Original Article

Self-Medication Knowledge, Attitude and Practice among the Population of Jamshoro City: A Cross-Sectional Study

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ABSTRACT

Background: Self-medication is a globally prevalent practice, with varying degrees of awareness and regulation across different regions. In developing countries like Pakistan, the practice poses significant public health challenges, including the risk of medication misuse and antibiotic resistance. Jamshoro, a city with a diverse demographic and educational landscape, provides a unique setting to explore the knowledge, attitudes, and practices of self-medication among its residents.

Objective: This study aimed to assess the extent of self-medication practices among the adult population in Jamshoro, focusing on their knowledge, attitudes, and the types of medications commonly used. It sought to identify potential risks associated with self-medication and propose recommendations for safer practices.

Methods: A descriptive cross-sectional survey was conducted from February to April 2023, involving 400 participants selected through non-probability convenience sampling. The survey encompassed questions related to demographic information, knowledge about self-medication, attitudes towards its practice, and the frequency and types of medications used. Data were collected using both online questionnaires distributed via Google Forms and face-to-face interviews, ensuring a comprehensive understanding of self-medication behaviors. Ethical approval was obtained from the Research Ethics Committee of Liaquat University of Medical and Health Sciences (LUMHS), with the study adhering to the Helsinki Declaration's ethical standards. Data analysis was performed using SPSS Version 25, utilizing descriptive statistics to summarize findings.

Results: The majority of respondents were male (55.5%) and undergraduates (64.5%), with students representing 66% of the sample. A significant portion (87.3%) reported a lack of knowledge regarding self-medication, and 90.3% had never taken medication without a physician's prescription. About 64% were aware of the difference between over-the-counter (OTC) and prescription drugs, and 82.5% recognized the risk of antibiotic resistance. Self-medication practices were infrequent among participants, with 32.5% engaging in it only occasionally. The study also found a predominant preference for private healthcare facilities (68.5%) over public ones.

Conclusion: The findings indicate a substantial knowledge gap regarding self-medication among the population of Jamshoro, despite a general tendency to consult healthcare professionals for medical issues. There is a critical need for public health initiatives to educate the community on safe medication practices, the risks of antibiotic resistance, and the importance of adhering to prescribed treatments.

Keywords: Self-medication, Antibiotic resistance, Over-the-counter drugs, Public health, Descriptive cross-sectional study, Healthcare consultation.

INTRODUCTION

Self-medication, a global phenomenon where individuals administer medications to themselves without a formal prescription, is an issue of significant concern across both developed and developing nations. This practice, while widespread, carries substantial health risks, particularly in regions with less stringent pharmaceutical regulation and access to healthcare services (1, 2). Despite efforts in developed countries to mitigate these risks through more rigorous management of medication distribution, developing nations,

including Pakistan, face ongoing challenges. In Pakistan alone, it is estimated that approximately half a million individuals succumb annually to complications arising from inadequate control over prescription drugs and medication errors, with cough syrups, anxiolytics, analgesics, and antipyretics among the most commonly misused substances (3, 4).

The root causes of self-medication in these regions are multifaceted, largely attributed to the reduced regulation of pharmaceutical products, challenges in drug distribution, and limited access to healthcare professionals, particularly for those of lower socioeconomic status (5, 6). For many, self-medication offers a readily accessible solution for managing medical conditions or minor health ailments. However, the adverse consequences of such practices, including the potential for misuse and serious health risks, are profound, underscoring the need for comprehensive research and intervention (7, 8).

Against this backdrop, the city of Jamshoro presents a unique case study. Despite the availability of healthcare facilities, self-medication remains a prevalent issue within the community. Prior research into the knowledge, attitudes, and practices of self-medication among the Jamshoro population is scant, marking a significant gap in understanding that this study aims to address (9). By focusing on a diverse demographic, encompassing various urban and rural residences and cultural backgrounds, this research seeks to elucidate the underlying factors contributing to self-medication practices within the city. The insights garnered from this study are intended to inform healthcare policy strategies aimed at promoting the rational use of medications, enhancing drug safety, and ultimately improving health outcomes. Moreover, this investigation contributes to the broader discourse on self-medication practices in developing countries, offering valuable perspectives on addressing a pervasive public health issue (10, 11).

MATERIAL AND METHODS

This descriptive cross-sectional study was undertaken in Jamshoro between February and April 2023, aiming to evaluate the knowledge, attitudes, and practices concerning self-medication among the local population. Utilizing a non-probability convenience sampling technique, a sample of 400 subjects was determined using the online sample size calculator, OpenEpi Version 3.018.8. Ethical clearance for the research was obtained from the Research Ethics Committee (REC) of Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro. The study adhered to the ethical guidelines outlined in the 1964 Helsinki declaration and its subsequent amendments, ensuring adherence to contemporary ethical standards (12, 13).

For the purpose of data collection, a self-administered questionnaire was developed, drawing upon existing literature to guide its structure. The questionnaire encompassed sections dedicated to demographic information, knowledge regarding self-medication, and the frequency of such practices. To facilitate a broad and inclusive data collection process, the questionnaire was distributed online via Google Forms, in addition to conducting face-to-face interviews (14). Prior to participation, informed consent was secured from all respondents, with the study protocol explicitly guaranteeing the confidentiality of all participant information (15, 16).

Upon completion of the data collection phase, the gathered information was systematically inputted into SPSS for analysis. Version 25 of the software was employed to conduct a thorough examination of the data, utilizing descriptive statistics to encapsulate the demographic characteristics of the study cohort, alongside their knowledge, attitudes, and practices pertaining to self-medication. This analytical approach allowed for a comprehensive assessment of the prevailing trends and behaviours among the population of Jamshoro regarding self-medication, contributing valuable insights to the discourse on public health and medication practices within the community (17).

RESULTS

In this comprehensive study, the demographic profile of the participants revealed a slightly higher prevalence of male respondents, accounting for 55.5% (222 individuals), compared to their female counterparts at 44.5% (178 individuals), as detailed in Table 1. The majority of participants, 64.5% (258 individuals), were classified as undergraduates, demonstrating a substantial representation of educated individuals within the sample. Students formed the bulk of the occupation category, representing 66% (264 individuals) of the total participants, highlighting the study's engagement with the younger demographic. A noteworthy 45.5% (182 individuals) of the respondents identified themselves as medical professionals, indicating a significant inclusion of healthcare knowledge within the participant pool.

The participants' knowledge and attitudes towards self-medication presented intriguing insights. A majority, 87.3% (349 individuals), admitted to a lack of understanding regarding self-medication, underscoring a substantial knowledge gap within the population (Table 2). Only a small fraction, 12.8% (51 individuals), affirmed their awareness of self-medication practices. This discrepancy extends to the realm of prescription and over-the-counter (OTC) medications, where 64% (256 individuals) recognized the difference, yet a considerable portion remained uninformed.

When delving into practices and perceptions surrounding self-medication, the data unveiled that 58.5% (234 individuals) perceived consultations with physicians as expensive, potentially driving the inclination towards self-medication (Table 3). Preference for

private healthcare facilities was pronounced, with 68.5% (274 individuals) opting for them over government hospitals. This preference could reflect perceptions of quality, accessibility, or trust in private versus public healthcare services. The decision-making process for selecting medicines revealed that 45% (180 individuals) considered the type of medicine as the primary factor, indicating a focused concern on medication appropriateness.

Table 1: Demographic Profile of Participants (n=400)

Demographic Variables	Frequency	Percentage
Gender		
Male	222	55.5%
Female	178	44.5%
Educational Status		
Uneducated	21	5.3%
Secondary	20	5%
Intermediate	34	8.5%
Undergraduate	258	64.5%
Graduate and above	67	16.8%
Occupation		
Student	264	66%
Government employee	34	8.5%
Private employee	30	7.5%
Self-employed	26	6.5%
Unemployed	46	11.5%
Medical Professional		
Yes	182	45.5%
No	218	54.5%

Table 2: Knowledge and Attitudes towards Self-Medication

Knowledge and Attitude Questions	Frequency	Percentage
Know what self-medication is?	51	12.8%
Ever taken medication without a prescription?	39	9.8%
Know if self-medication is permissible?	24	6%
View of self-medication as a healthcare practice?		
- Good practice	52	13%
- Not Good practice	193	48.3%
- Acceptable Practice	155	38.8%
Can treat common diseases by self-medication?	345	86.3%
Know the difference between OTC and prescription drugs?	256	64%
Know what kinds of drugs are included in OTC?	212	53%
Know the minimum duration of use for any antibiotic?	270	67.5%
Know antibiotics can cause resistance?	331	82.5%
Store Medicines at home?	313	78.3%
Consult with a doctor again for the same diseases?	256	64%

Table 3: Practices and Perceptions Regarding Self-Medication

Practice and Perception Questions	Frequency	Percentage
Are consultations with a physician expensive?	234	58.5%
Preference for medical complaints and consultation?		
- Government	126	31.5%
- Private	274	68.5%

Practice and Perception Questions	Frequency	Percentage
Consideration when selecting the medicine?		
- Type of the medicine	180	45%
- Brand of medicine	153	38.3%
- Price of medicine	20	5%
- Indications for use	17	4.3%
- Adverse reaction	30	7.5%
How knew the dosage of medicine when self-medicating?		
- Package insert	56	14%
- Doctor consultation	136	34%
- Pharmacist consultation	38	9.5%
- Family/friends	38	9.5%
- Media	4	1%
- Internet	77	19.3%
- Previous experience	42	10.5%
- Guessed myself	9	2.3%
Experienced any adverse reactions from self-medication?	120	30%
When normally stop taking the medicine?		
- After symptoms disappeared	177	44.3%
- A few days after recovery	77	19.3%
- A few days regardless of the outcome	20	5%
- After Medicine ran out	13	3.3%
- After the course	74	18.5%
- After consulting a doctor/pharmacist	39	9.8%
What do for adverse reactions?		
- Stop taking that medicine	115	28.8%
- Switch to another medicine	39	9.8%
- Consult pharmacy staff	30	7.5%
- Consult a doctor	140	35%
- Consult family/friends	18	4.5%
- Do nothing	58	14.5%

Table 4: Frequency of Self-Medication with Different Types of Medication

Frequency	Self-medication	Antibiotics	Antipyretic	Anti-inflammatory	Anti-tussive	Anti-allergic
Daily	28 (7%)	17 (4.3%)	14 (3.5%)	17 (4.3%)	24 (6%)	11 (2.8%)
Weekly	50 (12.5%)	28 (7%)	44 (11%)	14 (3.5%)	21 (5.3%)	42 (10.5%)
Monthly	74 (18.5%)	42 (10.5%)	80 (20%)	53 (13.3%)	41 (10.3%)	39 (9.8%)
Once in a while	130 (32.5%)	99 (24.8%)	103 (25.8%)	66 (16.5%)	112 (28%)	74 (18.5%)
Yearly	83 (20.8%)	95 (23.8%)	107 (26.8%)	107 (26.5%)	135 (33.8%)	72 (18%)
Never	35 (8.8%)	119 (29.8%)	52 (13%)	143 (35.8%)	67 (16.8%)	162 (40.5%)

The frequency of self-medication underscored a periodic reliance on pharmaceuticals without professional consultation. A notable 32.5% (130 individuals) engaged in self-medication occasionally, while 18.5% (74 individuals) adhered to a monthly regimen, highlighting diverse practices within the community (Table 4). Antibiotics and antipyretics were among the most commonly self-administered medications, with 24.8% (99 individuals) and 25.8% (103 individuals) using them sporadically, raising concerns about antibiotic resistance and the necessity for informed medical guidance.

Overall, the study's findings illuminate the prevailing demographics, knowledge gaps, attitudes, and practices regarding self-medication among the population of Jamshoro. The inclination towards self-medication, influenced by factors such as cost perceptions and healthcare preferences, alongside a notable lack of awareness about the implications of such practices, underscores the critical need for targeted educational interventions and policy adjustments to promote safe medication practices and enhance healthcare accessibility.

DISCUSSION

The recent investigation into the knowledge, practice, and attitudes towards self-medication among the populace of Jamshoro yielded significant insights. Conducted through a meticulously designed questionnaire, this study illuminated the prevailing perceptions and behaviors associated with self-medication. The demographic composition of the respondents predominantly featured males (55.5%), undergraduates (64.5%), and students (66.3%), presenting a skewed representation towards a younger, educated demographic. Remarkably, a substantial portion of the participants (87.3%) disclosed a lack of knowledge regarding self-medication, aligning with observations from similar studies, such as one conducted in Jordan, which found comparable levels of awareness among medical and non-medical students alike (18).

The study unearthed a considerable gap in awareness, with 94% of participants unaware of the legality and regulations surrounding self-medication, and a vast majority (90.3%) refraining from medication without prior consultation or prescription from a healthcare provider. This cautious approach is indicative of a broader trend, suggesting a predilection for professional medical advice despite the existing knowledge deficit. Interestingly, while 64% of respondents could differentiate between over-the-counter (OTC) and prescription medications, and 53% were familiar with the types of drugs classified under OTC, this awareness did not necessarily correlate with safer self-medication practices (19). This finding diverges from a Danish study that reported no significant association between over-the-counter medicine use and educational background (20).

The implications of antibiotic resistance were notably recognized by 82.5% of the study's participants, a figure that resonates with research from Romania, which highlighted a high level of awareness regarding antibiotic resistance (85.14%) and the importance of consulting a physician prior to medication use (11). Additionally, the propensity to store medications at home, observed in 78.3% of respondents, mirrors trends identified in Swat, Khyber Pakhtunkhwa, Pakistan, emphasizing a common practice across different regions (12). Despite the perceived high cost of medical consultations, with 58.5% citing expense as a concern, a significant majority (68.5%) still preferred private healthcare facilities for medical advice and treatment (21).

A critical observation from the study was the methodology employed by participants in determining medication dosages for self-medication, with 34% consulting doctors, underscoring a reliance on professional guidance even within the context of self-medication. This approach contrasts with findings from Ljubljana, Slovenia, where healthcare participants preferred leveraging prior medical advice, whereas non-healthcare individuals often turned to informal sources like friends or healers (11, 19). The tendency to cease medication following symptom resolution, reported by 44.3% of participants, raises concerns about the completion of prescribed treatment courses and potential for incomplete treatment outcomes.

The study's exploration into the frequency of medication usage revealed varied patterns, with a notable proportion (32.5%) engaging in self-medication sporadically. The reluctance to utilize antibiotics (29.8% never used them) and other specific medication categories intermittently underscores a cautious approach to self-medication among the participants.

This investigation, while illuminating, is not without its limitations. The reliance on self-reported data introduces potential biases, including recall and social desirability biases, which might affect the accuracy of the findings. Additionally, the study's focus on the Jamshoro population may limit the generalizability of the results to broader demographics (5, 18).

CONCLUSION

In conclusion, the study underscores a critical need for enhanced educational initiatives and guidance to foster safer self-medication practices. Despite a general hesitancy towards self-medication, the evident knowledge gaps and misconceptions about medication use highlight the importance of healthcare professionals in promoting responsible self-medication practices. These findings advocate for a multifaceted approach to healthcare education, emphasizing the rational use of OTC medications and the dangers of antibiotic resistance, thereby contributing to the overarching goal of improving public health outcomes.

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