Research Article

Assessment of Self-medication Practices During COVID-19 Pandemic in Hyderabad and Karachi, Pakistan

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Abstract

Background: Lack of appropriate treatment for COVID-19 infection led the general population of Pakistan toward self-medication and symptomatic treatment; almost 80% of the population collected medications for future use during pandemic. Thus, the current study aimed to assess the use of medication as symptomatic treatment preventive strategy.

Methods: This descriptive cross–sectional study was conducted on a local population of Hyderabad and Karachi, Sindh, Pakistan. The study duration was six months (April–September 2020). A total of 698 responders were selected via random sampling method. The number of participants were recruited based on 95% confidence interval with 5% margin error. Data were transferred into analysis sheet descriptively.

Results: Most participants responded to the use of different over-the-counter (OTC) products for headache. The use of antibiotics with prescription due to allergic conditions, cough, respiratory tract infections including sore throat, and urinary tract infections was also found among the majority. Few respondents had self-medication practice with sedatives due to difficulty in falling asleep, and 9.5% had self-medication practice due to pain. About 20.8% of the population agreed that lockdown was a contributing factor in the self-medication practice.

Conclusion: Pharmacists and healthcare professionals are advised to counsel the general public regarding the use of medication. A close collaboration is required at this stage to fight against COVID-19 and preventing the situation from worsening.

Keywords: self-medication, covid-19, Hyderabad, Karachi, Pakistan

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1. Introduction

The World Health Organization (WHO) defines self-medication (SM) as utilization of a medication without being prescribed by a healthcare professional to target symptoms that are self-recognized [1]. SM includes usage of medication through direct purchase from pharmacies, reusing previously prescribed medicines, or buying over-the-counter (OTC) medications from medical stores/pharmacies [2]. The most commonly self-prescribed medications are analgesics, antipyretics, sedative drugs, certain common antibiotics, supplements, herbal medicines, and homeopathic remedies. COVID-19 broke in as an infection in the late 2019, since then 30,905,162 confirmed cases were reported till the mid of 2020 [3, 4]. The WHO declared this situation as pandemic in the beginning of 2020. The pandemic and the fear of getting infected increased with the number of cases. COVID-19 has influenced the entire world with the confusion to preventive measures and no available treatment [5]. Cases of SM increased due to lack of appropriate guidelines to establish safety and treatment [6]. More number of people started SM practice to treat symptoms of infections such as cold, flu, and to strengthen their immunity in 2020 regardless of their knowledge, level of education, and socioeconomic status [7]. The literature supports high levels of SMs among underdeveloped countries where the healthcare systems are costly and difficult to approach. Despite the fact that WHO stresses on rational prescribing practices and avoiding OTC medication among general population, this practice is constantly rising. SM may cause resistance to microorganisms and serious health risks with adverse drugs reactions, prolonging the morbidities [8]. Compared to other developed countries, the doctors-to-patients ratio in Pakistan was low. Researchers and healthcare professionals are continuously searching for solution to combat the symptoms of COVID-19 [9]. Most countries in the world went into a lockdown, confining general public to their homes, so people could rely only on social media for updates and information related to the pandemic [10–12]. According to a recent report in March 2020, a 10-fold increase in the number of cases was noted only in the span of three months. The total deaths reported were six times more than the previous record [12]. The lack of a recognized treatment for the infection led people toward SM and symptomatic treatment, almost 80% of the population collected medication for future use during the pandemic. Thus, the current study aimed to assess the use of medication as symptomatic treatment preventive strategy.

2. Materials and Methods

A descriptive cross–sectional study was conducted among the local population of Hyderabad and Karachi, Sindh, Pakistan. The duration of study was six months (April–September 2020). A total of 698 responders were selected from various retail pharmacies via random sampling method. Retail pharmacies were selected based on patients' flow. The number of participants were recruited based on 95% confidence interval with 5% margin error. Patients aged >18 years and visiting one of the selected retail pharmacy were included. Verbal consent was also taken from the responders before filling the questionnaire. The questionnaire was divided into three parts: sociodemographic information; SM practices; and knowledge regarding COVID-19. The questionnaire was validated among 50 participants and necessary changes were made. Data were transferred descriptively into the analysis sheet.

3. Results

Of the 698 respondents, 56.2% were male while 43.8% were female. Based on their age, patients were divided into three categories: 19.3% were in the group of 18–38 years, 43.4% in 39–59 years, and 37.3% in >60 years. Moreover, about 43.7% of the responders were illiterate while 56.3% were educated (Table 1). The responders were also questioned about their current jobs – 28.2% were unemployed, 53.5% had a private job, and 18.3% had a government job.

TABLE 1: Demographic information.

Variable	Frequency	Percentage
Gender		
Male	393	56.2%
Female	305	43.8%
Age (yr)		
18–38	134	19.3%
39–59	302	43.4%
≥60	260	37.3%
Education		
Illiterate	304	43.6%
Literate	394	56.3%
Job status		
Unemployed	197	28.2%
Private job	373	53.5%
Government job	127	18.3%

The main objective of the study was to assess the prevalence of SM practice and the reason thereof. Majority of the participants responded to the use of different OTC products – 23.3% for the headache and seasonal cough and cold symptoms. However, the use of antibiotics with prescription due to allergic conditions, cough and respiratory tract infections including sore throat, and urinary tract infections was also found among the majority. Few respondents practiced SM with sedatives due to difficulty in falling asleep, while 9.5% had it due to pain (Table 2).

TABLE 2: Reasons of self-medication.

Reason		Frequency	Percentage	*P*-value
OTC products for common illness	Headache	163	23.3%	0.004
	Cold	135	19.4%	0.005
	Fever	107	15.4%	0.034
Use of antibiotics for infective symptoms	Allergy	25	3.7%	0.013
	Cough	45	6.5%	0.001
	Respiratory infection	93	13.4%	0.005
	Urinary tract infection	42	6.1%	0.001
Others	Sleeping problem	18	2.6%	0.021
	Body ache/ muscular pain	66	9.5%	<0.001

Factors involved in the use of SM during the pandemic were assessed and respondents were asked about the basic reasons behind the off-prescription use of medication: majority of them were afraid of getting infected in case of going out and seeking medical advice, 30.5% were afraid of getting the COVID-19 infection. During the peak of pandemic, a large number of countries observed lockdown confining people to their homes for months, this is considered as one of the contributing factors in the rising SM practice; about 20.8% of the respondents agreed to this, 5.5% stated the long waiting hours at the clinics as their reason for practicing SM, while 12.6% practiced SM based on their previous knowledge and experience with the disease (Table 3).

TABLE 3: Factors of self-medication in context of COVID-19.

Factors	Frequency	Percentage
Due to minor problem	88	12.6%
Lockdown	145	20.8%
Busy schedules of doctors	68	9.7%
Fear to get COVID-19	213	30.5%
Previous knowledge regarding the problem	88	12.6%
High fees	58	8.4%
Time wastage	38	5.5%

4. Discussion

SM practice is a major issue that worsens scenarios of health-related problems. The prevalence of SM has been increasing continuously in the past decades [13]. According to a study, SM practice with different OTC products and antibiotics has increased from 36.2% in 2019 to 60.4% in 2020 [14]. Moreover, the use of SMs for symptomatic treatment and based on the past experience of a patient is not a new phenomenon, this finding of ours is in line with the results of another study [15]. The majority of people were afraid to go out in the pandemic and more number of males were observed using medication with medical advice [16, 17]. After the pandemic broke, a vast majority of population was left jobless. Bamgboye *et al.* determine self-education practice and factors affecting them, and had similar results as that of our study [18]. While SM due to common symptoms, respiratory tract infection, and due to fear was practiced only after the onset of pandemic, those practicing SM based on their past experience were doing so even before the lockdown and pandemic [19]. The WHO recommends the use of precautionary measures during the pandemic, however, it does not recommend SM for the symptoms of COVID-19 and related factors [20]. Despite this, frequent use of antibiotics was found among the studied population [21–22]. The use of medication for different symptoms were in accordance with the study.

5. Conclusion

The study aimed to find the prevalence of SM during COVID-19. Pharmacists and healthcare professionals are advised to counsel the population regarding the use of medication. A close collaboration is required at this stage to fight against COVID-19 and preventing the situation from worsening.

Acknowledgements

Ethical Considerations

Verbal consent was taken from all responders prior to extracting data.

Competing Interests

None.

Availability of Data and Materials

All relevant data and methodological details pertaining to this study are available to any interested researchers upon reasonable request to corresponding author.

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