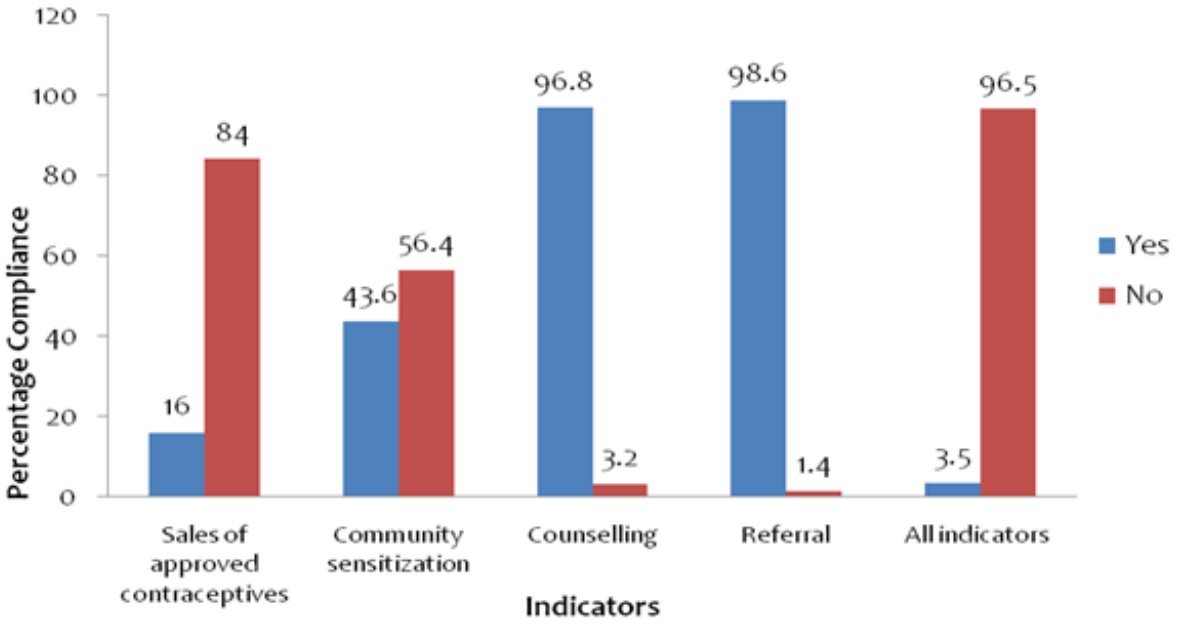

Fig. 7:
Respondent's compliance with FMOH guideline on the provision of contraceptive services

Among 54(19.1%) male respondents, 15.1% sold contraceptives not approved.Twenty- seven percent of respondents less than thirty years of age sold contraceptives not approved by FMoH. The greatest proportion (34.8%) of respondents that sold unapproved contraceptives was located in Yemetu zone. Details are shown in Table 4

Analysis of observational checklist
Approximately fifty-four percent (53.9%) respondents do not have the FMoH job description mini-book, 54.6% do not have the approved patent medicine list, 50.7% do not have a license and 92.6% do not have referral forms (Fig. 8).

Table 4:
Sales of contraceptives not approved by the FMoH.

Variable	Sales of unapproved contraceptives		
	Yes	**No**	**Total**
Sex			
Male	45 (15.9%)	9 (3.2%)	54 (19.1%)
Female	192 (68.1%)	36 (12.8%)	228 (80.9%)
Total	**237 (84.0%)**	**45 (16.0%)**	**282 (100.0%)**
Age – group			
<30	76 (27.0%)	17 (6.0%)	93 (33.0%)
30 – 39	118 (41.8%)	18 (6.4%)	136 (48.2%)
40+	43 (15.2%)	10 (3.5%)	53 (18.8%)
Total	**237 (84.0%)**	**45 (16.0)**	**282 (100.0%)**
Location			
Ashi	67 (23.7%)	13 (4.6%)	80 (28.4%)
Agbowo	72 (25.5%)	10 (3.5%)	82 (29.1%)
Yemetu	98 (34.8%)	22 (7.8%)	120 (42.6%)
Total	**237 (84.0%)**	**45 (16.0%)**	**282 (100.0%)**

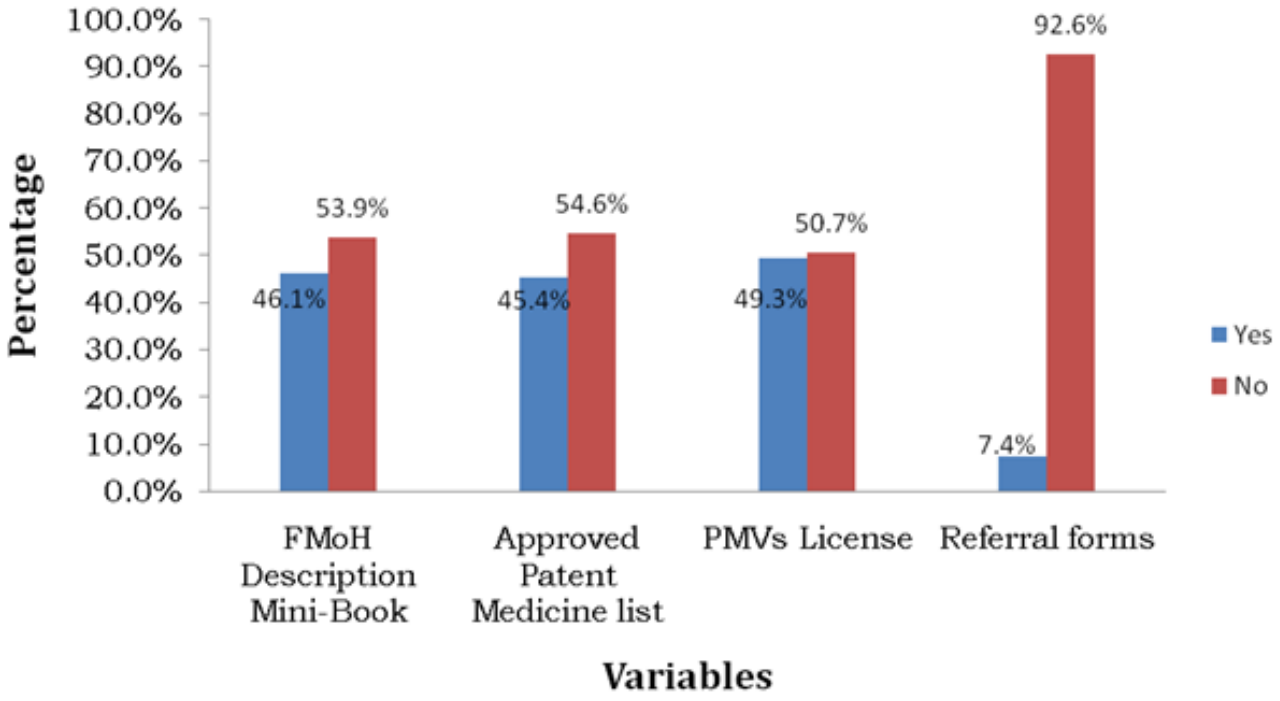

Figure 8:
Analysis of observational checklist

DISCUSSION

The ages of respondents ranged from 19 to 54 years with a mean of 32.8±7.0. The predominant proportions (48.2%) of respondents were between 30 – 39 years of age. A minute (1.4%) proportion of respondents were apprentices between the ages19 and 21, this is similar to the findings of Adikwu, (1996) where 89.3% apprentices at PMVs shops were below 21 years (Brieger, *et al.*, 2004; Egboh, 1984). The finding that a majority (94.7%) of the respondents were Yoruba's is due to the fact that Yoruba's are the dominant ethnic group in the study area. Although the pharmacy law does not specify the minimal educational qualification of a PMV, the findings of this study revealed that majority (63.5%) of respondents were SSCE holders while 17.0% were Primary School leavers. The findings is corroborated by

those of Abiola *et al*.(1983) and Ojuawo and Oyaniyi (1993) in Igbo-Ora community of Oyo State that PMVs educational status varies from Primary School leaving Certificate to SSCE holders.

Large proportions (82.6%) of respondent were not trained on contraceptives use; also PMV outlets were staffed by less qualified assistants. This agrees with the findings of Okeke *et al*. (2006) and Goodman *et al*. (2007) where most PMVs have little or no training in medicine or pharmacy. On the contrary Tumwikirize *et al*., 2004 reported that majority of PMVs in Uganda had one form of health training or another. Virtually all, (98.7%) respondents passed through apprenticeship system. This agrees with several studies by Abiola *et al*. (1983); Brieger, *et al*., (2004), Fassin, (1986); and Mosoru, Olowookorun, and Spiff (1987) that some PMVs enter apprenticeship to learn the work under an existing licensed holder.

Overall, PMVs surveyed showed inadequate knowledge of contraceptives which may be attributed to their low literacy level (63.5%; Secondary school leavers, 17.0% had primary school education), it may also be due to majority (82.6%) having no training on the delivery of contraceptive services. Okeke *et al*. (2006) identified that poor knowledge and dispensing behaviour of PMVs showed that most of the drug sellers were not trained health professionals. Oshiname and Brieger (1992) reported in a current study that respondents' lack of health training is likely to contribute to inappropriate dispensing of contraceptives especially where some have a primary education.

Majority (96.8%) of respondents offer counseling services. This agrees with the results of Brieger *et al*., (2004) that nearly one quarter of customers see PMV as a source of advice and counseling and there were instances when customers came to the PMVs shop with a view to getting some form of advice and guidance.

A study carried out in the four health zones in Nigeria (Boniface *et al*., 2006) brought to light contraceptive counseling among women who are currently on contraceptives. It pointed out that 0.8% PMVs gave counseling out of the 59% of women in rural area who received contraceptive counseling; which is contrary to the findings of this study.

Majority (98.6%) of respondents claims to refer customers only 7.4% had referral forms. This indicates that the referral they offer is verbal and unacceptable. Okeke *et al*. (2006) documented that PMVs hardly refer patients to the health centre and for those that refer, do so verbally with no formal arrangement to facilitate the referral. Oshiname and Brieger (1992) documented that the medical staff in Igbo-Ora stressed that the training curriculum for PMVs should focus on their ability to refer patients to the hospital. PMVs also lack the ability to know when to refer their customers to the hospital as expressed in a particular instance where PMVs attempted to treat STD without being aware of the danger of antibiotic resistance.

Less than half (43.6%) of respondent were involved in sensitizing people in their communities on FP. This implies that 56.4% respondents were not complying with FMoH guideline on community sensitization. Increase in the uptake of contraceptives could actually lead to decrease in abortion rate in the communities and the onus lies on PMVs' in their little way to increase FP awareness by being actively involved in community sensitization.

A list of indicators were used to determine compliance with FMOH guideline on the delivery of contraceptive services; such indicators included services offered by respondents (counselling, referral and community sensitization on family planning) and the proportion of respondents that were selling contraceptives not approved. Majority (84.0%) of respondents sold contraceptives not approved by FMOH such as IUD, Diaphragm and injectables. Goodman *et al*., (2007) similarly observed in a study that most PMVs stock prescription-only medicines illegally such as antibiotics and tranquilizers. Majority (72.3%) supplied oral pill (douofem). The initial uptake of oral pills should be facilitated in a clinical setting (after thorough counselling and testing for eligibility), PMVs are therefore operating outside their scope which could lead to serious complication for their customers. More than half (53.9%) of respondents do not have the FMOH job description mini-book, a little above average (54.6%) do not have the approved patent medicine list produced by the PCN. It shows that majority of PMVs in the study area lack the 'tools' necessary to operate maximally.

A little over half (50.7%) of respondents were not licensed, a PMVs should not be permitted to operate without a license. On further discussion with the respondents it was clear that they had already began the process towards obtaining their licenses, though they have been experiencing delays from the SMOH.

In conclusion,despite the involvement of PMVs in contraceptive service delivery, only minute proportions (3.5%) of respondents were complying fully with the FMOH guidelines. This could jeopardize the reproductive health of people who patronize them in various communities.

Recommendations

1. The apprenticeship system among PMVs is evident in this study and other previous studies. This should be encouraged for a stipulated time and should be one of

the prerequisite for issuing of license to intending PMVs; other prerequisite should also be the possession of at least SSCE and attendance of a formal training organized by the MOH.

2. Effective educational interventions such as training, periodic re-training and capacity building will increase PMVs knowledge. Such training will equally enable them give correct and adequate counseling on contraceptives and also ginger up prompt, effective and formal arrangements for referral. The call therefore goes to the government, non-governmental as well as International organizations to be involved in organizing occasional workshops, refresher courses and training for PMVs with a view to keeping them informed on contraceptive technology.
3. There is the need for suitable monitoring systems. Community-based organization could be recruited in the monitoring process as well as PMV associations.
4. The involvement of PMVs, public health officials and community representatives in curriculum development, training and supervision will contribute to PMVs effectiveness, acceptability and winning of political support leading to positive policy changes.

There is a need for a better implementation of regulatory laws in form of visits to PM stores by pharmaceutical inspectors who should be well renumerated so as not to be distracted from their regulatory role

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