Patent medicine vendors, community pharmacists and STI management in Abuja, Nigeria

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Abstract

Background: Increasingly, literature indicates that Patent Medicine Vendors (PMVs) and Community Pharmacists (CPs) provide sexual reproductive health services and products to their young patrons.

Objectives: This study explored the validity of literature claims, principally from CPs and PMVs perspective in Abuja, Nigeria.

Methods: Participants were recruited with convenience sampling based on their willingness to participate in the study and our judgement of their professional competence. They were administered a semi-structured questionnaire, which was modelled after McCracken's long interview. We empirically assessed the validity of CPs and PMVs opinions with an exit interview of seven consenting patrons. Interviews were audio taped, transcribed verbatim and subjected to iterative thematic analysis.

Results: Participants' accounts and our observations indicate that PMVs and CPs serve young people's sexual reproductive healthcare needs in Abuja. CPs and PMVs provide young people with a seamless and non-judgemental access to contraceptives, sexual health advice and post-sexual risk exposure care.

Conclusion: The study corroborates literature claims that CPs and PMVs provide sexual reproductive health advice, services and products to young people. However, participants contend that the current pharmacy practice laws in Nigeria constrain the scope and quality of services that young unmarried people require. Because it is unlikely that Nigeria will reinvigorate her primary healthcare system soon, we call for the formal co-option of CPs and PMVs into the sexual reproductive health management system to standardize and improve services.

Keywords: Premarital sex, STIs, Chemists, Community Pharmacists, Patent Medicine Vendors.
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Introduction

Young people in Nigeria continue to engage in unprotected premarital sex, despite the fact that "majority of women (88 percent) and men (94 percent) aged 15-49 have heard of HIV or AIDS.[1-] Unprotected sex sometimes produces unintended outcomes, such as teenage pregnancy and sexually transmitted infections (STIs) which young people putatively prevent and/or manage by patronizing Patent Medicine Vendors (PMV) and Community Pharmacists (CP), colloquially called chemists in Nigeria. To explore the above conjecture, we purposefully conducted a study in Abuja, Nigeria's Federal Capital Territory (FCT).

Over one point four million (1,405,201) people reside in Abuja.[4] This population is most likely composed of all segments of Nigeria's over 373 ethnic groups[5] and expatriates due to the socio-economic and political opportunities that Abuja present individuals and groups. At the time of writing this article, we could not find any official population figure for young unmarried people (18-30 years old) for Abuja, Nigeria. Nevertheless, data obtained from the Pharmaceutical Council of Nigeria (PCN), the regulator of pharmacy and patent medicine practice in Nigeria headquartered at Idu, Abuja, indicated that about 308-registered CPs and 87 PMVs serve Abuja residents from 237-registered premises.[6] However, official practitioner, and premises, registration list were given with a caveat that they are incomplete. Their incompleteness is associated with high registration costs,[7] poor surveillance and sanctioning of practitioners' who fail to register and/or renew their annual membership with PCN.

Notwithstanding, our observation during the study indicates that CPs and PMVs (commonly called chemists in Nigeria) enjoy the patronage of majority of Nigerians. This trend is most likely driven by their presence in every community, the dearth of healthcare professionals and the high costs of

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healthcare services from public and private providers in urban and rural Abuja.[8] Unlike PMVs who usually acquire their practice knowledge and skills from formal apprenticeship, CPs acquire theirs through formal university degree related training. Their formal education is reinforced with a one-year supervised preregistration practice with an established practitioner in good standing with the PCN.

Due to their different levels of education, knowledge and expertise, only CPs are legally mandated to sell and dispense prescription (ethical drugs), which are ideally sold on the presentation of formal prescriptions. In contrast, PMVs can only sell patent medicines or over the counter drugs (OTC) that Nigerian regulatory authorities, such as PCN, adjudge safe for unsupervised public use, as long as they are sold in their original manufacturer packages.[9-11] OTC drugs include common drugs like pain relieving tablets, antimalarials, cough syrups and so forth. Both CPs and PMVs also sell household provisions, such as soap powder, cereal, tinned milk, and light bulbs in response to customers' demand.[12,13] Notwithstanding, PMVs and CPs in Nigeria often stock OTC, controlled drugs (e.g. antibiotics and steroids), and perform procedures that are outside the scope of their licensing.[13-16] A recent survey in Nigeria detail this policy-practice gap:

> "The approved PMV drug list shows only condoms and foams as allowed family planning supplies. All parties understand that OC [oral contraceptives] resupply is permitted for PMVs under Ministry of Health policy, but the absence of OCs on the published list could be abused by inspectors, as they are authorized to seize any drugs in a drug shop that are not on the list. Most of the PMVs the assessment team visited sold antibiotics and other drugs not on the list of approved medicines."[17]

In essence, pharmacy practice in Nigeria is under-regulated. The under-regulation of patent medicine practice in Nigeria is associated with the prevalence of fake medicines; the high incidence of self-medication; unforeseen side effects of drugs; treatment failures; antimicrobial resistance; attrition of public confidence in the drug market; protracted ill health and untimely death of victims.[18] Consequently, regulatory authorities in Nigeria, such as the National Agency for Food & Drug Administration and Control (NAFDAC), periodically investigate and sanction the illegal sales of medicines in Nigeria.[19,20] However, not many Nigerians can afford the very expensive private hospitals and clinics that have professional staff and standardized services. Young people in particular, are unwilling to tolerate the long waits, record keeping bureaucracies and the cost of government-managed hospitals, which are currently understaffed and under-resourced. Consequently:

> "private chemists are the chief provider of contraceptive methods in Nigeria. The distribution sources of modern method supplies for current users shows that the majority of users (60 percent) obtain their contraceptive methods from the private sector. The participation of the public medical sector in family planning service delivery has decreased steadily during the past 18 years from 37 percent in 1990 to 23 percent in 2008."[1]

Apparently, Nigerians seem to accept the paradoxical helpful and harmful practices of PMVs and CPS in Nigeria as inevitable realities of their poorly managed and over-burdened government mandated primary healthcare delivery system. Despite its welfarist orientations, the Nigerian primary healthcare system is inefficient for a variety of reasons. Peterson and Obileye[18] list a host of factors, such as the lack of human resources; finance; technology, poor planning, a lack of political will and so forth.[21] The service vacuum created by Nigeria's primary healthcare asymmetries strengthens the de facto role of CPs and PMVs in Nigeria. It also promotes a paradigmatic shift from the traditional product-oriented roles of CPs and PMVs, to a more patient focused practice.[22-25] Indeed, the World Health Organization (WHO) paper on *Public Education in Rational Drug Use*[26] unequivocally states that nearly 80% of illness episodes in most of the developing world are self-treated with modern pharmaceuticals obtained from CPs and PMVs.[27,28]

This study investigates the preceding literature claims – primarily from CPs and PMVs' perspectives, and corroboratively, from their young patrons' perspectives - in pursuit of two related objectives: 1) To empirically confirm or refute literature claims that CPs and PMVs provide young unmarried people with comprehensive sexual reproductive healthcare services in Abuja, Nigeria; 2) To stimulate the larger Nigerian sexual reproductive healthcare industry interest in leveraging the ubiquity of CPs and PMVs for the provision of sustainable sexual reproductive healthcare information and services to all Nigerians.

Methods

In this exploratory study, we are interested in understanding the roles of CPs and PMVs' based on their subjective experiences primarily. We note that service providers' accounts were obtained in a local Abuja, and larger Nigerian context, which cast premarital sex as immoral on one hand, and purportedly limit the scope and quality of sexuality services CPs and PMVs can provide to young unmarried people on the other. This implies that CPs and PMVs' practices is most likely governed by contradictions between normative conduct and practice ideals, which can be gleaned from observing and interrogating their professional opinions, conducts and services. Accordingly, rather than impose a hypothesis on the study, we anticipate to confirm or refute literature claims, perhaps discover alternative hypothesis, about the roles of CPs and PMVs in managing premarital sexual reproductive healthcare challenges in Abuja, Nigeria.

Accordingly, our methods are expedient and semiotic – developed for a speedy and efficient "access to the conceptual world in which our subjects live so that we can, in some extended sense of the term, converse with them."[29] We anticipate our findings will capture, and reflect participants' complex and often-contradictory private versus public worldviews, interpersonal relationships and professional conducts. We believe a quantitative research bias will significantly dilute the alleged complexities and contradictions that pharmacy and patent medicine practice must embody. For this reason, our research method is qualitative. We justify our approach by noting that every social scientist:

> "…has as a field of study phenomena which are already constituted as meaningful. The condition of 'entry' to this field is getting to know what the actors already know, and have to know, to 'go on' in the daily activities of social life."[30]

In this instance, we sought to know what CPS, PMVs and their young patrons subjectively know, *and do*,[31-33] in relation to managing the unintended outcomes of premarital sex based on their embeddedness in the contradictory Nigerian sexuality culture, and professional conduct imperatives. Convenience sampling was used to identify, differentiate between, and recruit participants for our exploratory study. In line with modern research ethics,[34] we obtained a general introduction letter from PCN and a list[6] of practitioners in Abuja. The PCN list was particularly useful for physically locating premises in the different Abuja districts. Drawing on the list, participants were selected for: 1) their availability, 2) willingness to participate in the study and, 3) our judgement of their professional competence and knowledge of subject matter.[31-36]

Our selection criteria were expedient because majority of practitioners and patrons approached refused to participate in the study. They were suspicious of our motives, and potential research outcomes despite concerted assurances of confidentiality and anonymity. For example, most CPs and PMVs who declined to be interviewed cited the potentials for the study to "put them in trouble" with regulatory authorities. In contrast, majority of young patrons who declined to be interviewed were in a hurry to leave the premises, probably to avoid detection by peers and relatives. Overall, the consenting sample consisted of five consenting female CPs; four male CPs; seven male PMVs; four male, and three female young patrons. We visited 6% of the 207 registered premises in Abuja, and judge our sample adequate for an exploratory study (see Table 1).

Table 1: Participants Demographic Profile

Respondents category	Location in Abuja	Sex	Age-range	Tribe	Religion	Education
CP- 1	Asokoro	Male	36-41	Ibo	Christianity	B.Pharm
CP- 2	Asokoro	Male	42-47	Ibo	Christianity	B.Pharm
CP- 3	Asokoro	Female	36-41	Yoruba	Islam	B.Pharm
CP- 4	Garki	Female	42-47	Ibo	Christianity	B.Pharm
CP- 5	Garki	Male	30-35	Yoruba	Islam	B.Pharm
CP- 6	Wuse	Female	30-35	Ibo	Christianity	B.Pharm
CP- 7	Wuse	Female	36-41	Ibo	Christianity	B.Pharm
CP- 8	Gwarimpa	Male	36-41	Hausa	Islam	B.Pharm
CP- 9	Gwarimpa	Female	36-41	Yoruba	Christianity	B.Pharm
PMV- 1	Garki	Male	30-35	Ibo	Christianity	GCE O/L
PMV- 2	Garki	Male	30-35	Ibo	Christianity	OND

Continuation of table 1

Respondents category	Location in Abuja	Sex	Age-range	Tribe	Religion	Education
PMV- 3	Asokoro	Male	36-41	Ibo	Christianity	GCE O/L
PMV- 4	Gwarimpa	Male	36-41	Ibo	Christianity	GCE O/L
PMV- 5	Gwarimpa	Male	36-41	Ibo	Christianity	BA
PMV- 6	Wuse	Male	42-47	Yoruba	Islam	GCE O/L
PMV- 7	Wuse	Male	30-35	Hausa	Islam	GCE O/L
YP- 1	Asokoro	Female	24-29	Hausa	Islam	GCE O/L
YP- 2	Garki	Male	18-23	Benin	Christianity	BSc
YP- 3	Garki	Female	18-23	Yoruba	Christianity	BSc
YP- 4	Wuse	Female	18-23	Ibo	Christianity	MSc
YP- 5	Wuse	Male	18-23	Tiv	Christianity	GCE O/L & Student
YP- 6	Gwarimpa	Male	18-23	Hausa	Islam	GCE O/L & Student
YP- 7	Gwarimpa	Male	24-29	Hausa	Islam	GCE O/L & Student

The gender, religious and cultural self-identifications of participants were ascertained to corroborate or refute Kotecki, Elanjian and Torabi's claim that the religious[35] affiliations, age and gender of healthcare providers influence their choice of patients and services delivered. Interviews were scheduled at participants' convenience, at their patent medicine stores and pharmacies. In addition to our observations during the study, we corroborated service providers opinions (first level validity testing), in an exit interview of seven consenting patrons. The seven patrons were interviewed in surrounding beer parlours (pubs) and internet cafes to ensure confidentiality, privacy, and to reduce the influence of service providers on interviews.

Our semi-structured questionnaire was modeled after McCracken's[37] long interview, which accommodates pre-specified questions, developed after literature review and pilot studies. Although McCracken recommended "no more than eight" long- interviews,[37] we conducted twenty-three interviews, to generate more diverse opinions for plausible deductions.[38] In consonance with McCracken's long interview guideline[37], the research instrument was flexible enough to accommodate new issues, ideas and opinions, not documented in existing literature, that may arise during the interviews.[39] Tentative results from the pilot interviews were used to strengthen the questionnaire and to judge the adequacy of samples selected.[40] All participants were administered the informed consent protocol before the interviews, which were audio taped with their consent. Two service providers and two young female patrons were unwilling to be audio taped and their narratives were recorded as field notes.

Although our analysis commenced at the beginning of the study[41] substantive narrative data generated from the interviews were transcribed verbatim and deconstructed with iterative thematic analysis. Thematic analysis entails the creation and/or assignation of codes to meaningful fragments of narrative data to glean manifest and latent study issues from them.[42-45] In essence, we attached codes "to a segment of text" about critical issues related to sexual reproductive health service delivery to young people, which were subsequently "grouped into categories, providing the conceptual foundations for analysis...."[46] Our narrative data analysis simulates Bryman's[43] suggestion that narrative data should be deconstructed for explicit and implicit themes, which are assignable to broader constructs or categories, which themselves must be supported by corroborative interview extracts derived from the original transcripts.

Our analytic codes, themes and constructs were derived from our pre-knowledge of challenges facing sexual reproductive healthcare service delivery to young people and from existing literature.[47-49] Two broad experiential and literature constructs about young people's sexual reproductive healthcare needs and management challenges were used. These are: 1) service providers' self-assessment of their performance in meeting young people's needs and 2) young people's perspectives or opinions of sexual reproductive healthcare service providers.

These broad constructs were deconstructed into five sub-themes, which guided our presentation of findings. These are: 1) CPs and PMVs are more accessible to young patrons than public sector health service providers; 2) CPs and PMVs *display* non-judgemental attitudes towards young people's sexual reproductive healthcare needs; 3) CPs and PMVs are constrained by current pharmacy practice regulations, which limit the breath, scope and transparency of services offered, 4) CPs and PMVs are preferred by young patrons because they are diplomatic and keep their confidences and 5) CPs and PMVs offer a wide array of sexual reproductive healthcare services to their young patrons, despite constraining practice regulations.

Results

CPs and PMVs are more accessible to young patrons

In Nigeria, there are gaps in documented evidence about the roles of CPs and PMVs in young people's sexual reproductive health management. However, a study conducted by Brieger and colleagues[50] suggest their main role is the sale of medicines and household products to a self-medicating population, and a secondary role of providing information, education and advice to patients who actually complained about various ailments. This study corroborates Brieger and colleagues[50] findings, but also found that CPs and PMVs make clinical decisions, examine and treat minor ailments and refer complicated cases to more professional and standardized clinical settings.

Several reasons account for young people's patronage of CPs and PMVs for their sexual reproductive health needs in Nigeria. The most prominent reason is that CPs and PMVs are conveniently located in patrons' communities[51] and are open for longer hours, including weekends "when most of the action (premarital sex) takes place" (Patron 2 – Male; words in parenthesis are ours). Responses from all study participants corroborate the preceding claims that:

> "our members are everywhere. We are in every community. Where you don't find a pharmacist, you will find a chemist. So, people with problems have easy access to us" (CP – 2 - Male).

Young patrons corroborate service providers' access claims:

> "I can get it from pharmacy shops. The condoms are easy to get. But for other contraceptives, I don't know. The girls will know better. Definitely! Even pregnancy is no longer a big deal. Every girl knows that. If it happens, most girls will remove it before it becomes public with between N5000-10000 [equivalent to $34 (USD) as at February 15, 2010]. It's even cheaper in some pharmacies" (YP 5 – Male; words in parenthesis mine).

Other studies confirm that CPs and PMVs are the first point of contact, and are the most accessible source of medication and information for patients seeking treatment for STIs.[52-54] Mayhew and colleagues[53] in a related study from nearby Ghana contend that medicine sellers manage more STI cases than government health institutions. Similarly, Oparah & Arigbe-Osula[52] corroborate this finding for Nigeria. The authors stress that STIs are the third most prevalent diseases in Nigeria, which CPs and PMVs treat. According to respondents:

> "The issue really bothering us community Pharmacist is the infection by Staphylococcus aureus. It has actually not been easy. We have tried all drugs available, all combination of drugs to no avail" (CP 4 - Female).

Concurrently, participants also stress that:

> "the major …need of adolescents is prevention of unwanted pregnancies and how to get rid of pregnancies. My problem with them is that they hardly come for prevention or information; it is only when they are faced with these problems they seek help" (PMV 4 - Male).

Blenkinsopp, Panton, and Anderson[55] writing about the British setting, corroborate widespread public patronage of pharmacists due to their ability to communicate with the public without appointment among other attributes. CPs and PMVs in Nigeria are able to play these roles because the public has higher frequency of contact with them than with all other health care practitioners' combined[56] due to socio-economic and systemic healthcare asymmetries.

CPs and PMVs display non-judgemental attitudes towards young people's sexual reproductive healthcare needs

Like most Nigerians, all respondents profess a high value for religion. According to them, their religious beliefs govern the ethics and morality of their private lives, businesses and (inter)personal conduct. Studies from Nigeria corroborate the role of religion in the worldviews of Nigerians.[2,57-59] Accordingly,

respondents' self-identified with the dominant Nigerian faiths – Islam and Christianity, which in concert with the Nigerian adult-oriented culture, condemns premarital sex, especially young people's attempts to manage its unintended outcomes through self-medication and/or patronage of CPs and PMVs.

The Nigerian culture additionally render problematic various intended benefits young people derive from their active sexualities, such as sexual pleasure, self-determination, enhanced peer status, material rewards and so forth.[60] Probably based on participants' socialization in the sexually constraining context described above, all participants subscribe to the normative ideal that premarital sex is immoral and constitutes fornication:

> "This is Nigeria. Premarital sex is highly discouraged for young people. They end-up having many problems. Even Christianity and Islam condemn premarital sex as fornication! But it happens every day and everywhere" (CP – 4 - Female).
>
> "…my opinion about youths having sex is that ehhh… you know the world we live in now is very, very much corrupt. Outside God, it is very much difficult to abstain. Although they may say abstain, abstain, it is not all that easy…" (YP 6 - Male).

In addition, probably because of the above normative sentiments about premarital sex, CPs and PMVs controversially believe that young people's easy access to sexual reproductive health products increase their propensities to engage in unprotected premarital sex. For example, "although it is good that youths have access to condoms and contraceptives, somehow this makes them careless.… They are no longer afraid of pregnancy or things like gonorrhoea. They know where to go for antibiotics or abortion" (CP 9 - Female).

Accordingly, we deduce that CPs and PMVs have ambivalent attitudes towards their young patrons' sexualities. However, they observably masked these sentiments in their practical dealings with their young patrons. This is probably due to the exigencies of running a profitable business, which recommends CPs and PMVs stock, prominently display, promote and sell preventive and restorative sexual reproductive health products such as condoms, contraceptives and pregnancy-testing kits that "sell fast and is very profitable" (CP 6 - Female). Consequently, we did not corroborate our pre-research conjecture that participants' worldviews, ethnicity, gender, education and religion[35] overtly influence services they render to young people as shown in Table 2. According to participants:

> "there are so many adverts on AIDS and condom use. The degree of openness in asking and buying condoms depends on the location of the pharmacy and sale outlets …for example if you were to come here to buy condom and I am judgmental towards you, that attitude naturally puts you off" (CP 8 - Male).
>
> "…when you visit a chemist and ask for a condom or other stuff, they just go to the shelf and give it to you. No questions asked! No, *why are you doing this…no fill this form*; no, *we have to notify your parents* etc that you hear from hospitals. That is why I prefer chemists" (YP 7 - Female).

Table 2: Sources of reproductive health services

Class of sexual reproductive health services/products	Source(s) of sexual reproductive health services	Frequency among YP	Percentage of total (N = 7)
Male Condoms	CPs and PMVs	7	100%
Female Condoms	CPs and PMVs	7	100%
Morning After Pills	CPs and PMVs	7	100%
Birth Control Pills	CPs and PMVs	7	100%
Abortion services	CPs and PMVs	5	71.42%
	Hospitals/Clinics	2	28.57%
Post abortion care	CPs and PMVs	7	100%
Sexual health counselling	CPs and PMVs	4	57.14%
and education	Peers	3	42.85%
STI treatment	CPs and PMVs	7	100%

Legend to answer options: where do you go for sexual reproductive health services?

1. Hospitals/Clinics
2. Non-governmental outlets
3. CPs and PMVs (locally called chemists)
4. Peers
5. Self

Similarly, young patrons of the CPs and PMVs, who consented to be interviewed, were not overtly constrained by the normative status of premarital sex as immoral or the so-called culture of silence and secrecy surrounding sexual conduct in Nigeria. Without exception, they admit they knowledgeably and actively pursue heterosexual relations, which they partly maintain with premarital sex for varied individuated and collective reasons. Paradoxically, the normative status of premarital sex as immoral in Nigeria[59] highly recommends young people's secret practice of premarital sex and discreet patronage of CPs and PMVs for preventive and/or corrective sexual health services and products away from parental and societal moral scrutiny.

CPs and PMVs are constrained by current pharmacy practice regulations

In all the premises visited, we observed practices that contravene regulatory standards and licensing stipulations for both PMVs and CPs. For example, all service providers secretly stock/sell controlled substances and administer various kinds of injections to both young and adult patrons. Some studies attribute PMVs and CPs non-adherence to the strict guidelines of their licensure to their patrons' inability to afford the price of pre-packaged products, medications and services.[61] To meet the needs of their customers, CPs and PMVs often dispense medicines, adjust prices, sell goods on credit[62,63] and conduct unsanctioned procedures. Despite our observation, all CPs and PMVs interviewed were evasive about their roles in unsanctioned activities. For example, in relation to abortion services, all CPs and PMVs gave variants of the narrative below:

> "...considering abortion is illegal in Nigeria in some circumstances in the south and completely illegal in the north, I am not willing to discuss the referral on tape because of the legal implications. My responsibility to a patient bent on abortion is proper counselling and advice targeted at improving health" (CP 2 - Male).

Young patrons were more forthcoming about the role of CPs and PMVs in managing unwanted pregnancies:

> "Yes abortion is still illegal in Nigeria. It is. But that doesn't stop girls in trouble. Besides, it can be done in minutes now and it's affordable. Some of all these chemist, pharmacist and clinics do it. Don't you live in Nigeria? You must know these things!" (YP 3 - Female).

Our observation corroborates young people's assessment that CPs and PMVs perform proscribed services, such as abortion, post abortion care and STI management. Furthermore, the nature of Nigerian health system and the variable agencies of her people mean that few patrons of CPs and PMVs actually present them with formal drug prescriptions as legally mandated. All participants admit they rarely ask for, or present prescriptions themselves.[51,13,64]

In essence, CPs and PMVs are constrained by current pharmacy practice regulations, which limits the breath, scope, quality and transparency of services offered.

***C*Ps and PMVs are preferred by young patrons because they are diplomatic and keep their confidences**

To reiterate, we believe young people's preference of CPs and PMVs, over private and public managed healthcare concerns in Nigeria, is also linkable to the normative status of premarital sex as immoral.[2,57-59] Young patrons of CPs and PMVs apparently subscribe to this normative notion of premarital sex.

For example, in response to question, *should young people engage in premarital sex* - young patrons ambivalently observe that:

> "from the biblical point of view, it's (premarital sex) wrong but from the social point of view, it is not like wrong. Just that you have to be careful to avoid getting pregnant, STI and HIV/AIDS" (YP 4 – Female; words in parenthesis are ours).
>
> "...immorality is everywhere now in Nigeria. Nothing can stop it now. Young people don't listen to elders anymore. When you tell them sex before marriage is not good for you, they will go and do it" (PMV 6 - Male).

Notwithstanding, all patrons interviewed admit they engage in unprotected premarital sex,

and patronize CPs and PMVs, for preventive and restorative sexual reproductive healthcare products and services. "Of course, we all do it! That is why I am here" (YP 2 - Male). Young patrons confidence in, and trust of CPs and PMVs is most likely due to their proficiencies as good communicators, which predispose them to initiating confidential conversation with the patients, and referrals to doctors, if necessary, for comprehensive healthcare management.[65] CPs and PMVs admit they have good communication skills, the confidence and trust of their young clients:

> "…this is the first place they come to when they get in trouble! Sometimes, they come before they do it. They buy condoms and pills, mostly boys. Girls come after they do it to buy pills like postinor (morning-after-pills) and antibiotics. Next to paracetamol (pain killer), condoms sell very fast. But with the number that get in trouble and come here, I will say they don't use the condoms regularly!" (CP 3 – Female).
>
> "Look, the reason I come here is that this pharmacist is a good man. He will not ask you to fill any form or broadcast what your problem is. You don't need admission cards or have to wait in long lines like people do in the hospitals" (YP 4 – Female).

The finding that young people trust PMVs and CPs over formal government employed healthcare professional, on cursory examination, may run contrary to conventional western worldviews and experience of attending modern clinical settings and hospitals for their reproductive healthcare needs. Notwithstanding, a contextual reading of health seeking behaviour confirms that majority of Nigerians do not immediately attend hospitals and clinics for treatment. They seek alternative, affordable and accessible healthcare providers, such as CPs and PMVs.[52,53,54] This is often due to a combination of factors. These include poverty; early and repetitive sexual activity; STIs and HIV/AIDS; the illegal status of abortion; the dearth of medical services professionals; limited institutional medical support; and a proliferation of patent medicine stores/vendors.

Furthermore, CPs and PMVs practice settings are comparatively informal. They do not require patient registration, medical insurance, pre-service tests, parental consent and so forth. Although these requirements are deemed necessary in formal hospital and clinical settings, they constitute the most critical service barriers that young people face in their daily attempts to access comprehensive sexual reproductive health services in Nigeria. For example, we observed diplomacy and discretion in CPs and PMVs conduct of more private transactions and procedures in private rooms beyond their shelf displays, away from public scrutiny. The privacy of service settings, confidential and non-judgemental attitudes of CPs and PMVs eases the socio-economic barriers young people face in formal hospital and clinical settings. Incidentally, these behind-the-scene services are not covered by the licensure of CPs and PMVs.[17]

CPs and PMVs offer substantive sexual reproductive healthcare services to their young patrons

Unprotected premarital sex sometimes produces unintended outcomes, such as STIs and unwanted pregnancies that young people often manage away from societal and parental scrutiny by patronizing CPs and PMVs. According to WHO,[65] pharmacists play a role in ensuring responsible self-medication by the public and making hospital referrals. CPs and PMVs obtain their sexual reproductive health drug and products, such as contraceptives and antibiotics, from formal and informal retail and wholesale channels, pharmacies, pharmaceutical companies and major drug markets in Nigeria[66,67] Nigerian CPs and PMVs retail these products, and their (re)combination, to young people who need preventive and restorative sexual reproductive healthcare. Transcribed narratives corroborate literature claims[12,13] that CPs and PMVs sell medicines and products in response to customers demand:

> "when you know what is wrong with you, you simply go to the chemist or pharmacy and ask for antibiotics. Most times, they decode and suggest the best antibiotic for you to buy. Sometimes when tablets and capsules can't do the work, they will give you injections for a week or so, and you are okay. It is as simple as that" (YP 5 - Male).
>
> "We are usually the first contact, when they have such problems they walk in to us (pharmacy), the privacy is there and they explain their problems … Some may have noticed some symptoms, may be they suspect to be sexually related they come in and complain…. Depending on what their health concern is whether STDs we treat them" (PMV 7 - Male).

The preceding narratives are also unequivocal evidence that young people in Abuja, Nigeria, take sexual risks and experience unintended outcomes, such as unwanted pregnancies and STIs. It particularly corroborates[52] deductions that urinary tract infections (UTI) and sexually transmitted infections (STIs) ranked as third most prevalent diseases treated by CPs and PMVs in Nigeria, after malaria and cough ailments. CPs and PMVs provide preventive services, educate their patients about available contraceptive devices and help them select a suitable method of family planning or contraceptive use. Young patrons corroborate the preceding roles of CPs and PMVs, noting that despite their personal and/or partner's preference of unprotected sex, sexual reproductive healthcare products are common and easily purchased from CPs and PMVs (chemists):

> "You know Gold Circle is the most popular condom in Nigeria. It is very common. Everybody knows that every chemist and pharmacy in Nigeria sells condoms and contraceptives. Some of them also do a lot of other things - secretly … you know what I mean! So, it is not ignorance that is the problem. It is just that … well, regular condom use is not easy. Everybody knows skin-to-skin is better…!" (YP 2 - Male).

The CPs and PMVs interviewed corroborate young patrons' assessment of their professional competence and product availability as shown in Table 3.

> "… it's up to you to handle the case, we look for the slightest way of helping the matter, give some antibiotics and after some days, advise to go for a laboratory test after which if there is no response to treatment we refer to another place, it could be a clinic or pharmacy" (CP 1 – Male).

Table 3: Sexual reproductive health services provided

Service Provision	Answer	Frequency among CPs and PMVs	Percentage of total (N = 16)
Stock & Sell Male Condoms?	Yes	16	100%
Stock & Sell Female Condoms	Yes	3	18.75%
	No	13	81.25%
Stock & Sell Morning After Pills?	Yes	15	93.75%
	Sometimes	1	6.25%
Stock & Sell Birth Control?	Sometimes	8	50%
	Yes	8	50%
Do you provide abortion services?	No	16	100%
Do you provide post abortion care?	No	12	75%
	Yes	4	25%
Do you provide sexual health counselling and education?	Yes	16	100%
Do you provide STI treatment?	Yes	16	100%

Legend to answer options: confirm the sexual reproductive health services and products you provide and the frequency?

1. Yes
2. No
3. Somehow
4. Maybe
5. Never

Majority of service providers do not stock or sell female condoms because they are in short supply, expensive and in low demand. Nonetheless, all CPs and PMVs interviewed sell male condoms, pregnancy-testing kits, pre and post unprotected sex pills, educate and counsel patrons on contraceptive use regimes, provide counseling for complaints related to the lack of sexual enjoyment, impotence and STI prevention/management. All participants contend they also help raise awareness about HIV/AIDS, counsel and educate infected people and their loved ones about the infection.

Furthermore, nearly all the CPs and PMVs interviewed (except three) advance the opinion that

gender and other cultural beliefs, relating to contraceptive use, challenge their practice in Nigeria. The service providers observe that most young unmarried women are reluctant to use contraceptives due to inaccurate belief they harm their sexual reproductive system. Inaccurate contraceptive beliefs among young women promote female exclusive reliance on males for consistent condom use to prevent STIs and unwanted pregnancies. Young patrons corroborate CPs and PMVs view about local contraceptive beliefs:

> "are mostly hormones and have long term adverse effects like ovarian cyst or cancer. The most common one here is postinor - it's a kind of morning after pill. It is not really a daily contraceptive pill – those ones are scarce and expensive anyway" (YP 3 - Female).

Participants additionally note the influence of gender asymmetries on partner notification and treatment, especially in relation to women in polygamy. According to them, women often attribute blame to co-wives or husbands, and are reluctant to notify them after STI diagnosis and treatment. In contrast, when STIs are diagnosed in males, they always get their wives or girlfriend(s) treated - most likely leveraging masculine privilege:

> "… You find a woman coming in to complain about vaginal itching and discharge. So you send her for laboratory test and the result indicates she has one of these STDs. You then inform her about it, and that she will require treatment and would need to bring her husband for treatment as well …. She will immediately tell you she is in a polygamous marriage of four wives and cannot bring everybody. But if it is the man, who comes in first to seek care it is easier for him to get the necessary treatment for his wives and other sexual partners because you know our men are authoritative…. If they don't bring all their partners, a re-infection is most likely … because no one knows the primary source of the infection and prevention is quite challenging in such a set up" (CP 7 - Female).

Participants particularly cite their exclusion from, and the lack of standardized STI surveillance system in Nigeria as hampering their potentials for STIs diagnosis and case reporting for syndromic management of more than two STIs simultaneously. Participants believe this anomaly sustains the vicious cycle of STIs transmission and re-infection.

Discussion

This study explored the role(s) of CPs and PMVs (usually called chemists in Nigeria), in managing the unintended outcomes of young people's purposive, active and unprotected sexualities. Because the study is exploratory in nature, findings cannot be generalized for Nigeria. Nonetheless, we anticipate that readers and practitioners will hermeneutically judge the validity and relevance of findings in relation to their peculiar contexts and circumstances. In this regard, findings can inform plausible and evidence-based deductions about practitioners' ideal versus empirical roles, their interdependencies with their young patrons' sexual healthcare needs and the overall effect(s) of regulatory regimes on their practice.

Viewed from the preceding perspective, our findings indicate a very high level of CPs and PMVs involvement in managing young people's preventive and therapeutic sexual reproductive healthcare needs.[1,9,13,50-53,65] This is despite the constraining moral climate governing premarital sexuality in Abuja, Nigeria, and the constraining patent medicine sale regulatory regimes. We note that despite CPs and PMVs' privately expressed ambivalence, their gender, tribe, education and religion did not overtly deter them from stocking, selling sexual reproductive health products, rendering advice, and treating patrons with STIs and/or unwanted pregnancies. Notwithstanding, we draw attention to CPs and PMVs' reluctance to discuss specifics of their STI diagnosis/treatment and unintended pregnancies management regimes.

CPs and PMVs attribute their reluctance to discuss these issues to the illegality of abortion in Nigeria and the constraining pharmacy laws that patently forbid their involvement in STIs diagnosis, treatment and/or abortion services. Their exclusion from providing these services is paradoxically due to their lack of proper skills and training in these complex service areas. Regardless, we observed that CPs and PMVs are secretly involved in these highly complex service areas because "only a few proportion of the population go to the family planning clinics. You know, most them come to the pharmacy shops…" (PMV 2 – Male).

Conclusion

Based on our findings, we contend CPs and PMVs provide young unmarried Nigerians with preventive and therapeutic sexual reproductive healthcare services. Therefore, it will be prudent to formally

acknowledge their de facto roles, co-opt and train them for the syndromic management[68,69] of young people's sexual reproductive health challenges. This recommendation is underscored by young people's continued engagement in unprotected sex, despite their awareness of STIs and unwanted pregnancies,[2,3] especially their preference and patronage of CPs and PMVs who they judge accessible, discreet and professional.

We found that the roles of CPs and PMVs promote the World Health Organization recommendation for syndromic STI surveillance systems, which "prevents the development of complications and sequelae, decreases the spread of those infections in the community and offers a unique opportunity for targeted education about HIV prevention."[68] CPs and PMVs play these roles because they are at vantage positions to detect, treat and/or refer patrons to more formal clinical settings for standardized preventive and restorative sexual healthcare services[69] that will reduce the incidence of STIs and unwanted pregnancies.

Therefore, CPs and PMVs involvement in managing unmarried Nigerians sexual reproductive health needs in Abuja should be encouraged rather than discouraged. This is because it is unlikely that Nigeria will re-invigorate her primary healthcare system in the near future due to conflated political-economic variables too broad to discuss in this study.

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