



Original Article

Trends Toward Self-Medication Practices During Covid-19 In Gujranwala District

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ARTICLE INFO

Key Words:

COVID-19, Self-Medication, SARS-Cov-2, OTC Medications, Gujranwala District

How to Cite:

Raza, S. Q., Waqar, M. ., Ahmad, S. ., Iqbal, H. ., & Saifullah, A. . (2022). Trends Toward Self-Medication Practices During Covid-19 In Gujranwala District: Trends Toward Self-Medication Practices During Covid-19. Pakistan Journal of Health Sciences, 3(06). <https://doi.org/10.54393/pjhs.v3i06.259>

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Received Date: 12th October, 2022Acceptance Date: 14th November, 2022Published Date: 30th November, 2022

ABSTRACT

In Gujranwala, self-medication is a prevalent practice since it offers a low-cost alternative for individuals, and it entails the incorrect and irresponsible use of medications to cure self-recognized symptoms. It is also noteworthy that SM has both positive and negative aspects that affect the life of people. **Objectives:** To determine the occurrence, pattern, and sources of self-medication among respondents with all socioeconomic statuses and educational levels. **Methods:** A cross-sectional online survey on 535 residents of the targeted region was undertaken from June to November 2021 in Gujranwala district. We analyze our data by using SPSS and find mean values of our different variables and also find the frequencies and percentages the variables for achievement of our desired results. **Results:** As COVID-19 preventive, 44 (8.7%) respondents self-medicated with penicillin, and only 4 (0.8%) with paracetamol. When COVID-19 symptoms appeared, the pattern shifted, with azithromycin having the highest rate of self-medication of 49 (9.75%) of all drugs. When people were diagnosed with COVID-19, 12.5% used azithromycin, and 10.3% used penicillin. **Conclusions:** This study found a significantly high level of SM among men in Gujranwala district. Analgesics, particularly paracetamol and Ibuprofen, were the most often utilized medications for SM.

INTRODUCTION

Medications used by the patients for self-assessed disease and symptoms come under the term SM. This also includes the patient's choice of medication for a chronic or repeating condition following a physician's prescription. The administration of medicinal products for family members, especially infants, children or the elderly also comes under the umbrella of SM. In responsible SM, diseases that can be quickly and easily self-diagnosed or that have already been diagnosed by a doctor are treated with non-prescription, safe, conventional pharmaceutical items. According to the WHO, supportive SM must provide information about the way to use medications, withdrawal symptoms, monitor, precautions, period of usage, interactions [1]. Desire for self-care, empathy with family members in illness, lack of health facilities, poverty,

ignorance, mistrust, widespread advertising and availability of medicines in addition to drug stores are responsible for the growing trend towards SM. WHO is promoting the responsible SM practices to reduce the burden on healthcare system, especially in rural areas where most of the time, the lacking of staff has been seen [2]. The SM behavior in teenagers is affected by various factors. Trend towards self-care and overconfidence in drug knowledge often serve as stimuli for SM and drug abuse. Adults not only use older prescriptions, leftover and OTC medicines but also share medicines with friends and relatives. OTC and prescription only drugs can easily be reached without the vital information about the indications and ultimately pushing them towards unnecessary risk. Although adolescents show a sense of responsibility but

the risk of drug abuse and overuse associated with SM is still there. SM has major impact on health system of the entire globe. The prevalence of SM in developing countries is high as compared to developed countries; its rate is 84% in Pakistan, and 78% in Saudi Arabia [3].

METHODS

The Ethical Board of the Pharmacy Department of the University of Lahore gave its approval to the study. Before collecting data, each respondent gave their verbal consent. The survey's participants were anonymized, given the freedom to respond answer whenever they wanted, while any personal data considered a secret. Every survey respondent understood the goals of the study. The administrative division of Pakistan's Punjab province is titled Gujranwala Division. It is situated in the province's northeast, covers 3,622 km², and has an estimated 5.014 million residents. The current investigation was carried out in several areas and pharmacies. In order to explore the knowledge and use of SM, this cross-sectional online/physical survey used a descriptive non-experimental research methodology. It was done from June to November 2021, at the time of the national lockdown and the increase in the number of positive COVID19 cases. The study lasted for six months (June–November 2021). The totals of 505 participants were randomly selected from various retail pharmacies in different locations. The retail pharmacies were chosen based on patient inflow. The number of respondents was determined using a 95% confidence interval with a 5% margin of error. In this study, People ranging from 18 to 60 years' male or female or any other were included with education level of secondary qualification or above, because most of the patients belonging to this age are easy to find, and usually do not have a severe chronic disease. It is also important to mention here that our population was not only educated people but also uneducated or with very little education. These types of people can also SM by directly telling the disease to a seller at community pharmacy or by the suggestion of their peers. Below 18 and above 60 years of age, asthmatics, and patients with severe chronic diseases were excluded from this study. People below the age of 18 are usually immature and don't answer properly to a questionnaire (due to poor power of understanding) and above 60 years of age had mostly different comorbidities. Keeping in view all these parameters, the age groups of the population were excluded from the study. A self-made questionnaire made in Google survey form was used to collect the data. It provides a fast way to create an online survey and enable us to spread it easily through different social media platforms throughout the Gujranwala district. Responses were

collected on spreadsheet and simple descriptive statistics were applied to analyze the data and anticipate our results. By using IBM SPSS version 20 for Windows, all data were examined. Descriptive statistical analysis, like percentages, frequencies, standard deviation, and means were used to present the descriptive result. While categorical variables were indicated as frequency with percentages, continuous variables were indicated as mean \pm SD.

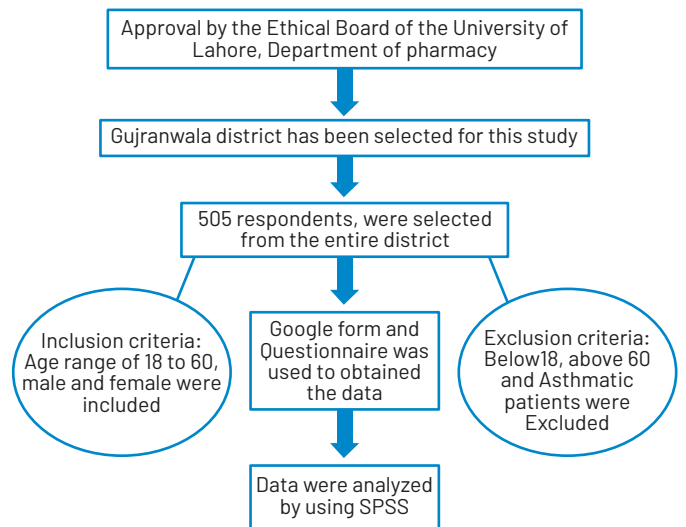


Figure 1: Flow chart of Methodology

RESULTS

The survey's physical and online forms were filled out by 535 people in total. Following the exclusion of 30 respondents who did not meet the study's inclusion criteria, the remaining total number of respondents was 505. Among the total participants 302 (59.8%) were male with the mean age of 30.18 ± 9.7 years. The majority of participants were single 276 (54.7%), educated 487 (96.4%), employed (263 (52.1%)), and all 505 (100%) were the resident of the urban area according to Table 1.

Sr. No	Characteristics	n (%)
1	Gender	
	Male	302 (59.8)
	Female	203 (40.2)
2	Age*	30.18 \pm 9.7
3	Marital Status:	
	Married	276 (54.7)
	Unmarried	229 (45.3)
4	Marital Status:	
	Educated	487 (96.4)
	Uneducated	18 (3.6)
5	Employment Status:	
	Employed	263 (52.1)
	Unemployed	242 (47.9)
6	Residential Area:	
	Urban	505 (100)

Table 1: The respondents' frequency distribution according to

their socio-demographic features

The categorical variables are expressed as frequency and percentages

(*)Indicates the mean values of continuous variable

Except for paracetamol, the majority of respondents did not self-medicate with other listed drugs in a very subtle way, as shown in Table 2. According to the findings, the majority of respondents (93.5%) used paracetamol and (35%) antihistamines, while nearly the same number consumed (34%) dextromethorphan, Azithromycin was consumed (47.9%), Antivirals were used nearly (14%) and the least amount was used (4.6%) calcium. Indicate whether you used any of these medications while COVID-19 was under lockdown.

Sr. No	Drugs	n (%)
1	Paracetamol	472 (93.5)
2	Ibuprofen	208 (41.2)
3	Azithromycin	242 (47.9)
4	Hydroxychloroquine	112 (22.2)
5	Penicillin	212 (42)
6	Antiviral	74 (14.7)
7	Antihistamine	177 (35)
8	Dextromethorphan	174 (34.5)
9	Calcium	23 (4.6)

Table 2: Self-Medication with various drugs during the COVID-19. The categorical variables are expressed as frequency and percentages.

The primary causes for drug intake for all medications were cold or flu except antiviral and hydroxychloroquine. For purposes other than pain relief (4.0%) of respondents used ibuprofen. To a lesser extent, antivirals were utilized by (1%) of participants, While (1.6%) took this anti-malarial medication HCQ for different causes. The fact that people in the Gujranwala district used these medications while having no symptoms was even more alarming. As an instance, (12.7%) Antihistamine, (2.4%) Paracetamol and other drugs utilized almost the same. It must be noted that the same responder may have consumed many drugs simultaneously. Three causes for drug usage in related to COVID-19 were listed on our survey: prevention, the existence of symptoms, and verified cases. As COVID-19 preventive, 44 (8.7%) respondents self-medicated with penicillin, only 4 (0.8%) with paracetamol, and approximately the same amount of ibuprofen 25 (5%), and 27 (5.3%) azithromycin. When COVID-19 symptoms appeared, the pattern shifted, with azithromycin being the drug with the highest SM 49 (9.75%), followed by the lowest SM of paracetamol 8 (1.6%). When people were diagnosed with COVID-19, 12.5% used azithromycin, and 10.3% used penicillin. Dextromethorphan (6.5%) and antihistamine (6.7%) were both used by nearly the same proportion of people.

DISCUSSION

It is also significant to mention here that in Hyderabad-Karachi a study similar to ours was conducted by Arian et al., elaborating SM practices among medical students of prestigious institutes [4]. The availability of all types of medicines OTC, prescription-only, and even schedule X substances without a prescription is the most major element for the rise in SM. A cross sectional study similar in many ways to our study was also conducted in Peru and Dhaka city of Bangladesh, showing the trend of population towards SM during the pandemic. The outcomes of both studies were resembling to our study with very much similar result except the population ethnicity and targeted territory from where population participated in the study [5, 6]. Nagarajiah et al., did a study based on our research on the prevalence and pattern of SM behaviors. But the study was conducted in only a single district (Gujranwala) during the COVID-19, while the performed research three districts of south Karnataka before the COVID-19 pandemic [7]. Quispe-Cañari et al., found that Ibuprofen, another analgesic marked as the mostly used drug during covid-19 among the population of Gujranwala district (41%) after paracetamol [5]. The SM has negative and positive effect on health care system and general population [8]. Sadio et al., found that prevalence of SM during COVID-19 and its associated factor that high risk to resistances the antibiotic in lome [9]. The high fatality rate and socio-economic collapse affected the health of uninfected people because they skipped the healthcare measures, visiting clinical and hospital appointments to limit their exposure to the virus same as in over study [10]. The Spanish healthcare system, including community pharmacies, has failed to enhance the rational use of medicines as same condition in Gujranwala district [11]. The SM practices source is various community pharmacies, and recommendation from friends or previous experience [12]. SM among prospective healthcare professionals poses a severe danger to medical professionals and has the potential to publics [13]. Mudenda et al., studied the poor healthcare seeking behavior, most individual's SM using drugs that are known to be effective against malaria, the common cold, and COVID-19. Antibacterial, antimalarial, and antivirals are some of the most widely utilized drugs [14]. The study in Islamabad and Ethiopia as same result most commonly used pharmaceuticals were paracetamol and NSAIDs, with drug retail shops being the most common source of drugs for SM [15, 16]. SM was not related to socioeconomic position, ethnicity, or age but it was associated with a person's educational level and antibiotic knowledge [17]. Nunes et al., found variety of medical disorders in which SM with NSAIDs was popular. Therefore the necessity for more

sensible use of NSAIDs the continued Pharmacovigilance was backed up by reported side effects (both common and rare) [18]. Higher values of a composite ("lockdown") index of SM related behaviors occurring during lockdown were predicted by higher religiosity and the presence of children in a household, according to linear regression [19]. High risk of SM and prefer drug therapy recommendations from TV, social media, and influencers [20]. All prior studies, according to our approach employed throughout this study effort, characterize SM during COVID-19 as a confounder that increases problems. To our knowledge, no research has been done in the Gujranwala district to evaluate the pattern of SM for respiratory symptoms during the COVID-19 outbreak. Except for this study, no other study has ever used both types of survey forms (E-forms and physical questionnaires) as shown above the boundaries.

CONCLUSIONS

This study found a significantly high level of SM among men in Gujranwala district. This was due to their extensive experience and education, as well as their in-depth knowledge and comprehension of illness processes and management. This enabled them to make educated about which medications to utilize for particular conditions. Analgesics, particularly paracetamol and Ibuprofen, were the most often utilized medications for SM.

Conflicts of Interest

The authors declare no conflict of interest

Source of Funding

The authors received no financial support for the research, authorship and/or publication of this article.

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