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Research Article

“Awareness About Effects Of “Self-Medication” And Its Practice Among Dental Patients – A Cross Sectional Study”

Dr. Koothati Ramesh Kumar¹, Dr. Akkaloori Anitha², Dr. Anil Kumar Biradar³, Dr. Impana P Bilagi⁴, Dr. Basawalingam Sadde⁵, Dr. Sheeba Glory Chowdary⁶

¹M.D.S., Associate Professor, Dept. of Oral Medicine and Radiology, Government Dental College & Hospital, Vijayawada, Andhra Pradesh, India.

²M.D.S., Associate Professor, Dept. of Public Health Dentistry, Malla Reddy Dental College for Women, Hyderabad, Telangana, India.

³M.D.S., Associate Professor, Dept of Orthodontics, Vasantdada Patil Dental College, Sangli, Maharashtra, India.

⁴B.D.S., College of Dental Sciences, Davangere, Karnataka, India.

⁵M.D.S., Dept. Of Orthodontics, Clinician in Hyderabad.

⁶M.D.S., Assistant Professor, Dept of Prosthodontics, kamineni Institute of Dental Sciences, Narketpally, Telangana, India.

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ABSTRACT

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Aim of the study: the main aim of the study is to assess the knowledge about adverse effects of self-medication and its practice among dental patients who have attended a dental college and hospital in Vijayawada, Andhra Pradesh.

Methodology: A cross sectional hospital-based questionnaire study was conducted for a period of six months. A total of 600 subjects of age between 18-65 years had been participated in the study. Questionnaire was given to each participant individually to explain all questions with sufficient time taken to fill the questionnaire and collected back on the same day.

Results: 64.5% of the subjects had practiced self-medication for dental pain. When considered about type of self-medication used, 41% used only analgesics, 4% only antibiotics and 54.5% of subjects used combined analgesics & antibiotics. 51.4% of the subjects used self-medication with their personal knowledge. Main reason for not visiting dental clinic was due to lack of time (28%). There was a significant difference between male and female patients regarding the knowledge about adverse effects of self-medication practice.

Conclusion: Almost half of the subjects who have self-medication practice were using it till pain subsides and more than half of them have used combined analgesics and antibiotics as self-medication. Maximum number of subjects got self-medication from pharmacy which was suggested by family members & friends, personal knowledge. Most of them agreed that they could not visit dentist due to time constraint

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Corresponding Author: Dr. Anitha Akkaloori, M.D.S, Dept. of Public Health Dentistry, Malla Reddy Dental College for Women, Hyderabad, Telangana, India.

INTRODUCTION:

Self-medication is commonly practiced in Indian population. The World Health Organization (WHO) defines self-medications as “the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continuous use of a prescribed drug for chronic or recurrent diseases or symptoms¹.

Self-medication includes acquiring medicines without prescription or re using the old prescription to purchase medicines or using old medicines which were left over at home². Self-medication is observed for dental problems also in India^{3,4}. Most commonly used self-medication drugs are analgesics and antibiotics either oral administration or topical form³. Advantages of using self-medication includes feasible, economical and less time consuming⁵ but the negative effects of self-medication have to be considered as a serious issue as it causes worsening of the dental problems that leads to functional loss of teeth which in turn economical burden for patients, missed accurate diagnosis, delayed effective treatments, anti-microbial resistance in case of using antibiotics, adverse drug interactions, increased risk of drug toxicity as a result of under or overdosing and adverse effects of frequent usage of analgesics on systemic health. Anti-microbial resistance is a major and current problem world-wide particularly in developing countries, where antibiotics are often available without prescription⁶.

Prolonged use of analgesics like paracetamol and diclofenac medicines causes peptic ulcers and irreversible renal damage⁷. Reasons for self-medication practice among dental patients could be due to lack of awareness about the importance of teeth, poor socio-economic status, over burden of dental treatment cost, lack of time, easily available over the counter drugs without prescription, influence of family & friends and effect of social media^{8,9,10}.

Self-medication is an important health issue in countries like India where universal primary health care is yet to be achieved, as self-medication is feasible and economical especially to the low socio-economic people. As per Drug and Cosmetics Act of 1940 in India, prescription drugs, antibiotics and other restricted medicines has to be sold by a legally qualified registered pharmacist up on presentation of

valid prescription. Though these laws had been formulated but not strictly practiced by pharmacists which lead to increase of self-medication practices which in turn causes adverse effects of self-medication¹¹.

Though studies^{3, 5, 10} have conducted on this issue in India, this study is focused to know the attitude, practice and awareness about self-medication among dental patients attending outpatient department in government dental college and hospital, Vijayawada.

METHODOLOGY:

A cross sectional hospital-based questionnaire study was conducted among patients who have attended the Out Patient Department of Government dental college & Hospital, Vijayawada, Andhra Pradesh for a period of six months from October 2018 to March 2019.

A total of 600 subjects of age between 18-65 years had been participated in the study and written consent was taken from all the subjects who were willing to participate after explaining about the study. Pilot study was conducted to know the feasibility of the study and restructured the questionnaire.

Preformed questionnaire consists of two parts and first part consists of questions related to demographic data such as age, education, occupation and income status and second part consists of questions related to practice and knowledge of self-medication whenever they had dental problem. Validity and Reliability of the questionnaire was checked. Validity of the questionnaire was found to be acceptable with Cronbach's alpha value of 0.78. Test-re test Reliability was evaluated using Kappa Statistic and the level of agreement was found to be acceptable with score of 0.72. A single investigator had conducted the entire study to avoid the interviewer's bias and questionnaire was given to each participant individually to explain all questions with sufficient time taken to fill the questionnaire and collected back on the same day. Each patient had undergone for informal education counseling about adverse effects self-medication practices for dental problems.

After completion of the study, data were entered in MS Excel sheet 2007 and subjected for the analysis by using SPSS 20 version. Quantitative data was analyzed by using means and standard deviation.

Qualitative data was analyzed by using frequencies and percentages, whereas comparisons between variables was analyzed using chi-square test and $p < 0.05$ was considered as significant.

RESULTS:

Data were collected from 600 patients and among them 270 subjects were female and 330 were male with the age group between 18 -65 years with mean age of 36 ± 4 age. Out of total participants, 80% of them were married and 20% were unmarried. In case of educational status, 37.7% of them were with higher degree, followed by illiterates (26.4%), secondary education (25.5%) and primary education (10.4%). Most of the participants were unemployed (53.4%) that includes house makers, followed by skilled workers (22.5%) and un skilled workers (24%) (Table-1)

Out of total sample, 64.5% (387) of them were suffering with dental pain and they had used self-medication for pain. Rest of the patients did not have dental pain but they visited for routine dental check up and preventive treatments like oral prophylaxis and initial caries restorations.

In the present study, those who have self-medication practice, 41% of the subjects were using self-medication since few days, followed by 14.7% of the subjects since few weeks and 44.4% of them were using self-medication till pain subsides (Figure-1) When considered about type of self-medication they used, 41% of them used only analgesics, 4% of them used only antibiotics, 54.5% of them used both analgesics and antibiotics followed by very few subjects (0.5%) had used medicated tooth paste to get relief from dental pain (Figure-2). When participants

were questioned about the sources of self-medication, 63.6% of those samples who had self-medication practice said that they got it from Over the Counter, 16.3% of them agreed that they took it from unqualified practitioner who are not dental clinician, and 20.1% of the subjects said that they home remedy for dental pain (Figure-3)

When participants were asked about who suggested them to take self-medication, almost half (51.4%) of them said that with their personal knowledge, 33.3% of the patients were suggested by their family members and friends, 11% of them used previous prescription and very few (4%) of them have gone through mass media also (Figure -4). In the present study, out of 387 subjects who have self-medication practice, main reasons for not visiting dental clinic for pain or not seeking dental treatment were due to no time (28%), fear of dentist (21%), not feasible to visit dentist (24%), not required (16%) and 3% of them said that dental treatments are costly or not economical. (Figure -5)

In the present study, when asked about their knowledge, more than half (55.5%) of the participants were aware that frequent use of analgesics is harmful to the body, 48% of them knew that irregular use of antibiotics is harmful to the body and more than half of the participants aware that dental pain has to be treated by dentist, it is not relieved only by medication and ignoring dental pain without treatment causes more damage to teeth (Table-2) There is a significant difference between male and female patients regarding the knowledge about adverse effects of self-medication practice (Table-3).

Table-1: Demographic status of the participants.

Demographic status		Frequency (N)	Percentage (%)
Gender	Male	270	45.0
	Female	330	55.0
Marital status	Married	475	79.2
	Un married	125	20.8
Education status	Illiterate	158	26.4
	Primary	62	10.4

	Secondary	154	25.5
	Higher	226	37.7
Occupation status	Skilled worker	135	22.5
	Unskilled worker	144	24.0
	Unemployed	320	53.4

Table-2: Knowledge of participants regarding usage of self-medication.

Knowledge question	Yes (N & %)	No (N & %)
Frequent use of pain killers is harmful for the body?	333 (55.5)	267 (44.5%)
Irregular use of antibiotics is harmful for the body?	287 (47.8)	313 (52.2)
Do you know that Dental pain is not relieved only by medication?	301(51.6)	299 (48.4)
Do you know that ignoring dental pain with out treatment causes more damage to your teeth?	313(52.2)	287(47.8)

Table-3: Comparison of knowledge about adverse effects of self-medication between male and female subjects.

Knowledge question	Male	Female	Chi-square value	p-value
Irregular use of antibiotics is harmful for the body?	75	94	5.207	0.02*
Do you know that Dental pain is not relieved only by medication?	78	103	9.484	0.009*
Do you know that ignoring dental pain with out treatment causes more damage to your teeth?	83	109	4.449	0.03*

* $p < 0.05$ (significant difference)

Figure -1: Distribution of self-medication practices among the participants

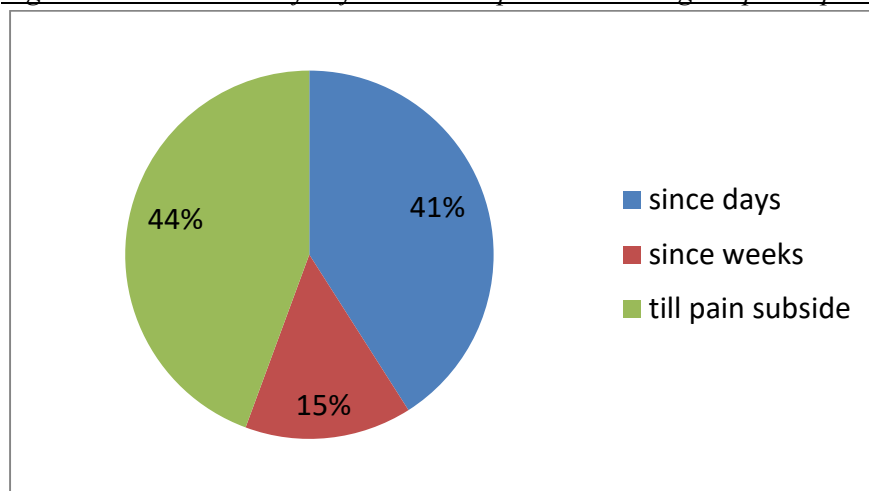


Figure-2: Distribution of type of self-medication used by the subjects.

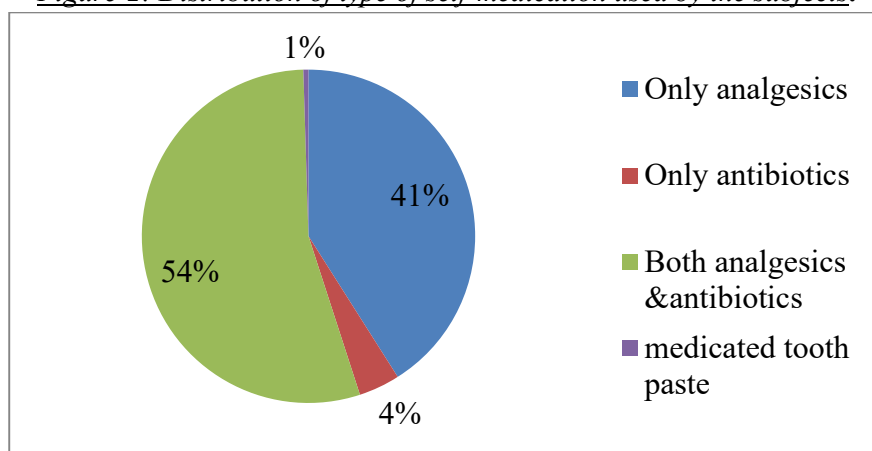


Figure -3: Sources of self-medication among subjects who had self-medication practice for dental pain.

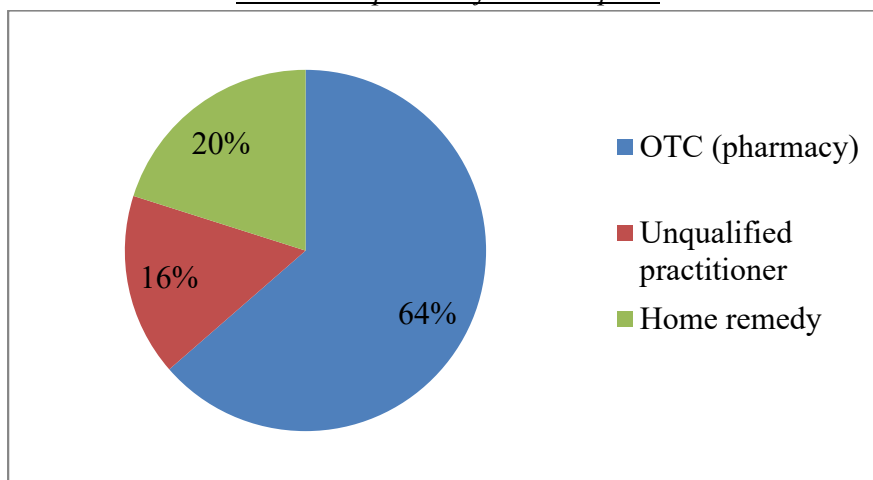


Figure-4: Distribution of persons who suggested participants for self-medication.

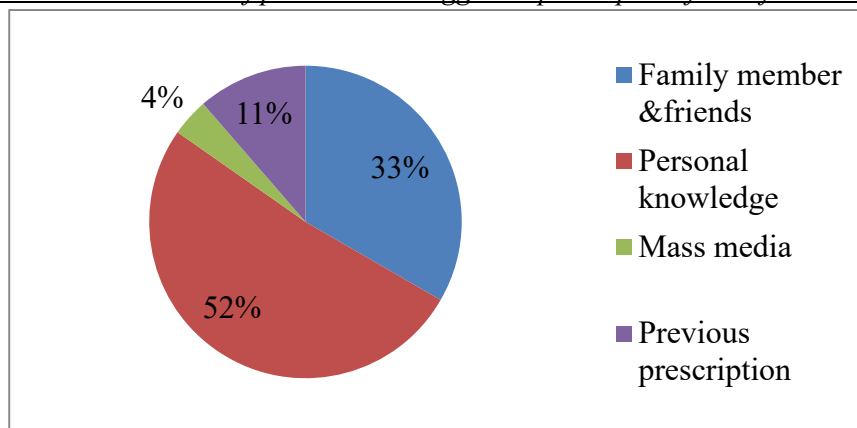
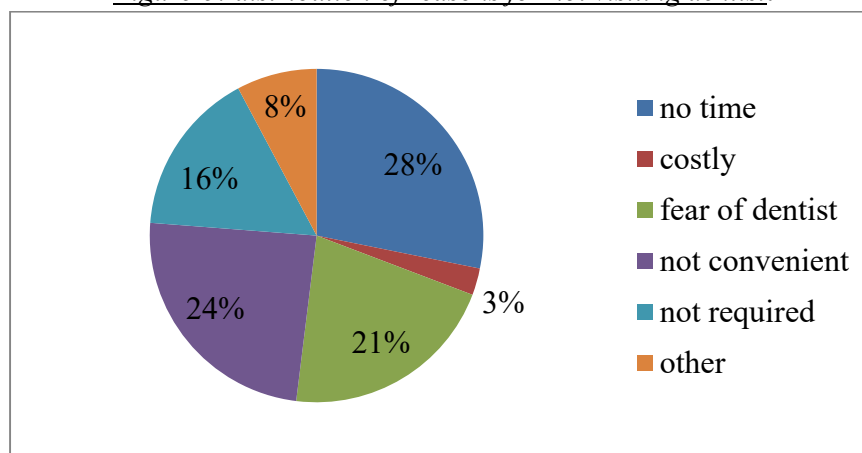


Figure-5: distribution of reasons for not visiting dentist.



DISCUSSION:

Self-medication practice has become a serious issue worldwide due to adverse effects like emergence of Multi-Drug Resistant pathogens¹², drug dependence and addiction¹³, masking of malignant and potentially fatal diseases¹⁴, drug interactions¹⁵ and tragedies relating to the side effect profile of specific drugs¹⁶. Though self-medication is useful in minor ailments where medical help is not required and pain is relieved temporarily but in case of dental pain, where pain is due to pulpal origin, treatment has to be rendered by the dental expert. Self-medication in dental pain is of limited use when compare to general minor ailments. This present study was conducted among dental patients attending a dental college and hospital to know the awareness about harmful effects of self-medication and practice of it.

In the present study, practice of self-medication was found to be 64.5% and this result is in accordance with

other studies conducted by Subhashini¹⁷ et al. in 2017 (69.32%), Balamurugan¹⁸ et al. in 2011(71%), Joshi¹⁹ et al. in 2011(75%). Reasons for high practice of self-medication could be due to easy availability of medicines without prescription, time constraint, visiting dentist may not be feasible at that movement. Whereas some other studies have shown lower prevalence of practice of self-medication when compare to present study which were conducted by Selvaraj K²⁰ et al.in 2014 (11.9%), Arun KS²¹ et al.in 2015 (30%), Dutta R²² et al.in 2017 (23.3%).

In the present study, 44% of the participants were using self-medication till pain subsides and this result is high when compare to a study conducted by Giriraju A⁵ et al in 2104 (27.5%) and Komal Raj²³ et al in 2015(29.7%). With this finding in the present study, it was understood the severity of the problem of self-medication practice in this locality as it could be due to un awareness about adverse effects as some of the

subjects were illiterates (26.4%) and with primary education (10.4%).

When the present study participants were asked about reasons for not visiting dentist, 21% of them said fear of dentist, this finding in the present is in accordance with the study conducted by Choudhary H³ et al. in 2015.

In the present study, 11% of the subjects used previous prescription for getting self-medication, it is very low when compare to a study conducted by Rawlani SM⁴ in 2015(24%) and another study²⁴ conducted on Pakistani mothers, where good past experience (61.3%) with the medicine was the main reason for self-medication. It could be due to the fact that they did not visit dentist previously to have previous prescription and this finding is in agreement with a study by Komal Raj²³ et al in 2015(17%). Very few participants cited financial constraint (3%) to get dental treatment and this finding is in contrast to findings from Awad²⁵ et al in 2005 in Sudan where the main reason for self-medication was financial constraint.

When the present study subjects were asked about who have suggested them to have self-medication, 4% of the said mass media, 52% said with their personal knowledge, 33% agreed that their family members and friends suggested. Similar results were given by the study conducted by Giriraju A⁵ et al in 2014 in Davangiri city in Karnataka where mass media effect is 2.5% and 34% said by family & friends.

Regarding the use of type of self-medication, present study participants (41%) were using only analgesics for pain and only antibiotics (4%) as self-medication for pain followed by 54.5% used both analgesics and antibiotics and very few subjects (0.5%) had used medicated tooth paste to get relief from dental pain. In another study by Harshvardhan³ et. al in 2015 in Gujarat, very large number of people (86.2%) was used only analgesics and 6% used only antibiotics. Present study result may be due to the fact that they would have suggested by other people to take self-medication which is not their individual decision. Where as in other study conducted in Saudi Arabia by Aldeeri A²⁶ et al in 2018 17.79% of the study subjects used only antibiotics as self-medication for pain which is very high when compare to the present study. In this

study, females have more knowledge about adverse effects of self-medication than males. With this finding it is generally assumed that women are more health conscious and have better health practices than men²⁷ but they also have lower threshold for pain²⁸ and they are also more likely to be scared of dental procedures, and this may account for females to involve in self-medication practice. Some studies reported differences according to gender, education and economic status for self-medication practices^{9, 25}. It is possible that educated persons have a vague idea of their dental problems and an idea of what drugs to use. It might cause some serious issues regarding drug resistance and adverse effects as they might not be aware of appropriate dosing and drug interactions.

Limitations of the study are as it is a cross sectional study conducted in a specific location, generalizability cannot be mentioned and it is a questionnaire study conducted by a single investigator asking questions to illiterate participants hence there could be a chance of investigator's bias that leads to over estimation of self-medication practices.

CONCLUSION:

Most of the participants in the present study had self-medication practice and they were suffering with dental pain. Almost half of the subjects who have self-medication practice were using it till pain subsides and more than half of them have used both analgesics and antibiotics as self-medication. Maximum number of subjects got self-medication from pharmacy or over the counter (OTC) which was suggested by family members & friends, personal knowledge. Most of them agreed that they could not visit dentist due to time constraint. There is a significant difference between male and female patients regarding the knowledge of adverse effects of self-medication.

There is a need to conduct interventional studies which are related to health education to avoid self-medication practices. All the health care professionals have their role to motivate people about adverse effects of self-medication that includes anti-microbial resistance. Policies to avoid self-medication have to be implemented strictly by following the rules and regulations in pharmacies where legally permitted pharmacist is allowed to dispense medicines with medical prescription.

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