

**ONLINE SURVEY ON SELF MEDICATION PRACTICES OF HERBAL AND HERBO-MINERAL MEDICINES AMONG DIABETES MELLITUS TYPE-2 PATIENTS**Sandeep V. Binorkar<sup>1\*</sup>, Ranjeet S. Sawant<sup>2</sup> and Gajanan R. Parlikar<sup>3</sup><sup>1</sup>Assistant Professor, Dept. of Agadatantra, R.A. Podar Ayurved Medical College, Worli, Mumbai, (MS).<sup>2</sup>Assistant Professor, Dept. of Rasashastra & B.K., K.G. Mittal, Ayurveda College, Mumbai, (MS).<sup>3</sup>District AYUSH Officer, Zilla Parishad, Osmanabad, (MS).**\*Corresponding Author: Sandeep V. Binorkar**

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**ABSTRACT**

**Background:** Self medication is selection and consumption of non-prescribed medicines by the patients himself for pre/self diagnosed ailment. It is mostly practiced in the chronic conditions wherein patients are not satisfied with the symptomatic treatment received earlier. Though the degree and causes of such practices may vary worldwide, no data is available on the existing status of self-medication practices among *Diabetes mellitus* Type-2 patients. **Objective:** Present study was designed to find out the degree of self medication among the patients suffering of DM. **Methodology:** It was cross-sectional study conducted online among the subjects suffering from Diabetes mellitus –type 2 in the form of survey. The web link of the survey was also shared by email for its wide circulation. The link was available online from 21<sup>st</sup> July to 31<sup>st</sup> October 2017 for recording the responses of the volunteers. **Results:** Out of 1163 subjects suffering from DM voluntarily participated in the survey 547 (47.03%) volunteers were practicing self medication. Study revealed the causes and intentions behind the tendency of self medication seen in the patients. **Conclusion:** Unavailability of panacea and compulsion of lifelong medication in diabetes mellitus type-2 is the only cause found responsible for self medication.

**KEYWORDS:** Diabetes mellitus type-2, Herbal, Herbo-mineral, Self medication.**INTRODUCTION**

Diabetes mellitus (DM) type 2 is a long-term metabolic disorder which is portrayed by high blood sugar and comparative lack of insulin. It is also known as adult onset diabetes. The World Health Organization reported that around 347 million people worldwide are suffering from DM and will be the seventh leading cause of death in 2030.<sup>[1]</sup>

As the treatment required in the condition lasts life-long, a considerable number of patients suffering from diabetes mellitus type 2 shifts themselves to self-medication using either preparations of pure herbs or herbo-mineral compounds. The use of medications devoid of earlier medical consultation concerning about its indication, dosage and duration of treatment is referred to as self-medication.<sup>[2]</sup>

Self-medication is a human behavior wherein an individual consumes a substance or any exogenous influence to self-administered treatment for his sickness. Self-medication is also considered as one elements of self-care wherein the selection and use of medicines is done by individuals to treat self or pre recognized illness which is most frequently seen phenomenon.<sup>[3,4,5]</sup> Though

the extent and reasons of such practices may vary worldwide, no data is available on the existing status of self-medication practices among *Diabetes mellitus* Type-2 patients. Therefore, present survey was conducted to estimate the current inclination of the patients suffering from Diabetes mellitus type-2, towards the herbal and or herbo-mineral self medications for this ailment.

**METHODOLOGY**

It was cross-sectional study conducted among the subjects suffering from Diabetes mellitus –type 2 in the form of online survey, after preparing a questionnaire considering various aspects related to self medications. The questionnaire was uploaded on <https://www.surveymonkey.com/> web portal. The web link of this survey was also shared by email and Whatsapp (Android application) for its wide circulation. The link was available online for the responders from 21<sup>st</sup> July to 31<sup>st</sup> October 2017 to record their responses on self medication.

**Ethical Consideration:** The secrecy of the responders was preserved with utmost care. The study was accomplished in accordance with e-Health Code of Ethics.<sup>[6]</sup>

**Inclusion Criteria:** Subjects, diagnosed with *Diabetes mellitus* and who were consuming medicines purchased over the counter with/without the one prescribed by the physician.

**Exclusion Criteria:** Volunteers practicing any other method than internal medicine as a self medication such as yoga, exercise, diet etc were excluded and not considered for the analysis of results.

## RESULTS

Total 1163 subjects suffering from DM voluntarily participated in the survey and expressed their views on self medication. Among them 547 (47.03%) volunteers were practicing self medication. Table 1 shows the demographic details of the volunteers participated in the survey.

**Table 1: Demographic distribution of Volunteers.**

Survey participants	No. of Volunteer	%
Total Participants	1163	100
Participants on Self Medication (SM)	547	47.03
Participants without Self Medication (SM)	616	52.97
Demographic distribution of Volunteers with Self Medication (SM)		
Gender	No. of Volunteer	%
Male	438	80.07
Female	109	19.93
Locality	No. of Volunteer	%
Urban	493	90.13
Rural	54	9.87
Educational status	No. of Volunteer	%
Graduate	510	93.24
Intermediate	37	6.76

It is observed that the practice of SM was more common in male (80.07%) as compared to female (19.93%). and urban responders (90.13%) were more engaged in SM than rural (9.87%). Again it was obvious to observe that

the responders who were having higher education were more in practicing SM (93.24%) than the participants with intermediate schooling (6.76%).

**Table 2: Inducement of SM in responders.**

SM Suggested by	No. of Volunteer	%
TV / Radio / News papers / Internet	344	62.89
Friends and relatives	159	29.07
Self initiative	44	8.04

344 (62.89 %) subjects were influenced by media such as TV, radio, Internet etc. in making choice about shifting to self-medication. In 159 (29.07%) subjects, friends and

relatives suggested alternative remedies where as in 44 (8.04%) subjects self initiative was seen as a cause of self medication in diabetes.

**Table 3: Form of SM in responders.**

Type of Self Medication	No. of Volunteer	%
Tablets	432	78.98
Powders	79	14.44
Syrups & Decoctions	36	6.58

Table 3 shows that 432 (78.98%) participants reported that they were consuming self medication available over the counter in the form of tablets, where as 79 (14.44%) were having powders and 36 (6.58%) were consuming syrups or decoctions as a SM.

**Table 4: Reasons of SM in responders.**

Reasons	No. of Volunteer	%
For Better results	290	53.02
Cost effective	159	29.07
Less side effects	57	10.42
Past experiences	36	6.58
Easy to consume	5	0.91

Table 4 shows reasons for opting SM in responders. It can be observed that 290 (53.02%) were seeking better

results than the existing medications, 159 (29.07 %) found it cost effective, 57 (10.42%) found it with less side effects, 36 (6.58%) lured by the past experiences of SM and 5 (0.91%) responders opted SM because it was easy to consume.

**Table 5: Results of SM in responders.**

Outcome of SM	No. of Volunteer	%
Highly satisfied	236	43.17
Average satisfaction	284	52
Not satisfied	27	5

In response to the SM, as a outcome, it is observed that around 236 (43.17 %) subjects were highly satisfied with the results experienced after starting alternative remedies in combination with the existing therapy whereas 284 (52 %) were having average satisfaction whereas 27 (5%) were not satisfied with drugs chosen and planning to shift on other medicine.

## DISCUSSION

Self medication [SM] is being practiced all over the world. The precise history about its onset cannot be traced. Today in all countries irrespective of its developing status, the SM is being practiced without any second thought. Worldwide scenario shows that self medication [SM] is very frequent amongst educated population.<sup>[7-12]</sup>

Present study shows that Out of total 1163 DM patients participated in the study, 547 disclosed that they were engaged in the practicing self medication for the cure of DM. Major sources of self-medication are relatives, friends and electronic as well as, pharmacists, who not only provide medicines but also the information about drug's use.<sup>[13-14]</sup> Studies conducted earlier shows that the prevalence of self medication in diabetes range from 13-92%.<sup>[15-16]</sup>

Reasons for the self medications are observed as provocation by friends/ relatives with or without their personal experiences. Few participants also reported that they were unsatisfied earlier medicines prescribed by the physicians for DM, whereas some of them were impressed by the advertisements frequently watched over the electronic media such as television and internet and tempted to try the same. Some of the responders opted for SM as they found it cost effective than the medicine they were consuming and also achieving better results.

But keeping these benefits aside, the literature also shows that there may be some untoward effects because the use of over the counter drugs purchase or the one which is consumed without proper prescription. Studies conducted earlier signifies that improper self-medication may results in the consequences such as adverse drug reactions, increased mortality and morbidity, drug interactions including the wastage of healthcare assets.<sup>[17,18,19]</sup>

## LIMITATIONS OF THE STUDY

In this study sample size was too small to represent entire population suffering from DM and engaged in self medication, therefore results cannot be generalized. The other limitation is that the data collected were not blinded and self analyzed which may introduce some bias in the behavioral pattern of the respondents.

## CONCLUSION

The results show that large numbers of patients suffering for DM are shifting on self medications with or without the prescribed medicines by their physicians. Unavailability of panacea and compulsion of lifelong medication in diabetes mellitus type-2 is the only cause found responsible for self medication. Further studies should be conducted considering the prevalence rate of DM and the factors influencing and the suitability of self medication with a sample size which will be large enough to represent the whole population.

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