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Original Research Article

Assessment of self-medication practice for oral health problems among people of Varanasi, Uttar-Pradesh, India

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ABSTRACT

Background: Self medication has been practiced for centuries in both industrialized and under developed countries. There are lots of literatures indicating people awareness regarding abuse of medicines and antibiotics without a doctor's prescription, but there has not been much study conducted for dental illness. The present study aimed to gather information about self-medication pattern among people of Varanasi, Uttar-Pradesh and to identify the measures to curb these life-threatening practices.
Methods: An observational based cross-sectional study was carried out in OPD of Faculty of Dental Sciences, IMS, BHU, Varanasi. The sample size comprised of 500 respondents. The SPS software was used to code, input, and analyze all descriptive data. Descriptive data analysis was performed and the results were provided as frequencies and percentage.
Results: The response of survey received a perfect score of 100%. The prevalence rate of self medication was found to be 56.2%. The main reason for engaging in such life threatening practice was lack of time and ignorance. Analgesia was the most commonly utilized type of medication. Out of 281, 84 patients sought basic care from a pharmacist, whereas 49.2% patient approached to visit dentist only when their problem continued.
Conclusions: The prevalence rate was higher in male than female. Controlling self-medication requires patient health awareness initiatives, community pharmacist help, and pharmacist continuing education. There is a need for intervention planning to encourage rational self-medication through mass media such as newspapers, magazines and TV.

Keywords: Dental illness, Self-medication, Pharmacist, OTC drugs

INTRODUCTION

Nowadays, self medication is now highly popular among people in India and other developing countries.[1] It includes buying medicines from older prescriptions, borrowing leftover drugs from friends or family and buying medicines from pharmacist without a prescription are all examples of this.[2]

Self medication has been extended in the Indian healthcare system for many years. There are approximately 120 different types of analgesics and their combinations present in market as over the counter (OTC) medications.[3,4] People can readily purchase these over the counter medications without a prescription by consulting to a pharmacist only.[5]

Unfortunately, all peoples are learning about pharmaceuticals names, types and uses through the internet and media, but they are not aware of the contraindications and toxicity of pharmaceuticals in body.[6,7] Even medical students have a habit of self

medicating, which can influence how they prescribe in future.[8] Interestingly, many studies found that self medication habits are highly widespread in the well educated population. Mostly, youngsters are drawn to this tendency of self medication. Moreover, this practice has number of negative consequences, including antibiotic resistance.[9,10]

Nevertheless, there are numerous dental issues associated with self medication practice such as foul breathe, tooth soreness, gum bleeding, tooth mobility and so on.[11] As a results, there is a substantial evidence that most common cause for employing this practice among dental patients is odontalgia i.e. toothache.[12] In order to obtain immediate relief, some patient actively resort to frequent use of analgesics without a prescription while others unintentionally overdose due to poverty and unavailability of dentist. Consequently, economic position, cultural perception of illness, depression, ignorance, poverty and dental phobia are all prevalent reason for engaging in such practices.[13-15]

However there are very limited numbers of studies available related to self medication in event of dental ailment.[16] Although, no similar research have been proposed in Varanasi, Uttar-Pradesh, India. Thus this survey was conducted among patients attending the dental outpatient department (OPD) in Faculty of Dental sciences, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar-Pradesh, India.

METHODS

Study design

A cross- sectional study was undertaken among patients attending the dental outpatient department (OPD) in Faculty of Dental sciences, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar-Pradesh, India. A total of 500 patients were sampled in the period of 3 months from July 2021 to October 2021.

Ethical clearance

The synopsis of prepared survey was compiled and submitted to the Ethical Clearance Committee, Institute of Medical Sciences, Banaras Hindu University in Varanasi. The committee has been approved this study. Before participating, each responder was given an informed consent statement to read and sign, and their participation was entirely voluntary. Their identities and responses were kept strictly private.

Description of questionnaire

A specially built proforma was used to prepare the data. It was a closed-ended, self administered questionnaire with 29 questions, divided into two portions.

The first component of questionnaire comprises general demographic information of ten questions such as name, gender, sex, age, occupation, highest qualification, and so on. The second component of questionnaire discusses self medication habits linked to the oral health. This part had nineteen questions related to the attitude and practice of self medication for dental disorders.

Sample population

Inclusive criteria

The patients undergoing the dental OPD at Faculty of Dental sciences, IMS, BHU, Varanasi, India.

Exclusive criteria

Subjects that were below the age of 18 or over the age of 70, as well as mentally incapacitated to give a valid response to questions of survey.

Sample size determination

The sample size was calculated by using IBM Statistical package for social sciences (SPSS) software version 20.0. Based on prevalence rate of study design, sample size was calculated by using the formula:

$$n = Za \times p \times q \div L^2$$

where,

n = number of subjects required,

za= confidence level at 95 percent (standard value 1.96),

P = prevalence rate of self medication,

q = 1- P,

L = Allowable error (non response rate upto 10%)

Sampling technique

The survey was carried out using a non profitable convenient sampling technique. And the participants or their family member completed questionnaire which was followed by post counseled questionnaire.

Statistical analysis

The survey data were compiled using SPSS software version 20.0. The variables were prepared in software and the percentage were provided based on questionnaire data on different aspects of self-medication, drugs they used, rationale, adverse reaction, etc. Pearson Chi square test was used to determine the gender who self medicate and reason for doing so. The level of significance was considered as 0.01. A bar chart and pie chart were also employed to provide the graphical representation of results.

RESULTS

Results of general information or demographic factor.

Gender

The response of survey was found to be 100%. Out of 500 patients, 275 were males and 225 were females respondents are summarized in Table 1.

Age

The descriptive statistics shows results for minimum age was 18 and for maximum age was 69 of participants respectively are described in Table 2.

Marital status

The demographic result of survey shows that out of 500 patients single were 177 (35.4%), married patients were 289 (57.8%), divorced were 15 (3%) and widowed were 19 (3.8%).

Occupation

The occupation statistics obtained the results of student, farmer, businessman, housewife, employed, retired and unemployed were as 177 (35.3%), 13 (2.6%), 33 (6.6%), 127 (25.3%), 128 (25.5%), 17 (3.4%) and 5 (1.0%) respectively.

Highest qualification

According to the survey, mostly graduate patients (37.8%) were attending the OPD in faculty of Dental Sciences, IMS, BHU. Then 16.6% of higher secondary qualified patients, 14.2% were post graduated, 12.6% were illiterate, 9.4% and 8.5% were secondary graduates. This results shows that, well educated people are not aware of the potential risk of self medication pattern.

Table 1: Statistics result of all respondents in prevalence rate of self medication practice.

Gender	Self medication response in last 3 months	Gender	Total respondents	Percentage (%)	Cumulative percent (%)
Male	Yes	154	275	30.8	30.8
	No	121		24.2	24.2
Female	Yes	127	225	25.4	25.4
	No	98		19.6	19.6
Total	Yes	281	500	Yes= 56.2 No= 43.8	100
	No	219			

Table 2: Statistic result of triggered factors for self medication.

Factors	Frequency	Percentage (%)	Valid percent (%)	Cumulative percent (%)
Toothache	206	41.2	73.3	73.3
Gum bleeding	48	9.6	17.1	90.4
Bad breathe	15	3.0	5.3	95.7
Oro facial swelling	9	1.8	3.2	98.9
Tooth mobility	3	0.6	1.1	100.0
Total	281	56.2	100.0	-
Non self-medicates	219	43.8	-	-
Total	500	100.0	-	-

Table 3: Result of reason for self medication.

Reasons	Frequency	Percentage (%)	Valid percent (%)	Cumulative percent (%)
Lack of time and ignorance	111	22.2	39.5	39.5
Lack of money	69	13.8	24.6	64.1
Previous experience of similar illness	48	9.6	17.1	81.1
Traditional belief	15	3.0	5.3	86.5
Unavailability of dentists	38	7.6	13.5	100.0
Total	281	56.2	100.0	-
Non self-medicates	219	43.8	-	-
Total	500	100.0	-	-

Table 4: Result for type of drug used.

	Frequency	Percentage (%)	Valid percent (%)	Cumulative percent (%)
Analgesia	209	41.8	74.4	74.4
Native herb	46	9.2	16.4	90.7
Antibiotics	17	3.4	6.0	96.8
Salt and hot water	8	1.6	2.8	99.6
Ice pack	1	0.2	0.4	100.0
Total	281	56.2	100.0	-
Non self medicates	219	43.8		
Total	500	100.0		

Table 5: Result of consultants for self-medication practice.

	Frequency	Percentage (%)	Valid percent (%)	Cumulative percent (%)
Relatives	77	15.4	27.4	27.4
Friends	48	9.6	17.1	44.5
Internet	32	6.4	11.4	55.9
Traditional healer	21	4.2	7.5	63.3
Personal knowledge	15	3.0	5.3	68.7
Television	4	0.8	1.4	70.1
Pharmacist	84	16.8	29.9	100.0
Total	281	56.2	100.0	-
Non self medicates	219	43.8		
Total	500	100.0		

Table 6: Result for adverse effect experience detail.

Adverse effect response	Adverse effect detail and precaution after experience		Frequency	%	Valid percent	Cumulative %
No	NA		264	100.0	-	-
Yes	Upset stomach	Stop taking medication	1	100.0	100.0	100.0
	Constipation	Go to private/govt. doctor	1	14.3	14.3	14.3
		Go to primary health care centre	6	85.7	85.7	100.0
		Total	7	100.0	100.0	-
	Headache	Go to primary health care centre	1	20.0	20.0	20.0
		Go to private/govt. doctor	4	80.0	80.0	100.0
		Total	5	100.0	100.0	-
	Severe Headache	Stop taking medication	1	100.0	100.0	100.0
	Upset stomach	Go to private/govt. health care centre	3	100.0	100.0	100.0
Total yes			17	3.4		

Results of self-medication habits

Timely visit

According to the statistics, the result for patients who visits dental professional timely was only 34 out of 500 participants. This indicated that 34 participants were prudent and self aware about their health which would be economical and less painful in their future because routine checkup can help them to find potential health issues. Hence, early detection gives the best chance for getting right treatment without any complications.

Duration of visit

Majority like 431 participants (86.2%) admitted to visit dentists if they have any severe pain or other dental problems, 35 (7.0%) denies to visit until they have any serious issue regarding dental problem, 21 (4.2%) visits once in a year, and 13 % (2.6) six monthly to the dental professional.

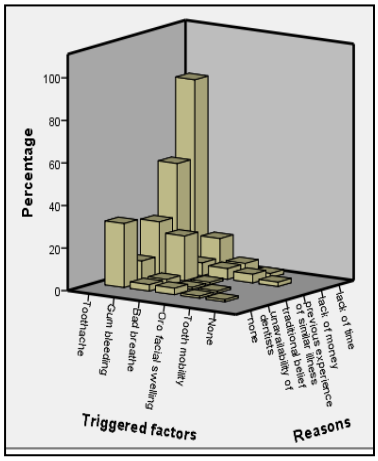

Figure 1: This diagram represents the detail of triggering variables as well the reasons why people of Varanasi self-medicates.

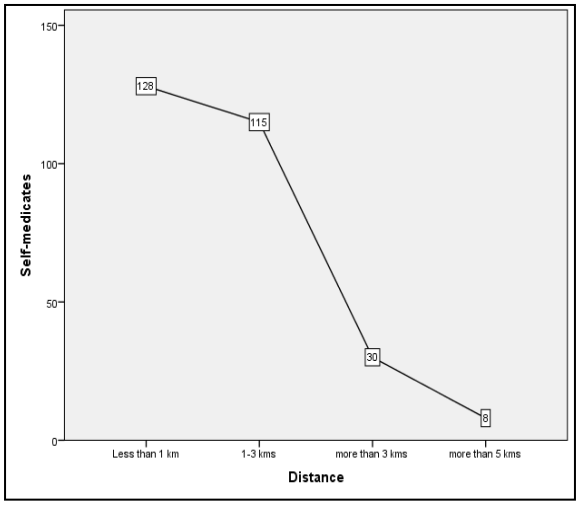

Figure 2: This diagram indicates the distance between patient's home and nearest medical post. Majority of self-medicates (128) have medical post within 1 km.

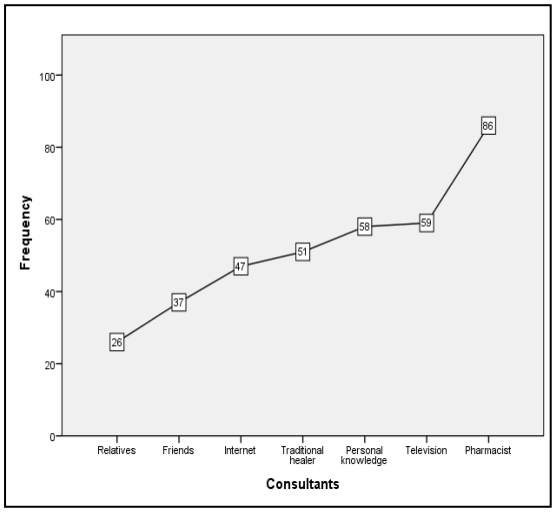

Figure 3: Rationale resource for self medication among people of Varanasi.

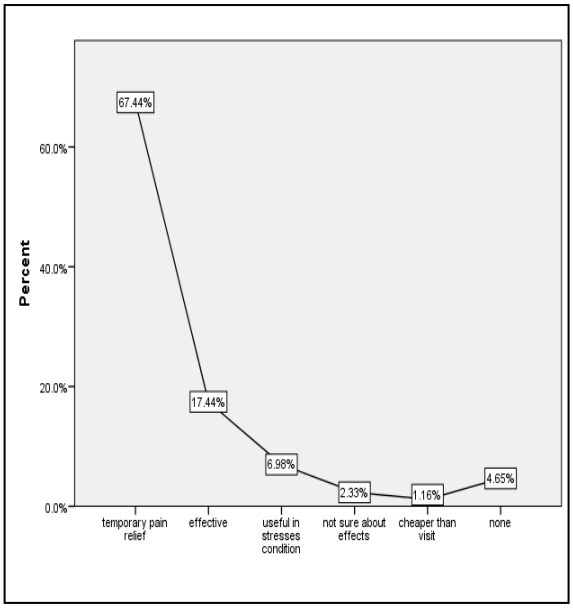

Figure 4: Participants perception after self medication.

Self medication practice

In this survey, about 56.2 % of patients had practice of self medication for dental problem. Among 281 patients (56.2%) of self-medicates, 154 (30.8%) were males and 127 (25.4%) were females are described in Table 3.

Triggered factors

Out of 281 self medicates, the most common triggered factor for practicing such self medication was found as toothache by 206 patients (41.2%), for gum bleeding 48 patients (9.6%) taken self medication, for bad breathe 15 patients (3.0%), oro-facial swelling 9 patients (1.8%), tooth mobility 3 patients (0.6%) outlined in Table 4.

Reason for self-medication

The most common reason for self medication was found to be lack of time and ignorance 22.2%, the second reason was found as lack of money about 13.8%, previous experience of similar illness or minor illness was 9.6%, traditional belief reason was 3.0%, and availability of dental professional was about 7.6% are shown in Table 5.

Bought medication

The finding of the present study showed that majority of medication was procured from pharmacy shop as 38.6 %, followed by other places such as hospital pharmacy as 13.6% and traditional home remedy as 4.0% respectively.

Distance from medical/health post

The result for distance of procured medication from nearest pharmacy or other health post by self medicates is

given in bar chart (Figure 2.1). This chart showed that 128 participants have nearest health post within 1 km of range, followed by 115 study participant have health post 1-3 km distance, 30 participants have distance of more than 3 km, and 8 participants have distance of more than 5 km.

After self-medication

This result shows that temporary relief as 31.8 % from pain was given as major response by participants who had taken self-medication, followed by effective, useful in stress condition, not sure about the effects, curable in nature, and cheaper than visit as 12%, 5.4%, 3%, 9% and 11% respectively.

Duration of self-medication

Majority of study participants (139) in our survey taken medication for 3-5 days, followed by till pain relief (74 participants), for one day (51 participants) and for 1 month or more (17 participants).

Type of self-medication

In the present study, out of 281 self-medicates majority of them as 209 participants were used analgesia as the most common form. Then 46 participants used native herb, 17 participants used antibiotics and 1 participant used icepack for the treatment of dental problem are described in Table 6.

Drug name

In this study, out of 281 self-medicates majority of 100 participants do not remember the medication they had taken. Other 36 had paracetamol in commonly used drugs, followed by 29 had combiflam, 26 had ibuprofen, 18 had crocin, 15 bruzen MR, 14 had disprin, 14 had diclomol, 14 had antibiotics, 11 had imol and 4 had nimesulide respectively (Table 7).

Advised by

In this study, pharmacist were the main consultants for taking self-medication by 84 participants followed by 77 study participants had taken medicine from relatives, 48 participants got advice from friends, 32 participants from internet, 21 from traditional healer, 15 from their own personal knowledge and 4 participants took idea regarding medicine from television (Table 8).

If problem persists

The result of our study shows that majority of study participants as 49.2% visited dentist if problem or any oral symptoms persisted. Other 6.2% again visited to pharmacist, and 0.8% continued same medication to treat oral problems.

Adverse effect experience detail

In this present study majority of self-medicate 264 participants denied to have any adverse effect after taking self-medication (Table 9). But 17 participants had complaint regarding experiencing some adverse effect such as upset stomach, severe headache and constipation. And after having adverse effect, 8 participants went to private/government doctors, 7 participants went to primary health care, and 2 participants stop taking medication.

DISCUSSION

The survey found the prevalence of self-medication practice to be high as 56.2% of total study participants. The reasons for such high prevalence of such a practice may be due to lack of awareness among general population about oral diseases, cost of dental treatments, lack of time, quick relief from symptoms, lack of knowledge about side effects, and belief in other herbal system of medicines.[17,18] It was found in our survey that practice of self-medication was more among male participants (30.8%) than compared to female participants (25.4%).

From the demographic result, it was concluded that the overall percentage of male and female participated in the survey were 55% and 45% respectively. The mean age of patient attending the OPD during survey was 34.03 years indicating that majority of study participants were middle-aged and had practice of self-medication.

The finding of the present study showed that among participants who practiced self-medication (281), toothache was the main reason for administration of self-medication (41.2%) and lack of time was the most common reason for such practice (22.2%). It was found in our study the mostly medication (38.6%) was procured from pharmacy shop without any prescription. Temporary pain relief (31.8%) was given as a major response by majority of the respondents who had taken self-medication in relation to their oral health problems. This may be due to self-medication gave relief like pain, saved money, made them independent to take care of themselves and time and also felt self-medication cured their ailments.[19-21]

Analgesia was most common type used by participants for doing such practice (74.38%). Also, mostly study participants (35.59%) do not remember drug names and took medication without having knowledge regarding name, type, interaction, adverse effect, etc. 29.89% of pharmacists were the main consultants for taking self-medications followed by relatives with 27.40%, then friends with 17.8% and then internet with 11.38% in our present study. This showed that majority of the participants heavily relied on the expertise of pharmacists, experience of their relatives and friends and also on internet which gives information about lot of

medications which are easily available as OTC drugs without prescription.

Our survey results showed that the majority of study participants (49.2%) visited doctors/dentists if oral symptoms persisted even after the self-medication. This study also found that out of 281 self-medicates, seventeen participants had experienced adverse effect like upset stomach, severe headache and constipation. After experiencing such adverse effect participant took serious action regarding their heath. But without having proper knowledge regarding drugs they indulge their life in danger.[22,23]

The survey's limitations includes the sample was withdrawn from adults attending one dental hospital OPD in Varanasi, Uttar-Pradesh, India; and the relationship between medication and socio-demographic characteristics was not explored. More research on self medication is needed to encompass different group in India. However, if self-care methods are properly adopted, they can greatly aid in the rational use of medication. In India, where dental insurance is not available, affordability may play a significant oral health habits. Dental health education should be prioritized in order to educate people about the risks of self-medication.

CONCLUSION

This survey was conducted to find out the prevalence rate of self medication pattern among people of Varanasi, Uttar-Pradesh, India. The result showed that 56.2% of patients admitted use of self medication with non doctor prescription. Toothache was the main reason for using such practice. Analgesics were the most common drug type used by participants. Mostly people admitted to consulting pharmacist for basic treatment and immediate pain relief. From this study it was concluded that it is necessary to curb the self medication pattern and it is very much important to make people aware about the potential risk of such practices. There should be more campaign, survey, research or study needed to solve this problem regarding abuse of drugs in India.

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. AlQahtani HA, Ghiasi FS, Zahiri AN, Rahmani NI, Abdullah N, Al Kawas S. Self-medication for oral health problems among adults attending the University Dental Hospital, Sharjah. J Taibah Univ Med Sci. 2019;14(4):370-5.
2. Agbor MA, Azodo CC. Self medication for oral health problems in Cameroon. Int Dent J. 2011;61(4):204-9.
3. Gowdar I, Alhaqbani M, Almughirah A, Basalem S, Alsultan F, Alkhathlan M. Knowledge and practice about self-medication for oral health problems among population in Riyadh Region, Saudi Arabia. J Pharm Bioallied Sci. 2021;13(1):S246-50.
4. Aldeeri A, Alzaid H, Alshunaiber R, Meaigel S, Shaheen N, Adlan A. Patterns of Self-Medication Behavior for Oral Health Problems Among Adults Living in Riyadh, Saudi Arabia. Pharmacy. 2018;6(1):15.
5. Mercy O, Joan E. Herbal/Traditional Medicine Use and Self-Medication among Patients Prior To Seeking Oral Health Care in a Tertiary Health Facility in Nigeria. J Med Res. 2017;65(5):256-60.
6. Giriraju A. Perception about self-medication practices for oral health problems among the general population of Davangere city, Karnataka, India. J Indian Assoc Public Heal Dent. 2014;7(1):41-5.
7. Shaikh S, Fatima J, Shakil S, Rizvi SMD, Kamal MA. Self Medication Practices for Oral Health Problems Among Dental Patients in Banglore: A Cross Sectional Study. IOSR J Pharm. 2015;15(2):90-101.
8. Simon AK, Rao A, Rajesh G, Shenoy R, Pai MBH. Trends in self-medication for dental conditions among patients attending oral health outreach programs in coastal Karnataka, India. Indian J Pharmacol. 2015;47(5):524-9.
9. Jain A, Bhaskar DJ, Gupta D, Agali C, Yadav P, Khurana R. Practice of self-medication for dental problems in Uttar Pradesh, India. Oral Health Prev Dent. 2016;14(1):5-11.
10. Surenthar M, Kumaran J, Srinivasan S, Daniel M. Self-medication practices and ignorance to seek treatment for oral health problems amongst adult dental patients: A cross-sectional survey. J Dent Res Rev. 2021;13(8):e0201776.
11. Tonetti MS, Chapple ILC, Jepsen S, Sanz M. Primary and secondary prevention of periodontal and peri-implant diseases. J Clin Periodontol. 2015;16:S1-4.
12. Paudel S, Aryal B. Exploration of self-medication practice in Pokhara valley of Nepal. BMC Public Health. 2020;20(1):714.
13. Mendes MSS, Chester LN, Fernandes dos Santos JF, Chen X, Caplan DJ, Marchini L. Self-perceived oral health among institutionalized older adults in Taubate, Brazil. Spec Care Dent. 2020;40(1):49-54.
14. Huang YM, Shiyanbola OO, Smith PD. Association of health literacy and medication self-efficacy with medication adherence and diabetes control. Patient Prefer Adherence. 2018;12:793-802.
15. Beker N, Van Der Maarel-Wierink CD, De Baat C, Holstege H. Self-reported oral health in the Dutch 100-plus Study of cognitively healthy centenarians: An observational cohort study. BMC Geriatr. 2019;19(1):355.
16. Garofalo L, Di Giuseppe G, Angelillo IF. Self-medication practices among parents in italy. Biomed Res Int. 2015;2015:580650.

17. Gambalunga F, Iacorossi L, Notarnicola I, Serra V, Piredda M, De Marinis MG. Mobile Health in Adherence to Oral Anticancer Drugs: A Scoping Review. CIN - Comput Informatics Nurs. 2021;39(1):17-23.
18. Fishbein JN, Nisotel LE, MacDonald JJ, Pensak NA, Jacobs JM, Flanagan C, et al. Mobile application to promote adherence to oral chemotherapy and symptom management: A protocol for design and development. JMIR Res Protoc. 2017;6(4):e62.
19. Ramsay SE, Papachristou E, Watt RG, Tsakos G, Lennon LT, Papacosta AO, et al. Influence of Poor Oral Health on Physical Frailty: A Population-Based Cohort Study of Older British Men. J Am Geriatr Soc. 2018;66(3):473-9.
20. Paton C, Adams CE, Dye S, Fagan E, Okocha C, Barnes TRE. The pharmacological management of acute behavioural disturbance: Data from a clinical audit conducted in UK mental health services. J Psychopharmacol. 2019;33(4):472-81.
21. Lindenmeyer A, Bowyer V, Roscoe J, Dale J, Sutcliffe P. Oral health awareness and care preferences in patients with diabetes: A qualitative study. Fam Pract. 2013;30(1):113-8.
22. Lozano EJO, Pinzón YDL, Solano SIP. Oral health self-medication in muiscas, yanakunas and pijaos indigenous populations of Colombia. Cienc e Saude Coletiva. 2021;26(3):5251-60.
23. Fernando ADA, Bandara LMH, Bandara HMST, Pilapitiya S, De Silva A. A descriptive study of self-medication practices among Sri Lankan national level athletes. BMC Res Notes. 2017;10(1):257.

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