

## Original Article

### To Determine the Pattern of Self Medication Practices Among Paramedics in a Tertiary Care Hospital

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#### ABSTRACT:

**Background:** Self-medication is widely practiced in both developed and developing countries. Inappropriate self-medication results in increases resistance of pathogens, wastage of resources, and serious health hazards. **Objectives:** Present study was conducted to determine the prevalence, pattern and factors associated with self-medication among paramedics of a tertiary care hospital. **Materials and Methods:** A cross-sectional study was designed using a self-administered questionnaire to assess the knowledge and self-medication among paramedics of tertiary care hospital. **Results:** Out of total 440 study participants, 324 (73.6%) had used self-medication. The practice of self-medication was more common among younger age groups and prevalence was more in males 77.7% as compared to females 67.9%. Paracetamol (73.77%) and other analgesics (41.98%) were most commonly used drugs. Most common symptoms warranting self-medication were fever (75.31%) and headache (62.04%). Antibiotics were used by 20.37% of the participants for symptomatic treatment without any rational justification. **Conclusion:** Rising prevalence of self-medication is a matter of serious concern. IEC activities should be strengthened among general population to minimize the practice of self-medication. Antibiotic awareness should reach every corner of our society for prevention of antibiotic resistance.

**Key words:** Self-medication, drugs, prevalence, practice, antibiotic usage.

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#### INTRODUCTION

Self-medication can be defined as the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms. WHO defines as "Self medication is the selection and use of medicines by individuals to treat self-recognized illness or symptoms"<sup>1</sup>

It also includes procuring medicines without a doctor's prescription, acquisition of new medicines by using former prescriptions, sharing medicines with others or using left-over and extra medicines kept at home.<sup>2</sup> The increasing ease of access to pharmaceutical products, improving potential among people to deal certain illnesses by themselves; and extra-terrestrial approach to information nowadays have overall increased the frequency of self-medication worldwide as reported by numerous studies.<sup>3,4</sup> The self-medication prevalence is elevated all over the world reaching up to 68% in

European countries, while upraising up to 92% in the developing countries which is perhaps due to characteristic variances in their socioeconomic and ethnic factors, discrepancies in health care systems such as health care approach, drug distribution and refund policies.<sup>5,6</sup> Perhaps self-medication is an economical option for the treatment of self-limiting illnesses. As the person puts a self-made diagnosis based on the symptoms and buys drug over-the counter to treat it.<sup>7</sup> It is documented that 2.9 - 3.7 % cases of deaths occurred in hospitals as a consequence of drug-drug interactions.<sup>8</sup> The youth is inspired by the media and the internet which is encouraging self-medication behavior.<sup>9</sup> People often do not consult physician when they fall sick. They may either consult a drug store keeper or discuss with the neighbour who may have some left over medicines from the previous illnesses.<sup>10</sup> In our society it is generally observed that peoples whether known or

unknown they have a tendency to give their expert opinion when it comes to health related issues. Most of the times whom-ever we meet have an excellent remedy for whatever ails us and this is one of the reasons what<sup>11</sup> compels self-medication practices. Many studies have reported the direct correlation between the misuse of antibiotics and growing bacterial resistance.<sup>12,13,14</sup> At present day it is also observed that peoples are highly influenced by the media and the internet which promotes self-medication practices.<sup>15</sup> This raises the concerns of incorrect self-diagnosis, drug interaction, and use of nonspecific drugs for various disorders per se.<sup>16</sup> A study conducted at All India Institute of Medical Sciences, New Delhi observed that self-medication was considerably high among undergraduate medical and paramedical students in India and it increased with medical knowledge.<sup>17</sup> Antibiotics serves as a very important and useful armamentarium in protection against various harmful pathogens. Unfortunately excessive and inappropriate use of antibiotics have resulted in antibiotic resistance which is now a rapidly growing global problem with a strong impact on morbidity and mortality.<sup>18,19</sup> It is evident that self-medication is a matter of concern worldwide and India is also witnessing a significant rise<sup>20,21</sup> in inappropriate self-medication practices. Hence, keeping in mind the present study was carried out to determine the prevalence and pattern with self-medication. The idea of this study was to determine the individual's knowledge regarding self medication behaviour among paramedics working in a tertiary care hospital. May be with this project we can highlight some of the underlying facts which can help us to understand the problems related to Self medication.

## METHODS

### Study design

A survey using a validated self-administered questionnaire was conducted in paramedics working staff of GMC Jammu administration. Each participant was provided with questionnaire form, consisting of multiple questions along with the corresponding answer options, which he/she feels appropriate to answer. For those who have difficulty in understanding they were explained verbally. They were asked to complete the questionnaire anonymously.

### Sample size

The questionnaire was distributed among 440 candidates, working in various departments of GMC Jammu administration.

### Development of questionnaire

The questionnaire was adapted from previous studies and

modified accordingly to suit the conduct of the study. A Questionnaire was designed in order to access or to obtain data regarding knowledge and self-medication behaviour

### Data analysis

The questionnaire were designed to access the knowledge and self-medication behaviour. The participants were assessed by set of response using yes, no and unknown questions are intended to study the attitude of the participants regarding self medication.

A pretested, Semi-structured questionnaire was used for data collection regarding socio- demographic details like age, sex, education and practices of self medication ,symptoms for which drugs were used, sources of information for self-medication and reason for self medication. The data were coded, tabulated and analyzed using Microsoft Excel and epi-info 7 software. Descriptive results were expressed as frequency and percentage .P value of less than 0.05 was considered significant.

## RESULTS

Out of total 440 study participants, 324 (73.6%) had used self-medication within last three months. The practice of self-medication was more common among younger age groups 18-30 years (82.9%) and 31-40 years (83.4%) and there was a significant association between age factor and self-medication ( $p < 0.05$ ). Prevalence of self-medication was more common among males as compared to females ( $p < 0.05$ ). (Table 1) Referring to the question whether antibiotics are commonly used to treat all kind of infections irrespective of bacterial and viral origin; most of the paramedics around 20.37% of the participants have a history of self medication with antibiotics.

Antibiotic resistance is the major area of concern at present time. All the paramedics were aware of the term antibiotic resistance and were aware that indiscriminate and injudicious antimicrobial usage can cause ineffective treatment, which is an alarming signal for approaching problem of antibiotic resistance.

Most common symptoms warranting self medication were fever (75.31%) and headache (62.04%), followed by cough and common cold (43.21%) (Table 2). Paracetamol (73.77%) and other analgesics (41.98%) were the most commonly used drugs followed by cough and cold remedies (29.94%) for self-medication among respondents. 20.37% of the participants using self-medication reported practice of antibiotics (Table 3).

Source was reported by 5.25% respondents (Table 4). Majority of the participants practicing self medication (39.51%) reported doctor's advice not necessary for minor illness as a chief reason for self medication. 15.74% participants were practicing self-medication in emergency. 19.75% reported convenience and 12.65% reported lack of time as a reason for self- medications (Table 5)

**Table 1: Distribution of study subjects according to self-medication practices (n=440)**

Participant characteristics	Practicing self medication		P value
	Yes (%)	No (%)	
<b>Age group (years)</b>			<b>&lt; 0.05</b>
18-30	87 (82.9)	18 (17.1)	
31-40	121 (83.4)	24 (16.6)	
41-50	59 (67.0)	29 (33.0)	
51-60	35 (54.7)	29 (45.3)	
>60	22 (57.9)	16 (42.1)	
<b>Gender</b>			<b>&lt; 0.05</b>
Male	199 (77.7)	57(22.3)	
Female	125 (67.9)	59 (32.1)	
<b>Total</b>	<b>324 (73.6)</b>	<b>116 (26.4)</b>	

**Table 2: Symptoms reported for Self-medication (n=324)**

Symptoms	Frequency*(%)
Fever	244 (75.31)
Headache	201 (62.04)
Cough/Common cold	140 (43.21)
Body ache	113 (34.88)
Gastritis/Dyspepsia	103 (31.79)
Diarrhea	64 (19.75)
Others	89 (27.47)

\*Multiple responses

**Table 3: Drugs used by the respondents for self medication (n=324)**

Drug Class/Drug	Frequency (%)
Paracetamol	239 (73.77)
Other NSAIDs	136 (41.98)
Cough/Cold remedies	97 (29.94)
Antibiotics	66 (20.37)
Drugs for APD	89 (27.47)
Laxatives/antidiarrheal agents	42 (12.96)
Anti-allergic	58 (17.90)
Others	32 (9.88)

\*Multiple responses

**Table 4: Source of Information about Drugs Used in Self-medication (n=324)**

Source of information	Frequency (%)
Pharmacist	141(43.52)
Previous Prescription of Doctor	88(27.16)
Own experiences	65 (20.06)
Family members/Friends	55 (16.98)
Internet	17 (5.25)
Advertisements	15 (4.63)

\*Multiple responses

**Table 5: Reasons for Self-medication (n=324)**

Reasons	Frequency (%)
Mild illness/Doctors advice not needed	128 (39.51)
Emergency use	51(15.74)
Lack of time	41 (12.65)
Convenience	64 (19.75)
Others	47 (14.51)
<b>Total</b>	<b>324(100)</b>

\*Multiple responses

## DISCUSSION

The present study was carried out to determine the prevalence and pattern of self medication among paramedics in tertiary care hospital. The prevalence of self-medication was found to be 73.6% in present study which is comparable to the study carried out by Shyam Sunder Keshari et al (2014)<sup>23</sup> in which 69.6% participants reported self medication. Prevalence of our study was higher than the study by Kalaiselvi Selvaraj et al (2014)<sup>24</sup> in coastal region of urban Puducherry, in which they had shown 11.9% prevalence of self-medication to allopathic medication. However, Varun kumar et al (2015)<sup>25</sup> reported that 92.8% people took medicines without doctor's prescription in an urban area of Delhi. Age factors, sex, and education status were found to be significantly associated with practice of self medication in present study. The prevalence of self medication was more common among younger age groups. This is similar to findings of studies by Shyam Sunder Keshari et al<sup>26</sup> and Varun Kumar et al . In present study, males (77.7%) were practicing self-medication more than females (67.9%) in contrast to study by Pankaj Gupta et al<sup>22</sup> (2011) in which Prevalence was significantly more in the females (59.8%) than in males (48.9%). paramedics around 86% of the participants have a history of self medication with antibiotics and rest 14% do not have. In present study, most common symptoms warranting self-medication were fever and headache followed by cough and common cold. These are consistent with the results of other studies.<sup>22,23,24</sup> Paracetamol (73.77%) and other NSAIDs analgesics (41.98%) were the most commonly used drugs for self-medication among respondents in this study. Antibiotics were used by 20.37% of the participants using self-medications. Paracetamol (76.2%) was the most commonly used drug followed by cough syrup (58.9%) in the study by Varun Kumar et al.<sup>25</sup> Antimicrobials were used by 32.7% participants in study by Shyam Sunder Keshari et al.<sup>23</sup> In present study, local pharmacists (43.52%), previous prescription of doctor for similar complaint(27.16%) and family members and friends (16.98%) were the major sources of information for selfmedication similar to findings of study by Pankaj Gupta et al<sup>22</sup> while in contrast to study by Shyam Sunder Keshari et al<sup>23</sup> in which previous doctor's prescription (72.6%) was the major source of self medications information in the study. In present study, most common reason reported by participants for self-medication was doctor's advice not necessary in minor illness (39.51%). In study by Pankaj Gupta et al<sup>22</sup> monetary constraint was reported by 40.5% participants practicing self medications.

## CONCLUSION AND RECOMMENDATIONS:

Rising Prevalence of self-medication is a matter of serious concern. Inappropriate use of antibiotics usage was also identified as one of the major areas of concern.

Non-seriousness of the illness is the most common reason and pharmacists are the most common source of knowledge for practice of self-medication. IEC activities should be strengthened among general population to minimize the practice of self- medication. Further studies need to be carried out to increase the awareness among the community to understand the attitude of people towards self-medication and various factors influencing the practice of self-medication.

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