

## Knowledge, attitude and practice of dental products by the out patients of dental college and hospital - questionnaire survey

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### Abstract

**Introduction:** Awareness, attitude and pattern regarding oral health among general public has grown, but the practice of self-medication is posing a threat to life. Therefore, the aim of the study was to evaluate self-medication practice and medicine knowledge among the out patients visiting dental college and hospital.

**Materials and Method:** The study was anonymous, questionnaire-based survey conducted among 400 subjects, aged above 18 years visiting the out-patient department of a Dental College and Hospital. The questionnaire consisted of demographic details, questions regarding the type of medication, the source of knowledge of the medicines, illness for which the medication was used, reason for self-medication and reason for not adhering to the prescriptions. The collected data was analyzed using the SPSS Version 21.

**Results:** Knowledge of usage of dental products was 74.4%, 31.6% ticked television as the source of information, 88.4% of the respondents felt that the prescription is required for the dispensing of the drug at the pharmacy. 52.2% of the respondents followed the instructions given by the dentist.

**Conclusion:** A majority of the respondents had a fair knowledge about the dental products prior to their visit to the dental college. The major source of information was from the dentists, television and from friends. The larger population did know that the prescription was important for procuring the medication and also to follow the instruction for the proper drug dosage, time of consumption and for the duration of the course.

**Keywords:** Dental Products, Knowledge, Self-medication, Awareness, Attitude

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### Introduction

The changing oral health patterns, oral health awareness, dental knowledge and positive attitude of the general public has grown. In contrast, increasing levels of dental caries have been observed in several developing countries where preventive programmes have not been implemented<sup>1,2</sup>. Under usage of prescription, medicines constitutes a large problem for the global health care system.<sup>3-9</sup> This could be attributed to under-diagnosis, under-treatment and to the fact that patients do not take medications that they have been prescribed, a phenomenon referred to as medication non-adherence.<sup>4-16</sup> Medication non-adherence is related to greater morbidity and mortality in chronic diseases<sup>16-18</sup> and has been estimated to increase health care costs.<sup>19,21</sup> The public health consequences of medication non-adherence have led providers and health planners, to aspire to measure its frequency, assess its root cause, develop and implement interventions to address it. Prior research has demonstrated that many patients stop taking medications soon after filling the first

prescription.<sup>21</sup> These studies generally rely on claims data and begin tracking adherence when the patient first fills a prescription, in effect measuring "persistence" on a medication.<sup>16</sup> The rate at which patients fill new prescriptions has been defined as "primary adherence"<sup>22,23</sup> and is an important phenomenon, since timely initiation of medications is critical for treating both acute and chronic conditions.

Therefore, the aim and objective of the study was to evaluate self-medication practice and medicine knowledge among the out patients visiting dental college and hospital.

### Materials and Method

This study was an anonymous, questionnaire-based survey. A self-developed, pre-validated close-ended questionnaire was used which was translated in both Kannada and English language, consisting of 11 questions.

The study population comprised of patients visiting outpatient department of a dental college and hospital, Mysore. The study enrolled patients who were 18yrs and above. Prior to the data collection, the questions were pre-tested (pilot study) in order to ensure the level of validity and degree of repeatability (Cronbach's alpha=0.76). 400 patients (subjects) agreed to participate in the study. 97 were excluded in accordance with the exclusion criteria like incomplete information (incompletely filled questionnaire) and 52 withdrew

from the study. Convenience sampling method was used, Ma Corr Inc. Sample size calculator was used for estimating the sample size at 95% confidence interval.

A briefing was given about the nature of the study, and the procedure of completing the questionnaire was explained. Consenting participants anonymously completed the questionnaire.

For the purpose of the study, certain operational terms were defined. Self-medication was defined as the use of over-the-counter or non prescription drugs, whether modern or traditional, for self-treatment, without prior consultation with a doctor. A doctor was defined as any person who is medically qualified to prescribe medications. It included practitioners of modern scientific medicine as well as practitioners of other health care systems. Medication was defined as any substance used for the treatment or prevention of disease. The questionnaire consisted of demographic details, questions regarding the type of medication, the source of knowledge of the medicine, illness for which the medication was used, reason for self-medication, reason for nonadherence to the prescriptions.

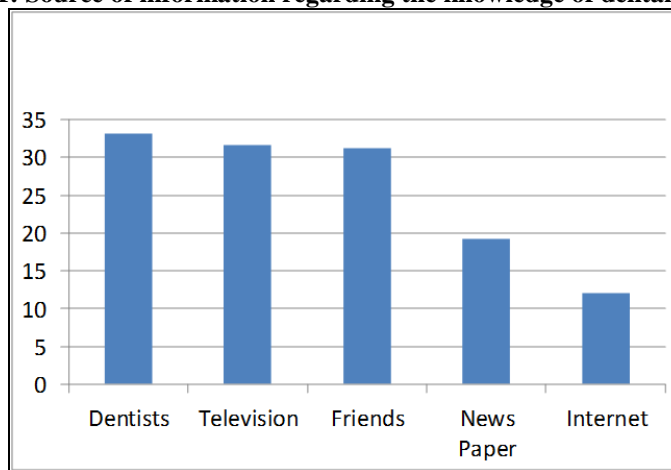
Knowledge regarding any adverse drug effects associated with self-medication was noted. The results

were based upon the data obtained from 251 patients. The prevalence of self medication was reported as percentages. The survey was descriptive and data was summarized as counts and percentages, some of the questions had multiple options to choose from. The tabulated data was analyzed using the Statistical Package for the Social Sciences (SPSS) Version 21 and results were expressed as number and percentage of respondents for each question.

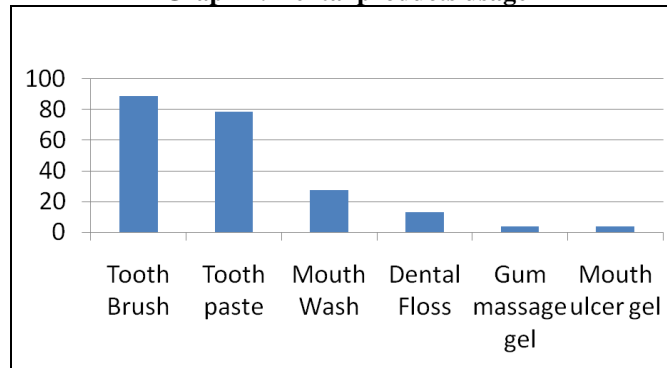
## Results

Taking into consideration the 251 filled questionnaires, the response to the question asked regarding the knowledge of usage of dental products prior to visiting the dental hospital, 74.4% was yes and 25.6% was no. The respondents who answered yes were asked about the source of information. Among them, 31.6% stated television, 19.2% newspaper, 12% internet, 31.2% friends, and 33.2% dentists as the source of information (Graph 1). Information through TV, friends and through doctor takes almost equal percentage in acquiring knowledge considering Marascuillo procedure.

**Graph 1: Source of information regarding the knowledge of dental products**



78.8% responded as using tooth paste, 27.6% were familiar with the usage of mouth wash, 13.2% were familiar with the usage of dental floss, 11.2% were familiar with the usage of interdental brushes, 3.6% were familiar with the usage of gum massage gels or the gum paints, 3.6% were familiar with the usage of mouth ulcer gels (Graph 2) and 2.8% of them were using the other dental products. 88.4% of the respondents agreed that the prescription is required for the dispensing of the drug at the pharmacy. Among them, 48% felt the prescription was important to know the correct dosage of the drug, 14.8% to know the correct time of consumption of the drug, 35.2% to know both of the above. 78.8% of the respondents believed that it is not acceptable to buy the drugs without the prescriptions like Over the Counter (OTC). 37.2% of the respondents believed that only by consuming the prescribed medication, the dental problems would be solved. Whereas, 62.8% of them contradicted to the above. Regarding a question related to adherence to the instructions to be followed post prescription, 52.2% of the respondents followed the instructions given by the dentist, 26.5% followed the instructions provided on the label, 11.6% of them followed the instructions provided by the pharmacist and 3.2% of them did not adhere to any of the instructions.

**Graph 2: Dental products usage**

## Discussion

A majority of the respondents, 74.4% were found to have awareness about the dental products prior to visiting the dental college and similar results were obtained in a study conducted by Tunde Joshua Ogunrinde et al<sup>24</sup> and 31.6% stated television as a major source of information regarding the awareness which was similar to a study by Arigbede AO, Ogunrinde TJ.<sup>25</sup>

78.8% of the respondents answered usage of tooth paste, 27.6% were familiar with the usage of mouth wash, 13.2% were familiar with the usage of dental floss well, in a study conducted by Ostberg AL, Halling et al<sup>26</sup> and in another study, it was found that the usage of dental floss is less when compared to other dental products, this could be attributed to lack of knowledge on the use of dental floss as oral hygiene aids or the difficulty in the use of the material as seen in a study done by Muttappillymyalil J, Devakaran B.<sup>27</sup>

88.4% of the respondents agreed that the prescription is required for the dispensing of the drug at the pharmacy and 78.8% of the respondents believed that it is not acceptable to buy the drugs without the prescriptions as seen in a previous study by Amanda B. Bower et al.<sup>28</sup>

In the present study 48% felt the prescription was important to know the correct dosage of the drug, 14.8% to know the correct time of consumption of the drug, 35.2% to know both of the above. 78.8% of the respondents believed that it is not acceptable to buy the drugs without the prescriptions in other words usage of the Over the counter drugs (OTC) and a similar result was observed in another study done by Giriraju A<sup>29</sup>, which described that 60% of the subjects self medicated themselves with analgesics and only about 7.4% with antibiotics and remaining with the topical applications. Rawlani SM<sup>30</sup>, tried to find out the reasons for self-medication, 96 patients (61.04%) mentioned that dental treatment required more time and was costly. 54 patients (28.42%) mentioned that they had fear for dental treatment and dental instruments, while others 40 patients (10.54%) mentioned various reasons such as dentist are not available, dental clinic is far away from home or they can take care of themselves. Despite wide

availability, patient information leaflets were rarely used by the patients. The leaflets were usually only read if the medicine was new or if a side-effect was experienced. Negative views of the leaflets included poor design and long lists of side-effects.

Accurate information and advice from health care professionals could serve to reassure patients and to ensure they are well informed about the medicines they take, as stated by Hughes L<sup>31</sup>. However, when thinking about OTC and prescription drug instructions in general, subjects tend to take the prescription drug instructions more seriously. While further studies are obviously needed.

Based on the studies carried out on self medications it was found that it is very common practice, especially in economically deprived communities. Self-medication also has some advantages and disadvantages.<sup>32, 33</sup> Here, we discuss about the risks involved and at different stages.

## Potential risks

### Individual level

- Incorrect self-diagnosis
- Failure to seek appropriate medical advice promptly
- Incorrect choice of therapy
- Failure to recognize special pharmacological risks
- Rare but severe adverse effects
- Failure to recognize or self-diagnose contraindications, interactions, warnings and precautions
- Failure to recognize that the same active substance is already being taken under a different name
- Failure to report current self-medication to the prescribing physician (double medication/harmful interaction)
- Failure to recognize or report adverse drug reactions
- Incorrect route of administration
- Inadequate or excessive dosage
- Excessively prolonged use
- Risk of dependence and abuse
- Food and drug interaction

## Prevention of Potential Risks Associated with Self-medication

### Role of health profession

Health professionals are the ones who have potential role in preventing risks of self-medication. Because he is the one who works on three main therapeutic aspects of professionalism in his daily practice: Information, therapeutic advice and education.<sup>34</sup>

**Information:** Whenever health professionals are prescribing drugs, he should give proper instructions and explain for what it is prescribed so that it will be helpful for the patient to understand and make his own decisions. Given information should be at patient's comprehension level so that it will be helpful for them to understand its management.

**Therapeutic advice:** Lack of therapeutic compliance is a serious problem in both acute and chronic treatments and reflects a poorly understood or incomplete description of the treatment aims. If patients are not well informed they are unlikely to use medication correctly. However, if the directions for use and the limitations of a given drug are explained-for example, dose, frequency of dose, treatment course, how to take it, etc., then patients have a set of guidelines which will help them to use the drug correctly, both now and in the future. Inappropriate and erratic self-medication, along with lack of compliance, will only be reduced if patients are informed and understand clearly why certain advice has been given.

**Education:** Inappropriate self-medication is the result of the medical model from which people have learnt. Proper health education should be given to the patients. By regularly adopting an educational attitude we can have an effect on large sectors of the population, on people who, in turn, may directly influence their friends and family. This aspect is of particular importance with respect to the self-medication of children by their parents or care takers.

**Self-medication** is an alarming concept. It would be safe, if the people who are using it, have sufficient knowledge about its dose, time of intake, side effect on over dose, but due to lack of information it can cause serious effects such as antibiotic resistance, skin problem, hypersensitivity and allergy. Hence, developing country like India, where we have poor economic status, education status as well as poor health care facilities, people have less knowledge regarding risks associated with their self-medication. Hence it is recommended that holistic approach should be taken to prevent this problem, which includes proper awareness and education regarding the self-medication and strictness regarding pharmaceutical advertising. Dispensing modes need to be improved through proper education, strict regulatory and managerial strategies to make health care easily accessible and cost-effective.

Health professionals have to spend some extra time in educating patients regarding the same. Improved

knowledge and understanding about self-medication may result in rationale use and thus limit emerging microbial resistance issues.<sup>35</sup>

### Conclusion

A majority of the respondents had a fair knowledge about the dental products prior to their visit to the dental college. The major source of information was from the dentists, television and from friends. The larger population knew that the prescription was important for procuring the medication and also to follow the instruction for the proper drug dosage, time of consumption and for the duration of the course.

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