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PREVALENCE AND PATTERN OF SELF-MEDICATION PRACTICES IN RURAL AREAS OF CENTRAL KASHMIR

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ABSTRACT

Objectives: To assess the prevalence, pattern and other demographic characteristics of Self-medication in rural areas of Central Kashmir.

Method: A descriptive cross -sectional study was conducted from February 2015 to July 2015 in the rural areas of two Central Kashmir districts, Budgam and Srinagar. Simple random sampling method was used.Data was analyzed by combination of manual calculators, Vassar stats and also SPSS.Out of 250 participants, 192 returned the completely filled questionnaires.

Results: Prevalence of self-medication was found to be as high as 89.58%.(64.58%) of those who practiced self-medication were males. Majority of the participants (30.76%) aged between 26-35 years and only 1.56% aged above 75 years. Most of the participants (88.54%) were literate. Most common illnesses for which self medication was used were: fever, backache, myalgias (32.55%), followed by gastrointestinal symptoms/diseases (23.25 %) and respiratory symptoms/diseases(16.27 %).Some major illnesses like hypertension(6.97%),thyroid disorders(4.65%),diabetes mellitus(2.32%)and surgical illnesses(2.32%) were also treated by self-medication.34.88 % practiced self-medication to save time and 27.90% to save money. 25.58% had previous experience of treating the same illness or symptoms.9.30 % practiced self-medication as they had no trust in prescribing physician due to varied reasons. Most of the respondents (25.58 %) used pain killers, followed by antibiotics by 19.76%,GIT drugs by 17.44% and decongestants, bronchodilators by 11.62%.Other drugs used were anti hypertensives(5.81%), multivitamins(4.65%) and anti allergics(1.16%).Majority (34.88 %) consulted their pharmacists to know about the drug & dosage. 25.58% consulted their friends and co-workers and 16.27% their family members to know about the drug(s) and dosage.16.27% searched internet to know about the drug(s).Most of the respondents (53.48%) stopped the drug after symptoms disappeared.30.23% stopped the drug(s) after a few days despite the outcome. Only 15.11% continued the drug(s) till full recovery.88.37% knew that drug(s)can cause various side effects and 11.62% were ignorant of this fact.40.69% experienced adverse drug effects.

Conclusion: Self- medication is an important health issue. It is commonly practiced to get quick relief. It can be hazardous especially to pregnant women and extremes of age. Consequences of such practices should always be emphasized to the community and steps to curb it considered. Prevalence rate of self medication is alarming in rural areas of Central Kashmir. Thus further work should be done on larger scale and strict policies should be formulated to address this problem.

Keywords: Self-medication, prevalence, pattern, practices.

INTRODUCTION

There is a lot of public and professional concern about the irrational use of drugs. Inappropriate use of drugs could be a cause of resource wastage, drug dependency and serious health hazards**.** Self-medication involves use of medicinal products by the individuals to treat self-recognized diseases or

symptoms or the intermittent or continuous use of medication prescribed by a physician for chronic or recurrent disease or symptoms.[1]

Self-medication also involves acquiring medicines without a prescription or resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using left over medication or failing to comply with the professional prescription, either by prolonging it or interrupting it too early or decreasing or increasing the originally prescribed dose.[2]

Though Self-medication reduces the burden of governments due to health expenditure linked to the treatment of minor health conditions, yet it is far from being a completely safe practice. Potential risks of self-medication practices include: incorrect diagnosis, delays in seeking medical advice when needed, masking of a serious disease, adverse drug reactions, dangerous drug interactions, incorrect medicine, incorrect dosage and risks of dependence and abuse. Self-medication is a world-wide problem. The prevalence rate is up to 68 % in European countries[3], 57 % in the USA [4], 31 % in Urban India [5],59 % in Nepal [6],51 % in Pakistan [7], 92 % in adolescents of Kuwait[8], and 47.8 % in Southern China [9], In developing countries, where universal access to health care is yet to be achieved, self-medication is one of the common and preferred modes resorted by the patients. [10]

In developing countries people are not only using nonprescription drugs, but also prescription drugs as self-medication. [11] Although OTC drugs are meant for self-medication and are of proven efficacy and safety, their improper use due to lack of knowledge of correct dose, side effects and interactions could have serious implications especially in extremes of age (children and old age) [12]

Few studies have been conducted at community level in Kashmir to assess the magnitude of self-medication practices. Studies of such nature will provide useful insight on the reasons for which patients resort to this practice and might help the policy makers and regulatory authorities to streamline the process of drug regulations, updating the list of essential medicines, and safety issues of over the counter drugs.

With this background, the present study was done to estimate the prevalence of self-medication and also to look for association between self-medication and socio demographic characteristics in rural areas of central Kashmir.

MATERIAL AND METHODS

Study Design: A descriptive cross sectional questionnaire based study was conducted in a time span of six months from February 2015 to July 2015, in rural areas of Central Kashmir.Sample size calculation was done to determine the population required for the study.

Sample size calculation:
$n=pq/(E/1.96)^2$ where
n=minimum sample size
p= prevalence of self-medication in previous studies (87% in North India.Malvi R etal)
q=100-p(100-87)=13
E=margin of sample error tolerated (%)
=5% i.e 95% confidence interval

$$n=\frac{87x13}{(5/1.96)2}$$

=174
(174 was the sample size required. In this study 250 participants were included).

Study population:
Total 250 participants from the rural areas of Central Kashmir Districts(Budgam and Srinagar) were given a prevalidated questionnaire out of which only 192 participants answered the questions completely.Rest of them answered incompletely hence data of only 192 participants were considered for the study and the rest were excluded.

Sampling method*:* Simple random sampling

Consents: The participants were informed about study objectives before data collection, and then sought their consents and questionnaires were filled only by those who were willing to fill it.

Inclusion criteria:
1. Inhabitant of study area
2. Of sound mind
3. Can communicate by at least one of the means viz. speaking or writing
4. Consuming any category of medicine without any prescription at time of study or having consumed within past six months.

Exclusion Criteria:
1. Inhabitant outside the study area.
2. Of insane mind.
3. Unable to communicate
4.Drug consumers, taking medicines with valid prescription.

Study tools: Pre-tested questionnaire which was prepared in English and Urdu. It contained two sections. Section first included the questions regarding the general demographic information such as age, gender, location, qualification etc. Section two contained the questions related to self-medication behavior like reasons for self-medication, diseases or symptoms for which self-medication was used, drugs used for self-medication, source of information about these drugs, adverse effects experienced etc.

Ethical Consideration: The objectives of the study were explained to the study participants prior to data collection, and their consents were sought and the questionnaires were filled only by those who agreed. The confidentiality of the responders was maintained.

Data entry, analysis and interpretation: Analysis was done by combination of manual calculators and Vassar stats and also SPSS software package. The prevalence of self -medication will be reported as percentages.

DISCUSSION

According to World Health Organization (W.H.O), self-medication is utilization of drugs to treat self-diagnosed symptoms or disease, irregular or continuous use of prescribed drugs for repeated or chronic disorders or symptoms.[13] Self-medication has become a worldwide matter and a lot of research is going on to find the prevalence in different countries. Factors influencing self-medication include patient satisfaction with health care provider, cost of the drugs, educational level, socioeconomic factors, age and gender. [14] This is a questionnaire based descriptive study on self-medication which was completely based on the information given by the respondents.

The prevalence rate of self-medication tends to vary across the studies. The prevalence rate of self-medication was found 89.58%, which is almost similar to the prevalence of self-medication in North India (87%)**.** [15] In Kashmir except few almost every pharmacy sells drugs to customers without prescription. The prevalence rate of self-medication in a coastal region of South India was found to be 71 %.[16] and in an urban area of Delhi was found to be 92.8 %[17].In Islamabad Pakistan prevalence rate was found to be 61.2% **[18]**

In this study, the prevalence rate of self-medication was found higher in male respondents.This is contrary to data from western reporters. **[19]** The prevalence rate was found to be higher in Spanish women than men**.** **[20]** Another study found that self-medication was not effected by gender.**[21]**

In another study the proportion of the participants as regards to gender was 35.6% female and 64.4% male **[22]** In this study 43.75% participants were married and 56.25% were single or unmarried. This is contrary to another study that found 67.4% married and 31.5% unmarried**.** **[22]** In this study it was found that greater proportion of respondents (30.76%) aged between 26-35 years took self-medication during the preceding six months period and Self-medication was found to be a rare phenomenon above the age of 75 years.

It has been found that self-medication begins in early adolescence, often during middle school years. By the age of 16, nearly all adolescents have taken medicines independently. There is however considerable variation in the age. **[23]** In another study it was found that 63% respondents aged between 15-30 years. **[18]** Most of the respondents in this study (63.52%) had studied up to school level,23.52% up to college level and 12.94% were post graduates and only 11.45% were illiterate.

Various studies have shown that self-medication is higher in literate people as compared to illiterate. **[24]** In another study also it was found that literate participants were more likely to self-medicate as compared to illiterate participants [18]

In another study 29.2% responders were found illiterate, 41.5% School going and 14.3% College going.[22]

The better socioeconomic status, better earning power and higher educational level are probably amongst the reasons for self-medication.[25] The extent and reason for self-medication varies from country to country due to the study methodologies adopted and also the different socioeconomic and sociodemographic factors.

When the most common reason for self-medication was analyzed it was found that 34.88% respondents in this study reported that they used self-medication to save time, 27.90% to save money, 25.58% reported that they had prior experience of treating similar illness. Only 1.16% thought that their illness is minor and does not require doctor's consultation. In another study majority of the participants (41.8%) reported "mild illness" as the most common reason, followed by "economical"(21.2%),"previous

experience"(19.6%),"time saving"(7.5%),"lack of health care facilities"(7.2%) **(18)**

In another study 35.9% respondent thought that their disease/symptoms were not serious, 15.7 % had prior experience of treating their symptoms successfully and 21.6% thought that self-medication saves time and money**.** (22)

The most common types of ailments for which the respondents reported to have practiced self-medication were various pain syndromes like headache, backache, trauma pain(32.55%) which is in accordance with other studies done in Rawalpindi Pakistan and other European countries.(26). Other common complaints were nausea, vomiting, diarrhea, epigatric pain, constipation (23.25%), cough, breathlessness, common cold, sore throat(16.27%).

In another study 20.2% respondent self-medicated for respiratory tract infections, 23.7% GI diseases, 23.6% headache, fever, and 10% for miscellaneous diseases/symptoms. (22) This study also revealed that 6.97% people treated hypertension themselves, 2.32 % self-medicated for Diabetes Mellitus and 4.65% for thyroid disorders. Self-medication for these major illnesses is a cause of concern.

In this study it was found that the most commonly used drugs for self-medication were pain killers (25.58%), followed by antibiotics (19.76%), GIT drugs (17.44%), and anti-cold & antitussives (11.62%).The most commonly asked analgesics were paracetamol, diclofenac, nimesulide. Other drugs used for self-medication were tonics (4.65%), anti-hypertensives (5.81%),Thyroxine(4.65%),oral anti diabetics (2.32%), drugs for urinary diseases/symptoms (3.48%) and anti allergics (1.16%).

In another study analgesics (61.1%) were determined as most likely group of medicines used for self-medication, followed by antibiotics (13.7%), antiallergics (12.1%), multivitamins (7.2 %), GIT drugs (5.2%) and sleeping pills (0.7%)(18)

In another study 24.8% respondents used analgesics, 17.0% GIT drugs, 14.0 % antibiotics,5.4 % respiratory drugs, and 1.4% multivitamins (22) In this study it was found that the majority of the respondents practiced self-medication on their own initiative but when the most common sources of information on self-medication were determined, it was found that pharmacist was the most common source (34.88%), followed by friends (25.58%), Family(16.27%), internet(16.27%), Self-guess (5.81%), TV, Radio and Newspaper advertisement (1.16%). 53.48% respondents stopped the medicines immediately after the symptoms disappeared, 30.23% after a few days irrespective of the outcome. Only 15.11% took the drugs till complete recovery.1.16% continued the drugs indefinitely. 88.37% knew that self-medication can cause adverse drug reactions. As high as 40.69% respondents reported to have experienced various adverse effects after self-medication.

One limitation of this study is the limited sample size, which we tried to overcome by use of a random sampling method so as to generalize findings. Other possible limitation is recall bias which we tried to minimize by a using a standardized well-structured questionnaire.

CONCLUSION

This study revealed that the prevalence of self-medication is alarmingly high in Central Kashmir. Fever and various pain syndromes were the most common reason for self-medication. Pain killers were the drugs most commonly used and antibiotics were more frequently taken without prescription. Self-medication was found to be common in educated males aged between 26 to 35 years. Pharmacists were the most important factor in self-medication. Despite the good access to health care facilities people resort to self-medication. Easy availability of drugs from pharmacies and decreased cost of therapy are major factors related to self-medication. This issue needs to be addressed by responsible authorities. We recommend that a holistic approach must be taken to prevent this issue from escalating. Self-medication can be prevented or minimized by: (i) Awareness and education regarding the implications of self-medication. (ii) Proper statutory drug control to ensure that drugs are supplied by a chemist on valid prescription only. iii) Strategies to make receiving health care easier and (iv) strict rules regarding pharmaceutical advertising. Further studies on the prevalence, the factors influencing and the appropriateness of self-medication are required to be conducted. Periodic studies on the attitude and practice of self-medication may give an insight into the changing pattern of drug use.

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Conflict of interest: None

Table No. 1: Demographic characters of the study population (n=192)

Demographic factors	Categories	Total (%)
Gender	**Male**	**124(64.58)**
	Female	**68(35.41)**
Marital status	**Married**	**84(43.75)**
	Unmarried	**108(56.25)**
Age	**15-25**	**38(19.79)**
	26-35	**60(30.76)**
	36-45	**32(16.66)**
	46-55	**32(16.66)**
	56-65	**7(3.64)**
	66-75	**20(10.41)**
	>75	**3(1.56)**
Literacy status	**Literate**	**170(88.54)**
	Illiterate	**22(11.45)**
Education	**School Level**	**108(63.52)**
	College Level	**40(23.52)**
	University Level	**22(12.94)**

64.58% were male and 35.41 % were female. Most of the responders(56.25%) were unmarried and 43.75% were married . Majority of the responders were between 26-35 yrs (30.76%), followed by 15-25 yrs (19.27%). Only 1.56 % responders were aged above 75.Most of the responders(63.52%) had studied up to school level and only 11.45% were illiterate.

Table No. 2: Self-medication behaviors (n=172)

Variable		no.(%)
Self-medicators	-	172(89.58)
Reason for self medication	Saves time	60(34.88)
	Saves money	48(27.90)
	No trust on prescriber	16(9.30)
	Past Experience	44(25.58)
	Avoids hassles	2(1.16)
	Minor illness	2(1.16)
Symptoms/diseases treated	Fever, Headache, pain syndromes	56(32.55)
	GIT symptoms	40(23.25)
	Respiratory	28(16.27)
	Urinary symptoms	6(3.48)
	Weakness	4(2.32)
	Diabetes Mellitus	4(2.32)
	Thyroid disorders	8(4.65)
	Hypertension	12(6.97)
	Surgical	4(2.32)
	Misc	10(5.81)
Drugs used for self-medication	Pain killers	44(25.58)
	Antibiotics	34(19.76)
	GIT drugs	30(17.44)
	Respiratory drugs	20(11.62)
	Anti hypertensives	10(5.81)
	Tonics	8(4.65)
	Thyroxine	8(4.65)
	Antidiabetics	4(2.32)
	Anti allergics	2(1.16)
	Misc	12(6.97)
Source of advice	Pharmacist	60(34.88)
	Friends	44(25.58)
	Family	28(16.27)
	Internet	28(16.27)

	Self-guess	10(5.81)
	Advertisement	2(1.16)
When self-medication was stopped	After symptoms disappear	92(53.48)
	After a few days	52(30.23)
	After complete recovery	26(15.11)
	Continued indefinitely	2(1.16)
Know that drugs cause side effects	Yes	152(88.37)
	No	20(11.62)
Experienced Side effects	Yes	70 (40.69)
	No	102(59.30)

Maximum responders (34.88 %) practice self-medication to save time,(27.90 %)for socioeconomic reasons, (25.58 %) on the grounds that they had a previous experience of treating the same illness/symptoms . (9.30 %) participants had no trust on the doctor and cited varied reasons for the lack of trust. Fever and various pain syndromes, including headache, backache, myalgias were the commonest indication for self-medication (32.55 %) followed by Gastrointestinal symptoms/diseases (23.25 %), and respiratory symptoms/diseases (16.27 %). Maximum responders (25.58 %) used pain killers, followed by antibiotics (19.76 %), GIT drugs (17.44 %) and antitussives & bronchodilators (11.62 %). Maximum responders (34.88%) consulted their pharmacists and in 25.58 % responders the drug(s) was suggested by friends and co-workers. 53.48 % participants stopped the drug after disappearance of symptoms, 30.23 % after a few days irrespective of the outcome. Only 15.11 % took the drug till complete recovery.88.37 % participants knew that the drug can cause adverse effects.40.69% respondents experienced adverse drug effects.

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