An Assessment of Community Pharmacists' Competence and Involvement in Adolescent Sexuality Education and Reproductive Health Services

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Abstract

Background: *Provision of sexuality education and reproductive health (SERH) services for the adolescent population has been inadequate. Increasing access to adolescent SERH through the community pharmacy is a viable option in bridging this gap.*

Objective: *The study objectives were to assess community pharmacists' involvement, self –reported competence, confidence and comfort level regarding provision of adolescent SERH services and explore barriers to service delivery.*

Method: *A pre-tested questionnaire was distributed to 200 community pharmacists by simple random sampling. Self-reported competency and confidence were measured on a Likert scale ranging from 1-5, midpoint 3. Continuous data was expressed as mean and standard deviation while categorical data was expressed as frequencies and percentages.*

Results: *Community pharmacist' self- reported competence, confidence and comfort levels were high, 4.09 ± 0.14; 3.2±0.75; 4.17± 0.18 respectively on a Scale of 1-5. Majority of the pharmacists, 130 (81.3%) claimed to have had formal training in sexuality education and nearly three quarters, 105 (65.6%) had recently updated their knowledge. Although product availability was adequate, 118 (73.6%), availability of educational materials was low, 37 (23%). Schools were the most frequent place where pharmacists had distributed sexuality education materials 96 (60%). Lack of time and religious objection were the major barriers to service delivery 99(61.9%); 63(39.4%) respectively.*

Conclusion: *Pharmacist' self-reported comfort, competency and confidence levels in delivering adolescent SERH services were high. The major barriers to service delivery were lack of time and religious objection. These findings suggest that community pharmacists have a potentially major impact on improving access to adolescent SERH service. Therefore, the option of delivering SERH services through pharmacies is worth exploring in order to improve access and service delivery to the adolescent population.*

Key words: Community pharmacy, Adolescent, Sexuality education, Sexual and reproductive health

Introduction

Adolescence is a period characterized by physical, physiological, psychological and social transformation. Perhaps the most significant aspect of change is sexual in nature. Adolescents have an overwhelming desire to explore[1]. Sexual curiosity exposes them to vices such as pornography, early sexual exposure, sexually transmitted diseases, teenage pregnancy and premature parenthood[2]. This is compounded by the internet revolution, which has exposed adolescents to extensive sexually related information much of which may be misleading, thereby significantly exerting a negative impact on their sexual behaviors[3-4]. The 1999 National Conference on Adolescent Health in Nigeria reviewed the status of the country's compliance with the platform for action adopted by the International Conference on Population and Development in 1994. In its report, the conference noted that "existing reproductive health services have mainly disregarded the reproductive health requirements of adolescents as a group"[5].

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In addition, it is erroneously believed in the traditional African society that shielding adolescents from sexual matters would encourage chastity[6]. Many young persons, therefore, lack proper education and awareness of sexual matters[7-8]. This is evidenced by reports of increasing incidence of sexual abuse of young girls in Nigeria by very close family members including fathers. Self-esteem, body image, peer pressure, relationships, communication, bargaining, and decision-making abilities are all topics covered by sexual health. Therefore, adolescents require sexuality education that teaches and models positive self-worth, responsibility, understanding, diversity and acceptance, among other things[9-11]. The major channels for delivering sexuality education have been through schools, youth friendly health facilities and youth centers[12-13]. However, out-of-school mode of delivering Comprehensive Sexuality Education (CSE) has been advocated by some authorities[14-15].

Sexuality education is the provision of factual, evidence-based, age-appropriate information that can equip young people with skills to enable them make informed decisions and choices about their sexual health. A practitioner is deemed competent and comfortable with regards to SERH issues if he can easily and non- judgmentally convey factual information to young persons on sex and sexuality[16].

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Sexual and reproductive health (SRH) services relates to activities designed to meet the sexual and reproductive health needs of adolescents. In the context of the community pharmacy, service components include provision of SRH information, educating and counselling adolescents on sex and sexuality, contraceptive services including emergency contraception, pregnancy testing, prevention of unwanted pregnancy and unsafe abortion, prevention, diagnosis, management and referral of Sexually Transmitted Infections (STI) including HIV, and prevention of sexual violence and coercion[17-18].

Community pharmacies are believed to be an ideal place to deliver SERH services to adolescents. This is so because of the pharmacy's long hours of operation, which include weekends, and availability for walk-in consultations without prior appointments. Also, the pharmacy is often the first point of call for majority of adolescents with sexual health related challenges[19-20]. Pharmacists are in a unique position to assist adolescents meet needs that may go unmet by other health professionals by providing an adolescent-friendly, confidential environment where adolescents can be helped to have a better understanding of their sexual health needs, and be guided to be able to make informed decisions and right choices that can improve their quality of life[21-22].

In view of the potential of community pharmacists to impact positively on adolescent sexual health, there is a need to explore the level of involvement of community pharmacists in the delivery of SERH services to the vulnerable adolescent population.

Although SERH services are available as a component of primary health care services in Nigeria, services specifically targeted at the adolescent population are either non-existent or of very poor quality[23-24].

The objectives of this study were to evaluate community pharmacists' self-reported involvement, comfort level, confidence level and competence in successfully providing adolescent SERH services and to identify barriers to service delivery.

Materials and methods Study design

This was a cross sectional survey of all community pharmacists in the study area.

Study Setting

The study took place in community pharmacies in Delta State, Nigeria. Delta State is an oil producing state situated in the Niger Delta region, South-south geo-political zone of the country. Sexual and reproductive health services are mainly provided as part of primary health care package targeted at women of childbearing age. There are no specific programs for adolescents sexual health needs. There are about 250 registered community pharmacies in the state.

Study Population

The study population consisted of all 250 retail community pharmacists in the state while the sampling unit was the registered pharmacist.

Inclusion/ Exclusion Criteria

The study included only licensed community pharmacists in the state. Participants who lacked evidence of licensure and those who refused to sign the informed consent form were excluded from the study.

Sample Size Determination/ Sampling Procedure

The sample size was determined to be 153.3 using the Taro Yamane formula[25] and a population size of 250. This was approximated to 200 in order to allow for non- response.

Questionnaires were administered to only licensed pharmacists in the community setting over a period of 3 months after they agreed to participate in the study by signing a written informed consent form. Respondents who claimed to be pharmacists but who lacked evidence of licensure were not included in the study.

Instrument for Data Collection

The data collection instrument was a 55-item self-completion questionnaire developed based on a thorough examination of the literature on the subject[33,35,38,40]. There were four sections to the questionnaire. Section A contained information on pharmacist's demographics, section B addressed issues of resource availability, section C explored pharmacist's self-reported competencies, confidence and comfort level in providing SERH services , while the last section addressed barriers to service delivery. The questionnaire was developed by the authors. A professor of community medicine , a senior community health nurse with many years' experience in working with adolescents and a faculty member with expertise in public health perused the questionnaire for content and face validity. Also, the questionnaire was pretested on 10 community pharmacists outside the study setting. The Chonbach's alpha coefficient was used as a measure of reliability. Questionnaires were administered after respondents indicated a willingness to participate by signing a written informed consent form. The questionnaires were administered from March to May 2020.

Data Analysis

The completed questionnaires were coded and analyzed with the aid of SPSS version 21[26]. Categorical data was expressed as frequency and percentages. A Likert scale ranging from 1 to 5 with a midpoint of 3 was used to access self-reported competency, comfort and confidence levels. Ordinal scale were treated as numerical data and therefore expressed as mean and

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standard deviation. Chronbach's alpha coefficient was computed to determine reliability of the questionnaire items.

Ethical Approval. Ethical approval for the study was obtained from the Health Research Ethics Committee, Delta State University Teaching Hospital, Oghara, Delta State, Nigeria. Ethical approval NO: DELSUTH/HREC/042.

Results

One hundred and sixty (160) questionnaires were retrieved out of 200 distributed giving a response rate of 80%. Chronbach's alpha value for questionnaire items was 0.90 indicating a high degree of reliability.

Respondent's socio-demography

There were almost an equal number of male and female community pharmacists, 81 (50.6%) Vs. 79(49.4). Pharmacists surveyed were predominantly in the 25-34 age group, 62 (38.8%) and had practiced for between 1-5 years, 64 (40%). Details of the pharmacists' socio demographic characteristics is shown in Table 1.

Availability of resources for delivering sexuality education and reproductive health services

More than half of the pharmacists, 99 (61.9%) believed that the undergraduate curriculum adequately prepared them to offer adolescent SERH services. Majority of the pharmacists, 130 (81.3%) claimed to have had formal training in sexuality education and 105 (65.6%) pharmacists had recently updated their knowledge of adolescent SERH services. Product availability was adequate, 118 (73.6%). However, the level of availability of educational materials was low, 37 (23%), Figure 1.

Table 1: Demographic Characteristics of Respondents. n=160

Characteristics	Frequency	Percent (%)
Gender		
Male	81	50.6
Female	79	49.4
Age Distribution		
less than 25	46	28.8
25-34	62	38.8
35-44	28	17.5
45-54	17	10.6
55-64	6	3.7
Greater than 65	1	0.6
Years in Pharmacy Practice		
less than 1	49	30.6
1-5	64	40.0
6-10	26	16.3
11-15	12	7.5
Greater than 16	9	5.6
Type of degree		
Bachelor	112	70.0
FPCPharm	18	11.2
Others	30	18.8

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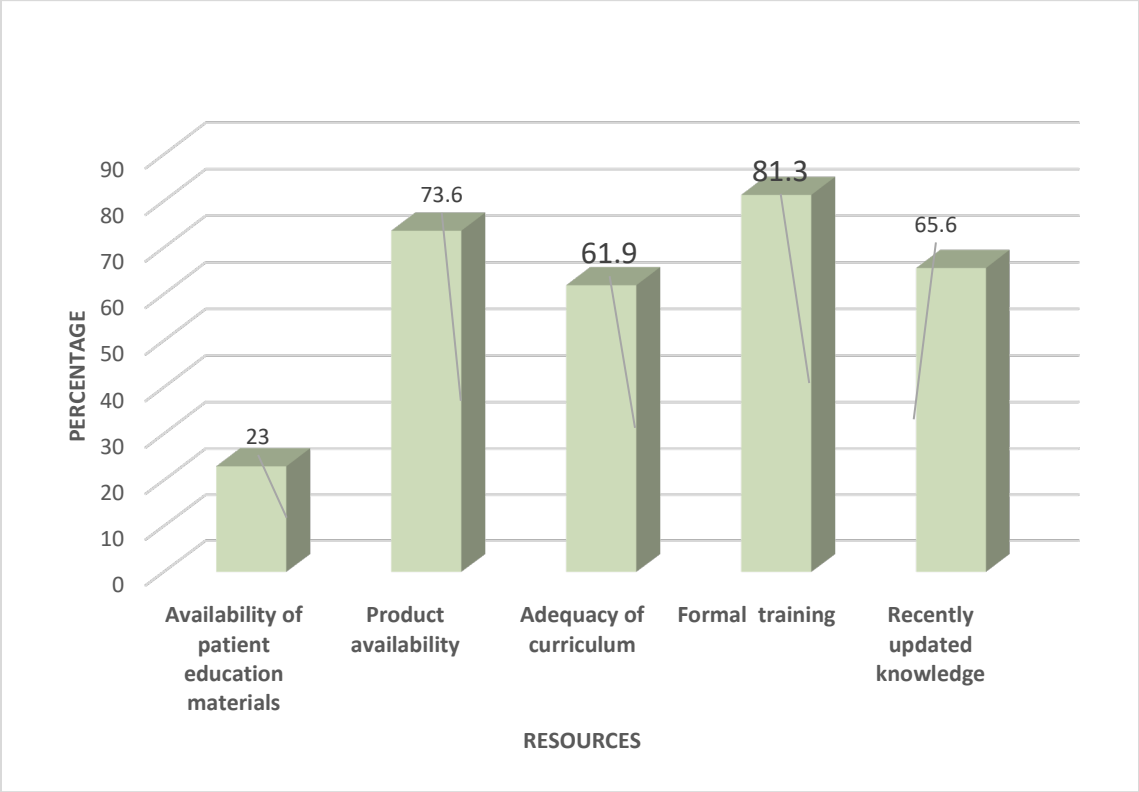
Figure 1-Availability of resources for SERH services in community pharmacies.



Products- Condoms, Misoprostol, daily pills, Emergency contraceptives
Educational materials- CDs, SERH Leaflets.

Distribution of sexuality education materials by community pharmacists.
Schools were the most frequent place where pharmacists had distributed sexuality education materials, 96 (60%). This was followed by church/ mosque, 71 (44.4%), saloons 16(10%) and the public toilet, 6 (3.8%), (Table 2).

Table 2. Distribution of sexuality education materials by community pharmacists. n=160

Distribution of Materials in	Frequency (N = 160)*	Percent (%) +
Churches/Mosque	71	44.4
Schools	96	60.0
Saloons	16	10.0
Public toilet	6	3.8

*.Proportion of pharmacists that answered in affirmative
+Percentages do not add up to 100 due to multiple response

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Pharmacist's ease, confidence and competence in relation to adolescent SERH services

Pharmacists were more comfortable talking about sex generally and premarital sex in particular with mean score of 4.44±0.90 and 4.33±1.00 respectively while they were least comfortable talking about abortion options, 3.81±1.29.

Regarding the ease of offering sexual health education, pharmacists were quite comfortable as indicated by a grand mean of 4.17±0.18, on the scale of 1-5, (Table 3).

Pharmacists were similarly confident about offering SERH services. (Grand mean is 4.32 ±0.15) on a scale of 1-5. They were most confident advising on unwanted pregnancy, (4.53±0.80) and least confident advising on contraceptive methods (4.09±1.20), (Table 4).

The grand mean for self –reported competence in offering SERH services was 4.09±0.14 on a scale of 1-5. Self -reported competence was highest for pregnancy testing services (4.34±0.94) and least for HPV vaccination (3.81±1.22), (Table 5).

Table 3: Pharmacists' ease of offering adolescent SERH services n= 160

Item	Very comfortable	Comfortable	Somewhat comfortable	Not comfortable	Not comfortable at all	Mean	Std Dev.
	N (%)						
How comfortable are you talking about sex	108 (67.5)	20 (12.5)	26(16.3)	6 (3.8)	0 (0)	4.44	0.90
How comfortable are you talking about premarital sex	103 (64.4)	18 (11.3)	29 (18.1)	9 (5.6)	1 (0.6)	4.33	1.00
How comfortable are you talking about sex orientation	87 (54.4)	34 (21.3)	26 (16.3)	9 (5.6)	4 (2.5)	4.19	1.06
How comfortable are you talking about incest	81 (50.6)	27 (16.9)	33 (20.6)	15 (9.4)	4 (2.5)	4.04	1.15
How comfortable are you talking about body image	90 (56.3)	21 (13.1)	43 (26.9)	6 (3.8)	0 (0)	4.22	0.97
How comfortable are you talking about forced marriage	90 (56.3)	27 (16.9)	37 (23.1)	4 (2.5)	2 (1.3)	4.24	0.98
How comfortable are you talking about gender-based violence	89 (55.6)	24 (15.0)	45 (28.1)	2 (1.3)	0 (0)	4.25	0.91
How comfortable are you talking about unsafe abortion	99 (61.9)	22 (13.8)	28 (17.5)	10 (6.3)	1 (0.6)	4.30	1.01
How comfortable are you talking about abortion options	70 (43.8)	30 (18.8)	30 (18.8)	20 (12.5)	10 (6.3)	3.81	1.29
How comfortable are you talking about male circumcision	77 (48.1)	32 (20.0)	39 (24.4)	9 (5.6)	3 (1.9)	4.07	1.06
How comfortable are you talking about female genital mutilation	74 (46.3)	33 (20.6)	35 (21.9)	14 (8.8)	4 (2.5)	3.99	1.12
					Grand mean ± Std Dev.	**4.17**	**0.18**

Key: Very comfortable =5, comfortable = 4, somewhat comfortable = 3, not comfortable = 2, not comfortable at all = 1
Scale = 1-5, midpoint = 3

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Table 4: Pharmacists' confidence in offering adolescent SERH services. n=160

Item	Very confident	Confident	Somewhat confident	Not confident	Not confident at all	Mean	Std Dev.
	N (%)						
How confident are you advising adolescents about unwanted pregnancy	115 (71.9)	14 (8.8)	31 (19.4)	0(0)	0(0)	4.53	0.80
How confident are you advising adolescents about risky health behavior	98 (61.3)	23 (14.4)	37 (23.1)	1 (0.6)	1 (0.6)	4.35	0.90
How confident are you advising adolescents about STIs	110 (68.8)	16 (10.0)	32 (20.0)	2 (1.3)	0(0)	4.46	0.85
How confident are you advising adolescents about abortion care	88 (55.0)	19 (11.9)	42 (26.3)	6 (3.8)	5 (3.1)	4.12	1.11
How confident are you advising adolescents about pre-natal/post natal care	98 (61.3)	23 (14.4)	32 (20.0)	5 (3.1)	2 (1.3)	4.31	0.98
How confident are you advising adolescents about HIV testing	102 (63.7)	24 (15.0)	31 (19.4)	3 (1.9)	0(0)	4.41	0.86
How confident are you advising adolescents about reproductive health problems	97 (60.6)	21 (13.1)	37 (23.1)	4 (2.5)	1 (0.6)	4.31	0.95
How confident are you advising adolescents about contraceptive method	86 (53.8)	25 (15.6)	34 (21.3)	6 (3.8)	6 (3.8)	4.09	1.20
					Grand mean± Std Dev.	**4.32**	**0.15**

Key: Very confident =5, confident = 4, somewhat confident = 3, not confident = 2, not confident at all = 1
Scale = 1-5, midpoint = 3

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Table 5: Pharmacists' self-reported competence in providing adolescent SERH services. n=160

Item	Very competent	Competent	Somewhat competent	Not competent	Not competent at all	Mean	Std Dev.
	N (%)						
How competent are you providing syndromic STI management	82 (51.2)	28 (17.5)	45 (28.1)	3 (1.9)	2 (1.3)	4.16	0.98
How competent are you providing prenatal and postnatal care	87 (54.4)	27 (16.9)	42 (26.3)	2 (1.3)	2 (1.3)	4.22	0.96
How competent are you providing HIV testing services	82 (51.2)	24 (15.0)	36 (22.5)	13 (8.1)	4 (2.5)	4.03	1.18
How competent are you providing pregnancy Testing services	103(64.4)	18 (11.3)	33 (20.6)	3 (1.9)	3 (1.9)	4.34	0.94
How competent are you in dispensing and use of misoprostol	72 (45.0)	25 (15.6)	41 (25.6)	16 (10.0)	6 (3.8)	3.88	1.20
How competent are you providing HPV vaccination	68 (42.5)	24 (15.0)	47 (29.4)	12 (7.5)	9 (5.6)	3.81	1.22
How competent are you providing emergency contraception	84 (52.5)	26 (16.3)	36 (22.5)	9 (5.6)	5 (3.1)	4.09	1.12
How competent are you providing contraceptive choice	77 (48.1)	27 (16.9)	43 (26.9)	9 (5.6)	4 (2.5)	4.03	1.10
How competent are you identifying risky behaviors	83 (51.9)	15 (9.4)	51 (31.9)	8 (5.0)	2 (1.3)	4.06	1.08
How competent are you resolving menopausal problems	76 (47.5)	26 (16.3)	50 (31.3)	7 (4.4)	1 (0.6)	4.06	1.01
How competent are you in sexual history taking	81 (50.6)	28 (17.5)	43 (26.9)	6 (3.8)	1 (0.6)	4.14	0.99
How competent are you resolving men sexual dysfunction	85 (53.1)	27 (16.9)	34 (21.3)	11 (6.9)	3 (1.9)	4.13	1.09
How competent are you advising on herbal supplements to boost male potency	82 (51.2)	24 (15.0)	38 (23.8)	13 (8.1)	3 (1.9)	4.06	1.12
How competent are you resolving psychosocial problems	80 (50.0)	22 (13.8)	40 (25.0)	14 (8.8)	4 (2.5)	4.00	1.16
How competent are you offering clinical advice and referral	101(63.1)	18 (11.3)	35 (21.9)	5 (3.1)	1 (0.6)	4.33	0.96
					Grand mean ± Std Dev.	**4.09**	**0.14**

Key: Very competent =5, competent = 4, somewhat competent = 3, not competent = 2, not competent at all = 1
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Barriers to offering sexuality education and providing SERH services

Lack of time 99(61.9%) was the greatest barrier followed by religious belief, 63 (39.4%), lack of up-to-date educational resources 68 (42.5%) and lack of public confidence in the pharmacist 68 (38.1%), (Table 6)

Table 6: Barriers to providing adolescent SERH services. n=160

Characteristics	Frequency* (N = 160)	Percent (%) †
Belief that sexuality education will increase risky behaviors	48	30.0
Belief that sexuality education will increase unprotected sex	44	27.5
Belief that sexuality education will increase sex at earlier age	50	31.3
Belief that sexuality education will increase promiscuity	47	29.4
Religious belief	63	39.4
High cost	54	33.8
Lack of private space to carry out SE services	60	37.5
Lack of time	99	61.9
Lack of up to a date educational resources	68	42.5
Lack of confidence in the pharmacist	61	38.1

*.Proportion of pharmacist that answered in affirmative.

† Percentages do not add up to 100 due to multiple response.

Discussion

Over the last 20 years, the scope of pharmacy practice has expanded to include roles outside the core traditional function of drug dispensing[27-28].The expanding role of pharmacists creates opportunities for them to assist in the provision of several types of health services for adolescents[29-30].

The urban predominance of pharmacies observed in this study is similar to other studies conducted among community pharmacies in Nigeria[31].The reasons for this include population density, availability of social amenities, and per capita income of residents[32].

The findings of this study show that pharmacists are very much involved in the provision of adolescent SERH services. The range of services include contraception, counselling on unwanted pregnancy and risky health behavior, HIV counseling and testing, STIs prevention, abortion counseling and provision of reproductive health commodities. Other studies have also demonstrated a robust level of pharmacists' involvement in sexual health needs of young persons[33-38.] The majority of pharmacists in this study were also comfortable, confident and competent in offering services related to adolescent health and youth sexuality. Similar findings have been observed from other studies[39-41].

Barriers to provision of adolescent SERH services noted in this study include lack of time, lack of confidentiality, religious objection, resource limitation and misconceptions about reproductive health services. In addition to these, other studies have identified fear of responsibility and liability, lack of social acceptability, difficulty of integrating services into daily workflow and, lack of adequate remuneration, as barriers to offeringreproductive health services[42-43].

Increasing pharmacists' knowledge and skills in adolescent issues through focused training may reduce barriers and enhance pharmacist's self -efficacy in the provision of adolescent SERH services[33,44]. Other strategies to overcome barriers that have proved effective in other countries include equipping community pharmacies with SERH skills through structured training programs, developing up to date resources for pharmacists, clearly visible signage at pharmacies to improve awareness of service availability and provision of needed support and technical assistance[45-47]. There is a need to explore the full range of SERH services offered by community pharmacists and the impact of religious objection, policy framework and legal authorization on service delivery. Also important is the need to develop standard training modules for pharmacists in order to ensure sustainability of services and desired impact on adolescents.

The limitations of this study include the fact that involvement and competency levels were assessed by self- report. This might explain the ceiling effect observed in some of the domains assessed. Using a validated tool to assess competency would have yielded more accurate results. Also, broadening thescope of this study by ensuring a wider geographical spread would have allowed for a more diverse sample. This might limit generalization of the findings from this study.

This study highlights the need to explore channels outside the major and conventional ones in meeting the SERH needs of the adolescent population. It also highlights the potential role that community pharmacists can play in bridging the significant gap

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in service delivery to the adolescent population. It emphasizes the fact that community pharmacists are a viable option in meeting the SERH needs of adolescents and provides some evidence base for this assumption.

Conclusion

The level of involvement of community pharmacists in providing adolescent SERH services was high. Self- reported competency level was high. Majority of community pharmacists were comfortable and confident in providing SERH services to adolescents. Lack of time was a major barrier to service delivery. The results of this study suggests that community pharmacists have a potentially major impact on improving access to SERH service for the adolescent population.

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The opinions expressed in this paper are those of the author(s)

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