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Self-medication practice in Shabwah Governorate, Yemen: A cross-sectional survey

Hesham Saeed Hezam [1]*, Musaab Fahmi Yousef[2]

[1]*Dept. of Intensive Care Unit, Maternal and Childhood Hospital, Shabwah, Governorate, Yemen*
[2]*Dept. of Medicine, University of Jordan, School of Medicine, Amman, Jordan*

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ABSTRACT

Background: Self-medication is common in developing countries. In Yemen, there is little data on the prevalence of self-medication and possible factors influencing this practice. This study aimed to determine the prevalence of self-medication and to explore the attitude, knowledge, and practice of self-medication in Shabwah Governorate, Yemen.

Materials and Methods: This cross-sectional study was conducted in Shabwa Governorate, Yemen from January 1, 2024 to March 31, 2024. Approximately 385 households within the governorate areas were selected through systematic random sampling. Permission to conduct this study was obtained from local authorities as there is no research committee in the governorate.

Results: A total of 385 study participants were recruited with a response rate of 100% (N = 385). The prevalence of self-medication in this study was 69.9%. The most common reason for self-medication was time-saving 180 (66.9%), followed by cost-saving 137 (50.9%). The main indication for self-medication was fever/cough 214 (79.6%), followed by skin problems 140 (52.0%), while the most commonly used self-medication was antibiotics. Most 220 participants (81.8%) were unaware of the side effects before self-medication.

Conclusion: Self-medication has become a significant health and well-being problem in Shabwah Governorate, which has been exacerbated by the current situation in the country. In this study, the prevalence of self-medication was 69.9%. We recommend investigating self-medication practices across the country to generalize our findings and help health authorities formulate their policies on the rational use of medicines in the country and raise awareness among the population about the disadvantages of self-medication.

1. Introduction

Nowadays, medicines are easily available and some drugs are now even sold in supermarkets. In addition, in some countries, especially developing countries, people often go to the pharmacy to get advice or treatment for common ailments without consulting a physician. This type of practice among the population is called self-medication practice. The World Health Organization (WHO) has defined self-medication as "the use of drugs to treat self-identified symptoms or use of prescribed drug continuously or intermittently for chronic or recurrent diseases without periodic consultation with health care provider. [1]

Self-medication practice is a worldwide health problem with serious public health implications. Several studies conducted on self-medication practice revealed that it is a common practice, particularly in economically poor populations. [2] The intention of utilizing self-medication may be affected by various factors, such as individual,

* *Corresponding author.*
E-mail address: kh1541964@gmail.com (H. S. Hezam).

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organizational, and environmental variables. Cost-saving, time-saving, advice from friends & relatives, mild illness, lack of confidence in the health workers, high doctor fees, and lack of appropriate health facilities were some of the reasons for self-medication practice. [2–4]

In Yemen, the civil war resulting from the sociopolitical conflict has affected all aspects of life, including the health sector, which suffers from a lack of basic health care, poor facilities, and lack of access to essential medicines, in addition, medications are often dispensed by non-medical staff at medical stores without a prescription. Therefore, self-medication may offer an easier and more cost-effective opportunity to the population. However, there is a paucity of data on self-medication prevalence and possible factors that influence this practice. This study aimed to determine the prevalence of self-medication and to explore the attitude, knowledge, and practice of self-medication in Shabwah Governorate, Yemen.

2. Materials and Methods

2.1. Study design, and setting

This cross-sectional survey was conducted, from January 1, 2024, to March 31, 2024, in Shabwah Governorate, which is the third-largest governorate by area in Yemen and is located in the center of the country. This governorate, which is under the control of the internationally recognized government, consists of 17 districts covering an area of around 43,000 square kilometers and has the lowest population density in Yemen. Shabwah's estimated population of between 600,000 and 950,000 is spread across several small urban centers – the largest being the capital Ataq – and numerous small towns, villages, and hamlets. [5]

2.2. Inclusion and exclusion criteria

Inclusion criteria for the survey were residents who were at least 17 years old and who had resided in the Shabwah Governorate for not <6 months. The resident was to be one who had practiced self-medication, at least, over the past 3 months, and who had consented to be a part of the study. Incompletely filled questionnaires were not included in this survey.

2.3. Sample size and sampling technique

The sample size was calculated by adopting a 95% confidence level, and 5% margin of error at a response distribution of 50% for the population (n = 925,000) The estimated sample size was 385. Households within the areas of the governorate were selected by systematic random sampling.

2.4. Data collection instrument

An adapted questionnaire from a previous study, [6] modified slightly, was used as a data collection instrument. The questionnaire was tested for face validity by a panel of subject experts and modified in accordance with their recommendations to ensure comprehension by respondents. Verbal consent was taken from all subjects.

2.5. Data analysis and ethical approval

Data collected were coded, stored, and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 21 Results were presented as means ±standard deviation (SD) for quantitative variables, while qualitative variables were described as numbers and percentages. The permission to conduct this study was obtained from the local authorities as there is no research committee in the governorate.

Table 1: Socio-demographics

Variables	N (%)
Age	38.50±12.02 (17-66 years)
Sex	
Male	325(84.4)
Female	60(15.6)
Employees	149(38.7)
Education level	
None	59(15.3)
Primary	68(17.7)
Secondary	110(28.6)
Tertiary	148(38.4)
Marital Status	
Single	139(36.1)
Married	246(63.9)

3. Results

3.1. Demographic information about the participants

From January 1, 2024, to March 31, 2024, A total of 385 participants were selected to assess their self-medication practice. All participants received and filled out the questionnaire and returned it to the investigators (Response rate 100%). Of all, 84.4% (n=325) were male and 15.6% (n=60) were female. The mean age of the participants was 38.50±12.02(range:17-66 years) and most of them had secondary and tertiary levels of education. Table 1 shows the detailed demographic information about the participants.

3.2. Prevalence of self-medication practice, attitude toward it, and the reasons for its acceptance and avoidance

The prevalence of self-medication practice was 69.9% (n=269). Among participants accepting self-medication

Table 2: Attitude of the participants to ward Self medication practice

Variables	N(%)
Do you prefer self-medication practice?	
Yes	269(69.9)
No	116(30.1)
Reason for preferring self-medication	
Time-saving	180(66.9)
Cost-saving	137(50.9)
Lack of confidence in the health workers	128(47.6)
High doctor fees	127(47.2)
Mild illness for consultation	110(40.9)
Lack of appropriate health facilities	110(40.9)
Thought pharmacists are also doctors	86(33.1)
Difficulty in accessing the health facilities	78(28.9)
Advice from friends & relatives	65(24.2)
Privacy	60(22.3)
Reason for avoiding self-medication	
Risk for using wrong medication	110(94.8)
Risk of wrong diagnosis	99(85.3)
Risk of adverse drug reaction	67(57.8)

Table 3: Indications of self-medication in Shabwah Governorate

Variable	N(%)
Fever/Cough	214(79.6)
Skin problems	140(52.0)
Headache	136(50.6)
Diarrhea	135(50.2)
Allergy	132(49.1)
Eye problems	129(47.9)
Ear problems	110(40.9)
Abdominal pain	109(40.5)
Asthma	94(34.9)
Vomiting	79(29.4)
Muscular pain	78(28.9)
Menstrual problems	70(26.0)
Common cold	57(21.2)

Table 4: Purchased self-medications Iin Shabwah Governorate

Variable	N(%)
Antibiotics	182(67.6)
Analgesics/antipyretics	177(65.8)
Vitamins	173(64.3)
Antihypertensives	172(63.9)
Eye drops	172(63.9)
Anticough	169(62.8)
Antidiabetics	167(62.1)
Antiacids/proton pump inhibitors	167(62.1)
Antihistamine	140(52.0)
Antispasmodics	112(41.6)
Antimalaria	102(37.9)
Inhaler	94(34.9)
Antiemetics	79(29.3)

Table 5: Side effects after self-medication

Variable	N(%)
Diarrhea	42(30.5)
Allergic reaction (Skin rash)	38(14.1)
Vomiting	18(6.7)
Headache	11(4.1)
Abdominal pain	8(2.9)

Table 6: Actions taken to counteract side effect of self-medication (n=59)

Variable	N(%)
Stop taking medicine	29(49.2)
Consult pharmacist	15(25.4)
Switch to another medicine	12(20.3)
Consult a doctor	3(5.1)

practice, the common reason was time-saving 180(66.9%), followed by cost-saving 137(50.9%), lack of confidence in the health workers 128(47.6%), and high doctor fees 127(47.2%). On the other hand, the participants who prefer to avoid self-medication justified their opinion by the following: 110(94.8%) wanted to avoid the risk of using the wrong medication, 99(85.3%) wanted to avoid the risk of wrong diagnosis, and 67(57.8%) wanted to avoid the risk of adverse drug reaction. Table 2, describes the attitude of the participants toward self-medication and the reasons for accepting or avoiding self-medication practice.

3.3. Indications of self-medication practice and the purchased self-medications

The most common indication for self-medication was fever/cough accounting for 79.6% of cases (n=214), followed by skin problems 140(52.0%), headache 136(50.6), and diarrhea 135(50.2%). Table 3 describes the indications of self-medication. Antibiotics were the most commonly purchased drug, while analgesics/antipyretics ranked second. Table 4 summarizes the purchased self-medications.

3.4. Side effects after self-medication and actions taken

Most participants 220 (81.8%) were unaware of the side effects before self-medication. The most common side effect reported was diarrhea 42(30.5), followed by allergic reactions 38(14.1). Stopping drugs was the most common action taken by 49.2% of the participants (n=29). Tables 5 and 6 describe side effects after self-medication and actions taken to counteract these effects.

4. Discussion

Irrational use of medicines among different populations is of great concern because most of them lack the knowledge or have little knowledge about the safety profile of the drugs

that were self-medicated which finally might modulate severe adverse events in long-term use. A continuous worldwide increase in self-medication has been triggered by economic, political, and cultural factors and the practice is becoming a major public health problem. [7]

Numerous studies were conducted in different countries that investigated self-medication practice among different groups of the population, which revealed that self-medication practice is common and the prevalence varies throughout the world. Globally, the prevalence of self-medication practice is varied from 11.9% to 91.4%. [8,9] The difference in the prevalence of self-medication practice among various studies may be due to the variation in the ease of accessibility to all medications (even those medicines that should only be dispensed with physicians' prescriptions) from pharmacies and drug shops in different countries. Or it may be attributed to recall periods employed for self-medication practice, with some studies using 3 months and others using 6 months. Our study was the first in Shabwah Governorate, Yemen that showed self-medication practices are very common among the population in this governorate with a prevalence of 69.9%, which falls within the global range.

The reasons for preferring self-medication in our study were strongly related to the environmental characteristics of Shabwah Governorate, which has a huge area and lacks doctors in rural areas which are far from the main healthcare facilities. Thus, time-saving was the main reason for self-medication among the participants in our study, which differs from other studies. For example, In Ghana. [10] the common reason for self-medication practice was Influence from others (Friends and family), in Nepal, [6] low cost was the main reason for self-medication, In Bangladesh, [11] lack of perceived seriousness of disease was the most common reason for self-medication, while in Nigeria and Pakistan, [12,13] minor illness was the common reason why participants engage in self-medication practice.

The common indication for self-mediation in our study was fever/cough 214 (79.6%), which coincides with results from India [8,14,15], the Philippines [16], and Bangladesh. [11] This finding contradicts other studies from other countries. For example In Nepal [6], Gaza strip-Palestine [17], and Ethiopia [18], headache was the common indication for self-medication, in Pakistan [12], pain was the most common symptom for which self-medication was practiced. On the other hand, the type of utilized drugs would vary based on the nature of illness that indicates self-medication. Therefore, the current study showed that antibiotics were the class of drugs most self-medicated, which coincides with findings from a previous study from Yemen [19], and other studies from Mexico [20], Sudan [21], and India. [22] One of the crucial aspects of self-medication is the side effects of the utilized drugs and awareness of the population of these side effects and how to deal with them. Several studies including ours, showed that most participants are unaware of the side effects before self-medication. [8–22] The common adverse reactions often associated with self-medication may include skin rashes, hypoglycemia, upper gastrointestinal bleeding, gastrointestinal upset, diarrhea, and hepatitis [8–21] The common side effect of self-medication in this study was diarrhea (Table 5).

4.1. Limitations of this study

Recall bias could have happened due to the cross-sectional design and asking the participants to recall self-medication in the last 3 months. Moreover, selection bias could also happen due to involving participants who were willing to participate in the research, which may affect the characteristics of the participants leading to a bias in the results. Although we covered all governorate districts, conducting the study in one governorate does not allow us to generalize our results to the whole country.

5. Conclusion

Self-medication has become a significant health and well-being problem in Shabwah Governorate, which has been exacerbated by the current situation in the country. In this study, the prevalence of self-medication was 69.9%. The common reason for self-medication was time-saving, and the most common indication for self-medication was fever/cough. Whereas the most common self-medication used was antibiotics. Most participants were unaware of the side effects before self-medication. We recommend conducting research on self-medication practice throughout the country to generalize our results and to help health authorities formulate their policy on the rationale use of medications in the country and to increase population awareness of the disadvantages of self-medication.

6. Authors' Contribution

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, data analysis, and interpretation, or all these areas. All authors took part in drafting, revising, or critically reviewing the article; and gave final approval of the version to be published.

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8. Conflict of Interest

None.

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Author biography

Hesham Saeed Hezam, Consultant and Head https://orcid.org/0009-0002-3571-2676

Musaab Fahmi Yousef, Medical Student

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