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The Views of the Public on Making Decisions about over the Counter Medications and Their Attitudes towards Evidence of Effectiveness

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Authors' contributions

This work was carried out in collaboration among all authors. Author NJA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors ASA and FZA managed the analyses of the study. Author NJA managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Aim: This study aimed to determine the public views on making decisions about over the counter drugs and their attitudes towards evidence of their effectiveness.
Methodology: The present study includes gathering data from the public using a survey that was adapted from a previous study. This survey was translated from English to Arabic language and was converted to an online form using Google Forms and then the link was sent to be completed by the public.
Results: The survey was completed by 102 respondents. Most of the respondents agreed that the most important factors that influence their purchases of medications were the safety of the product (73.53%) and the efficacy of the drug (71.57). Most of the respondents agreed that the main methods of determining the effectiveness of the medication included the previous using of the drug (76.5%) and the physician recommendation to use it by a (75.5%). Only about 49.02% of them agreed that the majority of non-prescription medicines are supported by scientific evidence from drug trials to prove they are effective.

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Conclusion: This study highlighted positive views and attitudes toward the use of OTC drugs. It is important to increase the awareness of the public about how to use these drugs wisely. Community pharmacists should play a crucial role in optimizing medication use and in patients counseling.

Keywords: Attitude; OTC drugs; over the counter drugs; public; views.

1. INTRODUCTION

Over the counter medications (also known as nonprescription medications and OTC) are drugs that could be bought without a prescription [1]. They are generally effective and safe when patients follow the directions on the drug label and follow the directions of health care professional [1]. The role of evidence in decision making in relation to these drugs has been controversial. Till now, there has been some debate about their efficacy and also there has been some debate whether their use is supported by scientific evidence or no [2].

A recent systematic review has indicated that there is no good evidence for the efficacy or against the effectiveness of over the counter cough preparations in acute cough [3] and also complementary medicine has been heavily criticized for evidence base lacking [4-6]. Another study showed that pharmacists rarely considered evidence when making decisions about over the counter drugs and that safety of the drug was the primary concern for the patients [7].

One of the major problems of using OTC is that the public may be influenced by information received from family and friends that affect their medication selection [8,9]. The public may also have perceptions that these medications are safe and don't cause any harmful effects [10]. Wilcox et al. [11] reported that the individuals who use OTC non-steroidal anti-inflammatory drugs were in general unaware of the potential side-effects of these medications [11]. Other studies found that found that consumers usually had a lack of awareness of the potential interactions of OTC drugs with other drugs [12,13].

There has been limited research conducted about the views of the public on evidence of effectiveness for OTC products. Therefore, the objectives of this study was to determine the public views on making decisions about over the counter drugs and their attitudes towards evidence of their effectiveness.

2. METHODOLOGY

The present study includes gathering data from the public using a survey to determine their views on making decisions about over the counter drugs and their attitudes towards evidence of effectiveness. The survey was adapted from a previous study that was conducted by Hanna and Hughes in in Northern Ireland [2].

The survey questionnaire contains clear and simple questions that enable the respondents to provide accurate information. This survey was translated from English to Arabic language and after validation, it was converted to an online form using Google Forms and then the link was sent to be completed by the public. The survey was validated by content and face validation and after that it was shared over social media during January 2021.

The public in Saudi Arabia were included in the study. The exclusion criteria include other populations and persons who refuse to participate. Moreover, all of the incomplete surveys were excluded from the study. The data were collected and analyzed by excel software and after that the data were represented by numbers and percentages.

3. RESULTS AND DISCUSSION

The survey was completed by 102 respondents. Most of the respondents were less than 30 years old (86.28%) and most of them were students (71.57%).

Factors that influence non-prescription medicines purchases are shown in Table 2. Most of the respondents agreed that the most important factors that influence their purchases of medications were the safety of the product (73.53%) and the efficacy of the drug (71.57) followed by the familiarity with the drug (63.73%).

Table 3 shows the Views of the public on methods of determining drug effectiveness. Most of the respondents agreed that the main methods of determining the effectiveness of the

medication included the previous using of the drug (76.5%) and the physician recommendation to use it (75.5%).

Table 4 shows the statements that are related to scientific evidence of effectiveness for prescription only and non-prescription medicines. Most of the respondents agreed that the majority of medicines that are only available on prescription are supported by scientific evidence from drug trials to prove they are effective (70.59%). Only about 49.02% of them agreed that the majority of non-prescription medicines are supported by scientific evidence from drug trials to prove they are effective. Moreover, more than 67% agreed that it is wrong for non-prescription medicines which lack evidence of effectiveness from drug trials to be on sale to the public and about 64.71% said that it is more important to have scientific evidence from drug trials for medicines that are only available on prescription than non-prescription medicines.

Table 5 shows statements relating to buying non-prescription medicines and whether evidence of effectiveness influenced the decision. Only 24.51% of the respondents agreed that evidence of effectiveness from drug trials isn't important to me when I'm choosing a non-prescription medicine.

About 21.57% of them agreed that it is up to people to decide for themselves what non-prescription medicine they want, even if there is no scientific evidence for it and about 15.69% of them agreed that they will buy whatever non-prescription medicine they want, regardless of what a pharmacist recommends for them.

Table 1. Demographic data of the respondents

Variable	Category	Number	Percentage
Ages of respondents	Less than 20	46	45.10
	20-29	42	41.18
	30-39	8	7.84
	More than 39	6	5.88
Working status	Employee	15	14.70
	Not working	14	13.73
	Student	73	71.57

Table 2. Factors that influence non-prescription medicines purchases

Which of the following factors influence non-prescription medicines purchases*	Number of agreed respondents	Percentage
How effective I think the product will be	73	71.57
Familiarity with the drug name	65	63.73
How safe I think the product is for me	75	73.53
How easy the medicine is to take or use	20	19.61
The cost of the medicine	31	30.39
Advertising of the medicine and product presentation	12	11.76

**The respondents can choose more than one answer*

Table 3. The views of the public on methods of determining drug effectiveness

Methods of determining drug effectiveness	Number of agreed respondents	Percentage
I have used it before	78	76.5
Recommended by a chemist or pharmacist	47	46.1
Recommended by a physician	77	75.5
Recommended by a nurse	14	13.7
Recommended by a dentist	10	9.8
Recommended by friends and family	45	44.1
Tested by scientists and shown to be effective	35	34.3
Recommended on the Internet	8	7.8

Table 4. Statements about scientific evidence of effectiveness for prescription only and non-prescription medicines

Variable	Category	Number	Percentage
I think the majority of medicines that are only available on prescription are supported by scientific evidence from drug trials to prove they are effective.	Agree	72	70.59
	Neither agree nor disagree	20	19.61
	Disagree	10	9.80
I think that the majority of non-prescription medicines are supported by scientific evidence from drug trials to prove they are effective	Agree	50	49.02
	Neither agree nor disagree	31	30.39
	Disagree	21	20.59
It is more important to have scientific evidence from drug trials for medicines that are only available on prescription than non-prescription medicines.	Agree	66	64.71
	Neither agree nor disagree	24	23.53
	Disagree	12	11.76
I think that scientific evidence from drug trials is the only way to know if a non-prescription medicine is effective.	Agree	63	61.76
	Neither agree nor disagree	26	25.49
	Disagree	13	12.75
It is wrong for non-prescription medicines which lack evidence of effectiveness from drug trials to be on sale to the public	Agree	69	67.65
	Neither agree nor disagree	17	16.67
	Disagree	16	15.68
I think government experts should look at evidence for other non-prescription medicines like they did for children's cough and cold products and remove any that are not proven to be effective from the market.	Agree	84	82.35
	Neither agree nor disagree	10	9.80
	Disagree	8	7.85

Table 5. Buying non-prescription drugs and the influence of the evidence of effectiveness on buying decision

Variable	Category	Number	Percentage
Evidence of effectiveness from drug trials isn't important to me when I'm choosing a non-prescription medicine.	Agree	25	24.51
	Neither agree nor disagree	13	12.74
	Disagree	64	62.75
If there was no scientific evidence from drug trials to say that the non-prescription medicine was effective, but it wouldn't cause me harm, I would still be willing to try it	Agree	48	47.06
	Neither agree nor disagree	17	16.67
	Disagree	37	36.27
It is up to people to decide for themselves what non-prescription medicine they want, even if there is no scientific evidence for it	Agree	22	21.57
	Neither agree nor disagree	20	19.61
	Disagree	60	58.82
At the end of the day, I buy whatever non-prescription medicine I want, regardless of what a pharmacist recommends for me	Agree	16	15.69
	Neither agree nor disagree	15	14.70
	Disagree	71	69.61

The present study showed that the main factors that influence the respondents' purchases of non-prescription medications were the safety of the product and the efficacy of the drug and the familiarity with the drug. Similarly, Hanna and Hughes stated that the main factor that influence the purchases of non-prescription drugs was efficacy of the drug (95.9%) followed by the familiarity with the drug (79.1%) and the safety of the drug (77.8%) [2]. Similar findings also were reported in a global study covering several countries by Proprietary Association of Great Britain [14]. Tesfamariam et al. [15] stated that over the counter medications are believed to be relatively safe but their incorrect use could have serious implications [15]. Previous studies also reported that despite the fact that usually, OTC drugs are used incorrectly and causing several adverse events, their use is increasing [16-18].

Most of the respondents in the present study said that the main methods of determining the effectiveness of the medication were the previous use of the drug and the physician recommendation to use it. Hanna and Hughes stated that the public determine the effectiveness mainly by previous use (99.7%) [2]. Moreover, Similar to the results of the present study, Hanna and Hughes reported that most of the respondents in their study agreed with statement "the majority of medicines that are only available on prescription are supported by scientific evidence of effectiveness" (86.0%) and about 57.9% of them agreed with the statement "the majority of non-prescription medicines are supported by scientific evidence of effectiveness) [2]. One of the main problems is the availability of a large number of OTC drugs that were not evaluated and available in markets. Food and Drug Administration (FDA) reported that because there are over 300,000 marketed OTC drug products; FDA reviews the active ingredients and the labeling of over 80 therapeutic classes of drugs [19].

About 21.57% of them agreed that it is up to people to decide for themselves what non-prescription medicine they want, even if there is no scientific evidence for it, in contrast to that, Hanna and Hughes reported that in their study about 71.8% of the respondents agreed that that it was up to people to decide for themselves what non-prescription medicine they wanted, even if there was no scientific evidence [2].

The inappropriate use of over the counter drugs is common. In the present study a high percentage of the respondents said that they are willing to try these drugs if there was no scientific evidence from drug trials to say that the non-prescription medicine was effective, but it wouldn't cause me harm. Lessenger and Feinberg reported that the abuse of over-the-counter medications is a national issue [20]. Moreover, Aronson stated that nowadays over the counter drugs are much more widely available than ever before [21]. Conca and Worthen reported that factors that may contribute to inappropriate nonprescription drug use include public perception that these medications are without safety concerns, and the ease of procurement [22].

4. CONCLUSION

The present study highlighted positive views and attitudes toward the use of OTC medicines among the respondents but still there are some concerns that should be corrected such as their knowledge and views toward OTC drugs safety. It is important to increase the awareness of the public about how to use these medications wisely and about the safety concerns of inappropriate use by making targeted educational programs such as lectures and workshops. Community pharmacists should play a crucial role in optimizing medication use; they should counsel the patients about the efficacy and safety of OTC drugs.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

It is not applicable.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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