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Studying Saudi Citizens' Knowledge of Antibiotic Misuse and Safe Use Practices

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ABSTRACT

The purpose of this study is to investigate common misuses of antibiotics, evaluate the degree of knowledge about medicine safety among the Saudi population, and examine any associations between these variables and demographics. MethodsA questionnaire survey was randomly distributed to members of the general population and medical professionals in Al-Riyadh-Al-Kharj, Saudi Arabia, in 2016 and 2017. Study Location and Time Commitment: Over the course of nearly two months, samples were gathered from residents of Al-Kharj and Al-Riyadh. A total of 413 participants were surveyed (334 members of the general population and 79 members of the medical community; age range, 18-61 years; 82 males, 331 women). Both Riyadh and Al-Kharj received an equal number of these surveys. Statistical Product and Service Solutions (SPSS) (version 22.0) was used to conduct the statistical analysis of the data. The p-value chi-square test Differences in replies were analyzed using a 0.05 significance level. The results indicated that many individuals were improperly storing or disposing of antibiotics, indicating either ignorance or deliberate error. Health care providers also reported that noncompliance from patients was a major source of mistakes. Health care providers' involvement is crucial to improving antibiotic safety practices in Saudi Arabia, and their efforts may even pay for themselves.

Keywords: Antibiotics; medication safety; patient safety; errors; storage; misuse; self-medication; antibiotic resistance; patient awareness.

1. INTRODUCTION

Antibiotics are well recognized as a class of drugs that may save lives, and as a result, they are often administered to patients [1]. There is widespread overprescribing and improper usage of these drugs, however [2,3]. This has resulted in major issues all across the globe, such as the rise of bacterial resistance, the proliferation of chronic illnesses, and the spiraling expense of healthcare as a result [4,5]. Medication safety is crucial to ensure the wellbeing of patients, but it is threatened by variables such improper antibiotic usage, storage, sharing prescription pharmaceuticals, self-medication practices, and abuse behaviors (Tawfik & Jabeen, 2013). Precautions to ensure the safety of both medical staff and patients are fundamental to any healthcare system. A medication safety plan is one that takes into account the patient, the drug, the dosage, the route, and the timing of delivery [6]. A patient-safe environment is one in which all potential threats to a patient's well-being have been identified and mitigated in a proactive and ongoing manner [6]. The Saudi Arabian Food and Drug organization (SFDA) is the regional regulatory organization responsible for ensuring the quality, safety, and effectiveness of pharmaceuticals in the country.

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Knowledge, attitudes, and behaviors of the community, as well as the antibiotic prescription behavior of healthcare professionals, are intimately associated to inappropriate use of antimicrobial medications [7]. The World Health Organization promotes the prudent use of antimicrobials via initiatives like the restriction of antibiotics to those with a doctor's prescription [8] and the dissemination of relevant educational materials [9]. pharmaceutical error prevention is, thus, a model for improvement in pharmaceutical safety [10]. Concern has been expressed in recent study papers [11] concerning the consequences of the procedures for administering different medications, particularly antibiotics, utilized in healthcare systems on medication and patient safety.

Many nations in the Middle East with comparable geography and culture to Saudi Arabia see these kinds of usage as a public health problem since they may cause major health consequences or even death [12, 13]. Antibiotic overuse has been studied and the causes have been explored in several research. Attitudes, beliefs, and knowledge about antibiotic usage [14] and related behaviors [15] are among them. However, there is a lack of specific data on antibiotic use patterns and public knowledge across educational levels in Saudi Arabia [16]. Evidence from surveys of the general population on the incidence of home-based Antibiotic blunders that often occur. There is an immediate need to raise awareness of the many errors that people make in their everyday use of antibiotics in Saudi Arabia in order to increase medication compliance and patient safety. The goals of this research are to (1) identify the most common instances of antibiotic misuse; (2) evaluate the degree of drug safety knowledge among the Saudi population; and (3) establish associations between these variables and demographic characteristics.

2. MATERIALS AND METHODS

2.1 Materials

Individuals from Saudi Arabia.
Questionnaire made of 42 questions.

2.1.1 Inclusion Criteria

Individuals of both genders
Individuals aged above 18 years

2.1.2 Exclusion Criteria

Uneducated people who could not read or write
Individuals aged less than 18 years

2.2 Methods

This research is a cross sectional study and the design used a questionnaire survey distributed randomly among public people & health care professional in Al-Riyadh – Al-Kharj, Saudi Arabia, in 2016-2017. The questionnaire had multiple questions pertaining to Antibiotics used and self-medication habits. Some of these questions were about the placement of antibiotics stored at home, whether they are prescription or not, completing the antibiotic course, keeping the leftover drugs for future use, understanding instructions given and sharing medications.

A self-designed, validated questionnaire adapted from previous studies was designed (Tawfik & Jabeen, 2013), in both English and Arabic languages. We divided 42 questions into two types; 32 was general for both public people & health care professional and only 10 questions were specialized for health care professionals. The questionnaire was distributed to a sample of 10 participants selected randomly and responses were subjected to a factor analysis. Then, some changes were made to some questions. The content validity was finally assessed by discussion and rating by academics and students. A pilot questionnaire was given

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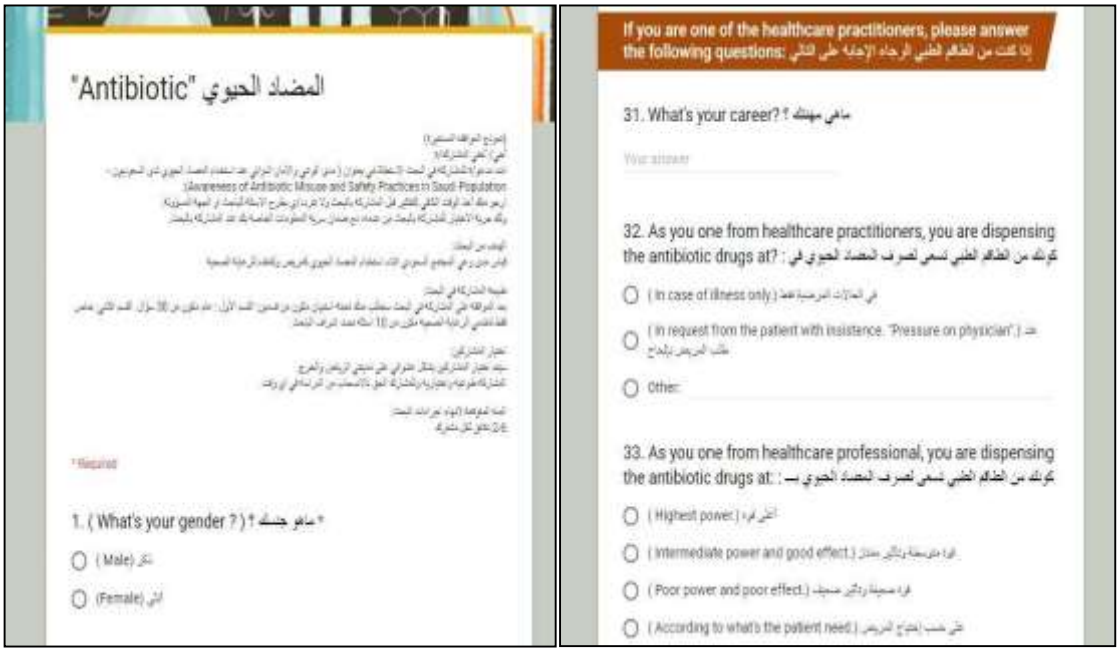

Fig. 1. Questionnaire form by using Google survey website

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3. RESULTS

The questionnaire will be administered orally, and copies will be made available electronically using a Google survey (viewable at https://docs.google.com/forms/d/e/1FAIpQLScfLd3jjeFvePuqYNO8jSliM5kBBWbSSr_QrEvmWP0 W502Bow/viewform?vc=0&c=0&w=1)) were submitted after filling out the online survey. The participants' ages, genders, and occupations were compared with their replies to a questionnaire. For the most part:

In both Riyadh and Al-Kharj, 413 replies were

2.3 Statistical Analysis

Storage and prescriptions. Medical Attendant The questions were presented in three formats; A total of 413 answers were gathered for this study, and analysis was performed utilizing Dispensing antibiotics, patient education, and prescription writing challenges

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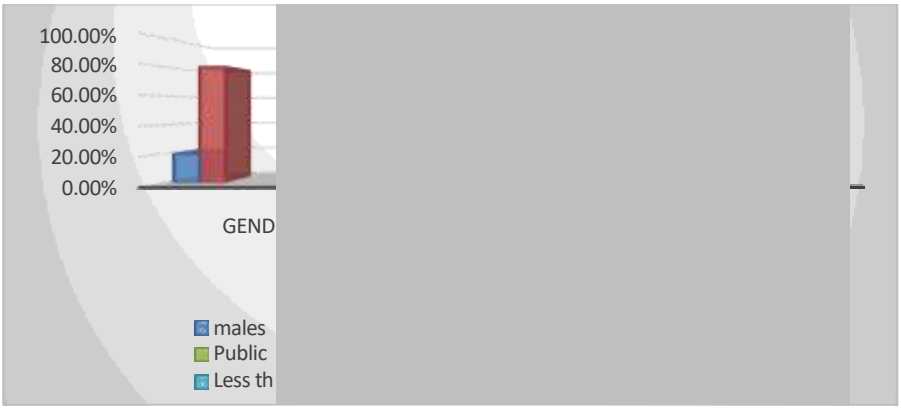

Fig. 2. Study populations divided into different categories

Fig. 3. The most common disea es or medical illnesses for which antibiotics have been used

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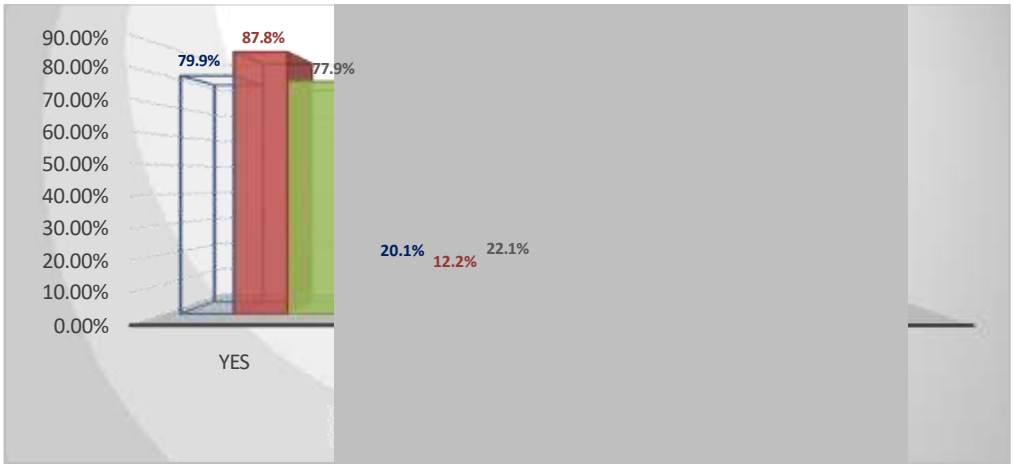

Fig. 4. Variation of population according to which prefer natural materials (Like: Honey/ Garlic/ Lemon...Etc.) over drugs for different gender

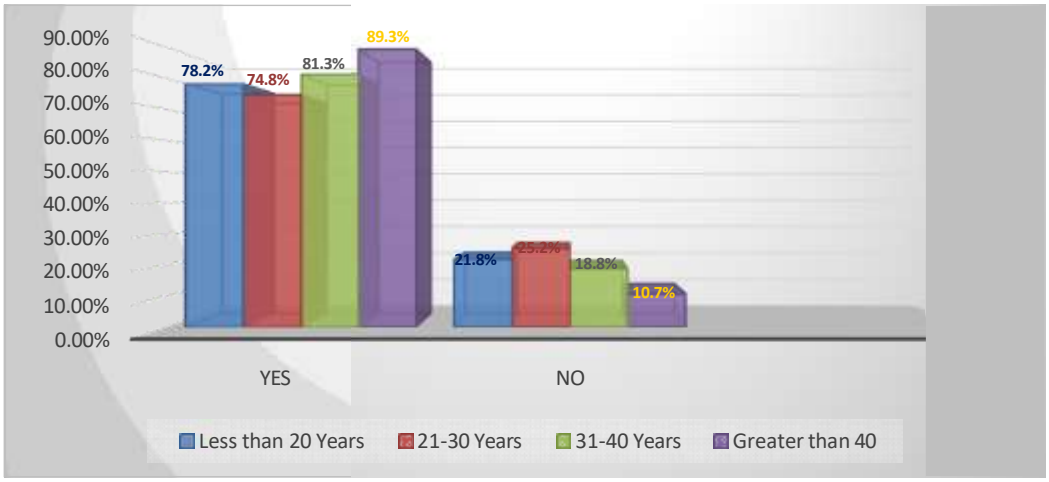

Fig. 5. Variation of population according to which prefer natural materials (Like: Honey/ Garlic/ Lemon...Etc.) over drugs for different ages

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4. DISCUSSION

Besides public population, part of the questionnaire was developed to measure the role of the health care professionals during the use of antibiotic such as; writing of prescription and patient education. This study showed that about 68.22% of Saudi health care professionals have a high effective role in patient education who are on antibiotics and only 31.75 % were of little role (Referred to Table 9). Through this ratio, we find that the role of the medical staff is very effective in building up patient's awareness and guiding them through the right way during antibiotic therapy. Unfortunately, all these efforts are being not sufficient and Health care professionals need to work harder to make higher in order to increase the level of safety and awareness in a well civilized population like Saudi one. Indeed, our study showed a high prevalence of medical errors and antibiotic resistances are associated mainly with patient incompliance, as they did not complete the antibiotic course. Subjects from the general population are not always aware about the importance of compliance in the case of antibiotic treatment of the correct use of antibiotics and are sometimes confused [18,19], therefore educational programs should be instated to inform about the harm produced by administering antibiotics in the most common viral infections. It is essential to increase the awareness of the importance for correct use of antibiotics, not using antibiotics in common viral diseases, both by healthcare professionals and the general population [7,20].

5. CONCLUSION

With the context of the main aim of this study, our paper was the first to conclude that females have more awareness of the safety measures than males when dealing with Antibiotics. In addition, we suggest that the major problem in Saudi society is the lack of awareness of the correct way of antibiotic storage and disposal. Moreover, self-medication and patient incompliance are considered the main problems beyond the antibiotic misuse as claimed by health care professionals. Therefore, active participation by health care professionals is fundamental for increasing Saudi population awareness about optimum dose regimen which would minimize the adverse effects and resistances, raise the antibiotic safety measures and might even be cost effective.

REFERENCES

1. Ciceklioglu M, Eren S, Ermertcan S, Hosgor-Limoncu M, and Buke AC. Buke AC, editor. 2003. Rational Antibiotic Use and Academic Staff. Int. J. Antimicrob. Agents. 21:63–66.
2. Quality measurements of antimicrobial medication use: An evidence-based approach. In: Gyssens IC (ed.), International Journal of Antimicrobial Agents 2001;17:9-19.
3. Third: Shehadeh, M.; Suaifan, G.; Darwish, R. M.; Wazaify, M.; Zaru, L.; Alja'fari, S. Jordanian adults' familiarity with, and perspectives on, the appropriate (and inappropriate) use of antibiotics. Test of the waters: Saudi Pharmaceutical Journal, Shehadeh M., editor. 2012;4:125-133. An Evidence-Based Journal.
4. Evidence-based epidemiologic observations of prudent antibiotic use in a pediatric teaching hospital. Int J Infect Dis. 2002;6:74-77. Mora Y, Avila-Agtiero M, Umafia M, Jimenez A, Paris M, Faingezicht I.
5. Perceptions of patients seeking primary care in Kuwait with respect to upper respiratory tract infections: an evidence-based Kuwait medical Journal, Sorkhou I, Al-Qallaf B, Hajiah A, Al- Sheibani H, Bayoomi A, Mustafa A. 2002;34:272-275.
6. Hughes RG, Blegen MA. Medication administration safety. In Patient safety and quality: An evidence-based guide for nurses. Hughes RG, ed., 2008;2:397-457.