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ORIGINAL ARTICLE

Community pharmacists' knowledge, behaviors and experiences about adverse drug reaction reporting in Saudi Arabia

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Abstract *Objective:* To assess community pharmacists' knowledge, behaviors and experiences relating to Adverse Drug Reaction (ADR) reporting in Saudi Arabia.

Methods: A cross-sectional study was conducted using a validated self-administered questionnaire. A convenience sample of 147 community pharmacists working in community pharmacies in Riyadh, Saudi Arabia.

Results: The questionnaire was distributed to 147 pharmacists, of whom 104 responded to the survey, a 70.7% response rate. The mean age of participants was 29 years. The majority (n = 101, 98.1%) had graduated with a bachelorette degree and worked in chain pharmacies (n = 68, 66.7%). Only 23 (22.1%) said they were familiar with the ADR reporting process, and only 21 (20.2%) knew that pharmacists can submit ADR reports online. The majority of the participants (n = 90, 86.5%) had never reported ADRs. Reasons for not reporting ADRs most importantly included lack of awareness about the method of reporting (n = 22, 45.9%), misconception

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that reporting ADRs is the duty of physician and hospital pharmacist (n = 8, 16.6%) and ADRs in community pharmacies are simple and should not be reported (n = 8, 16.6%). The most common approach perceived by community pharmacists for managing patients suffering from ADRs was to refer him/her to a physician (n = 80, 76.9%).

Conclusion: The majority of community pharmacists in Riyadh have poor knowledge of the ADR reporting process. Pharmacovigilance authorities should take necessary steps to urgently design interventional programs in order to increase the knowledge and awareness of pharmacists regarding the ADR reporting process.

1. Introduction

Adverse drug reactions (ADRs) are the most common cause of morbidity, mortality and poor economic outcomes (Pirmohamed et al., 2004; Patel et al., 2007). Therefore, post-marketing surveillance is very important for monitoring the risk and benefits of pharmaceutical products after they have been released on the market (Edlavitch, 1988). As an initiative to encourage and monitor ADR reporting, the Saudi Food and Drug Authority (SFDA) has recently established a National Pharmacovigilance Center that has made online reporting forms and papers forms available to encourage ADR reporting by public and healthcare professionals (National Pharmacovigilance Centre, 2012).

Traditionally, the role of the pharmacist was limited to the preparation and dispensing of drugs prescribed by the physician. Recently, the role of the pharmacist has expanded to other aspects of patient care. These roles include reporting ADRs, improving patients' health, and economic outcomes (Hepler and Strand, 1990; Manley and Carroll, 2002; Kane et al., 2003). Pharmacists can play an important role in ADR reporting and pharmacovigilance by increasing the number as well as the quality of submitted reports (Kees et al., 2004; Gedde-Dahl et al., 2007). However, in many countries the knowledge of pharmacists about pharmacovigilance and ADR reporting is poor and the rate of reporting is low (Oreagba et al., 2011; Su et al., 2010; Vessal et al., 2009; Toklu and Uysal, 2008; Lee et al., 1994). The scenario in Saudi Arabia is the same as in other countries. A recent Saudi study reported lower awareness of the ADR reporting program and a poor reporting rate (13.2%). Barriers to ADR reporting identified by this study included, most commonly, a lack of knowledge about where and how to report ADRs, and unavailability of ADR reporting forms (Bawazir, 2006).

Assessing the knowledge, behaviors and experiences of community pharmacists relating to spontaneous reporting of ADRs is very important. When pharmacists have sufficient knowledge of the ADR reporting process, they can improve other healthcare professionals' knowledge about ADR reporting (Khalili et al., 2012). In Saudi Arabia, studies conducted to assess pharmacists' knowledge, behaviors and experiences relating to ADR reporting are limited (Bawazir, 2006) and were conducted before the establishment of the National Pharmacovigilance Centre. Therefore, the aims of the current study were to assess the knowledge, behaviors and experiences of community pharmacists regarding the reporting of ADRs.

2. Methods

2.1. Study design and setting

This was a cross-sectional study conducted among a convenience sample of community pharmacists from Riyadh, Saudi Arabia.

2.2. Study tool

The questionnaire comprised 21 questions (Appendix 1). The first part consisted of two questions, one closed-ended and one open-ended. This part was designed to understand community pharmacists' familiarity with the ADR reporting process. The second part consisted of four questions, two open-ended and two close-ended, which used a four-point scale ranging from "never" to "frequently". The third part of the questionnaire consisted of four open-ended questions and one close-ended question designed to measure community pharmacists' experiences with ADRs. In the fourth part of the survey, patients' knowledge regarding counseling about ADRs was measured with a five-point scale ranging from "never" to "frequently". Three experts in the field were asked to provide comments regarding the questionnaire conciseness, clarity and relevance. Their comments were taken into consideration and the final survey was prepared. The questionnaire language was English.

2.3. Data collection and ethical consideration

A pharmacy student visited each pharmacy and invited community pharmacists to participate in the study after explaining the aims of the study. A written consent form was obtained from each participant who wished to participate in the study. Participants were told that all information provided was completely confidential and the results would be presented anonymously.

2.4. Data analysis

Descriptive statistics were used to analyze the data (frequency and percentages; mean ± standard deviation). Statistical analysis was performed using the Statistical Package for Social Science (SPSS) Software for Windows, (version 20.0).

3. Results

The survey was distributed to 147 pharmacists; however only 104 surveys were collected, giving a response rate of 70.7%.