

## Original Research

# Assessment of Jordanian pharmacists' knowledge and perception regarding sexual and reproductive health and their practice in providing sexual counseling to patients

Shereen Arabiyat, Odate Tadros, Rana Abu Farha, Deema Jaber, Tamara Al-daghastani

Received (first version): 18-Nov-2022

Accepted: 14-Dec-2022

Published online: 08-Feb-2023

### Abstract

**Objective:** In this quantitative study, we intended to explore sexual/ reproductive counseling between Jordanian pharmacists by addressing pharmacists' knowledge regarding sexual/ reproductive health and their perception and practice in providing counseling to patients. **Method:** This study adopted a survey methodology using a self-completed validated and administered unnamed survey. Participants were asked to fill-out the electronic survey after providing their electronic consent. Social media was utilized to extend the survey to facilitate contact multiple parts of pharmacists' community. **Results:** In this study, 200 pharmacists agreed to participate in this study. Most of the pharmacists knew that depression (n= 182, 91%) and alcohol (n=171, 85.5%) were among the main factors that may decrease sexual performance. Also, only 38.5% of the pharmacists (n= 77) agreed that discussing sexual issues is the responsibility of pharmacists, and only 55% of them (n= 110) felt comfortable discussing patients' sexual matters as any medical issue. Moreover, more than two-third of the pharmacist (n= 146, 73%) reported that if they were consulted about sexual problem, they may explore patients' problem. On the other side, only half of pharmacists (n= 102, 51%) revealed that they may discuss the side effects of prescribed drug if it might affect sexual performance. **Conclusion:** Education on sexuality/ reproduction is the key to help Jordanian pharmacists to advance patients' sexual/ reproductive health. In general, research on sexual/ reproductive health in conservative societies is limited. Therefore, additional surveys that include the perspectives of both patients and pharmacists on sexuality/ reproduction to augment this normally ignored aspect of health are necessary.

**Keywords:** sexual health; pharmacists; knowledge; perception; practice

## INTRODUCTION

According to sexuality, sexual health is a "state of mental, bodily, and social well-being" (WHO, 2006). Sexual counseling is a communicative, supportive process focused on the need to alter sexual behavior or to enhance handling of a sexual disorder or occurrence.<sup>1</sup> When individuals' associated concerns are properly addressed, sexual counseling can improve individuals' sexual health and reduce or remedy sexual dysfunction.<sup>2,3</sup> Individuals who aren't listened to about their sexual difficulties may get advice on how to deal with their sexual dysfunction from dubious sources.<sup>4</sup> Additionally, they might experiment with unlicensed plants or remedies,

which could have detrimental interactions or major adverse effects with their medications.<sup>4</sup> Conversely, social, religious, and cultural variables may have an impact on their readiness to discuss sexual issues.<sup>4-6</sup>

Sexuality is surrounded by a sense of extreme sensitivity and discretion among Arab Muslims, where sexual activity only permitted after marriage. Moreover, homosexuality and other extramarital or premarital relationships are viewed as serious sins.<sup>7,8</sup> Muslims of both genders are urged to communicate modestly to uphold the community's moral standards.<sup>8</sup> Therefore, it is widely believed that talking about sexuality is forbidden or, at the very least, impolite.<sup>9</sup>

Arab Muslim patients may be reluctant to disclose their sexual concerns in the medical setting due to social, cultural, and religious considerations, and pharmacists are careful while discussing patients' sexual issues.<sup>10</sup> In the traditional Muslim society of Jordan, no study has looked at pharmacists' thoughts on sexual and reproductive counseling and its incorporation into therapeutic practice. As a result, we addressed pharmacists' knowledge of sexual and reproductive health as well as their perceptions of and practices in advising patients in this quantitative study with the aim of examining sexual and reproductive counseling among Jordanian pharmacists.

## METHODS

### Study design, sample, and setting

This was a cross-sectional study which was conducted

**Shereen ARABIYAT.** Department of Medical Allied Sciences, Salt College, Al-Balqa Applied University, Salt, Jordan. shereen.arabiyat@bau.edu.jo

**Odate TADROS.** Department of Medical Allied Sciences, Salt College, Al-Balqa Applied University, Salt, Jordan. o.tadros@bau.edu.jo

**Rana Abu FARHA\*.** Department of Clinical Pharmacy and Therapeutics, Faculty of Pharmacy, Applied Science Private University, Amman, Jordan. r\_abufarha@asu.edu.jo

**Deema JABER.** Biopharmaceutics and Clinical Pharmacy Department, School of Pharmacy, Zarqa University, Amman-11942, Jordan. dsuleiman@zu.edu.jo

**Tamara AL-DAGHASTANI.** Department of Medical Allied Sciences, Salt College, Al-Balqa Applied University, Salt, Jordan. t.aldaghastani@bau.edu.jo



during the period from October- November 2020. Licensed pharmacists, who are working in community pharmacies or chain community from every governorate, were eligible to participate. This study adopted a survey methodology using a self-completed validated and administered anonymous survey. Convenience sampling technique was used, and participants were asked to fill-out the electronic survey after providing their electronic consent at the beginning of the survey. Social media (WhatsApp and Facebook) was utilized to extend the survey to facilitate contact multiple parts of pharmacists' community.

### Ethical approval

The world medical association declaration of Helsinki guidance was followed in the study. (Hoekstra et al, 2012) The institutional review board (IRB) committee of Al-Balqa Applied University gave its approval to the study. (Approval No. 2020)

### Questionnaire development

The study questionnaire was developed following extensive literature review on related literature to explore pharmacists' knowledge regarding sexual and reproductive health and their perception and practice in providing sexual counseling to patients. Demographic data were documented. The questions were designed to measure our objective and a scale was used to measure the level of application.

Following draft development, the drafts questionnaire was evaluated individually by three pharmacists (Ph.D. holders), to ensure face and content validity. This was followed by discussions to guarantee clarity and overcome any ambiguities in the questions. Accordingly, few questions were added / deleted. The survey was prepared in English and consisted of four parts: part A was designed to assess pharmacists' knowledge about sexual/ reproductive health. Part B assessed pharmacists' perception toward sexual/ reproductive counseling. Part C assessed the pharmacists' practice concerning providing sexual/ reproductive counseling, and Part D to collect information about pharmacists' demographics

During the anonymous questionnaire development and to ensure the content validity, an inclusive literature review was conducted. In the qualitative content validity assessment, 10 experts were asked to comment on the items regarding the grammar of items, choice of vocabulary, placement of items and scoring. Furthermore, to ensure face validity, the prepared questionnaire was evaluated individually by a group of clinical pharmacists, one statistician and one sociologist. These evaluators assessed difficulty, generality and ambiguity of the items. After that pilot testing and discussions were performed to confirm questions clarity. The study was piloted on around 30 educated and non-educated participants before the formal start of the data collection. Accordingly, few questions were added, deleted, or changed and these data were excluded from the final analysis.

### Sample size

A minimal sample size of 96 pharmacists was considered representative for the purpose of this study. Sample size calculation was performed using the following formula:

$$n = P \times (1 - P) \times z^2 / d^2$$

Where, "P" is the anticipated prevalence of pharmacist knowledge (50% the most conservative proportion), "d" is the desired precision (10%), and "z" is the appropriate value from the normal distribution for the desired confidence level (1.96 corresponding to 95% level of confidence).

### Statistical analysis

Statistical Package for the Social Sciences (SPSS), Version 25.0 (SPSS Inc., Chicago, IL, USA), was used for data entry and analysis. Variables that were categorical were displayed as frequencies and percentages. Continuous variables were shown as means and standard deviations, though.

## RESULTS

### Sample characteristics

There were 200 pharmacists in the study sample. The mean age for the study sample was 32.1 (SD= 9.9). Among the participated pharmacists, 71% were females (n= 142) and the majority having bachelor's degree in pharmacy (n= 172, 86.0%), while the remaining 14% have Master's/PhD degrees (n= 28). One hundred and fifty (75.4%) were employees in the pharmacies while the rest were pharmacy owners. More than two-third of the pharmacists were working in independent community pharmacy (n=137, 68.5%). For more details, refer to Table 1.

Parameter	Mean (SD)	n (%)
Age (years)	32.1 (9.9)	
Gender		
○ Males		58 (29.0)
○ Females		142 (71.0)
Educational level		
○ BPharm		172 (86.0)
○ Masters/PhD		28 (14.0)
Job status		
○ Employee		150 (75.4)
○ Owner		49 (24.6)
Site of work		
○ Independent community pharmacy		137 (68.5)
○ Chain community pharmacy		63 (31.5)
Location of pharmacy		
○ Commercial area		108 (54.0)
○ Others (Residential or clinics area)		92 (46.0)
Experience as community pharmacists	7.7 (8.5)	

### Pharmacists' knowledge about sexual and reproductive health related issues

More than half of the surveyed pharmacists (53%-85%) knew the factors that may decrease sexual performance and the factors that doesn't affect sexual performance as well, Table 2. Most pharmacists knew that depression (n= 182, 91%) and alcohol (n=171, 85.5%) were among the main factors that may decrease sexual performance. Also, many pharmacists correctly report that fruits (n= 178, 89%) and ginger (n= 162, 81%) were among the food substances that showed no effect on sexual performance. For more details, refer to Table 2.



Table 2. Pharmacists' knowledge about factors/foods that may decrease sexual performance (n= 200)

Factors/foods	Pharmacists with correct answer n (%)
Alcohol <sup>1</sup>	171 (85.5)
Smoking <sup>1</sup>	156 (78.0)
High blood pressure <sup>1</sup>	138 (69.0)
Irregular lipid profile <sup>1</sup>	112 (56.0)
Diabetes mellitus <sup>1</sup>	168 (84.0)
Anxiety <sup>1</sup>	172 (86.0)
Depression <sup>1</sup>	182 (91.0)
Fatty food <sup>1</sup>	133 (66.5)
High salt content <sup>1</sup>	106 (53.0)
Sugar and sweets <sup>1</sup>	107 (53.5)
Green leaves <sup>2</sup>	163 (81.5)
Fruits <sup>2</sup>	178 (89.0)
Potassium rich food <sup>2</sup>	107 (53.5)
Milk and its products <sup>2</sup>	135 (67.5)
Garlic <sup>2</sup>	157 (78.5)
Ginger <sup>2</sup>	162 (81.0)
Cinnamon <sup>2</sup>	154 (77.0)

1: True, 2: False

Table 3. Pharmacists' knowledge about factors/remedies that may decrease stress/hot flashes during menopause (n= 200)

	Pharmacists with correct answer n (%)
Factors reducing stress during menopause	
Oily fish <sup>1</sup>	147 (73.5)
Decrease magnesium in diet <sup>2</sup>	97 (48.5)
Controlled breath <sup>1</sup>	165 (82.5)
Hormone replacement therapy <sup>1</sup>	162 (81.0)
Sleep well <sup>1</sup>	183 (91.5)
Laugh <sup>1</sup>	171 (85.5)
Avoid sex <sup>2</sup>	101 (50.5)
Meditation <sup>1</sup>	148 (74.0)
Exercise <sup>1</sup>	171 (85.5)
Vitamin B6 and B12 <sup>1</sup>	164 (82.0)
Drinking enough water <sup>1</sup>	175 (87.5)
Remedies for hot flashes during menopause	
Hormone replacement therapy <sup>1</sup>	171 (85.5)
Low magnesium <sup>2</sup>	80 (40.0)
Controlled breath <sup>1</sup>	171 (85.5)
Oily fish <sup>1</sup>	150 (75.0)
Adding chicken and sesame seed to food <sup>1</sup>	102 (51.0)
Avoid bananas <sup>2</sup>	93 (46.5)

1: True, 2: False

Regarding factors that reduce stress and remedies that reduce hot flashes during menopause (Table 3), many pharmacists knew that sleeping well (n= 183, 91.5%) and drinking enough water (n= 175, 87.5%) reduces stress during menopause. On the other hand, pharmacists knew that hormone replacement therapy and controlled breath (n= 171, 85.5% for both) could reduce hot flashes during menopause. For more details, refer to Table 3.

Regarding patient knowledge about symptoms of condoms allergy (Figure 1), the most recognized symptoms by pharmacist were itching (n= 182, 91%), followed by rash (n= 179, 89.5%) and hives (n= 171, 70.5%). Watery eyes (n= 51, 25.5%) and runny nose (n= 47, 23.5%) were the least recognized signs and symptoms of condoms' allergy.

### Pharmacists' perceptions towards providing sexual and reproductive counseling

Pharmacists were asked to explain their perceived attitude towards providing sexual/reproductive counseling at their community pharmacy practice site (Table 4). More than half of the sample (n= 110, 55%) felt comfortable discussing patients' sexual concerns as any medical issue. Less than one-third (n= 58, 29%) reported that they feel embarrassed when discussing sexual problems with the patients. Around 66% of the pharmacists (n= 131) agreed that patients can discuss sexual issues with their pharmacists, but only 38.5% of them (n= 77) believed that discussing these issues are the pharmacists' responsibility.

### Pharmacists practice in providing sexual/ reproductive counseling

Pharmacists were asked about the possible practice they were consulted about any sexual related issue (Table 5). More than two-third of the pharmacist (n= 146, 73%) reported that if they were consulted about sexual problem, they may explore patients' problem. On the other side, only half of pharmacists (n= 102, 51%) revealed that they may discuss the side effects of prescribed drug if it might affect sexual performance. Also, only 48.0% of the pharmacists (n= 96) said that they may counsel the patient about oral contraceptives and the proper way of using this medicine when patients asked to purchase a pack of oral contraceptive. Finally, only 29.0% agreed to provide counselling about condoms before selling a condom.

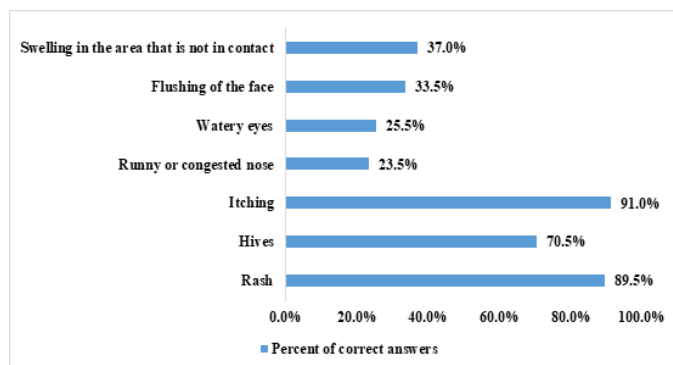


Figure 1. Pharmacists' knowledge about signs of condom allergy (n= 200)



	Strongly agree/agree
When you discuss a patient sexual problem, you will feel comfortable as it is a medical issue	110 (55.0)
When you discuss a patient sexual problem, you will feel embarrassed	58 (29.0)
When you discuss a patient sexual problem, how you will feel depend on the gender and age of the patient	133 (66.5)
Patients can discuss sexual issues with their pharmacists	131 (65.5)
Sexuality matters are considered as pharmacist responsibility	77 (38.5)
Pharmacist counselling may decrease the risk of unwanted pregnancies	139 (69.5)

	Strongly agree/agree
If a patient asks you about a sexual problem, as a pharmacist you will	
○ Ignore the question	14 (7.0)
○ Explore the problem in order to give some advice	146 (73.0)
○ Send the patient to his doctor to discuss this issue	35 (17.5)
○ Missing data	5 (2.5)
If you know that certain medicine will affect patient's sexual performance, you will	
○ Discuss this side effect with the patient	102 (51.0)
○ Change the drug without discussing the reason	12 (6.0)
○ Ignore this information	21 (10.5)
○ Advise the patient to refer to the doctor to discuss side effects	59 (29.5)
○ Others	4 (2.0)
○ Missing data	2 (1.0)
If the patient wants a pack of oral contraceptive, you will	
○ Send her to the doctor to get a prescription	60 (30.0)
○ Counsel her about oral contraceptives and the proper way of using this medicine	97 (48.5)
○ Give her the pack that she asked for	37 (18.5)
○ Others	3 (1.5)
○ Missing data	3 (1.5)
Do you give the patient counselling before selling him a condom?	
○ Yes	39 (29.5)
○ No	102 (51.0)
○ Not always	56 (28.0)
○ Missing data	3 (1.5)

## DISCUSSION

The state of sexual and reproductive counseling among pharmacists in Jordan was examined for the first time in this study. The social, psychological, inter-personal, and intra-personal functions of sex are a foundational aspect of wellbeing throughout a person's lifespan.<sup>11,12</sup> The fundamental tenet of public health initiatives aiming at improving reproductive and sexual health outcomes or reducing unwanted outcomes, such as unintended pregnancies or sexually transmitted diseases, is sexual literacy.<sup>10,13,14</sup> Access to sexual information frequently conflicts with unique cultural and religious prohibitions and guidelines for appropriate sexual behavior. Ensure sexual knowledge by doing comprehensive analysis, reaching consensus, and observing local customs.<sup>15,16</sup> Significant advancements in the description and growth of the field of sexual and reproductive health have been seen over the last ten years. International agencies, governments, and nongovernmental organizations have supported the development of policies and initiatives at the local and global levels.

A wide definition of reproductive health, which explicitly

includes sexual health in the words "...reproductive health, including family planning and sexual health," was agreed by 179 countries for inclusion in the ICPD Program of Action.<sup>17</sup> Only 55% of the pharmacists in this study felt comfortable addressing patients' sexual concerns as any medical issue, and only 38.5% of them agreed that discussing sexual issues is the role of pharmacists. Moreira and colleagues found that Middle Easterners were less likely to seek professional assistance for their sexual problems out of embarrassment and certain cultural norms (e.g., sexual dysfunction a natural component of becoming older and is not a medical issue that can be fixed.). Patients may feel less accountable and possibly less counseled to focus on their sexuality issues if they fail to initiate a discourse regarding those issues. Regardless of the patient's gender, community pharmacists should not be hesitant to offer advice and information to those seeking contraception.

Counseling recommendations should mention potential side effects of the medications, such as nausea and vomiting. To lessen gastrointestinal side effects, it is strongly advised that patients consume a small snack prior to taking their medications and, if time allows, take them at bedtime. The common side effect of cardiovascular medications is erectile dysfunction.





New medication generations, however, appear to have fewer negative sexual effects. Particularly thiazide diuretics and beta blockers can have an impact on erectile function. Even though certain studies also relate angiotensin receptor blockers (ARBs) or angiotensin converting enzyme inhibitors (ACEIs) to erectile dysfunction,<sup>17</sup> while others report a neutral or even positive effect of ACEIs or ARBs. More than half of the sample examined (51% of the pharmacists) stated they would address the issue with the patient and inform him of such a negative effect.

If a sexual adverse effect is noted, it is crucial to advise the patient not to stop taking the medication suddenly. Sometimes, altering medications or adjusting the dosage can help resolving the sexual dysfunction. A thorough analysis of any apparent sexual side effect is necessary to determine whether sexual dysfunction is brought on by the medicine itself or by any other source. Community pharmacists are qualified to give women professional advice on how to use hormonal contraceptives safely and effectively and help them select the right medication.<sup>17</sup> About 48.5% of pharmacists indicated they would offer the required counseling regarding oral contraceptives and the right method to use this kind of medication.

Eventhough this study represents the first study in Jordan to

evaluate pharmacists' knowledge of sexual and reproductive health as well as their perceptions of and practices in advising patients, but we still are aware of the main methodological limitation of this study; as the study relied on self-administred questionnaire, which may overestimate pharmacists practice in this area.

## CONCLUSION

It is anticipated that pharmacists would take the lead in advising patients on their sexual and reproductive health. However, the perceived duty and confidence of Jordanian pharmacists to provide sexual and reproductive therapy are underrated, and their effect to enhance patients' sexual health is insufficient. The key to assisting Jordanian pharmacists in promoting patients' sexual and reproductive health is education. Research on sexual and reproductive health is generally scarce in traditional communities. Therefore, new studies that incorporate the opinions of both patients and pharmacists on sexuality and reproduction are required to complement this sometimes, disregarded area of health. Furthermore, it is necessary to conduct long-term studies to determine how education affects participants' perspectives and levels of engagement.

## References

1. Johnson M, Bulechek GM, Dochterman JMM, et al. *NOC and NIC Linkages to NANDA-I and Clinical Conditions: Nursing Diagnoses, Outcomes, and Interventions*. Elsevier Health Sciences; 2011. <https://doi.org/10.26650/FNJJN386150>
2. Rostamkhani F, Jafari F, Ozgoli G, et al. Addressing the sexual problems of Iranian women in a primary health care setting: A quasi-experimental study. *Iranian Journal of Nursing and Midwifery Research*. 2015;20(1):139.
3. Steinke EE, Jaarsma T, Barnason SA, et al. Sexual counselling for individuals with cardiovascular disease and their partners: a consensus document from the American Heart Association and the ESC Council on Cardiovascular Nursing and Allied Professions (CCNAP). *European Heart Journal*. 2013;34(41):3217-3235. <https://doi.org/10.1093/eurheartj/eh270>
4. Moreira Jr ED, Brock G, Glasser DB, et al. Help-seeking behaviour for sexual problems: The global study of sexual attitudes and behaviors. *International Journal of Clinical Practice*. 2005;59(1):6-16. <https://doi.org/10.1111/j.1742-1241.2005.00382.x>
5. Hammoud MM, White CB, Fetters MD. Opening cultural doors: providing culturally sensitive healthcare to Arab American and American Muslim patients. *American Journal of Obstetrics and Gynecology*. 2005;193(4):1307-1311. <https://doi.org/10.1016/j.ajog.2005.06.065>
6. Al-Shdayfat NM, Green G. Reflections on sex research among young Bedouin in Jordan: risks and limitations. *Culture, Health & Sexuality*. 2012;14(1):101-111. <https://doi.org/10.1080/13691058.2011.626871>
7. Akhu-Zaheya LM, Masadeh AB. Sexual information needs of Arab-Muslim patients with cardiac problems. *European Journal of Cardiovascular Nursing*. 2015;14(6):478-485. <https://doi.org/10.1177/1474515115597353>
8. Dialmy A. Sexuality and islam. *The European journal of contraception & reproductive health care: The Official Journal of the European Society of Contraception*. 2010;15(3):160-168. <https://doi.org/10.3109/13625181003793339>
9. Matocha LK, Waterhouse JK. Current nursing practice related to sexuality. *Research in Nursing & Health*. 1993;16(5):371-378. <https://doi.org/10.1002/nur.4770160508>
10. Santelli JS. Medical accuracy in sexuality education: Ideology and the scientific process. *American Journal of Public Health*. 2008;98(10):1786-1792. <https://doi.org/10.2105/AJPH.2007.119602>
11. CDC. Centers for Disease, Control and Prevention. A public health approach for advancing sexual health in the United States: Rationale and options for implementation, meeting report of an external consultation. Atlanta: CDC. 2010.
12. WHO. Defining sexual health: report of a technical consultation on sexual health, 28-31 January 2002, Geneva. World Health Organization; 2006.
13. WHO. Promotion of sexual health: Recommendations for action. In: *Promotion of sexual health: recommendations for action*. 2000;58.
14. Ott MA, Santelli JS. Abstinence and abstinence-only education. *Current Opinion in Obstetrics & Gynecology*. 2007;19(5):446. <https://doi.org/10.1097/GCO.0b013e3282efdc0b>
15. Lindberg LD, Santelli JS, Singh SJPos. Changes in formal sex education: 1995–2002. 2006;38(4):182-189. <https://doi.org/10.1016/j.contraception.2006.05.030>



Arabiyat S, Tadros O, Farha RA, Jaber D, Al-daghastani T. Assessment of Jordanian pharmacists' knowledge and perception regarding sexual and reproductive health and their practice in providing sexual counseling to patients. *Pharmacy Practice* 2023 Jan-Mar;21(1):2792.

<https://doi.org/10.18549/PharmPract.2023.1.2792>

16. Maticka-Tyndale E, Smylie L. Sexual rights: Striking a balance. *International Journal of Sexual Health*. 2008;20(1-2):7-24.
17. Rawson HA, Liamputtong P. Culture and sex education: the acquisition of sexual knowledge for a group of Vietnamese Australian Young Women. *Ethnicity & Health*. 2010;15(4):343-364. <https://doi.org/10.1080/13557851003728264>

