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STUDY OF SELF-MEDICATION PATTERNS AMONG MEDICAL AND NURSING STUDENTS IN DEEMED MEDICAL UNIVERSITY

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ABSTRACT

Self-medication is the treatment of common health problems with medicines especially designed and labeled for use without medical supervision and approved as safe and effective for such use. Studies on self-medication show that it is influenced by many factors, such as education, family, society, law, availability of drugs and exposure to advertisement. A high level of education and professional status are predictive factor for self-medication. The objective behind the study was to compare the awareness and patterns of self-medication among medical and nursing students. A cross-sectional study was conducted on 400 students (300 medical and 100 nursing students) by simple random sampling, using a semi-structured self-administered questionnaire to solicit information from medical and nursing students of SDUAHER over a period of three month. In the study 63% were females and 37% were males. Out of 400 students 76% were practicing self-medication. 89% of 3rd Year MBBS students and 81% nursing students were practicing self-medications. In 33.3% the reason for self-medication was due to mild illness and in 18% previous experience was the reason for self-medication. Most common reason for not taking self-medications was risk of adverse effects in 36%. Allopathic drugs were most commonly used for self-medication in 63%. It can be concluded that there was significant increase in practice of self-medication from 1st year MBBS to 3rd year MBBS and nursing students were also practicing self-medication equivalent to 2nd and 3rd MBBS students. Hence they must be educated well about safe methods of self-medications to prevent abuse.

Keywords: *Self-Medication, Awareness, Medical Students, Nursing Students*

INTRODUCTION

Self-care may be defined as the care taken by individuals towards their own health and wellbeing, including the care extended to their family members and others. Self-medication is the treatment of common health problems with medicines especially designed and labeled for use without medical supervision and approved as safe and effective for such use.

Medicines for self-medication are often called ‘non-prescription’ or ‘over the counter’ (OTC) and are available without a doctor’s prescription through pharmacies.

It is now accepted that self-care in the form of responsible self-medication can be beneficial for patients, health care providers, the pharmaceutical industry and governments. The WHO has also pointed out that responsible self-medication can help prevent and treat ailments that do not require medical consultation and provides a cheaper alternative for treating common illness.

However it is also recognized that self-medication must be accompanied by appropriate health information.

Self-medication is an area where government and health authorities need to ensure that it is done in a responsible manner, ensuring that safe drugs are made available over the counter and the consumer is given adequate information about the use of drug and when to consult a doctor.

Medical students and nursing students being in the profession where they are exposed to knowledge about diseases and drugs can practice self-medication and can lead to inappropriate self-medication resulting in wastage of resources, increases resistance of pathogens and generally entails serious health hazards such as adverse drug reaction, prolonged suffering and drug dependence.

Hence this study was conducted to compare the awareness and patterns of self-medication among medical and nursing students.

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MATERIALS AND METHODS

An analytical cross-sectional study was conducted among medical students from 1st Year, 2nd Year, 3rd Year and nursing students in deemed University of rural Kolar for a period of three month. Sample size was calculated by considering the hypothesized frequency of outcome factor in the proportion (p) as 50% and 5% absolute error. By using the formula $n = \frac{Z^2_{\alpha/2} P(1-P)}{d^2}$ sample size estimated was 384 at 95% confidence interval. Expecting 5% nonresponse a sample size of ≈ 400 was taken into the study. For equal representation 300 medical students were included and 100 nursing students were enrolled from the nursing college. Simple random sampling (lottery method) was used to enroll the students in each group after obtaining the entire list of students in the classroom. Data was collected by using a pretested and structured questionnaire after obtaining the informed consent. Ethical clearance from institution was obtained prior to the study. Statistical analysis: The data was compiled in Microsoft excel and Epi info version 7 was used to analyze the data. Descriptive statistics like proportions and confidence intervals computed. Chi-square test is the test of significance for qualitative data and a p value of <0.05 will be considered as statistically significant.

RESULTS AND DISCUSSION

Self – medication patterns was studied in 400 students (300 medical and 100 nursing students). Majority 253 (63.25%) were females, 260 (65%) were Hindus and 310 (77.5%) were from urban background [Table 1]. Among the 300 medical students 226 (75.3%) and 81 (81%) of nursing students were practicing self – medication. There was no significant association between two groups. It was observed that majority 129 (42%) of students were practicing self-medication for mild illness and 72 (23.45%) were practicing due to past experience. There was significant association between two groups in self-medication practices [Table 2]. Among those not practicing self-medication the most common reason was adverse reactions of drugs in 28 (30.1%), followed by risk of taking wrong drugs in 20 i.e. 21.5%. In the study it was observed that majority of the subjects 210 i.e. 68.4 % were practicing self-medication before 18yrs. 107 (34.8%) opined that doctor’s opinion was not necessary before taking any drugs. 74.5% had knowledge about Generic, Trade name, Course and Dosage of Drug, 53.1 % were changing the drugs prescribed by doctor after side effects. There was significant association between groups to age at start of self-medication, prior doctor consultation, on knowledge about generic and trade name of drug, change of drugs after side effects. Majority of the subjects 85.6 % were aware of completing the course of antibiotic and 53.7% had become more careful in self-medication due to influence of medical knowledge and 24.7% has become confident in practicing self-medication. There was no significant association between the groups on awareness of completing the course of antibiotic and influence of medical knowledge on Self Medication [Table 3].

Table 1: Socio-demographic profile of subjects

		Students		Total
		Medical (n=300)	Nursing (n=100)	
Sex	Female	153	100	253
	Male	147	0	147
Religion	Hindu	229	31	260
	Christian	18	65	83
	Muslim	38	4	42
	Others	15	0	15
Residence	Urban	253	57	310
	Rural	47	43	90

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Table 2: Reasons for Self-medication

Reason for Medication	SelfStudents Medical (n=226)	Nursing (n=81)	Total	X ² Value, df, p value
Mild illness	84	45	129	12.9,
Past Experience	56	16	72	5,
Convenience	31	2	33	0.0243**
Time Saving	9	3	12	
Trial	9	4	13	
Multiple Responses	37	11	48	

Table 3: Showing Patterns of self-medication

Self-Medication	Students Medical (n=226)	Nursing (n=81)	Total	X ² Value, df, p value	
Age at starting Medication	Self<14yrs	50	6	56	40.147,
	14 – 16yrs	54	10	64	3,
	16 – 18yrs	73	17	90	0.0001**
	>18yrs	49	48	97	
Prior Doctor Consultation	Required	159	41	200	10.230,
	Not required	67	40	107	1, 0.001**
Knowledge about Generic, Trade name, Course and Dosage of Drugs	Yes	158	71	229	10.40,
	No	68	10	78	1, 0.006**
Aware of Completing full course of antibiotic	Yes	194	69	263	0.377,
	No	32	12	44	1, 0.828
Change the Doctor prescribed drugs after side effects	Yes	136	27	163	18.47,
	No	90	54	144	1, 0.0001**
Recommendation of drugs to other family members	Yes	134	68	202	16.67,
	No	92	13	105	1, 0.0001**
Aware of side effects of drugs used	Yes	162	67	229	3.86,
	No	64	14	78	1, 0.0492*
Influence of medical knowledge towards medication	More careful	122	43	165	0.755,
	Seek prescription	28	13	41	3,
	Afraid of side effects	19	6	25	0.860
	Confident in self-medication	57	19	76	

Prevalence of self-medication in our study was 75.3% in medical students and 81% in nursing students. Prevalence of self-medication among the medical students in India is ranging between 71% and 92% (El Ezz and Ez-Elarab, 2011; Selley, 1988; Badiger *et al.*, 2012). In study by Shettigar *et al.*, 84% nursing students were practicing self-medication (Stimmy *et al.*, 2013). Were as studies conducted in developing countries, the prevalence of self-medication were 2.4% which was lower when compared to present study (Abay and Amelo. 2010). Prevalence was 43.2% in Ethiopia, 1% in Slovenia, 3% in Pakistan and Egypt,

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6.9% in Nigeria and 80.9% in Malaysia (Gutema *et al.*, 2011; Smogavec *et al.*, 2010; Zafar *et al.*, 2008; El Ezz and Ez-Elarab, 2011; Fadare and Tamuno, 2011; Ali *et al.*, 2010). Prevalence of self-medication was higher among females in the study. Similar observations were made in studies from India (Badiger *et al.*, 2012; Banerjee and Bhadury, 2012) and abroad (Smogavec *et al.*, 2010). This can be due to unequal representation of sample. Majority of the study participants followed allopathic system of medicine which is similar to the observations made in other studies from India (Verma *et al.*, 2010; WHO, 2000). Most easily available drugs are allopathic and also they were part of allopathic system, hence majority were using allopathic drugs.

In the present study, 74% of the participants indulged in self-medication owing to their sufficient pharmacological knowledge. In studies from Ethiopia (Abay and Amelo, 2010; Gutema *et al.*, 2011), Karachi (Zafar *et al.*, 2008), and Malaysia (Ali *et al.*, 2010) prior experience with the illness was observed to be the most common reason for self-medication. Most common reason for self-medication reported by a large number of participants was the mild illness. Similar observations were reported in a few studies from India (Badiger *et al.*, 2012; Banerjee and Bhadury, 2012).

However, in a study from Tamil Nadu (Kayalvizhi and Senapathi, 2010) most students practiced self-medication as it was time saving, whereas in Punjab (Sontakke *et al.*, 2011) the most common reason for self-medication was for quick relief.

Antipyretics were the most common class of drugs self-medicated by majority of the participants in the present study. Similar observations were made in a study from South India (Badiger *et al.*, 2012) and Ethiopia (Abay and Amelo, 2010). However, in studies from Iran (Sarahroodi *et al.*, 2012)

Mozambique (Lucas *et al.*, 2007) Pakistan (Zafar *et al.*, 2008), and Egypt (Fadare and Tamuno, 2011) analgesics were the most common group of drugs self-medicated. Fever was the most common indication for self-medication in our study which was similar to observations made in Tamil Nadu (Kayalvizhi and Senapathi, 2010) and Ethiopia (Abay and Amelo, 2010). However, in studies from Western (Banerjee and Bhadury, 2012) and Southern part of India (Badiger *et al.*, 2012), cough & cold was the most common symptom for self-medication.

The prevalence of self-medication among medical and nursing students is high, facilitated by the easy availability of drugs and information from textbooks or seniors. Significant number of students are unaware of the adverse effects of the medication that they themselves take and suggest to others. Therefore, potential problems of self-medication should be emphasized to the students. Education on irrational use of drug should be advocated. The study findings are based on a single centre study in Deemed University and hence, the study observations cannot be generalized.

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