KAP STUDY

Self-Medication Phenomenon; A Population Based Study from Lahore

Ayesha Akram[1], Umer Maqsood[2], Muhammad Zahid Latif[3], Hafiz Sheraz Arshad[4], Haroon Riaz[5], Muhammad Atif Qureshi[6]

Abstract

Objective: To study the reasons of self-medication in rural and urban population.

Methods: The cross-sectional descriptive study was conducted in Lahore, Pakistan, from March to August 2017, and comprised inhabitants of rural and urban areas of the city regardless of gender and aged 18-50 years. The subjects were enrolled using non probability convenience sampling technique. Data was collected using a semi-structured questionnaire, which was validated through content validity index. Data was analysed using SPSS 21.

Results: Of the 786 participants, 551(70%) were from the urban areas and 235(30%) were from the rural areas. The mean age of the sample was 30.54±8.50. Overall, 746(95%) were taking medicines without a prescription. Among them, 528(96%) were urban and 218(93%) were rural inhabitants ($p<0.07$). Besides, 352(47.2%) were males and 394(52.8%) were females ($p>0.05$). The most frequent reason cited for self-medication was quick relief by 478(64.1%) subjects.

Conclusion: Self-medication prevalence was very high in both urban and rural populations.

Keywords: Self-medication, Rural and urban areas, Questionnaire, CVI approach, Analgesics, Antipyretics. (JPMA 69: 523; 2019)

Introduction

World Health Organisation (WHO) defines self-medication (SM) as the selection and usage of medicines by individual to treat self-evaluated illness or infirmity. This element of self-care is practised to maintain personal health and manage sickness. It includes hygiene, nutrition, lifestyle, environmental, socioeconomic factors and medication.[1] The growing trend of SM has many adverse aspects.[2] It is practised to cure symptoms of a disease and common health issues for which a visit to a doctor is not considered mandatory.[3] It is evident from the literature that SM is performed on a daily basis,[4] and it is becoming a growing concept among common people to attain autonomy regarding decision-making in minor illnesses and this autonomy gives a sense of authority for self-care.[5]

Diverse population-based global studies conclude SM prevalence in different locations, like Germany 27.7%, Portugal 26.2%, Spain 12.7%, Cuba 7.3%, Athens-Greece 23.4%, Brazil 16.1% and Iran 53%.[6] The socio-demographic data regarding SM has thrown up certain numbers, like gender (male 75.5%; female 92%), marital status (single 89.3%; married 75.4%), qualification level (illiterate/elementary school 75%; high school/college/university 87.7%), insurance (64.6%), and information about drugs (68.4%).[7,8] SM rate is quite high in developing countries, including Pakistan, as half its population (51%) indulges in SM which is among the leading health issues.[9] Research in Karachi and Islamabad found a prevalence of 76% and 42% respectively. Similarly, the rural prevalence is 52%, followed by urban prevalence of 47.8%. Gender-based prevalence is 62% in females and 38% in males.[10] Common reasons for SM in urban areas include previous experience and time-saving, whereas affordability and accessibility are the major causes among the rural population. In rural areas, family/friends, and in urban areas, medical professionals are the common source of information for SM.[10] Commonest used drugs include analgesics, antibiotics, cough syrups and oral rehydration solution (ORS).[11] Perceived beneficial effects of SM include quick relief, control over chronic illness, and affordability of time and money in rural areas. Harmful effects comprise misuse, overuse or wrong use of medicines which may lead to

[1,2,4]Department of Physical Therapy, Azra Naheed Medical College, The Superior University, Lahore, [3,5,6]Azra Naheed Medical College, The Superior University Lahore, Pakistan.

Correspondence: Muhammad Zahid Latif. e-mail: mzahidlatif@yahoo.com

reactions, toxicity and drug resistance. The sale of various medicines is illegal and their SM use may result in -related hazards to health.[12] Major causes of SM include common sign and symptoms, availability at home, good experience, affordability, accessibility to healthcare facilities, attitude toward healthcare utilisation and time-saving.[8,13]

Mostly used over-the-counter (OTC) drugs are analgesics (92%), antipyretics, antibiotics, antidepressants, sleeping pills, laxatives, vitamin supplements, ear-nose-throat (ENT) drops, homeopathic, expectorants, and nasal decongestants.[14] The relevant research concludes that OTC pain-related drugs are more likely used for immediate relief from pain.[15]

SM is a health hazard as it can cause delays in seeking medical diagnosis and advice, adverse drug reactions, and risk of dependence and abuse, but people take medication without consulting physicians regardless of the consequences. The current study was planned to look at the causative factors of SM in rural and urban population of a Pakistani setting.

Subjects and Methods

The cross-sectional descriptive study was conducted in Lahore, Pakistan, from March to August 2017, and comprised inhabitants of rural and urban areas of the city. After getting approval from the ethical review committee of Azra Naheed Medical College, Lahore, the sample size was calculated by taking 51% prevalence of self-medication from literature.[9] However, to increase the accuracy and precision, sample size was inflated by about 100%. The subjects were recruited through non-probability convenience sampling technique. Those included were subjects of either gender aged 18-50 years and included paramedical staff. Those who had recently migrated to the city as well as doctors and pharmacists were excluded. The data was collected from public places of rural and urban areas of Lahore including hospitals, universities, markets, parks and transport terminals.[16,17] Data collection tool was a semi-structured questionnaire, including open and close-ended questions. An initial Urdu version was developed through literature review while focussing on the cultural considerations. It was discussed with experts for face validation and was revised accordingly. The revised version was then validated through computing its content validity index (CVI) for which an panel of 8 experts was asked to rate the questions on the basis of clarity, simplicity and relevance by using a four-point Likert scale.[18] The validity of the questionnaire was 0.829 and reliability obtained through pilot study was 0.733.[19] The validated questionnaire was then translated in English for coding and statistical analysis through forward and backward translation. The questionnaire consisted of five parts. There were 11 questions in part 1 regarding demographic characteristics. Part 2 described the causes of self-medication (12 questions), part 3 addressed common conditions (10 questions), part 4 included group of medicines (four questions), and part 5 included source of information (six questions). Written informed consent was obtained from all the subjects prior to the data-collection stage. Data was individually collected from all the participants and relevant queries were explained. The collected data was analysed using SPSS 21.

Table: Variables related to self medication.

	Variables	n (%)
Causes of Self Medication	Non Seriousness About Illness	172 (23.1)
	Availability at Pharmacy	446 (59.8)
	Previous Experience of Medicine	284 (38.1)
	Distance To Health Care	98 (13.1)
	Saving Time	346 (46.4)
	Saving Money	122 (16.4)
	Available at Home	178 (23.9)
	Quick Relief	478 (64.1)
	Previous Experience Of Illness	254 (34.0)
	Knowledge About Medicine	262 (35.1)
	Unavailability of Doctor in Health Cares	42 (5.6)
Common conditions for which people self medicate	Headache	644 (86.3)
	Fever	598 (80.2)
	Flu	432 (57.9)
	Cough	402 (53.9)
	Allergy	254 (34.0)
	Body Ache	432 (57.9)
	Acidity	130 (17.4)
	Infections	84 (11.3)
	Burns	32 (4.3)
	Others	44 (5.9)
Group of Medication which people self medicate	Analgesics	629 (84.3)
	Antipyretics	539 (72.3)
	Antibiotics	363 (48.7)
	Vitamin Supplements	250 (33.5)
	Expectorants	215 (28.8)
	Others	227 (30.4)
Source of information about self medications	Previous Prescription Of Doctor	365 (48.9)
	Family/ Relatives	186 (24.9)
	Friends/ Neighbors	119 (16.0)
	Books	393 (52.7)
	TV Advertisements	185 (24.8)
	Internet	160 (21.4)

Results

Of the 1108 subjects approached, 786(71%) agreed to participate. Of these 786 participants, 551(70%) were from the urban areas and 235(30%) were from the rural areas. The mean age of the sample was 30.54±8.50 years. Overall, 746(95%) were taking medicines without a prescription. Among them, 528(96%) were urban and 218(93%) were rural inhabitants ($p<0.07$). Besides, 352(47.2%) were males and 394(52.8%) were females ($p>0.05$). The most frequent reason cited for self-medication was quick relief by 478(64.1%) subjects (Table).

Discussion

The current study focussed on SM causes in rural and urban populations of Lahore. Most studies are based either on prevalence or relationship among age, group of medicines and university students with SM.[20,21] The current study concludes an SM prevalence of 95% which is remarkably higher than reported in previous studies conducted in Pakistan.[14,20] Another noticeable finding is that 60% people reported that they indulged in SM because medicines were easily available at pharmacies. This fact puts a question mark on the implementation of drug sale rules at pharmacies. A large proportion of study population (64%) was using SM for quick relief of symptoms. The results are in line with the findings of a relevant study which stated that quick relief of symptoms is a very common cause of SM in general population.[22] The prevalence findings of the current study are in line with the results of a similar study which put it at 77%. However the study in literature was limited SM practices among first year medical students.[12] The gender-based results of present study are in accordance with the findings of a relevant study which concluded that SM was a common practice and females were more prone to it than males.[6] Similarly, the results are consistent with the earlier findings that there was a very high SM prevalence and the most noticeable group for SM was antibiotics and analgesics.[23] The results of current study also endorse the findings of a study according to which, the major causes of SM were previous experience of drug, time-saving and non-seriousness towards illness. Analgesics, vitamin supplements, antibiotics and digestive medicines were commonly reported allopathic self-medication drugs.[24] The findings based on gender and residence of the present study are contrary to the results of one study which showed a significant association of SM with gender and residence.[10] However, the results are in line with the findings that concluded a very high SM rate. Economic factors and easy availability of medicines were the main reasons of this high prevalence.[21] A study conducted in Tehran aimed at determining the factors associated with SM and established a significant association of SM with gender.[19] Another study portrayed results that are in accordance with our findings as they identified analgesics and antibiotics as the most commonly self-medicated drugs among medical students. A study proved high prevalence of SM in both genders, with headache and fever being the primary complaints leading to SM, while analgesics, antipyretics, and expectorants were the major groups of medicines. It also showed that relatives were the prime source recommenders of SM for females, and friends for males.[25]

As discussed, the results of the current study are in line with relevant national and international studies. However, some contrasting findings include internet as the least common source of information and easy availability of drug at pharmacies as the major cause of SM. Moreover, limited time duration and non-probability convenient sampling technique are the limitations of the study.

Conclusion

Self-medication is an important health issue among the general population. The practice was found to be very high in both urban and rural populations. There is a need to minimise the causes and educate the population to fortify safe practices. Moreover, strict regulatory measures are required to be executed on publicising and selling of medicines.

Disclaimer: None.
Conflict of Interest: None.
Source of Funding: None.

References

1. Organization WH. Guidelines for the regulatory assessment of Medicinal Products for use in self-medication, 2000.
2. Geissler PW, Nokes K, Prince RJ, Odhiambo RA, Aagaard-Hansen J, Ouma JH. Children and medicines: self-treatment of common illnesses among Luo schoolchildren in western Kenya. Soc Sci Med (1982) 2000; 50: 1771-83.
3. Jones R. Self care. Important for health services and needing more research. BMJ 2000; 320: 596.
4. Bennadi D. Self-medication: A current challenge. J Basic Clin Pharm 2013; 5: 19-23.
5. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self medication. Drug safety 2001; 24: 1027-37.
6. Arrais PSD, Fernandes MEP, Pizzol TdSD, Ramos LR, Mengue SS, Luiza VL, et al. Prevalence of self-medication in Brazil and associated factors. Revista de saude publica 2016; 50.

7. Mendes Z, Martins AP, da Costa Miranda A, Soares MA, Ferreira AP, Nogueira A. Prevalência da automedicação na população urbana portuguesa. Revista Brasileira de Ciências Farmacêuticas 2004; 40: 21-5.
8. Figueiras A, Caamano F, Gestal-Otero JJ. Sociodemographic factors related to self-medication in Spain. Eur J Epidemiol 2000; 16: 19-26.
9. Jan A. Self-medication: A major cause of health Issues. South Asian J Med 2015; 1: 21
10. Aqeel T, Shabbir A, Basharat H, Bukhari M, Mobin S, Shahid H, et al. Prevalence of self-medication among urban and rural population of Islamabad, Pakistan. Trop J Pharm Res 2014; 13: 627-33.
11. Hussain S, Malik F, Ashfaq KM, Parveen G, Hameed A, Ahmad S, et al. Prevalence of self-medication and health-seeking behavior in a developing country. Afr J Pharm Pharmacol 2011; 5: 972-8.
12. James H, Handu SS, Al Khaja KA, Otoom S, Sequeira RP. Evaluation of the knowledge, attitude and practice of self-medication among first-year medical students. Med Principles Pract 2006; 15: 270-5.
13. Gupta V, Bansal P, Manhas R, Singh Z, Ghaiye P. Preferred system of medicine and reasons of self medication among college students in malwa region of Punjab. J Drug Delivery Therapeutics 2011; 1.
14. Zafar SN, Syed R, Waqar S, Zubairi AJ, Vaqar T, Shaikh M, et al. Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes. J Pak Med Assoc 2008; 58: 214-7.
15. Pineles LL, Parente R. Using the theory of planned behavior to predict self-medication with over-the-counter analgesics. J Health Psychol 2013; 18: 1540-9.
16. Hart LG, Larson EH, Lishner DM. Rural definitions for health policy and research. Am J Public Health 2005; 95: 1149-55.
17. Roberts P. The evolution, definition and purpose of urban regeneration. Urban regeneration. 2000: 9-36.
18. Polit DF, Beck CT. The content validity index: are you sure you know what's being reported? Critique and recommendations. Res Nurs Health 2006; 29: 489-97.
19. Latifi A, Ramezankhani A, Rezaei Z, Ashtarian H, Salmani B, Yousefi MR, et al. Prevalence and associated factors of self-medication among the college students in Tehran. J Appl Pharm Sci 2017; 7: 128-32.
20. Hussain A, Khanum A. Self medication among university students of Islamabad, Pakistan-a preliminary study. Southern Med Rev 2008; 1: 14-6.
21. Bilal M, Haseeb A, Khan MH, Arshad MH, Ladak AA, Niazi SK, et al. Self-medication with antibiotics among people dwelling in rural areas of Sindh. J Clin Diagn Res 2016; 10: OC08-OC13.
22. Ruiz ME. Risks of self-medication practices. Curr Drug Saf 2010; 5: 315-23.
23. Azami-Aghdash S, Mohseni M, Etemadi M, Royani S, Moosavi A, Nakhaee M. Prevalence and Cause of Self-Medication in Iran: A Systematic Review and Meta-Analysis Article. Iran J Public Health 2015; 44: 1580-93.
24. Jafari F, Khatony A, Rahmani E. Prevalence of self-medication among the elderly in Kermanshah-Iran. Global J Health Sci 2015; 7: 360-5.
25. Afridi MI, Rasool G, Tabassum R, Shaheen M. Prevalence and pattern of self-medication in Karachi: A community survey. Pak J Med Sci 2015; 31: 1241-5