

### Research Article

## Self-medication Practices Among Muslim Youth of Kashmir: An Empirical Study

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**Abstract.** In many parts of the world self-medication is a popular practice to treat some common minor diseases in order to save time and money without realizing side effects of self-medication for the patients. We know 'Over The Counter' (OTC) drugs are meant for self-medications but their wrong use due to lack of knowledge about medicines can have grave side-effects on patients. In Kashmir the growth in self-medications in Kashmir can be attributed to urge to self-care, feeling of

sympathy towards ill family members, deficiency of health services, economic condition, unawareness and easy availability of drugs in medical shops. To treat minor common diseases like fever, cold, cough, diarrhoea etc patients acquire expert advices from family members, neighbours or strangers about medications. Majority of people do not take their illness seriously or avoid Doctor because of busy life, ignoring side effects of self-medication. In Kashmir, it is a common practice in homes to use antibiotics like Co-Amoxycylav 625 and Azithromycin for treating common cold and sharing of prescriptions within the family, using the left over medications for somewhat related symptoms is quite a popular practice. In the present study carried out in Kashmir valley, a survey of the study area was carried out and discussions were held with the elders as well as with medical practitioners. A well-designed validated questionnaire was used to collect the information from 400 youth selected at random from Kashmir on their consent. The data collected from survey was statistically analysed using standard statistical methods. The study revealed that majority of respondents were taking medicine without consulting a Doctor to treat minor ailments. Statistically, it was observed that there was a significant difference in the attitude of male and female respondents towards self medication ( $P < 0.01$ ). The discussion with respondents revealed that they were interested in knowing Islamic ruling about self-medication as in the present world due to lack of patience youth take medicine because of depression and anxiety. Islam allows modern treatment of many diseases like infertility provided it is not against the teaching of Islam and guidance of holy Prophet. Holy Prophet Muhammad (Peace and blessing of Allah be upon him) taught Muslims to pray more in tough times for attaining peace of mind, relief from pain, anxiety and worries. Finally, it was suggested that everyone should avoid self-medication as much as possible and Government should play its role to avoid the selling of banned medicines on medical shops without Doctors prescription.

**Keywords:** Kashmir, Self-medication, Youth, Heath, Survey, Statistics

## INTRODUCTION

Islam encourages Muslims to take care of their body and advised them to take medicine in case they feel ill as only healthy and strong body can fulfill responsibilities on earth as Allah's Caliph. Medicines are available in various forms so for a Muslim it is very important to have idea about Islamic ruling towards medicine and treatment of various diseases. Islam is a complete and perfect religion which guides related to faith, life, worship, health, law and other problems. Allah guides us to seek treatment if we face any illness in halal way and plead for healing from Him. Concerns regarding the practice of self-medication (SM) globally stem from various associated risks, including adverse drug reactions, the potential for masking underlying diseases, inaccurate disease diagnosis, heightened morbidity rates, drug interactions, inefficient use of healthcare resources, and the development of antibiotic resistance (James et al., 2006; Sahebi and Vahidi, 2009; Alam et al., 2015). Self-medication is the practice wherein an individual, either independently or based on advice from a third party, opts to administer medication to themselves with the aim of preventing, treating, or curing a condition whose nature and severity are often not fully understood (WHO, 2000). This practice may involve using leftover medications from previous treatment courses, medications obtained from relatives or friends (Ocan et al., 2014), as well as non-prescription or over-the-counter medicines. The indiscriminate use of medications is on the rise, posing a significant public health challenge (Kasulkar & Gupta, 2015) in both developing and developed nations alike. While self-medication is widespread globally, it is particularly prevalent in developing

countries, mirroring patterns observed in already developed nations, with some exceptions such as certain North American and Northern European countries (Morgan et al., 2011).

### *Prevalence and Challenges of Self-Medication*

Globally, SM presents a significant public health concern, with reported prevalence rates varying across regions. In northern and western Europe, the prevalence stands at 0.1%, whereas in Eastern Europe, it rises to 21%, and in the USA, it reaches 27%. Developing countries exhibit much higher reported prevalence rates, for instance, 84% in Pakistan, 78% in Saudi Arabia, 67% in Nigeria, and 79% in India (Sahebi and Vahidi, 2009; Afridi et al., 2015; Grigoriyan et al., 2006; Kumar et al., 2013). Antibiotics are frequently self-medicated globally, with over 50% obtained and used without a prescription. This trend significantly contributes to antibiotic resistance, making it the most prevalent and conspicuous factor internationally. Antibiotic resistance poses a significant challenge to healthcare systems, as they strive to manage a high burden of infectious diseases while facing limited options for effective antibiotic therapy (Cars and Nordberg, 2005; Ocan et al., 2014).

### *Regulation of Medications in India*

In India, there is no over-the-counter (OTC) category for medications, and they are required to be dispensed by pharmacists only upon presentation of a prescription from a registered medical practitioner. The Central Drugs Standard Control Organization (CDSCO) of India implemented Schedule H<sub>1</sub> on March 1, 2014, to regulate the sale of prescription drugs. Presently, there are 46 drugs listed under Schedule H<sub>1</sub>. This list includes twenty-four antibiotics such as 3<sup>rd</sup> and 4<sup>th</sup> generation cephalosporins, carbapenems, antituberculosis drugs, newer fluoroquinolones, and certain habit-forming medications. The packaging of these medications includes a mandatory Schedule H<sub>1</sub> warning printed on the label within a box bordered in red, accompanied by the Rx symbol in red as well. Additionally, pharmacists are required to maintain a separate register where they record the patient's identity, the contact details of the prescribing doctor, and the name and quantity of the dispensed drug. This register must be retained for a minimum of three years. The responsibility for enforcing these regulations lies with the drugs control authority, and government drug inspectors are empowered to conduct surprise checks on these registers to monitor the sale of the 46 drugs listed under Schedule H<sub>1</sub>. (Schedule H<sub>1</sub>, 2013; Hazra, 2014). India remains predominantly rural, with approximately 69% of its population residing in rural areas out of a total population of 1,210.2 million. Rural areas lag significantly behind urban areas in terms of socioeconomic factors such as livelihood, employment, poverty, literacy, gender disparity, and health indicators (Mukunthan, 2015; Goli, 2012).

### *Challenges and Prevalence of Self-Medication in India*

Although there are established rules and regulations in place, shortcomings in India's pharmaceutical regulatory framework have facilitated widespread access to various medications (Porter and Grills, 2015; Pal et al., 2016). A pharmacy-based

survey conducted in Berhampur, a major city in eastern India, revealed a self-medication (SM) prevalence of 18% (Panda et al., 2016). Among the most common indications were fever, pain, and gastrointestinal upset, with nonsteroidal anti-inflammatory drugs (NSAIDs) (38%), gastrointestinal drugs (16%), cough remedies (14%), and antimicrobials (10%) being frequently used for self-medication. Similarly, a study conducted in an urban area of New Delhi in 2013 reported a high SM prevalence of 93%. Common cold (61%) and fever (51%) were the primary ailments for SM, with previous use (39%) being the main source of information. Another study in 2012 reported a 50% SM prevalence in rural areas of Northern India. The primary reasons cited for practicing SM were high treatment costs in hospitals (40%), with family, friends, and neighbors serving as the main source of information (33%) (Ahmad et al., 2014).

### *Research Gap and Objectives*

Limited research has been undertaken at the community level in Kashmir to evaluate the prevalence of self-medication practices. Studies of this nature would offer valuable insights into the factors driving patients to engage in self-medication. Furthermore, such research could assist policymakers and regulatory authorities in refining drug regulations, updating lists of essential medicines, and addressing safety concerns associated with over-the-counter drugs. Against this backdrop, the current study aimed to determine the prevalence of self-medication among the youth of Kashmir.

## **METHODOLOGY**

In this study quantitative as well as qualitative methods are employed to collect the information from 400 educated youth (e.g., Cochran, 1977) from Kashmir using stratified random sampling technique. A well-designed validated questionnaire based on literature available on topic and expertise of researchers was adopted for the collection of data from youth who showed their willingness to participate in our survey. Group discussions were also held with the senior citizens of the study area to know the past. The data collected was analysed and interpreted statistically using standard statistical tools. Statistical software SPSS (Version 20) was used for analysis purpose.

### **Research Hypothesis**

Hypothesis: There is no significant difference in the opinion between male and female respondents. In order to test the hypothesis, we use Chi-square test (with usual notations) as given below:

$$X^2 = \sum_{i=1}^2 \frac{(o_i - e_i)^2}{e_i}$$

where  $X^2 \sim \chi_1^2$ ,  $o_i$  and  $e_i$  are observed and expected frequencies. We reject  $H_0$  if p-value is less than specified level of significance.

### **Data Analysis:**

Graphical representation was used to summarize the demographic characteristics of the participants under study. To assess the approach of youth towards self-medication, appropriate statistical tools were employed.

### Data Interpretation:

The results obtained were interpreted in the context of the research objective and conclusions were drawn regarding the approach of respondents towards food waste management in Central Kashmir.

## RESULTS AND DISCUSSION

The data presented in Table 1 shows the Residence, Education status, Economic status, Gender and type of family of under study. The respondents under study were 50% male, 50% female, 50% from rural area and 50% were from urban area. Further, 90.75% respondents were educated, 88.0% respondents belong to middle class families and majority of respondent's under study (68.0%) were involved in business and majority of respondents under study were from nuclear families (90.50%).

**Table 1:** General information of the participants under study in Kashmir valley

Variable		Count	Percentage
Residence	Rural	200	50.00
	Urban	200	50.00
Gender	Male	200	50.00
	Female	200	50.00
Education Status	Illiterate	37	9.25
	School level	180	47.00
	Graduate	119	29.75
	Postgraduate	54	13.50
Profession of Head of the Family	Business	272	68.00
	Government employee	79	19.75
	Private employee	49	12.25
Economic status	Lower class	39	9.75
	Middle class	352	88.00
	Upper class	9	2.25
Type of family	Joint	38	9.50
	Nuclear	362	90.50
Marital Status	Married	234	58.50
	Unmarried	166	41.50

The data shown in Table 2, revealed that statistically there was a significant difference in self-medication between rural and urban respondents ( $P < 0.01$ ), between male and female respondents ( $P < 0.05$ ), with respect to education status of respondents ( $P < 0.05$ ) and between married and unmarried respondents ( $P < 0.01$ ). However, statistically non significant difference was observed in attitude towards self

medication among people from different income groups ( $P > 0.05$ ). The study revealed that there is a high prevalence of self-medication among the youth of Kashmir.

**Table 2:** Self-medication as per socio-demographic characteristics of the participants under study in Kashmir valley

Variables	Type	Use of self-medication		Chisquare	P-value	Odds Ratio	C-I 95%
		Yes	No				
Residence	Rural	98	102	7.955	<0.01	0.564	0.379-0.841
	Urban	126	74				
Gender	Male	123	77	4.911	<0.05	1.566	1.052-2.330
	Female	101	99				
Education Status	Illiterate	25	12	8.117	<0.05	NA	NA
	School level	110	70				
	Graduate	64	65				
	Postgraduate	25	29				
Economic status	Lower class	27	12	3.074	>0.05	NA	NA
	Middle class	192	160				
	Upper class	5	4				
Marital Status	Married	159	75	32.672	<0.01	3.294	2.175-4.990
	Unmarried	65	101				

The data presented in Table 3, revealed that in response to statement about reasons for self-medication the male respondents reported that they go for self medication in order to save time (male=74.5%, female=80.5%), Save money (male=60.5%, female=67.5%), no trust on prescriber ( male = 13.5% , female = 15.5%) ,due to past experience ( male = 81.5% , female = 87% ) , to avoid hassles ( male = 90.5% , 93.5 % ) , minor illness (make = 89% , female = 81.5%) . However the most popular reason for self medication was found to be avoidance of hassles. The data also revealed that the symptoms /diseases treated via self-treatment include fever, headache, pain syndromes (male = 66 % , female = 68.5%) , GIT symptoms (male = 56% , female = 59.5%) , respiratory symptoms ( male= 43.5% , female = 37.5 % ) , urinary symptoms ( male = 21.5% , female = 26%) , weakness ( male = 42.5 % , female= 53.5% ) , diabetes mellitus ( male = 41.5 % , female = 53%) , thyroid disorders ( make = 60.5 % , female = 8.5%) , hypertension ( male = 41.5% , female = 36.5 % ) and others ( male = 14.5% , female = 10.5%). As per the data, the drugs used for self medication include painkiller antibiotics( male= 67% , female = 70.5%) , GIT drugs ( male = 58.5 % , female = 63%) , respiratory drugs ( male = 47% , female = 54.5 % ) , antihypertensives ( male = 41.5 % , female = 47.5 % ) , tonics ( male = 31.5% , female = 36%) , thyroxine ( male = 14.5% , female = 9.5%) , antidiabetics ( male = 38% , female = 36.5 % ) , anti allergics ( male = 60.5 % , female = 73% ) , others ( male = 20.5 % , female = 26.5 %). The study revealed that the source of advice of self-medicated treatment for the respondents were pharmacist ( male = 49% , female = 59.5%) , friends ( male = 36% , female = 33.5% ) , family ( male = 62% , female = 68.5 % ) ,

internet ( male = 21.5% , female = 14%) , self-guess ( male = 26.5% , female = 15.5 %) and advertisement ( male = 10.5 % , female = 14.5 %).

The respondents also revealed that they stopped self-medication after symptoms disappeared ( male = 63% , female = 69.5 % ) , after a few days ( male = 6.5 % , female = 9.5 %) after complete recovery ( make = 8% , female = 10.5 % ) , continued on regular intervals ( male = 9% , female = 6%). The study revealed that 39% males and 34.5 % females knew that drugs can cause side effects while the remaining were oblivious. Moreover, 13.5 % males and 16.5 % females experienced the side effects of self medicated drugs.

Despite being aware of the side effects these drugs cause, people resort to their usage as access to healthcare professionals and prescribed medications may be limited or costly. As a result, individuals may turn to self-medication as a more convenient and cost-effective alternative. The proliferation of misinformation, particularly through online sources and social media, further perpetuates self-medication practices. Other reasons include social and cultural norms, lack of doctors and saving time.

**Table 3:**Self-medication behaviour among participants understudy in Kashmir valley

Variables	Response	Gender		Chisquare	P-value
		Male (%) (n1=200)	Female (%) (n2=200)		
Reason for self medication	Saves time	149 (74.5)	161(80.5)	0.389	>0.05
	Saves money	121(60.5)	134 (67.5)		
	No trust on prescriber	27 (13.5)	31(15.5)		
	Past Experience	163 ( 81.5)	174 ( 87.0)		
	Avoids hassles	181 ( 90.5)	187 (93.5)		
	Minor illness	178 (89.0)	183 (81.5)		
Symptoms/ diseases treated	Fever, Headache, pain syndromes	132 (66.0)	137 (68.5)	11.758	>0.05
	GIT symptoms	112 (56.0)	119 (59.5)		
	Respiratory	87 (43.5)	75 (37.5)		
	Urinary symptoms	43 (21.5)	52 (26.0)		
	Weakness	85 (42.5)	107 (53.5)		
	Diabetes Mellitus	83 (41.5)	106 (53.0)		
	Thyroid disorders	31 (60.5)	19 (8.5)		

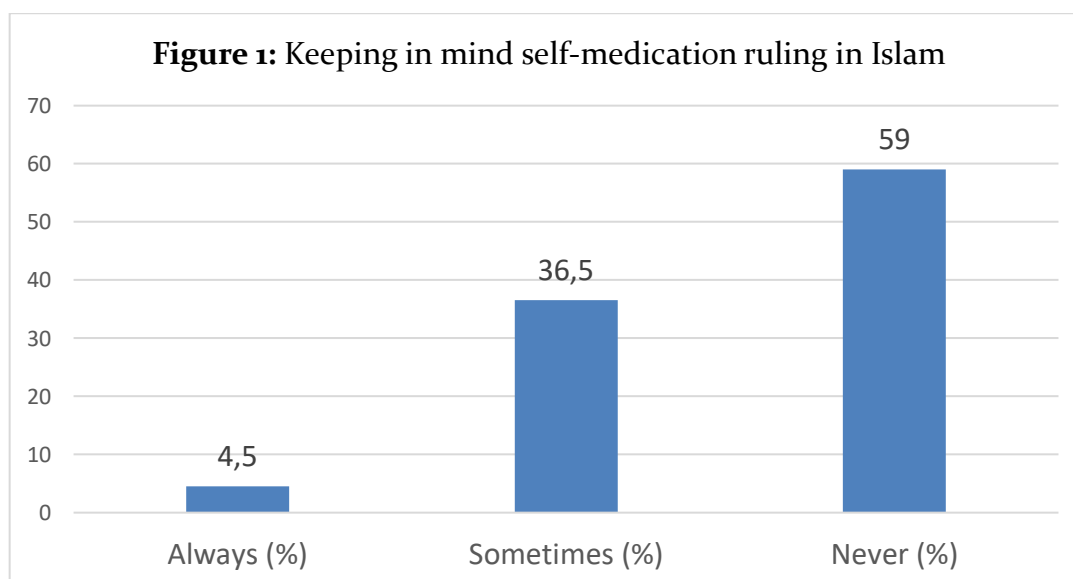
	Hypertension	83 (41.5)	73 (36.5)		
	others	29 (14.5)	21 (10.5)		
Drugs used for self-medication	Pain killers				
	Antibiotics	134 (67.0)	141 (70.5)		
	GIT drugs	117 (58.5)	126 (63.0)		
	Respiratory drugs	94 (47.0)	109 (54.5)		
	Anti hypertensives	83 (41.5)	95 (47.5)		
	Tonics	63 (31.5)	72 (36.0)		
	Thyroxine	29 (14.5)	19 (9.5)		
	Antidiabetics	76 (38.0)	73 (36.5)		
	Anti allergics	131 (60.5)	146 (73.0)		
	others	41 (20.5)	53 (26.5)		
Source of advice for treatment	Pharmacist	98 (49.0)	119 (59.5)		
	Friends	72 (36.0)	67 (33.5)		
	Family	124 (62.0)	137 (68.5)		
	Internet	43 (21.5)	28 (14.0)		
	Self-guess	53 (26.5)	31 (15.5)		
	advertisement	21 (10.5)	29 (14.5)	13.071	<0.05
When self-medication was stopped	After symptoms disappear	126 (63.0)	139 (69.5)		
	After a few days	13 (6.5)	19 (9.5)		
	After complete recovery	16 (8.0)	21 (10.5)		
	Continued on regular intervals	18 (9.0)	12 (6.0)	2.755	>0.05
Know that drugs cause side effects	Yes	78 (39.0)	69 (34.5)		
	No	31 (15.5)	57 (28.5)	7.039	<0.01
Experience Side effects	Yes	27 (13.5)	33 (16.5)		
	No	43 (21.5)	48 (24)	0.073	>0.05

It has been observed that self-medication in Kashmir is growing at fast rate which may be due to lack of health care facilities, sympathy towards family/neighbours/friends in sickness, poverty, lack of awareness and easy availability of drugs. In Kashmir people used to share drugs with neighbours, friends, relatives as well as with family members like food items. Almost in every home some medicine is available and everyone takes medicine as he/she is an experienced Doctor, ignoring the danger of self-medication. Health is wealth and having the proper medications at fingertips can make a critical difference in tough times. It is important to consult a healthcare expert for personalized advice and stock proper medicine (life saving drugs) at home for immediate relief from sudden sickness.





The data presented in Figure 1, revealed that majority of respondents (59.0%) informed that they never keep in mind Islamic ruling about self medication. Youth understudy were interested in knowing about the self-medication ruling in Islam. A good number of respondents told that they observe a good number of youth taking medicine because of depression and anxiety. Youth in general know that intoxicants are haram in Islam but due to deviation from Islamic teaching they feel physically and mentally calm after taking sleeping pills. In Islamic perspective sleeping pills and relaxants are permissible to use only on the advise of a trust worthy Muslim Doctor. Islam allows modern treatment of many diseases like infertility provided it is not against the teaching of Islam and guidance of holy Prophet. Every Muslim must remember that Holy Prophet Muhammad (Peace and blessing of Allah be upon him) guided Muslims to pray more in tough times for attaining peace of mind, relief from pain, anxiety and worries.



## CONCLUSION

In developing countries like India, Self-medication is an important topic of discussion as in many states of India as well as in Kashmir valley. Majority of the pharmacies sell drugs (medicines) to a customer without a proper medical prescription. In many states of India as well as in J&K Self-medication is still a major issue especially in urban areas. The findings of our research underscore the critical need for regulatory measures to address the rampant practice of self-medication, particularly in regions like Kashmir valley, where access to healthcare services is often limited. The prevalence of self-medication is intricately linked to factors such as place of residence and the health status of individuals, highlighting the urgent need for targeted interventions aimed at raising awareness about the risks associated with unsupervised drug use. In a devastating incident, a person tragically passed away due to complications arising from a painkiller injection dispensed by a nearby pharmacist. The incident occurred when the victim – 42 year old Kumar of Madhang Kuppam near Ambattur, had been struggling with an aching shoulder for the past two weeks and got treated at a private hospital. When the pain persisted, he went to Baskaran's Sri Sakthi Medicals on Surapattu-Ambattur Road .Baskaran administered Kumar an injection to reduce pain. But he swooned. He was rushed to a nearby hospital where doctors declared him dead. This unfortunate event serves as a poignant reminder of the critical importance of ensuring the safety and efficacy of medicines, as well as the need for robust regulatory oversight to prevent similar tragedies in the future. Hence, it is suggested that implementation of existing regulations should be reconsidered. The respondents under study were Muslims and Islam provides guidance in all aspects of life including self-medication. Islam allows modern treatment of many diseases like infertility provided it is not against the teaching of Islam and guidance of holy Prophet. A true Muslim always follows Quran and Prophet in all matters. Holy Prophet Muhammad (Peace and blessing of Allah be upon him) taught Muslims to sabr and pray more in tough times for attaining peace of mind, relief from pain, anxiety and worries.

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