



Hazards of Googling Symptoms: A Questionnaire Study.

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ABSTRACT

INTRODUCTION:The tendency of general population to self medicate is on the rise. This survey is intended to study the adverse effects of self medication and reasons for its occurrence. It induces anxiety in people which is called as "cyberchondria".

MATERIAL AND METHODS:A study was conducted among the general population, in the state of Maharashtra, India. A structured, self administered, close ended questionnaire was pre-tested and validated amongst 20 subjects

to assess their knowledge, clarity and responsiveness. The reliability statistics of the questionnaire was checked and the cronbach Value was 0.73 which shows reliability of questionnaire was good. **RESULTS:**A total of 240 individuals participated in this study. Around 47.5% population consider self medication as their instinct when they fall sick followed by friends and family guidance. **CONCLUSION:**This survey focused on hazards of self medication, their use, its safety and reason for using it.

Keywords:self medication, Google, cyberchondria, hazards.

I. INTRODUCTION

What is the first thing you do when you feel ill? Most often we tend to self-medicate, ask for help from friends or if it doesn't produce the desired effect, as a last resort we decide to pay a visit to the doctor. In this fast-paced life it is a given that our health tends to take a back seat. It is a common notion that waiting in an OPD, for a consultation from a registered practitioner seems

time consuming; some may also find it expensive to consult a doctor for any minor illness, while others just choose to ignore these symptoms completely, in the hope that time will cure their illness. This attitude towards health, leads us to undertake the simplest and most convenient way of diagnosing our illness-GOOGLE! Google has proved to be useful for finding and researching information regarding health related topics. But is it beneficial for self-diagnosis? Is it really curing the disease or just increasing anxiety among the masses? There is a term associated with this called "Cyberchondria" which is a disorder in which a person searches excessively for health care information online, but rather than finding relief for their concerns, diagnoses themselves with a terrible disease and then feels more anxious. The distress caused by the preoccupation is intense enough to cause time lost from work or social obligations [<https://www.choosingtherapy.com/cyberchondria/>]. It tends to make the concerned individual feel sicker than they usually are.

Also, the published content on internet needs to be assessed for its authenticity. Nobody can vouch for the quality and credibility available online. The adverse effects of drugs taken without a doctor's prescription are not known by the patient. Also, the patient is unaware of the drug interactions of self-medication with any associated underlined condition. Certain pharmacological companies promote their drugs more as compared to others. This leads to the general population buying medication that is more popular, remaining unaware of other better and beneficial drugs for the same illness. Another common practice that is



followed by public is buying over-the-counter drugs from a pharmacist without any prescription. This often leads to a biased approach of the seller towards certain pharmaceutical companies, while patient/buyer remains unaware of the same. Hence, this study was conducted to assess the understanding and knowledge of the general population regarding google search for self-medication.

II. MATERIAL AND METHOD

A study was conducted among the general population, in the State of Maharashtra, India. A self administered, close ended, structured questionnaire, comprising of 31 questions was designed to evaluate and assess the participants knowledge, attitude and practice of treating themselves with self-medication, without the consultation of a registered medical professional. The reliability statistics of the questionnaire was checked and calculated and the Cronbach - value was 0.73 , which shows that the reliability of the questionnaire was good. statistical analysis was done using descriptive analysis. A questionnaire study was conducted among the general population, in the State of Maharashtra, India with the aim to assess the knowledge and attitude of the general mass regarding the use of google for self-medication. A total of 250 participants (i.e., non-medical participants) were selected randomly. The questionnaire was designed using Google form (Google LLC, Mount view, California, USA) and a link was distributed among the study population via email, WhatsApp and other social media

platforms(Instagram, Facebook). A brief introduction about the study was given to all the participants. A convenient sampling technique was used to collect the study participants. A structured, self-administered, close-ended questionnaire was pre-tested and validated amongst 20 subjects to assess their knowledge, clarity and responsiveness. The questionnaire was designed to collect data and consisted of demographic details and 3 different sections comprising 31 questions regarding knowledge(section1), attitude(section 2) and practice(section 3). The reliability statistics were calculated and Cronbach value was 0.73. Data collected was entered in a spreadsheet (Microsoft Excel Sheet, 2016) the statistical analysis was done using descriptive statistics. The input parameter for sample size calculation used were as follows : effect size and degree of power of study, freedom . Terror 0.73, he calculated sample size calculation was using software version. The final considered sample size used in this study was 250 .

III. RESULTS

A total of 240 participants were given a questionnaire through Google forms having a response rate of 100%.Table 1 shows demographic details of the participants. The participants were divided into age groups: 18-25yrs,26-35yrs and above 35 yrs. Maximum participants belonged to the age group of 18-25yrs. Out of total 240 participants 55% were females, and 45% were male. Among nonmedical population 67.5% were graduates and 32.5% postgraduates.

Table 1:

AGE GROUPS	FREQUENCY	PERCENTAGE
18-25years	121	52.9%
26-35years	81	33.75%
Above 35years	32	13.3%
SEX	FREQUENCY	PERCENTAGE
FEMALE	132	55%
MALE	108	45%

Table2 shows that 47.5% population considers that self medication as their first instinct when they fall sick, 24.2% population consider friends and family guidance, 16.7% population consider consulting a doctor which is proven to be statistically significant. Around 40% of the population self medicated for headache, followed

by fever, cough and allergies. About 50.5% and 29.% preferred ease of convenience and less time consumption as a preferable reason to choose internet over doctors. However 47.5% of population agrees that due to similar symptoms for various disease Google rarely provides accurate diagnosis.



Table 2	FREQUENCY	PERCENTAGE
Consult a doctor	40	16.7%
Ignore it	28	11.7%
Self medication	114	47.5%
Acquaintances	58	24.2%
Headache	96	40%
Convenience	121	50.5%
Less time	71	29.5%
Google rarely provides accurate diagnosis	114	47.5%

Table 3 shows approx. 40.8% of population use previously prescribed drugs to treat their current conditions. Followed by 27.9%, 15.8% and 15.4% population rely on friends-family, internet and pharmacist respectively. Out of

240 participants, 186 participants follow doctors as a major line of treatment after failure of self medication, where they proved to be more informative and effective. But 68% of population self medicate without proper knowledge of dosage.

Table3:	FREQUENCY	PERCENTAGE
Acquaintances	67	27.9%
Internet	38	15.8%
Pharmacy	37	15.4%
Previously prescribed drugs	90	40.8%
Doctors	186	77.5%
Lack of knowledge	154	68%

Table 4 shows 60% of intake of painkiller medications without doctors consultation followed by antacids, antibiotics and anti-allergies which is statistically significant. Due to improper knowledge, 43.3% of population experience headache. Other symptoms like nausea, dizziness and rashes were experienced by 23.3%, 21.7% and

11.7% of population respectively. Out of 240 participants 101 participants access Google exaggerating symptoms leading to many adverse effects. Also, it is observed that 148 among 240 participants believe self medication often works for them.

Table 4:	FREQUENCY	PERCENTAGE
Antacids	42	17.5%
Anti-allergic	20	8.3%
Painkillers	144	60%
Antibiotics	34	14.2%
Headache	106	43.3%
Nausea	56	23.3%
Dizziness	52	21.7%
Rashes	28	11.7%



Google exaggerating symptoms	101	42.1%
Self medication works	148	61.7%

IV. DISCUSSION:

The present study aims on determining consequences of googling symptoms in general population which includes non-medical professionals in various fields.

Based on current evaluation, for population googling symptoms refers closely to self medication as their first instinct when they fall sick. Recent studies conducted in different parts of world such as United States, United Kingdom, Spain, Germany, Turkey, France, Mexico vary in their estimation of the percentage of patients who practice self medication with prevalence rate that ranges from about 13-90%^[1]. Data indicate 2 of demographic data (Age and Sex) has a significant association with the practice of self medication. Young individuals are more likely to administer self medication than older ones. This finding is consistent with other studies^[5]. Women are more inclined to self medication than men, But some of the studies contradicts to this results^[1]. Multiple reasons where people preferred self medication over doctors are, ease of convenience, less time consumption, financial constraints and lack of trust. Probably while economic and access might be the most predicting factor in rural settings it is the most time saving in urban settings. Self medication majorly carried through previously prescribed drugs, acquaintances, internet, pharmacist.

Common health problems for which self medication was practiced includes headache, fever, cough and allergies. Notable drugs like NSAIDs (60%) and Antacids (17.5%) are the frequently used medication without doctors consultation. In various other studies conducted on self-medication, different drug groups for self-medication were reported. In this regard, the most prevalent medicine categories used included analgesics/NSAID, antipyretics, cough and cold preparations, anti allergic, anti microbial drugs and traditional remedies.^[6] In our study the majority of participants practiced self-medication no more than once six month (43.3%), and usually chose which drugs to buy rather than allowing the seller to make drug recommendations. This phenomenon could also lead to drug-related issues if pharmacists in drug stores do not provide adequate drug-use recommendations (66.3%) leading to buy OTC drugs. Due to OTC drugs or incomplete knowledge

about drugs consumption leading 43.3% of population experiencing headache and other symptoms like nausea, dizziness and rashes. The most common adverse drug reaction was gastric upset caused by NSAIDs (6.6%), and the least common was blurred vision (0.6%). However, severe symptoms were reported in those who experienced palpitations, nausea/vomiting, dizziness, itching/rash, diarrhoea, dyspnoea, blurred vision, gastric upset caused by NSAIDs, and steroid acne or topical steroid addiction caused by topical steroids^[6]

Current study evaluate about 77.5% of population solely depends upon Doctors after failure of self medication. But some population consider acquaintances, pharmacist and alternative medication as a line of treatment if self medication fails. Doctors are proven to be more communitive and informative as compared to other sources including internet, pharmacist, friends-family. In this study, majority of the respondents (82.3%) claimed that usage of drugs in emergency cases is a major cause of self-medication, while more than half (71.8%) believe it's due to high cost treatment, also a good fraction (71.8%) of the respondents claimed previous experience with disease and treatment, difficulty in accessing health facilities, mild illness, given of doctor's prescription away from the hospital premises. Self-medication is influenced by many factors such as education, family, society, law, financial constraints, lack of trust in medical practitioner, availability of drugs and exposure to advertisements.^[3] Major problems related to self-medication are wastage of resources, increased resistance of pathogens and causes serious health hazards such as adverse reaction and prolonged suffering. Previous studies shows potential risks of self-medication practices include incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse.^[2] On evaluation Goggle often exaggerates symptoms. The findings of this study has thus brought to light the right place and benefits of self-medication if practiced responsibly. Therefore, the concept of self-medication have two components; which are



responsible (appropriate) and nonresponsible (inappropriate) self-medication. The later non-responsible (inappropriate) self-medication is the practiced that is associated with hazards and must be avoided. Whereas, responsible (appropriate) self-medication is beneficial, unavoidable and an integral part of man's activities of daily living and an essential component of health care delivery system. Thus, awareness campaign on self-medication and its health related hazards should be embarked upon by health practitioners and intensive school health education should be carried out. Also, Parents and elders should lay off the practice of "non-responsible" self-medication^[3]. They should also monitor how the younger ones use drugs at home

This study has its own limitations. Cross-sectional nature of this study precludes the assessment of self-medication by seasonal patterns. This study was restricted to use of self-medication to allopathic drugs. Patterns of drug intake would vary based on nature of illness. Access to health care like distance to health facilities or pharmacies were not included in this study.

V. CONCLUSION:

Self-medication is an alarming concept. This survey focused on the hazards of self-medication, their use, its safety, and reason for using it. 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 of antibiotics. We are on the edge of sword whether to promote self-medication or not. 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.

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