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Evaluation of Pharmacotherapy Standards During Pregnancy Among Jordanian Pharmacy Colleges Graduates

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ABSTRACT

Background: Pharmacists' knowledge of medication risks and benefits during pregnancy, as well as their competence in making appropriate therapeutic decisions to optimize medication use among pregnant women, is crucial. This study aims to evaluate the knowledge of Jordanian pharmacists regarding medication risks and safety during pregnancy and assess their abilities to make appropriate therapeutic decisions and optimize medication use.

Methods: A self-administered questionnaire was sent to 400 randomly selected pharmacists practicing in Amman, Jordan. A validated questionnaire, consisting of six sections with predefined options, was employed.

Results: A total of 233 pharmacists completed the questionnaire, resulting in a response rate of 58.2%. Nearly 73.4% of pharmacists (N = 171) correctly identified the drug of choice for hypertension during pregnancy. Over 70% of pharmacists (N = 169) determined the correct dose of aspirin to prevent preeclampsia. About 50% of pharmacists exhibited limited knowledge regarding drug risks and safety during pregnancy. There was a significant difference in the pharmacists' scores on all tests based on their marital status and years of experience ($p = 0.04$ and $p = 0.01$, respectively). Among pharmacists, 79.8% stated that they studied pharmacotherapy during pregnancy in their undergraduate courses.

Conclusion: Pharmacists have demonstrated an inadequate level of preparedness in providing appropriate pharmaceutical care for pregnant women. Therefore, there is an urgent need to collaborate between national health authorities and academic institutions to empower pharmacists and enhance their knowledge and skills necessary to improve the health outcomes of pregnant women.

Keywords: Pregnancy, Drug Therapy, Health Safety, Pharmaceutical Care.

INTRODUCTION

Pharmacists play a crucial role in optimizing medication use during pregnancy. They serve as the first point of contact for patients and are often the final healthcare professionals patients encounter after medications have been prescribed. Pharmacists possess the necessary pharmacotherapy knowledge, skills, and competencies to provide optimal patient care[1]. They are frequently called upon to make therapeutic decisions that require expertise and knowledge to optimize drug therapy for individual patients, including pregnant women.

The use of medications during pregnancy is often necessary, especially for pregnant women with underlying medical conditions. Research has shown that prenatal exposure to certain drugs can pose genuine risks to the fetus, leading to teratogenic effects or neurodevelopmental disorders in offspring[2]. Pharmacists can play a vital role in preventing drug-related adverse effects by assessing the likelihood of fetal exposure, reviewing prescriptions for

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appropriateness, and identifying drug therapy-related problems[1]. Furthermore, pharmacists are frequently consulted by other healthcare professionals due to their specialized expertise in drug therapies. This is also the case when it comes to medication use during pregnancy. Therefore, their level of professional confidence and knowledge regarding the use of drugs during pregnancy are pivotal factors in achieving the best possible outcomes for pregnant women[3, 4].

In today's dynamic healthcare landscape, pharmacists are shouldering greater responsibilities and commitments to enhance their practice[5, 6, 7]. There are growing global concerns about the mismatch between current pharmacy practice and pharmacy education[8]. In developing countries, including the Middle East, pharmacy education and research have often lagged behind the evolving roles of pharmacists[9]. Nevertheless, significant strides have been made in recent years, with changes introduced to pharmacy education at academic institutions in various countries, including Jordan[10]. For pharmacy educators, the practical challenge lies in harnessing this expanding knowledge base to benefit real-world practice[11, 12]. This study aims to evaluate the knowledge of Jordanian pharmacists regarding medication risks and safety during pregnancy, as well as their capacity to make informed therapeutic decisions and optimize medication use.

METHODS

Compliance with ethical standards

Ethical approval was obtained from the Institutional Review Board (IRB) at the Faculty of Pharmacy, Applied Science Private University (approval number: 2022-PHA-26). Electronic consent was obtained from all participants, and their anonymity was maintained as no names were recorded**.**

Study Design and Sample

This observational, descriptive, cross-sectional study was conducted from August to November 2022 among Jordanian pharmacists practicing in Amman. A random sampling approach was used to select participants. Pharmacists practicing outside Amman or those who did not graduate from Jordanian universities were excluded. The study's principal investigator initially contacted potential participants by phone, introduced the study's aim, assured them of its anonymity, and invited them to participate. Pharmacists who agreed to take part in the study were provided with a link to the self-administered questionnaire.

Sample Size Calculation

A list of practicing Jordanian pharmacists in Amman, including their full names, phone numbers, and occupations, was obtained from the national health authority. Microsoft Excel was used to randomly shuffle the list using the RAND function. The online Raosoft ® calculator was then employed to determine the required sample size for the study. It was assumed that 50% of Jordanian pharmacists working in Amman (out of 28,000) possess adequate pharmacotherapy knowledge during pregnancy. The sample size was calculated with a 95% confidence interval and an absolute precision of 5%. Consequently, the calculated sample size for this study was 375.

Questionnaire Development and Structure

After conducting an extensive literature review, the research team developed a questionnaire to assess fundamental pharmacotherapy knowledge necessary for optimizing medication use and safety during pregnancy.

The questionnaire consisted of five sections. The first section collected participants' demographic information and characteristics, including gender, age, marital status, university of graduation, practice setting, and years of professional experience. In this section, participants were also asked if they received official lessons covering pharmacotherapy during pregnancy during their academic studies at the university.

The second section aimed to assess participants' knowledge about medication safety during pregnancy. This section listed twelve medications, and participants were asked to specify the safety of each medication during

different pregnancy trimesters. Participants selected from five predefined options for each medication: safe during the first trimester, safe during the second trimester, safe during the third trimester, safe during all trimesters, and not safe during pregnancy. The third section measured participants' knowledge about medication risks during pregnancy. This section included six questions or statements to identify potential risks associated with medications during pregnancy.

The fourth section presented six clinical cases with predefined options to assess participants' ability to make appropriate therapeutic decisions for pregnant women. These cases depicted pregnant women with various medical conditions or complaints, and participants were tasked with selecting suitable medications for each case. The fifth section evaluated participants' ability to optimize medication use during pregnancy. It included six clinical cases of pregnant women experiencing chronic medical conditions or minor ailments. Participants were asked to choose an appropriate medication or action to optimize drug therapy for each corresponding case.

The face and content validity of the questionnaire was the questionnaire underwent face and content validity assessment by an expert panel, consisting of two academic researchers in pharmacy practice, two community pharmacists, and one practicing gynecologist. The experts provided feedback on the wording, clarity, comprehensiveness, and relevance of each questionnaire item to the study's aim and objectives. Amendments to the questionnaire were made based on their input. Scores were calculated based on the number of correct answers.

Data Analysis

The data were entered into SPSS version 23 for Windows (SPSS) for analysis. Descriptive statistics were used, and results were expressed as numbers and percentages with a mean (± SD). One-way ANOVA tests were employed to determine associations between variables when appropriate. A two-tailed t-test analysis within subjects was conducted to assess the significance of each measured quality attribute. The significance level was set at a P-value ≤ 0.05.

RESULTS

Pharmacists' Characteristics

Out of the 400 pharmacists contacted, 233 completed the questionnaire, resulting in a response rate of 58.25%. Table 1 presents the demographics and characteristics of the participants. Over half of the participants were young, aged between 23 and 28 years (n = 135, 57.9%), and nearly three-quarters were female (n = 164, 70.4%). Approximately half of the participants graduated from a private university in Jordan (n = 122, 52.3%), and the majority worked in community pharmacies (n = 191, 82%).

More than three-quarters of the participants (n = 186, 79.8%) reported receiving official lessons on pharmacotherapy during pregnancy at their university during their academic studies.

Table 1. Participants' Demographics and Characteristics (N = 233)

Age (years)	n (%)
23 - 28	135 (57.9)
29 - 34	52 (22.3)
35 - 40	27 (11.6)
> 40	19 (8.2)
Gender	
Male	69 (29.6)
Female	164 (70.4)
Marital status	
Single	147 (63.1)
Married	80 (34.3)
Divorced	6 (2.6)
University of graduation	
Public university	111 (47.6)
Private university	122 (52.3)
Practice Setting	
Community pharmacy	191 (82.0)
Hospital pharmacy	17 (7.3)
Academia	16 (6.9)
Pharmaceutical sales	9 (3.9)
Years of professional experience	
Less than 5 years	146 (62.6)
5- 9 years	53 (22.8)
10-15 years	15 (6.4)
More than 15 years	19 (8.2)

Pharmacists' Knowledge of Medications Safety during Pregnancy

The assessment of pharmacists' knowledge regarding medication safety during pregnancy is detailed in Table 2. A majority of the respondents (n=207, 88.8%) were unaware that NSAIDs are considered unsafe during the first trimester. However, only 10.7% and 20.2% recognized that pseudoephedrine and systemic glucocorticoids could be used in the second and third trimesters, respectively. None of the participants were aware of the contraindication of intranasal triamcinolone during pregnancy, and only half of them knew that mineral oil (n=114, 49.4%) and simvastatin (n=121, 51.9%) should be avoided during pregnancy.

Table 2. Assessing the Pharmacists' Knowledge about Medications Safety during Pregnancy (N = 233)

	Medication	Safe during the first trimester	Safe during the second trimester	Safe during the third trimester	Safe during all trimesters	Not safe during pregnancy	Number of correct answers n (%)	Number of incorrect answers n (%)
1	NSAIDs	√					26 (11.2)	207 (88.8)
2	Loratadine				√		99 (42.5)	134 (57.5)
3	Pseudoephedrine		√	√			25 (10.7)	207 (88.8)
4	Intranasal triamcinolone					√	0.0 (0.0)	233 (100)
5	Mineral oil					√	114 (49.4)	118 (50.6)
6	Inhaled albuterol				√		55 (23.6)	178 (76.4)
7	Inhaled budesonide				√		53 (22.7)	180 (77.3)
8	Systemic glucocorticoids		√	√			47 (20.2)	186 (79.8)
9	Insulin preparations				√		126 (54.1)	107 (45.9)
10	Nifedipine				√		52 (22.3)	181 (77.7)
11	Simvastatin					√	121 (51.9)	112 (48.1)
12	Methyldopa				√		159 (68.2)	74 (31.8)

Note: Correct answers are indicated by a checkmark.

Pharmacists' Knowledge about Medication Risks during Pregnancy

Table 3 documents the participants' responses to questions assessing their knowledge of medication risks during pregnancy. Among analgesics, only 7.7% of the participants identified that NSAIDs and aspirin can cause premature closure of the fetal ductus arteriosus if used after 30 weeks of gestation (n = 18, 7.7%). Most participants were unaware that the use of triamcinolone spray is associated with fetal malformations of the respiratory system (n=160, 66.7%), and that proton pump inhibitors are among the acid-suppressant medications that commonly increase the risk of gastric infections (n=172, 73.8%). A significant proportion of respondents did not recognize the harmful effect of systemic glucocorticoids and their association with fetal cleft palate (n = 149, 63.9%), as well as the association of angiotensin-converting-enzyme (ACE) inhibitors with neonatal renal failure (n = 153, 65.7%).

Table 3. Assessing the Pharmacists' Knowledge about Medications' Risks during Pregnancy (N = 233)

	Questions or statements	Answers [a]	One correct answer n (%)	Incorrect answer n (%)	Multiple correct answers n (%)
1	Which of the following drugs may cause premature closure of the ductus arteriosus of the fetus if used after 30 weeks of gestation?	- Muscle relaxants - Paracetamol - ***NSAIDs*** - ***Aspirin***	100 (42.9)	114 (48.9)	18 (7.7)
2	Fetus malformations of the respiratory system is linked to the use of the following nasal spray:	- ***Triamcinolone*** - Budesonide - Fluticasone - Mometasone	73 (31.3)	160 (66.7)	
3	Which of the following acid suppressant medications is more likely to cause an increase in gastric pH and hence increases the risk of enteric infections in pregnant women?	- Antacids - H2-blockers - ***Proton pump inhibitors (PPIs)*** - Potassium-competitive acid blockers	61 (26.2)	172 (73.8)	
4	Which of the following medications can cause fetal cleft palate if taken during the 1st trimester of pregnancy?	- Montelukast - ***Systemic glucocorticoids*** - Inhaled albuterol - Inhaled budesonide	84 (36.1)	149 (63.9)	
5	The risks of uncontrolled diabetes mellitus in pregnancy include:	- Neural tube defects - ***Preeclampsia*** - ***Macrosomia*** - Neonatal hyperglycemia	118 (50.6)	53 (22.7)	62 (26.7)
6	Neonatal renal failure is linked to the use of the following medication during pregnancy:	- ***Angiotensin-converting-enzyme (ACE) inhibitors*** - Beta blockers -Thiazide diuretics - Loop diuretics	80 (34.3)	153 (65.7)	

[a] The correct answers are presented in bold and italics corresponding to each question.

Pharmacists' Therapeutic Decision-making Skills

Table 4 presents the cases used to evaluate the participants' skills in therapeutic decision-making. Only half of the participants correctly identified the appropriate medications or herbal remedies for controlling nausea during pregnancy (n = 123, 52.8%). More than half of them recognized that oral cetirizine is the preferred choice for managing allergic rhinitis during the first trimester (n = 127, 54.5%). The majority of participants correctly identified the preferred medications for treating hypertension (n = 171, 73.4%) and dyslipidemia (n = 151, 64.8%) during pregnancy.

Table 4. Cases Assessing the Pharmacists' Therapeutic Decision-making Skills (N = 233)

	Cases	Answers [a]	One correct answer n (%)	Incorrect answer n (%)	Multiple correct answers n (%)
1	A pregnant woman complaining of nausea during her first month of pregnancy. What would you advise her to take?	- ***Oral ginger*** - ***Oral pyridoxine*** - Oral promethazine - Oral diphenhydramine	123 (52.8)	22 (9.4)	88 (37.8)
2	What do you advise a pregnant woman to take, during her 1st trimester, complaining of allergic rhinitis?	- Olopatadine nasal sprays -Triamcinolone nasal sprays - ***Oral cetirizine*** - Oral pseudoephedrine	127 (54.5)	106 (45.5)	
3	A pregnant woman has been suffering from acute diarrhea for the past few days. What would you advise her to do?	- Take Loperamide - Take Bismuth subsalicylate - Take Diphenoxylate with atropine - ***Take fluids to prevent dehydration and initiate probiotics***	184 (79)	49 (21)	
4	A pregnant woman, in her 1st trimester, complaining of constipation. What would you advise her to take?	- ***Oral polyethylene glycol*** - Oral bisacodyl - Oral mineral oil - Oral castor oil	113 (48.5)	120 (51.5)	
5	A pregnant woman presented with gestational hypertension, who was previously on enalapril before getting pregnant. What would you suggest to do to keep her blood pressure controlled during pregnancy?	- Continue enalapril - ***Discontinue enalapril & start nifedipine*** - ***Discontinue enalapril &start methyl dopa*** - Discontinue enalapril & start metoprolol	171 (73.4)	41 (17.6)	21 (9)
6	A pregnant woman suffering from dyslipidemia, is not responding to therapeutic lifestyle changes. Which of the following is (are) appropriate to manage her condition?	- Oral Simvastatin - ***Oral cholestyramine*** - ***Oral omega-3 fatty acids*** - Oral fenofibrate	151 (64.8)	67 (28.8)	15 (6.4)

[a] The correct answers are presented in bold and italics corresponding to each question.

Pharmacists' Ability to Optimize the Medications' Use during Pregnancy

Table 5 presents the cases used to evaluate the participants' ability to optimize medication use during pregnancy. More than half of the participants correctly identified the timing of prandial insulin administration (n

= 138, 59.2%) and the recommended starting dose of fluticasone propionate inhaler in pregnant women with asthma (n = 120, 51.5%). Three-quarters of the participants correctly suggested the aspirin dose for patients at high risk of preeclampsia (n = 169, 72.5%), and 65.7% correctly recommended the appropriate administration of antacids when taking iron supplements to prevent drug-drug interactions (n = 153, 65.7%).

Table 5. Cases Assessing the Pharmacists' Ability to Optimize the Medications' Use during Pregnancy (N = 233)

	Cases	Answers [a]	Correct answer n (%)	Incorrect answer n (%)
1	A pregnant woman with type two diabetes mellitus was on glyburide prior to pregnancy. The physician decided to replace glyburide with a prandial insulin lispro. When should she take this insulin with regard to meals?	- ***Lispro should be injected 15 minutes before meals*** - Lispro should be injected within 15 minutes after meals - Lispro should be injected between meals - Insulin lispro should be injected at any time	138 (59.2)	95 (40.8)
2	What is the optimal duration for using intranasal oxymetazoline for a pregnant woman complaining of severe nasal congestion?	- ***3 days or less*** - 6 days - 7 days - Not recommended during pregnancy	52 (22.3)	181 (77.7)
3	The doctor decided to prescribe a fluticasone propionate meter dose inhaler for a pregnant asthmatic patient. What is the recommended starting dose for this patient?	- ***100-250 mcg*** - 250-500mcg - >500 mcg	120 (51.5)	113 (48.5)
4	What would suggest for a pregnant woman in the last trimester complaining of a severe headache?	- Oral paracetamol - Oral NSAIDs - ***Refer her to a physician*** -Rest, reassurance, and massage	33 (14.2)	200 (85.5)
5	What would you suggest for a pregnant woman with gestational hypertension at high risk of preeclampsia?	- ***Aspirin 80 mg*** - Aspirin 200 mg - Aspirin 300 mg - Aspirin 500 mg	169 (72.5)	64 (27.5)
6	A pregnant woman has been suffering for several days from heartburn after meal intake and asks for your advice. What would you suggest, in addition to lifestyle modifications and dietary changes, knowing that she is already receiving an iron supplement?	- Take antacids and an iron supplement after meals - ***Take the iron supplement at least 2 hours before an antacid and not less than 6 hours after.*** - Take antacids andiron supplement before meals. - Discontinue the iron supplement until the heartburn problem resolves.	153 (65.7)	80 (34.3)

[a] The correct answers are presented in bold and italics corresponding to each question.

Variables Associated with Answering the Test

The results of the univariate analyses are summarized in Table 6. Single participants (mean = 16.58) had significantly higher scores of correct answers on the entire test compared to married participants (mean = 14.79, p = 0.04). Additionally, participants with 10 years of experience or less achieved a higher test score (mean = 17.22 ± 5.86, P = 0.01).

Table 6. Variables Associated with Answering the Test

Gender		**T-test**
Male/Female (Mean)	15.56/16.07	p = 0.58
Age **Mean ± SD** **18 – 23** **23 – 28** **29 – 34** **35 – 40** **> 40**	 15.92±6.43 13.28± 6.73 16.19±6.74 16.94 ± 6.74 15.55 ± 6.75 14.94± 6.70	**One-way ANOVA** P = 0.23
Marital status		**T-test**
Single /Married (Mean)	16.58/14.79	p = 0.04*
Occupation **Mean ± SD**	15.92 ± 6.43	**One-way ANOVA** p = 0.10
University		**T-test**
Public/ Private (Mean)	16.01/15.83	p = 0.83
Experience (Mean ± SD)		**One-way ANOVA**
< 5 years	16.11 ± 6.26	p = 0.01*
5-10 years	17.22 ± 5.86	p = 0.01*
10-15 years	13.26 ± 5.54	p = 0.92
< 15 years	16.05± 5.88	p = 0.13
***P< 0.05 → statistically significant**		

DISCUSSION

Despite the fact that pharmacists do not provide direct obstetric services, they are readily accessible to women at any point during the continuum of care for preventive advice, prescription filling, and the management of minor ailments. Pharmacists have a considerable influence in optimizing patients' drug therapies; however, they are sometimes ill-equipped to provide adequate pharmaceutical care services for the well-being of mothers[13]. The present study was conducted to assess the preparedness of Jordanian pharmacists in providing appropriate patient care to pregnant women.

The current study revealed that pharmacists have inadequate knowledge about the safety of medications used during pregnancy. Most of the participants could not recognize the safety of various medications during the three pregnancy trimesters. Additionally, almost half of the participants could not identify medications contraindicated during pregnancy. These findings were consistent with other studies, where pharmacists exhibited a low level of knowledge about medication safety[14-16]. As such, these findings reflect that pharmacists have insufficient competence to provide patients and healthcare providers with adequate information about the safety of medications during pregnancy.

We also assessed the participants' knowledge about medication risks during pregnancy. Pharmacists must cautiously evaluate the potential risks of medication use versus the risks of untreated disease during pregnancy[3]. Pharmacists should provide patients with information regarding both the benefits and risks of medication use while discussing the limitations of the available information[17]. The

knowledge of pharmacists about the risks of different medications used during pregnancy differs according to the type of medication. Many participants did not identify the risks associated with the use of commonly dispensed prescribed-only medications (POM) and over-the-counter (OTC) medications. Therefore, pharmacists are not well-equipped with adequate knowledge about medications' safety and risks during pregnancy. This underscores the need to incorporate core courses in the pharmacy curriculum among Jordanian pharmacy colleges to adequately cover the pharmacology of commonly used medications and pharmacotherapeutics during pregnancy.

A high proportion of participants did not recognize the medications required to relieve nausea associated with pregnancy. Our results were not in line with relevant studies[18, 19, 20, 21], which could be explained by the limited national availability of OTC nausea medications, potentially hindering the process of selecting the right product. Furthermore, only half of the participants were aware that oral cetirizine is the drug of choice to manage allergic rhinitis, consistent with a previous French study[22]. However, the majority of pharmacists recommended fluid resuscitation to prevent dehydration and the use of probiotics to treat diarrhea, which was consistent with other studies[23, 24]. Most of the participants recognized the drug of choice to treat hypertension and dyslipidemia, which was similar to other relevant studies[25-28]. On the other hand, the pharmacists' responses to the treatment of constipation were inappropriate. Only half of the pharmacists considered oral polyethylene glycol as the drug of choice. A similar finding was retrieved from a Kuwaiti study, in which the participants recommended stimulant laxatives for pregnant women with diarrhea[24]. Thus, our results have demonstrated the inadequate preparedness of Jordanian pharmacists to make appropriate therapeutic decisions for pregnant women.

Pharmacists play a pivotal role in optimizing medication therapy during pregnancy. For example, they are essential in ensuring the safe and effective use of insulin pens in gestational diabetes. Pharmacists monitor patients' response to insulin therapy, ensure glycemic control, provide counseling on the appropriate administration and titration of insulin, and help prevent hypoglycemic episodes[29, 30, 31]. However, about 40% of the participants did not identify the appropriate administration of prandial insulin in relation to meal intake. This raises concerns that pharmacists may not be providing adequate care for general diabetic patients on insulin therapy. Furthermore, less than one-fourth of the participants correctly identified the recommended duration for the use of topical intranasal decongestants containing oxymetazoline. As a result, pharmacists may not be providing appropriate care for patients with minor ailments and could be putting patients at risk of developing rebound congestion[32]. Headaches during pregnancy can be either primary or secondary, with the latter potentially indicating a life-threatening condition. The most common secondary headaches in pregnancy include stroke, cerebral venous thrombosis, eclampsia, and preeclampsia, especially in the third trimester[33, 34]. Remarkably, the majority of the study participants were unable to provide appropriate advice to a pregnant woman complaining of severe headaches in the last trimester of her pregnancy. This suggests that Jordanian pharmacists may lack the necessary skills to optimize medication use during pregnancy.

Study Limitations

While this study proactively investigated the preparedness of Jordanian pharmacists to provide appropriate pharmaceutical care for pregnant women, it has several limitations that should be highlighted. First, the study had a relatively small sample size. Second, we recruited a random sample of pharmacists practicing exclusively in Amman, the capital of Jordan. Therefore, we cannot extrapolate our results to pharmacists practicing in other parts of the country. Third, there was an underrepresentation of male and older pharmacists with longer professional experience. This may be partly attributed to the high non-response rate to the

questionnaire. Additionally, it is possible that younger females were more interested in the study topic, which is related to women's health. Consequently, the generalizability of the results to the broader population of Jordanian pharmacists may be limited. Fourth, the web-based nature of the study, which utilized a self-administered questionnaire, is a potential weakness. This approach could introduce socially desirable responses and may not accurately reflect the pharmacists' actual knowledge, as some participants might have conducted a literature search before responding to the questions.

CONCLUSION

Pharmacists have demonstrated an inadequate level of preparedness in providing appropriate pharmaceutical care for pregnant women. Consequently, there is an urgent need for collaborative efforts between national health authorities and academic institutions to empower pharmacists and enhance their knowledge and skills necessary for optimizing the health outcomes of pregnant women.

The Jordan Pharmaceutical Association should develop a range of educational sessions aimed at providing Jordanian pharmacists with continuous and up-to-date knowledge about medications during pregnancy. Additionally, Jordanian universities should consider incorporating official courses into their curriculum that address pharmacotherapy during pregnancy.

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Conflict of Interest

The authors declare that they have no conflicts of interest.

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تقييم معايير العلاج الدوائي أثناء الحمل لدى خريجي كليات الصيدلة الأردنية

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ملخص

خلفية الدراسة: تعتبر معرفة الصيادلة بمخاطر الأدوية وفوائدها أثناء الحمل، وكفاءتهم في اتخاذ القرارات العلاجية المناسبة لتحسين استخدام الأدوية بين النساء الحوامل أمرًا محوريًا. تهدف هذه الدراسة إلى تقييم معرفة الصيادلة الأردنيين بمخاطر الأدوية وسلامتها أثناء الحمل، بالإضافة إلى تقييم قدراتهم على اتخاذ القرارات العلاجية المناسبة وتحسين استخدام الأدوية.

المنهجية: تم ارسال استبيان ذاتي يتكون من ستة أقسام مع خيارات محددة مسبقًا إلى 400 صيدلي تم اختيارهم عشوائياً في عمان، الأردن.

النتائج: أكمل 233 صيدلي الاستبانة بنسبة استجابة 58.2٪. ما يقرب 73.4 ٪ من الصيادلة حددوا الدواء الأفضل لارتفاع ضغط الدم أثناء الحمل. كما حدد أكثر من 70٪ من الصيادلة الجرعة الصحيحة من الأسبرين للوقاية من تسمم الحمل. وأظهر حوالي 50٪ من الصيادلة معرفة متدنية بمخاطر الأدوية وسلامتها أثناء الحمل.كما كان هناك فرق واضح في درجات الصيادلة في جميع الاختبارات بناءً على الحالة الاجتماعية و سنوات الخبرة سنوات. كما ذكر 79.8% من الصيادلة انهم درسوا المعالجة الدوائية اثناء الحمل في دراستهم الجامعية.

الاستنتاج: أظهر الصيادلة مستوى غير كافٍ من الاستعداد في تقديم الرعاية الصيدلانية المناسبة للحوامل. لذلك، هناك حاجة ملحة لدمج الجهود بين السلطات الصحية الوطنية والمؤسسات الأكاديمية لتمكين الصيادلة وتحسين معارفهم ومهاراتهم اللازمة لتحسين الرعاية الصحية للمرأة الحامل.

الكلمات الدالة: الحمل، العلاج الدوائي، السلامة الصحية، الرعاية الصيدلانية.

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