

Knowledge, Attitude and Practices Regarding Self-Medications among Dental Students

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ABSTRACT

Introduction: Self-medication is a human behavior in which an individual uses a substance or any exogenous influence to self-administer treatment for physical or psychological ailments. The most widely self-medicated substances are over-the-counter drugs and dietary supplements, which are used to treat common health issues at home. The aim of the study is to evaluate the knowledge, attitude and practices regarding self-medications among dental students.

Materials and methods: The present study was a cross-sectional survey conducted among the saveetha university dental students consisting of undergraduate and postgraduate students. An online survey was conducted among 300 university dental students between the age group of 18-40 years. A questionnaire containing 10 close-ended questions regarding self-medications and its adverse effect was prepared. The data were collected and tabulated using the Microsoft Excel sheet. This study was conducted from jan-feb, 2021. Using the IBM SPSS software version 22, statistical analysis was done.

Results: A total of 300 responses were received out of which most of them were interns. When questioned regarding intake of medicines without consultation of doctors, 11% of male and 17% females said yes, 10% male and 17% female said no and 28% male and 17% females said they would take medications sometimes without the consultation of doctors. 27% of male and 28% of females had experienced adverse effects due to self-medication, and 22% male and 23% female had not experienced adverse effects due to self-medications. 27 % of male and 33% of females said self-medications are advisable without the consultation of the doctor, and 22% male and 18% female said self-medications are not advisable without the consultation of the doctor.

Conclusion: Self-medication is an important health issue in our country. Participants in this study had adequate knowledge about self-medications and showed a positive attitude towards considering the adverse effects of self-medications. However, respondents are in favor of using self-medication in future for their personal use and to recommend for others, health education of the public and regulation of pharmacies may help in limiting the self-medication practices.

Keywords: Self medications, dental students, adverse effect, advisable, innovative technique

INTRODUCTION:

Self-medication is defined as the selection and use of non-prescription medicines by individuals' own initiatives to treat self-recognized illnesses or symptoms. It is also obtaining and consuming medication without professional supervision regarding indication, dosage, and duration of treatment. It is common for people to feel unwell, and human beings have an inherent tendency to use herbs, potions, medications, etc. for treating themselves(1). Everyday people throughout the world act on their own for their health; they practice self-care. In some instances, they do so through self-medication, which is now increasingly being considered as a component of self-care. Some governments are increasingly encouraging self-care of minor illnesses, including self-medication(2). Encouragement of self-care is seen as giving patients every opportunity to take responsibility and build confidence in their ability to manage their own health. Patient empowerment is viewed as a positive step in the development of the relationship between patient and healthcare provider and is considered as an important health policy concept (3) .

It is the use of medication, whether modern or traditional, for self-treatment. Studies done on self-medication reveal that it is a fairly common practice, especially in economically deprived communities. It is a growing trend of 'self-care' which has its positive and negative aspects (4).

In several studies it has been found that inappropriate self-medication results in wastage of resources, increases resistance of pathogens and generally entails serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence. On the other hand, if done appropriately, self-medication can readily relieve acute medical problems, can save the time spent in waiting to see a doctor, may be economical and can even save lives in acute conditions(5). It is now accepted that self-care in the form of responsible self-medication can be beneficial for patients, healthcare providers, the pharmaceutical industry and governments (6).

The World Health Organization (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 illnesses. Minor health conditions commonly treated included headache, fever, colds, coughs, sore throat, dermatologic conditions (such as acne, cold sores, dandruff, head lice and athlete's foot), muscle ache, migraine and thrush. However, it is also recognized that self-medication must be accompanied by appropriate health information (7). Studies on self-medication show that it is influenced by many factors, such as education, family, society, law, availability of drugs and exposure to advertisements.

A high level of education and professional status have been mentioned as predictive factors for self-medication. The reasons for self-medication mentioned in the literature are mild illness, previous experience of treating similar illness, economic considerations and a lack of availability of healthcare personnel. The most common medications used for self-medication are analgesics and antimicrobials (8).

Self-medication is an area where governments 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 drugs and when to consult a doctor (9). Unlike other aspects of self-care, self-medication involves the use of drugs, and drugs have the potential to do good as well as cause harm. As different drugs have different effects, they may be used for different reasons. According to the self-medication hypothesis (SMH), the individuals' choice of a particular drug is not accidental or coincidental, but instead, a result of the individuals' psychological condition, as the drug of choice provides relief to the user specific to his or her condition (10). Specifically, addiction is hypothesized to function as a compensatory means to modulate effects and treat distressful psychological states, whereby individuals choose the drug that will most appropriately manage their specific type of psychiatric distress and help them achieve emotional stability.

Our team has extensive knowledge and research experience that has translated into high quality publications (11), (12), (13), (14), (15–24) (25), (26–28), (29, 30). The main aim of the study is to evaluate the knowledge, attitude and practices regarding self-medications among dental students.

MATERIALS AND METHODS

The present study was a cross-sectional survey conducted among the saveetha university dental students consisting of undergraduate and postgraduate students. An online survey was conducted among 300 university dental students between the age group of 18-40 years. A questionnaire containing 10 close-ended questions regarding self-medications and its adverse effect was prepared. The data were collected and tabulated using the Microsoft Excel sheet. This study was conducted from Jan-Feb, 2021. Using the IBM SPSS software version 22, statistical analysis was done. Descriptive analysis was done and expressed in terms of mean, standard deviation, frequency and percentages. Association between the categorical variables was done with Chi square test, with p value less than 0.05 considered as statistically significant. Pie charts and bar graphs were used to express the results obtained.

Questionnaire:

Knowledge, Attitude and Practices Regarding Self-Medications among Dental Students

S.No	Questions	Options
1	gender	male Female
2	Postgraduate - Year of study	1st year 2nd year 3rd year
3	Undergraduate - Year of study	1st year 2nd year 3rd year 4th year Intern
4	What are the reasons for self-medication?	Costly physician fees Easy access to medicine Not taking the disease seriously Previous prescription of the drug All of the above

5	Are you aware of self-medication?	yes No
6	What are the effects of self-medication?	Incorrect self-diagnosis Delays in seeking medical advice when needed Infrequent but severe adverse reaction All of the above
7	Do you feel self-medication is not safe?	yes No
8	Are you aware of self-medication syndrome?	yes No
9	For which disease have you taken self-medication in the past 6 months?	Headache body pain cold Fever none of the above Have never taken self-medication
10	Have you ever experienced adverse effects due to self-medication?	yes No
11	Are you taking self-medication for any chronic disease?	yes No
12	Have you ever taken medication without the consultation of the doctor?	Yes No Sometimes
13	Do you think it is advisable to take medicine without the consultation of the doctor?	yes No

RESULTS

A total of 300 responses were received out of which most of them were interns. The following conclusions were made from the results and were expressed with the help of pie charts and bar diagrams. About 54.87% of them were males and 45.13% of them were females [Figure 1]. Among the participants, 64.10% of them belong to 21-30 years, 23.08% belong to 31-40 years and 12.82% belong to 10-20 years [Figure 2]. When questioned regarding intake of medicines without consultation of doctors, 11% of male and 17% females said yes, 10% male and 17% female said no and 28% male and 17% females said they would take medications sometimes without the consultation of doctors [Figure 3].

When questioned regarding the reasons for self-medications, 10% of male and 12% of female said costly physician fees, 15% male and 10% female said easy access to medications, 13% of male and 15% of females said not taking diseases seriously, 8% of male and 10% of female said previous perception of drugs and 3% of male and 4% of female choose all the options [Figure 4]. 16% of male and 22% of females were aware of self-medication syndrome, 33% male and 29% female were unaware of it [Figure 5].

27% of male and 28% of females had experienced adverse effects due to self-medication, and 22% male and 23% female had not experienced adverse effects due to self-medications [Figure 6]. 27 % of male and 33% of females said self-medications are advisable without the consultation of the doctor, and 22% male and 18% female said self-medications are not advisable without the consultation of the doctor [Figure 7].

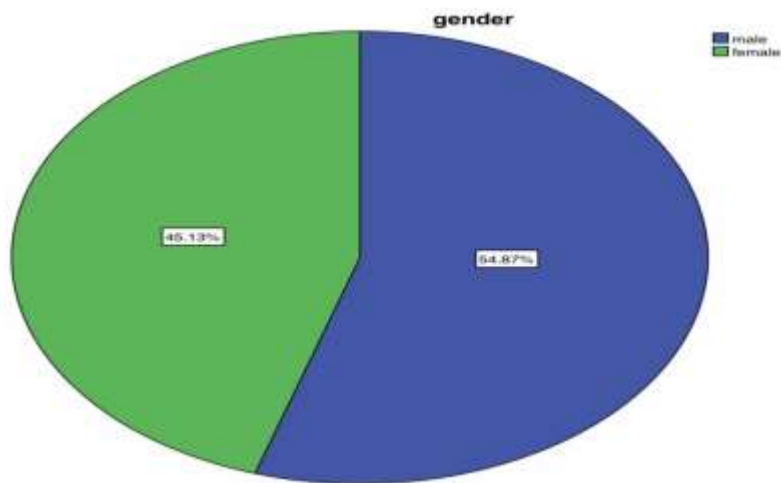


Figure 1: Pie chart shows the gender distribution of the study participants.

About 54.87% of them were male (blue) and 45.13% of them were female (green)

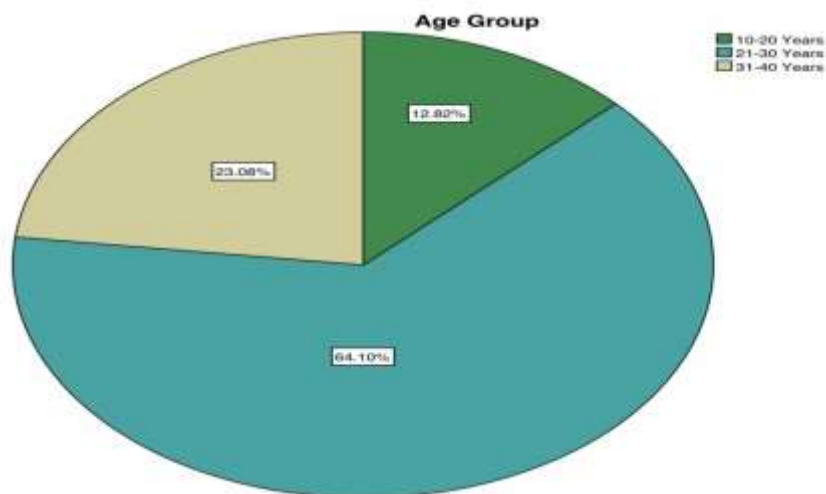


Figure 2: Pie chart shows the age distribution of the study participants.

About 64.10% of them belong to 21-30 years (blue), 23.08% belong to 31-40 years (yellow) and 12.82% belong to 10-20 years (green).

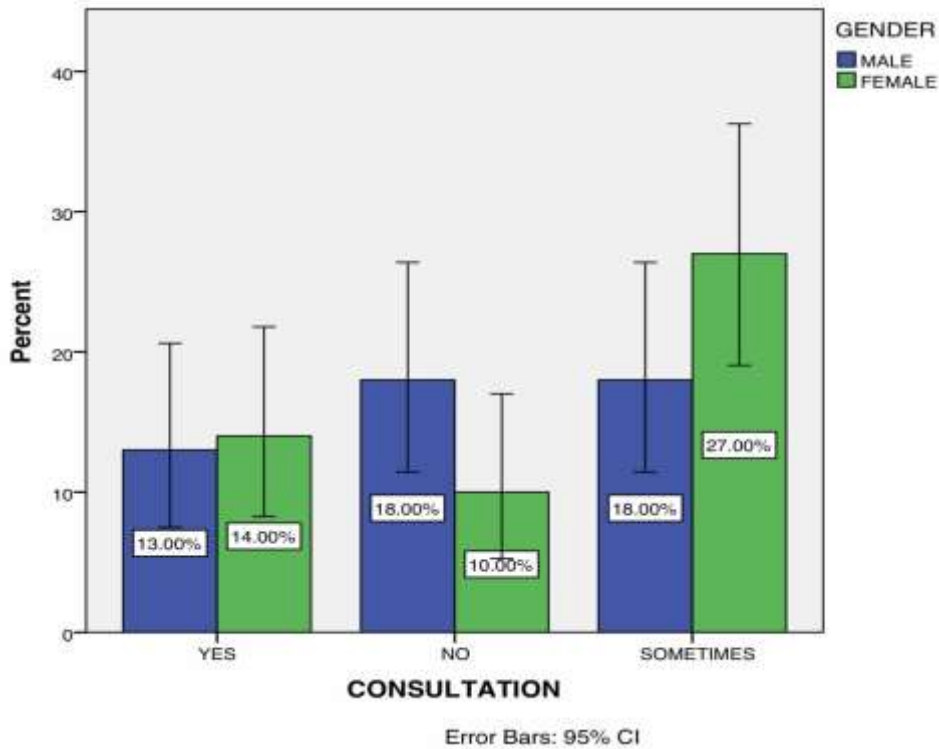


Figure 3: Bar chart depicts Association between gender of the participants and their responses regarding consuming medications without the consultation of the doctor.

blue color denotes yes, green color denotes no and yellow colour denotes sometimes. The X-axis represents the gender of the participants and Y axis represents the number of participants. About 13% of male and 14% females said yes, 18% male and 10% female said no and 18% male and 27% females said sometimes they would take medications without the consultation of doctors. Majority of the participants had sometimes taken medications, sometimes asking the consultation of the doctor, chi square $p = 0.565$ ($p > 0.05$), however the results were statistically not significant.

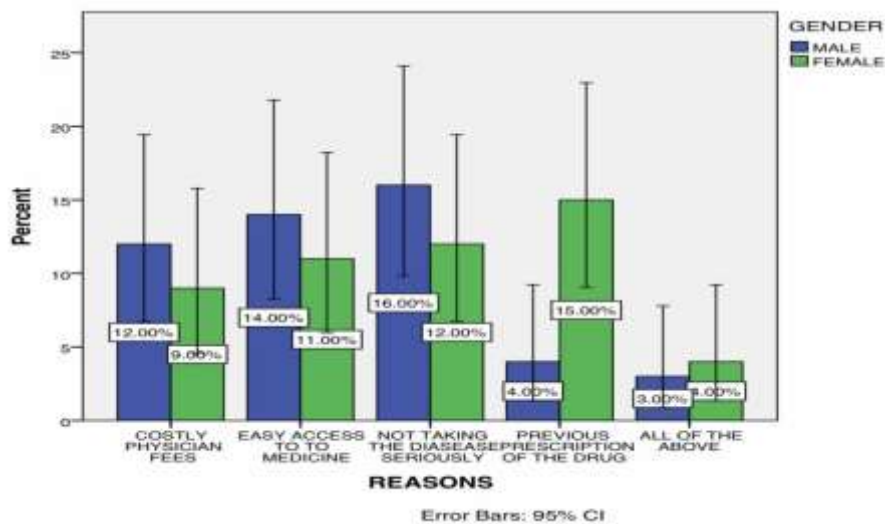


Figure 4: Bar chart depicts Association between gender of the participants and their reasons for taking self-mediations.

Blue color denotes costly physician fee, green color denotes easy access to medicine, brown colour denotes taking the disease seriously, indigo colour denotes previous prescription of the drug and yellow colour denotes all the above. The X-axis represents the gender of the participants and Y axis represents the number of participants. About 12% of male and 9% of female said costly physician fees, 14% male and 11% female said easy access to medications, 16% of male and 12% of females said not taking diseases seriously, 4% of male and 15% of female said previous perception of drugs and 3% of male and 4% of female choose all the options. Majority of the participants said they didn't take the disease seriously, chi square $p = 0.675$ ($p > 0.05$), however the results were statistically not significant.

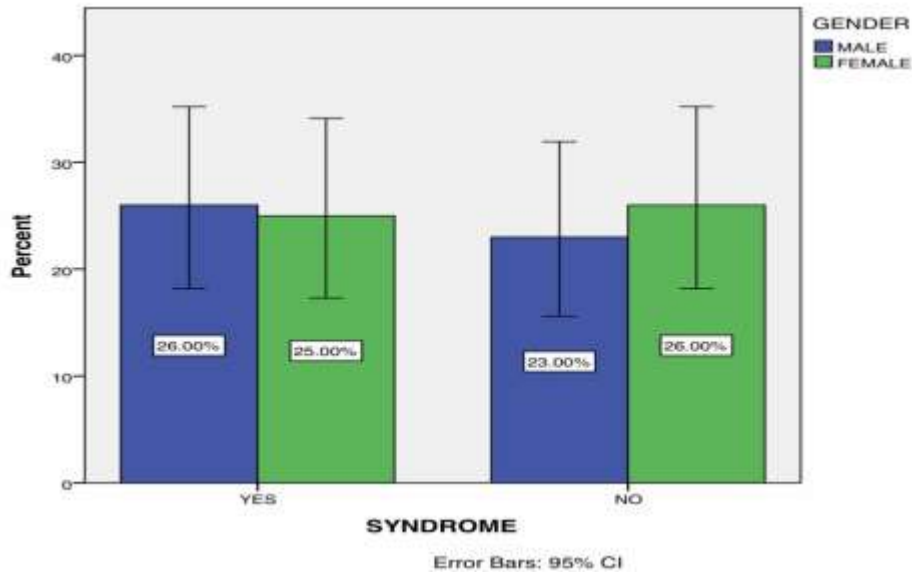


Figure 5: Bar chart depicts Association between gender of the participants and their awareness regarding self-medication syndrome.

Blue color denotes yes and green color denotes no. The X-axis represents the gender of the participants and Y axis represents the number of participants. About 26% of male and 25% of females said yes, 23% male and 26% female said no. Majority of the participants said they don't have awareness of self-medication syndrome, chi square $p = 0.345$ ($p > 0.05$), however the results were statistically not significant.

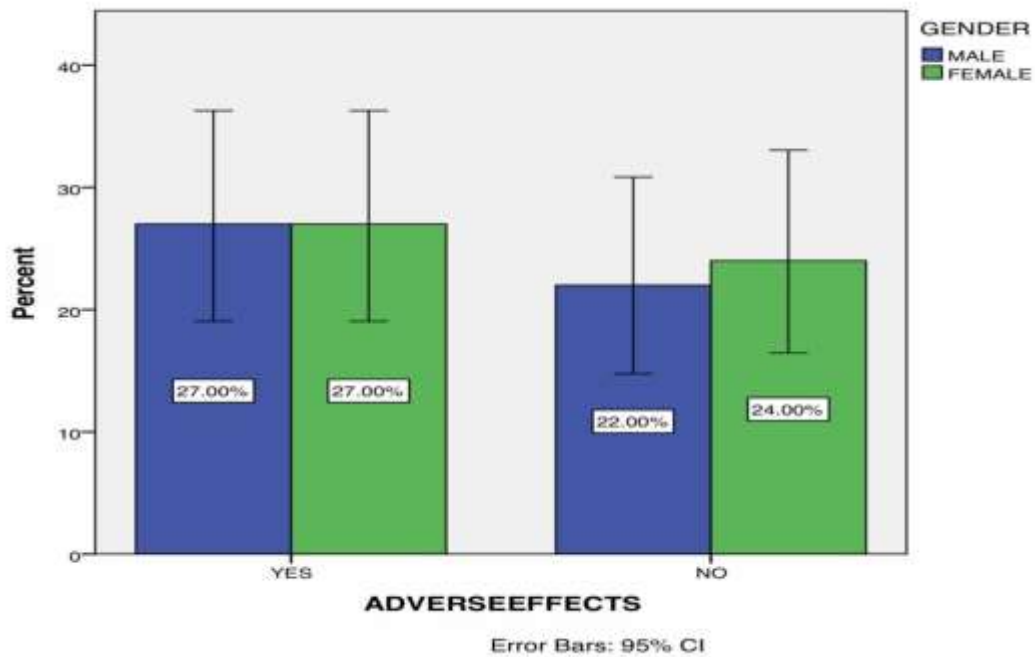


Figure 6: This Bar chart depicts Association between gender of the participants and adverse effect of self-medication.

Blue color denotes yes and green color denotes no. The X-axis represents the gender of the participants and Y axis represents the number of participants. About 27% of male and 27% of females said yes, 22% male and 24% female said no. Majority of the participants had experienced adverse effects due to self-medication, chi square $p = 0.456$ ($p > 0.05$), however the results were statistically not significant.

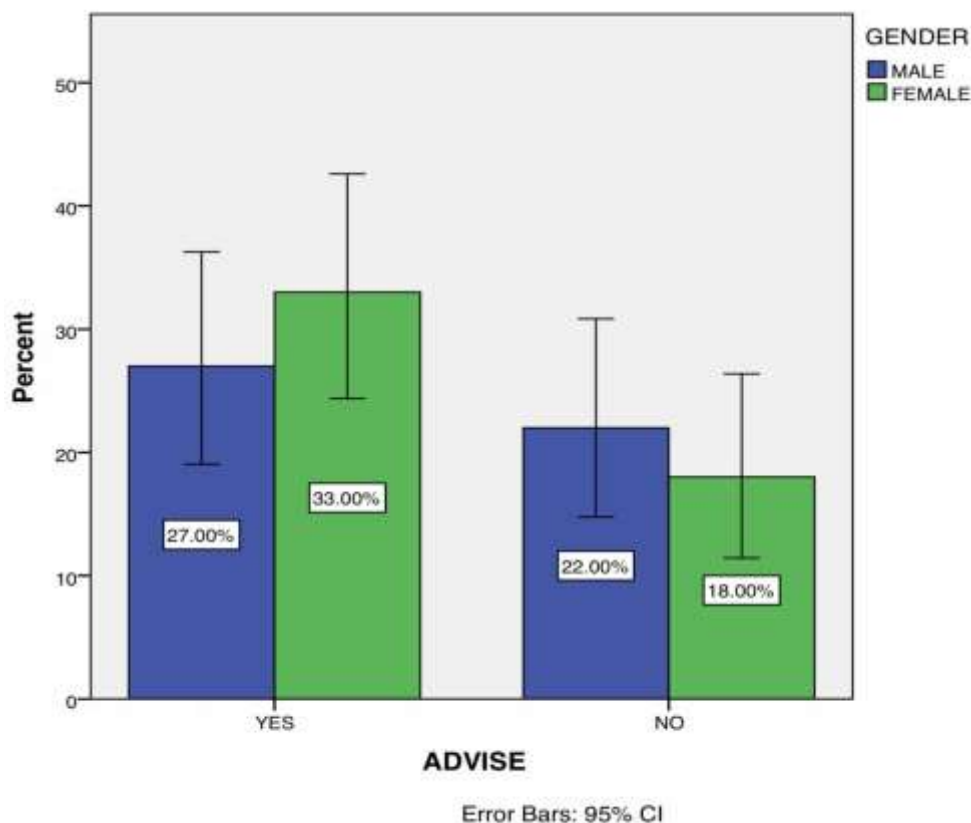


Figure 7: Bar chart depicts Association between gender of the participants and their responses regarding if it's advisable to take self-medications.

Blue color denotes yes and green color denotes no. The X-axis represents the gender of the participants and Y axis represents the number of participants. About 27 % of male and 33% of females said self-medications are advisable, 22% male and 18% female said self-medications are not advisable. Majority of the participants said their self-medications are advisable, chi square $p=0.768$ ($p>0.05$), however the results were statistically not significant.

DISCUSSION:

This study conducted from the university dental students to know their knowledge, attitude and practices towards self-medications. Majority of the studies were from North India and very few studies were conducted from this part of the country. A study in Puducherry showed the knowledge towards self-medications is as high as 71%(31). In this study about 54.87% of them were male students and mostly belonged to the age group of 21-30 years (64.10%). Another study in an urban slum showed that self-medication was practiced by 34.5% respondents and prevalent among all the age groups(32). Other studies also showed comparable results. Majority of the participants, about 18% male and 27% female, had sometimes taken medications, with consultation of the doctor. A study in urban Delhi showed that knowledge towards self-medications among those who had suffered some illness episode in the last 1 month was 31.3%. However, all these studies had taken into account all types of drugs including homeopathy or other Indian system-related drugs(33). Knowledge and attitude of self-medication could not be compared across different studies due to their varying nature of definitions used, recall period considered for definition, region selected, and methodology adopted.

Even though knowledge and attitude of self-medication tends to vary across studies, determinants and patterns of drug use have remained the same across studies(34). Most of the study had reported 17.8% prevalence among males and 5.4% prevalence among females. Study reports from India and neighbouring countries like Sri Lanka and Nepal had opined the same. This could be due to the neglecting nature of mild illnesses by males and to avoid loss of wages by spending time in hospitals(35). Most of the participants, about 16% of male and 12% of females, took self-medications by not taking diseases seriously. The commonest method of procuring drugs was found to be recalling the names from previous prescriptions which is contraindicated from our study. Fever, headache, and abdominal pain are most common conditions for which people have used self-medications.

Self-medicating excessively for prolonged periods of time with benzodiazepines or alcohol often makes the symptoms of anxiety or depression worse(36). This is believed to occur as a result of the changes in brain chemistry from long-term use. Self-medication in regards to antibiotics is reported as being highly prevalent and common in developing nations in Asia, Africa, the Middle East, and South America. While being cited as an important alternative to a formal healthcare

system where it may be lacking, self-medication can pose a risk to both the patient and community as a whole(37). The reasons behind self-medication are unique to each region and can relate to the health system, societal, economic, health factors, gender, and age. Risks include allergies, lack of cure, and even death. Potential risks of self-medication practices include: incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse(38).

Majority of the participants said self-medications had adverse effects and in contrast they said self-medications are advisable. Over the years, it has been proved time and again that self-medication is as harmful as the wrong diagnosis. Yet, many of us become our own doctor and try various methods to treat the illness. In fact, with easy access to the internet, we tend to search for a remedy and self-medicate ourselves. Self-medication is harmful. Since, the Education of the respondents was found to be the major factor influencing the practice of self-medication in various studies including the present study(39).

A total of 26% of male and 25% of females are aware of self-medications syndrome(40). Self-medicating is a very common precursor to full addictions and the habitual use of any addictive drug has been demonstrated to greatly increase the risk of addiction to additional substances due to long-term neuronal changes(41). Addiction to any/every drug of abuse tested so far has been correlated with an enduring reduction in the expression of GLT1 (EAAT2) in the nucleus accumbens and is implicated in the drug-seeking behavior expressed nearly universally across all documented addiction syndromes. This long-term dysregulation of glutamate transmission is associated with an increase in vulnerability to both relapse-events after re-exposure to drug-use triggers as well as an overall increase in the likelihood of developing addiction to other reinforcing drugs. Drugs which help to re-stabilize the glutamate system such as N-acetylcysteine have been proposed for the treatment of addiction to cocaine, nicotine, and alcohol(42). A study on self-medication among university students showed higher knowledge and attitude towards self-medications especially among females, in accordance to our study results (43)

The study was geographically limited and predominantly considered of the South Indian population. Data which were unclear were excluded thereby reducing the sample size. To ascertain the results of this study and to increase the level of significance, the sample size and the geographic area of coverage should be extended to all parts of south India. Conducting a multicentered study with an extended geographic area and a wide range of population in the future we can get better results.

CONCLUSION

Self-medication is an important health issue in our country. Participants in this study had adequate knowledge about self-medications and showed a positive attitude towards considering the adverse effects of self-medications. However, respondents are in favor of using self-medication in future for their personal use and to recommend for others, health education of the public and regulation of pharmacies may help in limiting the self-medication practices.

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CONFLICTS OF INTEREST:

The authors declare that there were no conflicts of interest in the present study.

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