

# Awareness and knowledge on the use of antidepressants among undergraduate dental students - A Questionnaire based study

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**Abstract:** Antidepressants are prescription medications used to treat moderate to severe depression. The most common forms of antidepressant medication are selective serotonin reuptake inhibitors (SSRIs) and serotonin and norepinephrine reuptake inhibitors (SNRIs). They balance out chemicals (serotonin, dopamine and norepinephrine) in the brain which improves a person's mood. There are side effects associated with antidepressant medications and some of them could be severe. Abuse or over-usage of these drugs can lead to severe effects like drug interactions, complications, and toxicity. Hence the objective of this study is to analyse the knowledge and awareness of antidepressants usage. This is a questionnaire based study conducted among randomly chosen 100 undergraduate dental students. It consisted of questions regarding the knowledge and awareness of antidepressants usage and its complications. In this study, all 100% of the students reported to have been affected by stress and 96% of the students reported that their dental school plays a role in affecting the personal health and well being. 47% of the students reported the use of antidepressants. According to gender females are more prone to usage of antidepressants than males. Only 30% of the participants are aware of the knowledge on the use of antidepressants. Only 24% of the students are aware of the complications caused by the misuse of antidepressants. From the study, it is evident that the knowledge and awareness of antidepressants usage is very poor. Future actions with a view to improve the knowledge of dental students concerning the use, side effects and therapeutic effects of antidepressant medication seem to be particularly needed and relevant.

**Keywords:** Depression, dentist, dental students, Misuse, medication, Side effects, Stress

## Introduction

Depression is a chronic and recurrent disorder characterised by one or more depressive events with at least two weeks of depressive mood. It leads to loss of interest in most activities, accompanied by at least four additional depressive symptoms. These symptoms include: persistent pessimism, guilt, difficulty in concentrating, hopelessness, decreased sexual desire, increased irritability, insomnia, and appetite loss[1].

It is estimated that the prevalence of depression among the young population might reach 8.3%. and that the frequency of depression is higher among students than in the population in general[2,3]. Few studies have been carried out among nursing and medical students about the usage of antidepressants which showed higher frequency[4].

In India, dentistry is attractive, interesting but not an easy profession. It has been frequently described as a stressful job and also associated with greater incidence of illness, alcoholism and suicide than other profession. Many studies have shown high preference of physical and psychological illness in dental practice also[5]. Stress is considered as one of the significant factor which can lead the exhaustion of the job and put an premature end to that job in which many has invested time and money. Therefore, it is hardly surprising that dentistry has been classified even as hazardous profession[6]. While in the college, the trouble is that many more of them, affected by the increased stress of college life overextended by extracurricular activities taken on in order to build their résumés, sleeping even less than their predecessors. As the students, they worry more about financial, social, and academic pressure. These plays a vital role in depression which are at risk for misusing or abusing of drugs, which can have serious adverse effects.[7].

Two types of treatment have been used to treat this population: psychotherapy and therapy with antidepressant medications. However, the number of antidepressants prescribed to young individuals has increased in recent years. The treatment of depression includes medications that belong to one of the following classes: tricyclic (TCAs), serotonin-specific reuptake inhibitor (SSRIs), Serotonin-norepinephrine reuptake inhibitors (SNRIs), Monoamine oxidase inhibitors (MAOIs) and atypical antidepressant[1].

Among the different classes of antidepressant medication, the SSRIs are the most commonly used by young individuals with depression due to their profile with less side-effects. Several studies stress that health professionals play an important role in treatment adherence. These studies show that one of the key factors influencing treatment adherence is how much patients rely on the prescription, on the health team and/or the physician

Prescribing is the act of indicating one or more drugs to be administered to or taken by the patient, its (their) dosage, and the duration of the treatment. It is an individualised and dynamic clinical process. In spite of their unique characteristics, prescription patterns may be influenced by social, cultural, economic, and/or promotional factors[8,9]. Dental prescriptions provide short-term treatment or treatment specifically for surgical procedures. Hence dentists require knowledge about drugs and must follow the international rules for prescribing[10,11]. As a dentist, they should be aware of drug usage before prescribing to others. Considering the increased prevalence of depression among the youth and the fact there is a considerable incidence of this disorder among university students, this study evaluated the opinion of antidepressant users concerning instruction about the use of medication, verified the knowledge of users concerning antidepressants and characterised the pattern of consumption of antidepressants. Hence the objective of this study is to evaluate the knowledge and awareness of antidepressants usage among undergraduate dental students.

### Materials and methods

This is the questionnaire based study conducted among 100 undergraduate dental students studying in a registered dental college in Chennai. A standard questionnaire was prepared and mailed to randomly chosen 150 students. The positive response came out from only 100 students with the response rate of 66.6%. The negative responses are mainly due to the lack of time and unwillingness to participate in the study.

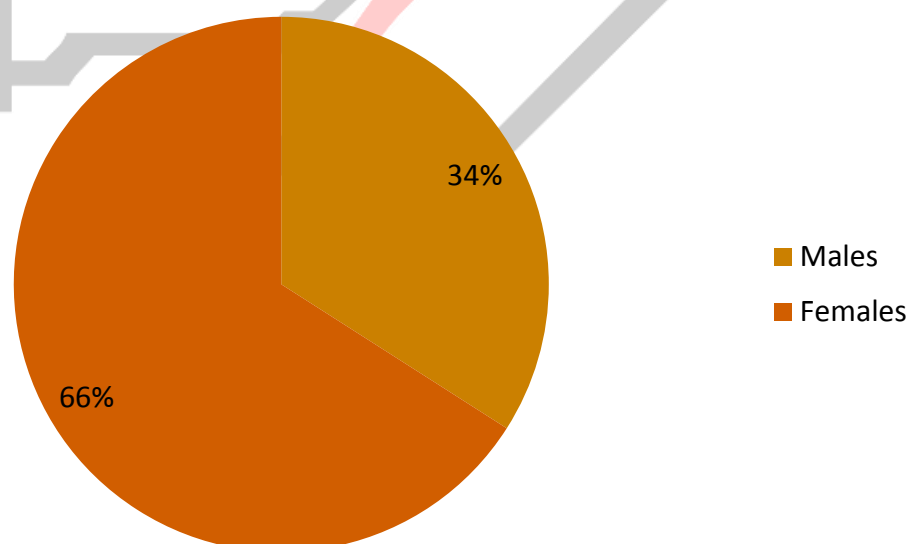
**Questionnaire:** The questionnaire used for this study is prepared based on the similar study done by Plínio Tadeu Istilli et al.[12] which was conducted among the nursing students. The questionnaire is divided into 4 parts. The first part of the questionnaire consisted of the participants' personal data which includes age, gender, year of study for identifying purpose. The second part of the questionnaire consisted of questions regarding their use of antidepressants which concerns the instruction provided about using the medication. The third part of the questionnaire consisted of questions regarding their knowledge on the usage of antidepressants and its complications. The last part consisted of questions regarding the pattern of consumption of antidepressants (type of antidepressant, dosage, frequency of consumption, medical follow-up, and reason for taking the medication). The questionnaire was analysed and the results were noted.

### Results

Out of 100, 67 females and 33 males have participated in this study. All the participants belong to the age group ranging 19-22. From the data analysed, 100% of the students reported to have been affected by stress and depression and 96% of the students reported that their dental school plays a role in affecting the personal health and well-being. Out of 100, 47 students reported the use of antidepressants to relieve their stress.

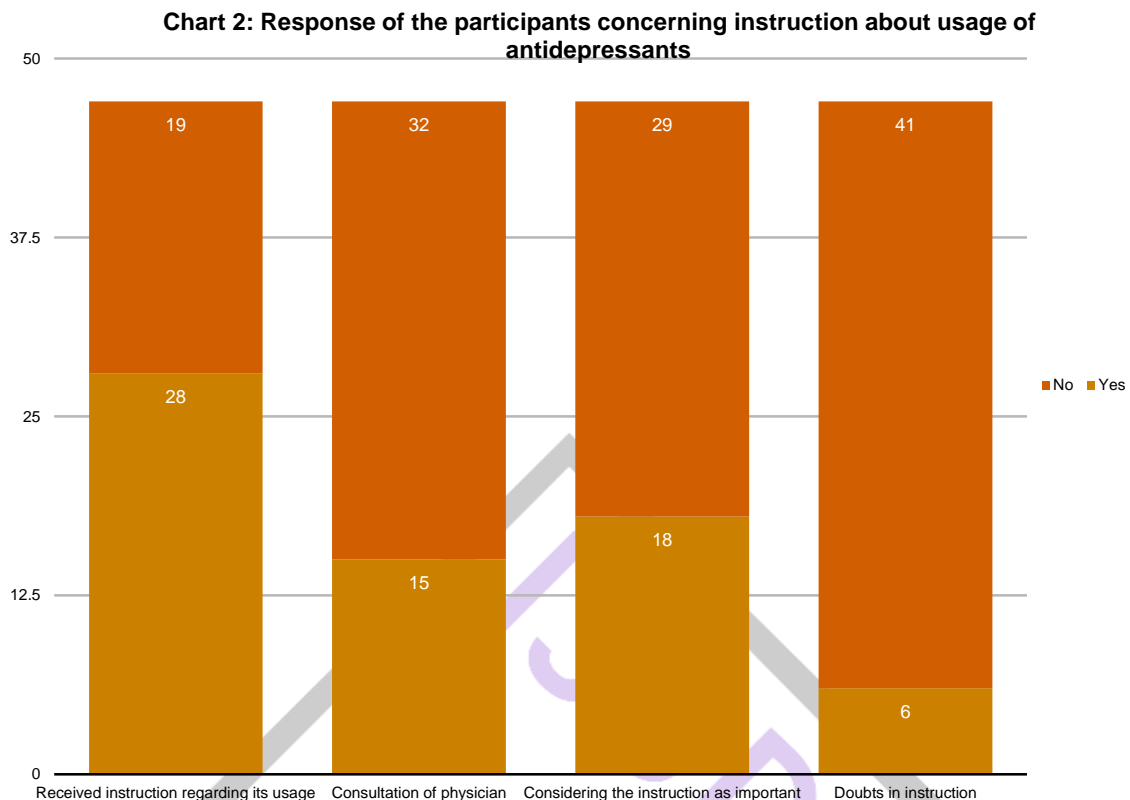
Out of 47, 31 students were females and 16 students were males which concluded that females reported higher usage of antidepressants than males (Figure.1)

**Figure :1 No. Of participants using antidepressants by gender**



Out of 47, most of the students (58.5%) received instructions about the usage of antidepressants which includes medications' side effects, drug interactions and time for the medication to start acting. Only few students (32.9%) have consulted physicians before using the antidepressants while the rest 32 students used it without any consultation. Only few (38.2%) students consider the

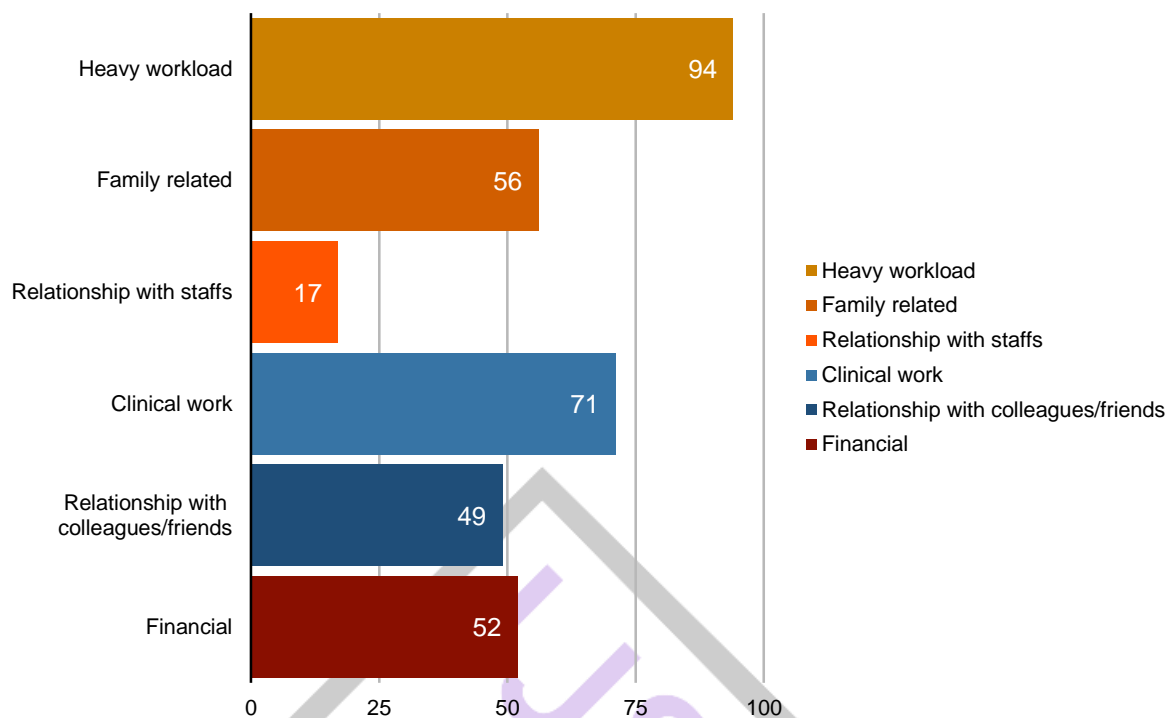
instruction as important for the usage of antidepressants in increasing , safety, effectiveness of and trust in the therapy, to minimize its side effects and drug interactions and very few(12.7%) have doubted about the instruction before using( Chart.2).



In this study, data reported that the knowledge on the antidepressants among dental students is very poor. About 78% of the students did not know when would antidepressants start to act. Most of the students(84%) believed that the usage of antidepressants cause tolerance and dependency. Out of 47 students who were reported to be using antidepressants, 35 students(74.4%) presented no side effects due to its usage. While the rest 12 students(25.5%) reported side effects which include nausea, vomiting, diarrhoea, dizziness and head ache. Only 8% of the participants in this study reported the use of concomitant drugs along with antidepressants.

From the survey, the reasons for the usage of antidepressants includes : Heavy workload(94), clinical work(71), family issues(56), financial issues(52), relationship with friends and colleagues(49) and relationships with staff(Figure:3)

Figure:3 Reasons for usage of antidepressants



## Discussion

Before discussing the study, it is better to discuss the limitations of this study. This study was done only among the third year and final year undergraduate dental students studying in registered dental college in Chennai. This study does not include other undergraduate students and the results are based only on the data obtained from survey conducted among these participants.

The transition to college is known to be both a stressful time and an important step in the transition from adolescence to adulthood [13,14]. In addition to the sociocultural factors influencing this developmental transition, Developmental neuroscience has shown dramatic brain changes during this time of late adolescence with 18–25 years of age [15,16]. It is the final phase of neural plasticity in the human life cycle. Such dynamic change in brain physiology sets up a unique opportunity for examining developmental assets and risks because they can have long-lasting impact on multiple levels. These factors contribute to the stress, anxiety and depression which is faced by all individuals of this age. Students use the antidepressants as the relieve to let go of these issues

SSRI antidepressants and stimulants affect different neurotransmitter systems and therefore have different therapeutic and side effects. The SSRIs are thought to act, in part, by blocking the presynaptic reuptake of serotonin. Their therapeutic effects include improved mood, social functioning, energy, sleep, and concentration and (often at higher doses) reduced obsessive thinking and urges to binge on food. In most people, the side effects are minimal. They include mild nausea, headaches, odd dreams, sleep disturbance, decreased libido, and delayed orgasm. Occasionally, there are more serious side effects, especially during the first few weeks of treatment. They can induce anxiety and agitation and, albeit rarely, increase obsessive thinking about suicide [7].

The use of antidepressants by young individuals in general can reach 8.3% [2] and from this study, it is evident that the use of these medications is higher among dental students, since 47% of the students reported to use antidepressants. These results are in agreement with the literature, which reports a higher prevalence of depression among university students. This study showed that almost all participants have been affected by depression. In this study, Females are more affected than males since the depression and anxiety are known to have higher prevalence among females. This is similar to the result reported by Plínio Tadeu Istilli et al. [12] who conducted the survey among nursing students.

In this study it is evident that The majority of antidepressant users in this study only followed the medical prescription and only few consulted the physicians. Several studies state that health professionals play a central role in treatment adherence. Many studies show that one of the key factors influencing treatment adherence is the trust patients have in the prescription, the health team and the physician [12]. This study confirms these data as few of the users believe that the instruction provided by health professionals on the appropriate use of the medication increases the therapy safety and trustworthiness.

In this study, the fact that many of the participants did not know there is a latent period greater than two weeks for the medication to cause any effect can directly interfere in the therapy. The reason is that these patients might interrupt the treatment due to not observing an immediate improvement in their condition or they may increase the medication dosage in order to observe the desired

effects. Moreover, educating patients regarding the need to wait a period to observe the first effects of antidepressant medications does not generate unfounded expectations, which can increase treatment adherence[9].

In this study, it was observed that most antidepressant users believe that the medication can cause tolerance and/or dependency, which are not actually associated with this type of medication. This is an alarming finding since most of the students who use antidepressants already have knowledge about the pharmacological actions of these medications. Lack of knowledge concerning the pharmacological actions of these medications was previously reported and was attributed to a gap between theory and professional practice. It is a fact that hinders understanding and implementation of pharmacological principles in daily practice[9].

Prescribing multiple medications require persistent awareness and care because there is a favourable association between the use of other medications and side effects. In this study, only few participants reported the use of other medications along with antidepressants. Prescribing multiple medications requires the review of medications in use and extensive knowledge of them. It is important in order to minimise substances used, monitoring and taking into account side effects and toxic effects. The foundation of identifying and understanding drug interactions is based on physiology, physiopathology, drugs mechanisms of action. It is also associated with care focused on the clinical observation of patients, characterising symptoms and their development over the treatment course[17,18]

The data which is obtained from the study shows that there are doubts associated with antidepressants therapy. Due to this kind of situation, dentists should be provided with development of an educational plan about administration of medication. It is important in order to provide information about the time it takes to act and potential side effects associated with its use. Dentists should also provide a written list of the main medications that interact with antidepressants and instruct patients never to use additional medication without the previous approval of their physicians. These actions increase treatment adherence because they do not lead patients to create unfounded expectations in relation to the antidepressant treatment.

Dental students are reported in showing considerable stress symptoms that were experienced during their training and becoming more anxious in comparison to general population[19]. In this study, it is clear that most of the students are getting stress due to heavy workload followed by clinical work.

There are many coping methods to overcome stresses to continue the dental practice effectively. A study by Aishwarya et.al concluded that majority of the dental students preferred acceptance and spiritual methods as the best coping methods to overcome stress. A similar study revealed that yoga, meditation, listening to music as other coping methods that helped in reducing stress[20,21].

This study shows that there is a lack of knowledge concerning how these medications act among students who use them.

### Conclusion:

From this study, it is clear that though few students preferred the use of antidepressants, the knowledge and awareness of usage and complications among the undergraduate dental students is very poor. It is important to highlight that this study sample is composed of dental students who should be prepared to educate patients in the use of antidepressants. The reason for such a lack of knowledge is not clear, but it might be related to a gap between theory and professional practice. Future actions with a view to improve the knowledge and practice of dental students concerning the use, side effects and therapeutic effects of antidepressant medication seem to be particularly needed and relevant.

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