

## **Knowledge of community pharmacists in issues related to breastfeeding: a cross sectional study in the Palestinian pharmacy practice**

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### **ABSTRACT**

#### **Background**

The breastfeeding provides the ideal nutrition for infants. Breastfeeding is very important for infant in the first 6 months, because they will have fewer hospitalization and trips to doctors. The pharmacists can be a resource in breastfeeding promotion and support. The pharmacists can advise and consulting the mothers about importance of breastfeeding.

#### **Method**

The study was conducted with a cross-sectional observational design using a questionnaire. We distribute the questionnaire to pharmacists in their place of work. A total of 376 pharmacists responded to a course on breast feeding during pharmacy school. The study was conducted from [July 2017](#) to [February 2018](#). The reliability and internal consistency of the study tool was assessed using the test-retest method and the Cronbach alpha. Categorical groups were compared using the chi-square test and the Spearman rank correlation.

#### **Result**

A total of 376 pharmacists responded to the questionnaire, the female 196 and the male 180, they respond about taking (e.g. codeine) for cough what would you say?, when a breastfeeding mother ask pharmacist about taking pseudoephedrine what would you say?.

#### **Conclusion**

This study was conducted to investigate the knowledge of pharmacists about drug and disease during breastfeeding.

## **2. Assessment of age-related changes in pediatric gastrointestinal solubility of cefdinir in biorelevant media**

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## Abstract

Solubility of a drug in the gastrointestinal (GI) tract is an important determinant of its oral **:Background** Adults and children have different bioavailability as only dissolved drugs are absorbed from the GI tract physiological and anatomical characteristics, which consequently may lead to differences in the pharmacokinetics of drugs and consequently lead to different exposure-response. Cefdinir is a third recurrent urinary tract generation cephalosporin widely used for upper and lower respiratory infections infections, simple skin, and skin structural infections in adults and children

The aim of the study was to assess the solubility of cefdinir in pediatric biorelevant pediatric **:Objective** media and compare it with the relevant adult media

Solubility of cefdinir was assessed in 13 biorelevant media reflective of the gastric and **:Methods** proximal small intestinal environments to both fasted and fed states in pediatrics and adults. Solubility assessment was conducted in a shaking water bath with a temperature set to 37 °C and 200 strokes/min. Solubility assessments were determined following a 72 h dwell period. Saturated media samples were then filtered through 0.45 µm cellulose filters and diluted with fresh media before analysis. Assessment of solubility in the fed-state media was conducted using equilibrium dialysis using dialysis membrane (MWCO 12,000–14,000 Da). For solubility assessment, dialysis membranes were removed and their contents were extracted, vortexed, centrifuged at 8,000 rpm and 4 °C for 15 min, and then filtered through 0.45 µm cellulose filters. Quantification of cefdinir was done using a voltammetric method

In the simulated fasted-gastric media, solubility of cefdinir significantly decreased in biorelevant **:Results** media representative of both neonates and infants. In fasted-state intestinal media, solubility was increased in media representative of pediatric media when the bile salts were assumed 50% of those of adults. Interestingly, solubility ratios were outside of the 80%-125% criteria which indicated that the differences in solubility of cefdinir in pediatric media compared to adult media which were outside of the acceptable range

Although the solubility of cefdinir was different in pediatric biorelevant media compared to **:Conclusions** those in adults, interestingly, it fell outside an 80–125% range from adult values in pediatric media.

Findings of this study suggest large age-related changes in solubility of cefdinir in relation to the GI fluid composition. More investigations are needed to define a future pediatric biopharmaceutical classification system as pediatric biopharmaceutics are not well understood

### 3. Exploring weight management services in Palestinian pharmacies

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## **Abstract**

**Objective:** This study was conducted to determine the knowledge and practices of Palestinian pharmacist toward weight loss products and programs, if the recommendations used by pharmacist are outlined in weight loss guidelines, and, if not, what recommendation could be made.

**Methods:** This study was conducted in an observational cross-sectional design using a questionnaire. The questionnaire collected the sociodemographic and practice characteristics and weight management strategies offered at community pharmacies in Palestine.

**Results:** A total of 350 pharmacists completed the study. The highest percent of pharmacists (78.3%) had a bachelor degree in pharmacy, (76.6%) graduated from Palestinian universities. About 65% of the pharmacists had been in practice since fifteen years or less. About 45% of the pharmacists had course(s) on weight management during their pharmacy school. The highest percentage of pharmacists who were under of 40 years old asked their patient about dietary habits (p-value = 0.027), refer their patient to dietician (p-value = 0.035), and needed extra staff and guidelines in pharmacy (p-value = 0.036, 0.034 respectively).

**Conclusion:** Pharmacists needed more training to provide weight management advice. Further studies are still needed to improve provision of healthcare services in community pharmacies in Palestine.