KNOWLEDGE AND PRACTICES TOWARDS SELF - MEDICATION AMONG NON – HEALTH CARE PROFESSIONALS IN EASTERN REGION, KSA

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ABSTRACT

Background: The World Health Organization (WHO) defines the practice of self-medication as the treatment of self-diagnosed disorders or symptoms by use of medicines or intermittent/continued use of medicines prescribed by physician for chronic/recurring diseases. Self – medication is an issue that needs to be addressed not only in Saudi Arabia but worldwide. It imposed a higher risk to those individuals who practice self – medication without proper knowledge of their use. This study aims to determine the knowledge and practices towards self-medication among non-healthcare professionals in Eastern Region, Saudi Arabia and identify different reasons why non – health care professionals practice self – medication.

Methodology: This research study was conducted conveniently on a sample of randomly selected individuals (general public) who are non –health care professionals from 20 years old and above. 351 individuals (non – health care professionals) from Eastern Region, KSA is included in this study. This study excluded health care professionals (Ex. Doctors, Pharmacists, Nurses) and those who are less than 20 years old. Data collection was done by self – administered questionnaires which are written both in English and Arabic version. Written consent explained and ensured before giving the questionnaires to the participants. Participants answered the questionnaires for less than 10 minutes. Data gathered analyzed using the identified statistical tool (SPSS).

Results: It was observed that half of the respondents 174 (50%) are not aware with the health hazards of self-medication. Even they don't check and understand instructions that comes with the medication. They select their dosages of medication without consulting a doctor even though they didn't experience any adverse effects (headache, gastro intestinal disorder, difficulty of breathing etc.) of self-mediation and also, not consulting a doctor if they experience an adverse effect. The respondents are not aware of alternative / herbal medicine, despite that with their adverse effect they take medication (every 2-4 months) without prescription, The reason for self - medication are the following: it saves money, ready accessibility, delayed medical opinion, influence by family / friends, relieve recurrent symptoms, past successful use / experience, saves time in going to hospitals

Conclusion: The major practice of self -medication is based on own experience. The respondents are not aware of alternative / herbal medicine even they are knowing the bad effect and they may take medication without prescription. Most of the cases they use alternative / herbal medicine, which obtain from the family.

Keywords: Self - Medication, Non – Health Care Professionals.

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Introduction

The World of Self-medication (WSMI) identifies self-medication as a method of treating a common disease with drugs that are prescribed and designed to be used by patients without the supervision of practicing physicians, and are approved to be safe and effective for use. The use of prescription medicines without a prior medical prescription is not part of responsible self-medication. The safety, efficacy and quality of non-prescription medicines must be proved according to the same principles as prescription medicines.

In this study, overall, most participants had poor knowledge and negative perceptions regarding self – medication. More than 68 % of participants did not know whether the medicine they bought is a prescription – only or over the counter medicine (Aljadhey et al., 2015). Another study conducted in Ethiopia, the results showed that 45.5% of the participants used at least one medication that was not prescribed by the medical profession, and 63.4% indicated that they followed the advice of their family members about the medications they use (Goodyer, 2019).

The main drugs that are used for self-treatment were antibiotics, analgesics, appetite suppressants, antiemetic and anti-influenza: 13.9% of these medications were called by pharmacists while 19.7% were considered as another treatment choice. The frequency of self-medication differs depending on the context assessed, in Latin America, studies done in Brazil showed an escalation from 31% to 86%, research done in Peru indicated that 74.8% of the general public carry out this practice. However, percentages ranging from 8% to 14% are reported in developed countries such as America, Germany, France and United States due to the fact that these countries have more strict measures as far as dispensing drugs over the counter is concerned.

In the European Union, the percentage number of individuals self-medicating has been on the raise, from 5% back in 2009 to 7% in 2016. Southern European countries have the highest records with an estimate of 16% in Romania and 20% in Greece while countries such as Sweden and Slovakia have only 2% and 3% of their population affected by this, respectively. Recent community-based studies conducted in various African countries among them Ethiopia, Cameroon, Ghana, Sudan, Ivory Coast, Uganda and Sudan depicted that 39-80% of the respondents in the surveys took part in self-treatment (Julian et al., 2019).

Alhomoud et al. (2017) posted that the overall dominance of self-medication varies from 19% to 82% in the Middle East. A study done in Central Saudi revealed that 76.1% of the study group where self-medicated. A similar survey done on adolescents aged between 10-19 years found that 86.2% were self-treating. The results of few studies have shown that 3% of infants born with birth defects, 7% result chemical exposure during their intrauterine life. 6.1% of pregnant women were identified with teratogenic risks due to taking medications that were not prescribed by health professionals, especially medications such as sex hormones with androgen and tetracycline components (Alhomoud, 2017).

Several studies related to self – medication have been conducted in Saudi Arabia, however to the best of our knowledge, there are no studies related to knowledge and practices towards self – medication of non – health care professionals in Eastern Region, KSA. As there are many health risks and economic losses associated with irresponsible and continuous drug use and the first step towards change is the recognition of a problem, if any. As seen in other regions of Saudi

Arabia, the trend is on the rise hence there is need to understand how far reaching this practice is.

Thus, the present survey will determine knowledge and practices of such individuals and to identify different reasons why they practice self – medication.

Research Methodology

A descriptive research design was conducted to the 351 resident public who are 20 years old and above and are non–health care professionals who are practicing self-medication in Al Khobar and Dhahran Eastern Region, KSA. The study was conducted in two phases. Phase I: Collection of demographic data of the participants, general questions about social status, educational level, occupation and income status and Phase II: Questioning related to Knowledge and Practices towards Self – Medication among Non – Health Care Professionals which in turn has 2 parts, Part A consist of 10 Questions related to Knowledge towards self – medication. Part B consist of 11 Questions related to Practices towards self – medication.

Data Collection

The period of data collection started in February 2021 after an approval from research local and ethical committee in Prince Sultan Military Collage of Health Sciences was obtained. A prepared questionnaire both English and Arabic version was given to assess the knowledge and practices towards self–medication among non–health care professionals. Written informed consent was obtained from participants after selecting them randomly and they are clearly informed that the researcher would use the data for educational purposes only. Researchers are available if there is any questions / clarification from the participants and the answering was done within 10 minutes for a period of 4 weeks.

Statistical Analysis

Collected data was analyzed using SPSS software. Data is collected from the respondent by survey questionnaire method. Then entered data were checked for errors and made necessary modification and correction. Descriptive analysis like frequency distribution and percentage was calculated for each questionnaire response values.

Data Analysis and Interpretation

Demographic characteristics

From the collected data frequency distribution and percentage of each demographic variable (Gender, Age group, Education level, Marital status, Occupation and Income status) calculated and result was shown in Table 1. It was observed that number of male respondents 161 (46 %) and female was 189 (54%). It was observed that the number of respondents was 94 (27%) in age group 20 – 29, 171 (49) in 30 – 39, 61 (17%) in 40 – 49, 19 (5%) in 50 – 50 and 6 (2%) in 60 and above. The number of respondents with no formal education was 7 (2%), primary level = 21 (6%), secondary level = 28 (8%), tertiary level = 164 (47%) and postgraduate was 131 (38%). The marital status of the respondents who are single was 140 (40%), married = 200 (57%), widow = 4 (1%) and divorced = 7 (2%). From Table 1, it was observed that the number of respondents who are students was 76 (22%), employed are 199 (57%), unemployed = 62 (18%), retired = 9 (3%) and others = 5 (1%). Table 1 shows that the number of respondents with income level less than 1000 was 95 (27%), 1000 – 3000 was 69 (20%), 4000 – 6000 was 80 (23%), 7000 – 10000 was 79 (22%) and more than 10,000 was 29 (8%).

Table. 1 Demographic characteristic

Demographic Characteristics	Frequency	Percentage
Gender		
Male	161	46.0
Female	189	54.0
Age group		
20 – 29	94	26.8
30 – 39	171	48.7
40 – 49	61	17.4
50 – 59	19	5.4
60 and above	6	1.7
Education Level		
No formal Education	7	2.0
	21	6.0

Demographic Characteristics	Frequency	Percentage
Primary Level	28	8.0
Secondary Level	164	46.7
Tertiary Level	131	37.3
Postgraduate		
Marital Status	140	39.9
Single	200	57.0
Married	4	1.1
Widow	7	2.0
Divorced		
Occupation	76	21.7
Student	199	56.7
Employed	62	17.7
Unemployed	9	2.6
Retired	5	1.4
Others		
Income Status	95	27.1
Less than 1000	69	19.7
1000 – 3000	80	22.8
4000 – 6000	79	22.5
7000 10000	29	8.0
More than 10000		

Analysis of the questionnaire

The number of respondents who answered that self - medication was taking by himself was 71 (20%), for self - treatment was 171 (49%) and without prescription was 109 (31%). The number of respondents who are aware of health hazards because of self -medication was 174 (50%) and those who are not aware was 177 (50%). The number of respondents for dosage from the internet was 41 (12%), dosage by consulting a doctor was 104 (29%), dosage by consulting the pharmacist was 69 (20%), dosage from my previous experience was 62 (18%), dosage by checking the package insert was 27 (8%), dosage by guessing the dosage by myself was 12 (3%), dosage by consulting family members / friends was 36 (10%). The number of respondents for checked sometimes instruction medication was 160 (45%), checked never instruction medication was 125 (36%) and checked always instruction medication was 66 (19%). The number of respondents for fully understood the instruction was 100 (28%), partially understood the instruction was 139 (40%) and did not understand at all was 112 (32%). The number of respondents for experienced adverse effects self – medication was 146 (42%) and not experienced adverse effects self – medication was 205 (58%). The number of respondents for common adverse effects experience head ache was 102 (29%), allergy was 34 (10%), difficulty of breathing was 47 (13%), gastro intestinal disorder was 50 (14%) and none experienced was 118 (34%). The number of respondents for adverse effects go to pharmacist was 50 (14%), consult a doctor was 73 (21%), stop taking medication was 89 (26%), consult a friend / family member was 22 (6%), go to primary health care center was 15 (4%), try other home stored medication was 6 (2%) and none do for adverse effects was 96 (27%).

The number of respondents for aware alternative / herbal medicine was 250 (72%) and not aware alternative / herbal medicine was 99 (28%). The number of respondents of aware adverse effects alternative / herbal medicine was 158 (45%) and not aware adverse effects alternative / herbal medicine was 191 (55%). The number of respondents for treat often medication without prescription once a week was 53 (16%), every 2 – 3 weeks was 66 (19%), every 2 – 4 months 100 (29%), more than 5 times in a year was 77 (23%) and nearly all the time 44 (13%). The number of respondents for reasons for self – medication saves money was 54 (15%), ready accessibility was 73 (21%), delayed medical opinion was 65 (18%), influence by family / friends was 58 (17%), relieve recurrent symptoms was 30 (9%), past successful use / experience was 43 (12%), saves time in going to hospitals was 19 (5%) and no reason was 9 (3%). The number of respondents of complains self – medication cough was 177 (50%), fever was 43 (12%), diarrhea was 26 (7%), vomiting was 28 (8%), runny nose was 14 (4%), nasal congestion was 20 (6%), sore throat was 16 (5%), aches and pains was 20 (6%) and none was 7 (2%).

The number of respondents for practice of self – medication based my own experience was 161

(46%), opinion from friends was 56 (16%), opinion of family members was 62 (18%), previous doctor's prescription was 46 (13%), recommendation by net citizens was 11 (3%), recommendation by pharmacists was 10 (3%) and none was 5 (1%). The number of respondents drugs obtain for self – medication friends was 92 (26%), family was 111 (32%), pharmacy was 114(32%), online stores was 13 (4%), primary health center was 16 (5%) and none was 5 (1%). The number of respondents for classification of drug Analgesic was 172 (49%), Antipyretic was 81 (23%), Antibiotics was 54 (16%), Anti – allergy was 35 (10%) and Antihypertensive was 8 (2%). The number of respondents for using alternative / herbal medicine was 247 (71%) and not using alternative / herbal medicine was 101 (29%). The number of respondents for alternative / herbal medicine obtain from friends was 70 (21%), family was 210 (63%), pharmacy was 27 (8%) and online stores was 25 (8%). The number of respondents for recommend to others self – medication was 201 (58%) and not recommend to others self – medication was 147 (42). Figures 1-6 depicts the actual numbers and percentages of the subjects towards answering the questionnaire.

Discussion

The objective of the study was to determine the health hazard, dosages, reasons, complains, effect, alternative / herbal medicine, practice, classification, use and recommendation. The data was collected through the use of questionnaire from 351 respondent. The collected data was analyzed using SPSS.

Although, self-medication has many possible benefits it is associated with multiple risks too (Ansari et al., 2020). Analysis done in Egypt showed that some of the risks one predisposes themselves to include health complications in case of incorrect self-diagnosis, delayed health seeking behavior which may lead to disease progression and mortality and severe adverse reaction which may affect quality of life (Zeid et al., 2020). The outcome of a study carried out on Irani women showed an associated damage on body organs principally involved in drug metabolism, which is kidneys and liver with old age due to long term exposure to drugs (Karimy et al., 2019). Subjects in our study complained about headache (29%), GI disorders (14%) and allergies (10%). Interestingly 34% of the subjects stated that they did not experience any ADR with a history of self-medication. Jasminka et al. (2014) identified that self-medication of psychoactive drugs and sedatives puts one at risk of addiction and dependence. Irrational drug use, use of incorrect doses and for the wrong duration of time has resulted in global problems such as pathogen resistance, especially bacterial resistance (Helal and Abou-ElWafa 2017). In our study, after experiencing the adverse effects majority (26%) of the subjects in the study stopped the use of such medications. Nearly 21% and 14% consulted a physician and pharmacist respectively to treat those adverse effects.

Studies done on undergraduate students in Nigeria showed that a good number of them are vulnerable to self- treatment due to inadequate knowledge on the risk factors associated uncontrolled drug use, easy access to internet provides them with relevant information needed to narrow their symptoms to a certain drug of choice and common knowledge on treatment of frequent ailments too makes them opt for shortcuts (Esan et al., 2018). Contrarily our study showed that the adverse effects associated with these self-medications were well known in almost 58% of the subjects but still continue to take self-medications. About 12% of the subjects check the internet to use self-medication and about 8% rely on the information on the packing to use them.

Research work done in central Saudi showed that participants had negligible knowledge and negative perceptions concerning self-medication. This was made more tragic by the fact that 68% of participants did not know whether the medicine they bought in local pharmacy were prescription-only or over the counter medication (Aljadhey et al., 2015). In our study subjects stated that 32% of the self-medications were acquired form the family members only and 32% from local pharmacies. Very limited subjects (<5%) get these medications from PHC or physician.

A study conducted on university students showed that the most commonly used drugs when self-medicating were analgesics (60.3%) followed by antibiotics (30.6%), antipyretics (5.6%), vitamins (3.4%), and antihistamines (1.1%) (Aljaouni et al., 2015). Supported by the above study our results stated that 49% of the self-medications were composed of analgesics, antipyretics (23%) and 16% antibiotics which they take for cough (50%), Fever (12%) and vomiting (8%). Overall, after knowing all the disadvantages of the self-medications our subjects preferred to take them because they needed immediate relief and to avoid waiting and spending of money on the physician consultation. So, there are necessary actions to be taken to improve the safe treatment efficiency by reducing the wait and expenditure pertinent to the treatment of minor and frequently occurring illnesses.

Limitations of the study

The study was conducted in course of 4 weeks and this small duration was not significant to determine and predict the accuracy of the information based on the sensitivity of the subjects to understand the aim of the study. Also, there was difficulty in holding meetings to gather patients by following the COVID-19 protocols which can have hindered the results. The small amount of time given to the subjects might have put some pressure in answering the questions to their fullest knowledge.

Conclusion

The study was conducted to analyze the patterns of self-medication in the non-medical profession public. It was observed that half of the respondents are perception of self-mediation by self-treatment. Again, half of the respondent was aware of the health hazards resulting from self – medication and half was not aware of the health hazards resulting from self – medication. The highest number of dosages selected from by consulting a doctor, followed by consulting the pharmacist was and from my previous experience. This work indicates that the patients must select their drug only based on the physician's recommendations and to avoid self-medication as much as possible so as to ensure their safety and better treatment of the disease.

Conflict of interest: None

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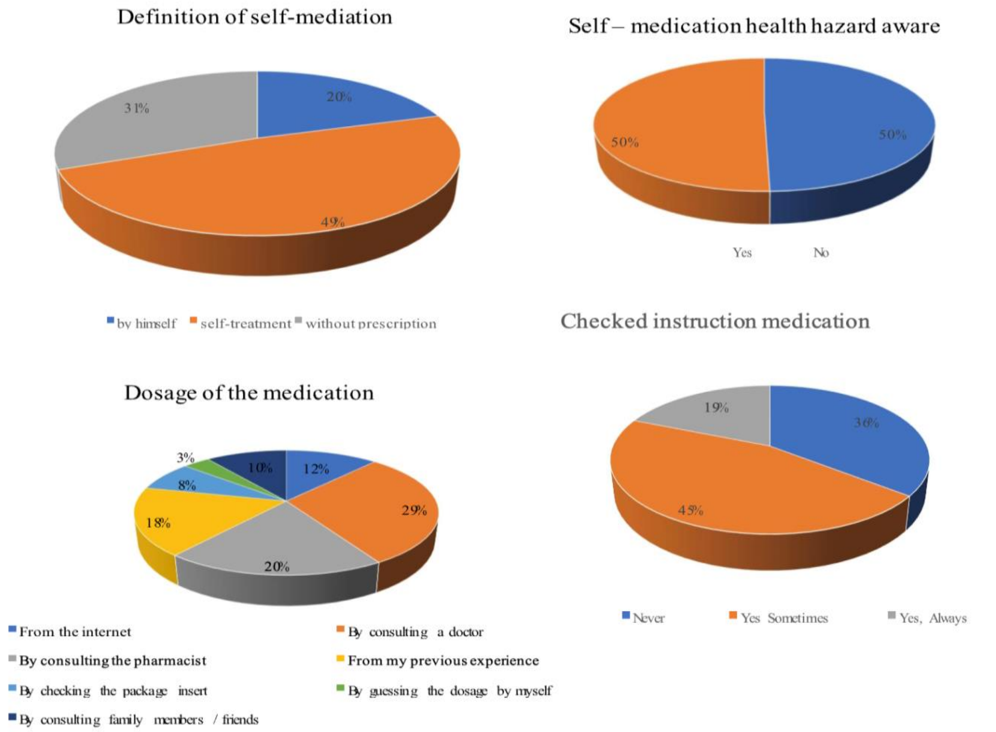

Figure. 1 Results of knowledge of the subjects of the study on self-medication

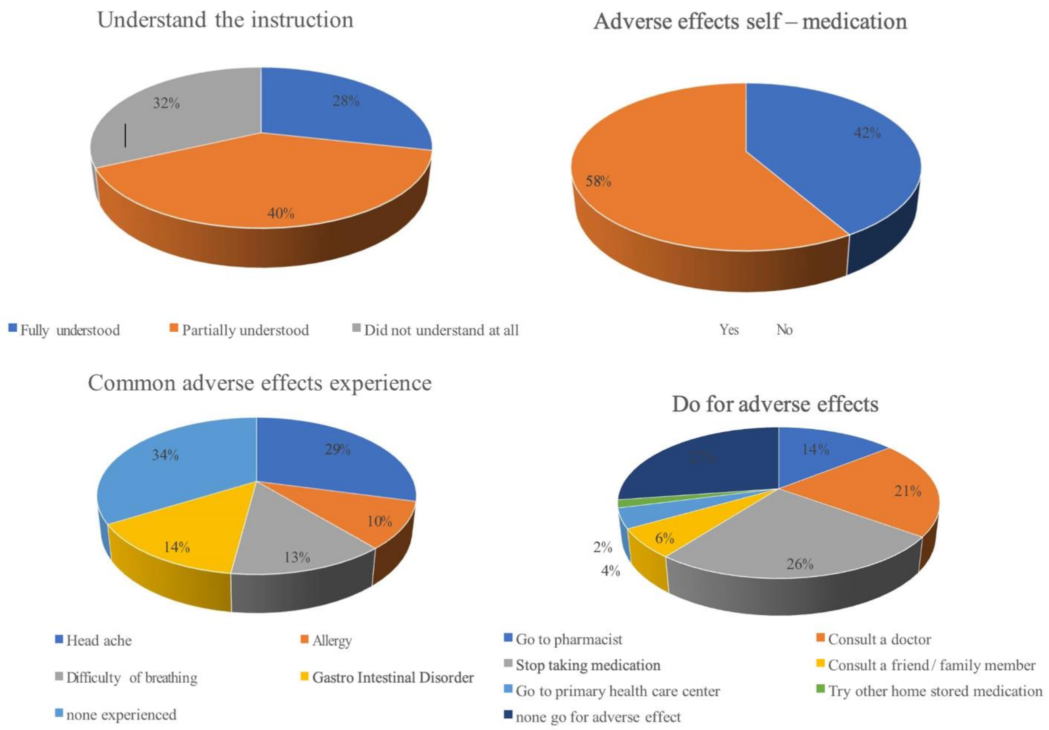

Figure. 2 results of the adverse effects experienced due to self-medication

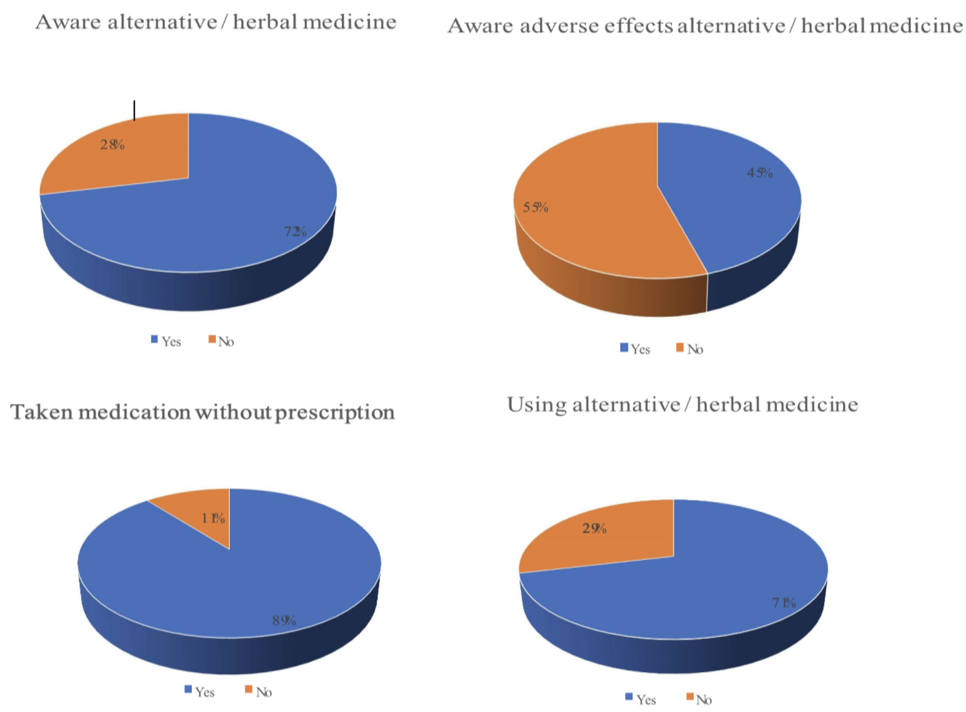

Figure. 3 Results of rely of subjects on alternative/herbal medicine

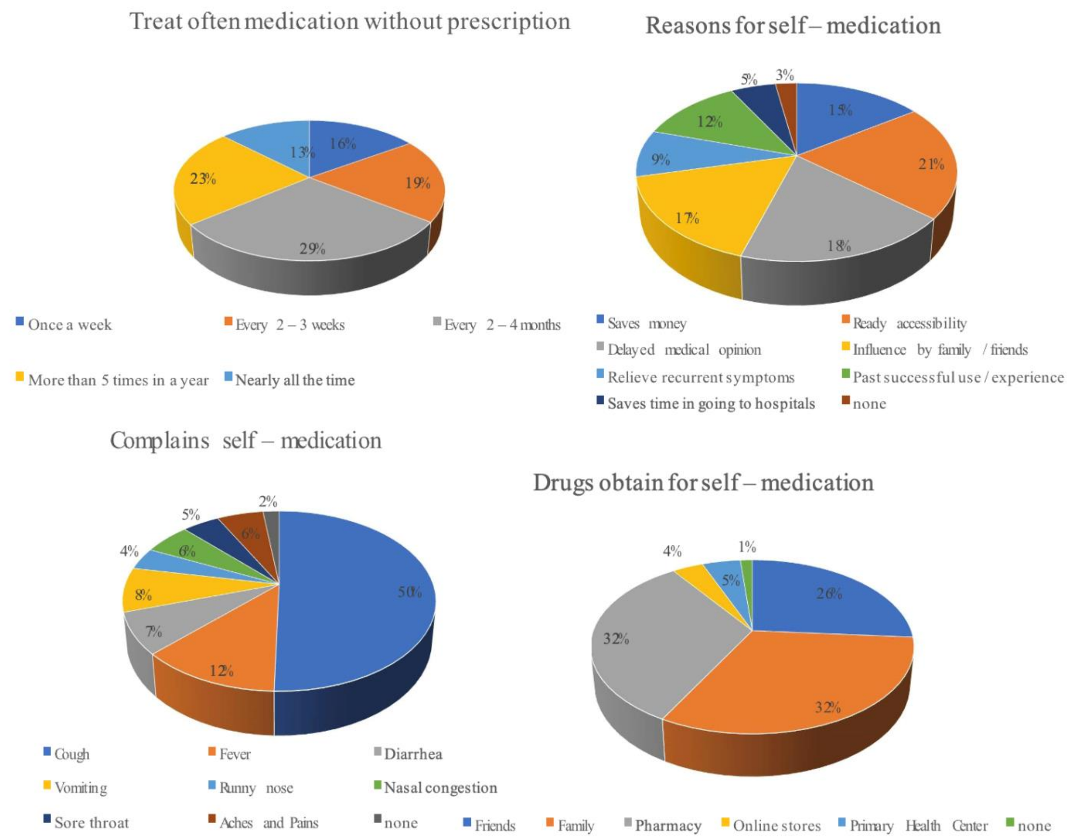

Figure. 4 Patient feedback on the effects of use of self-medication

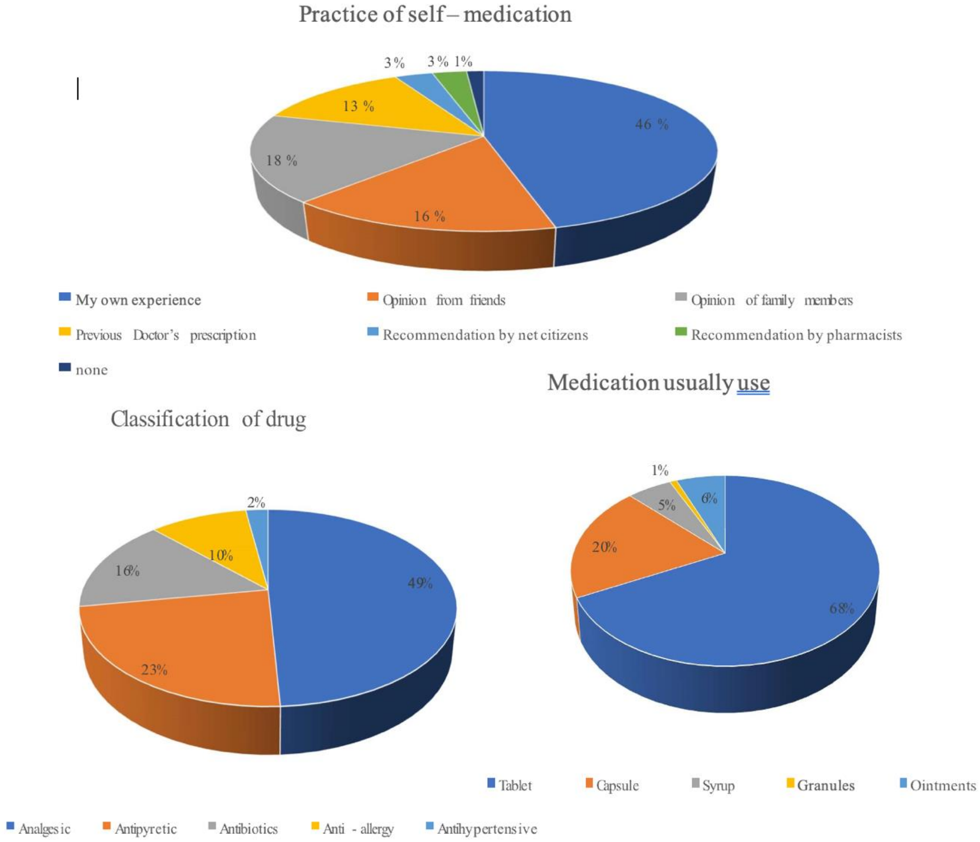

Figure. 5 Range of drugs used for self-medications

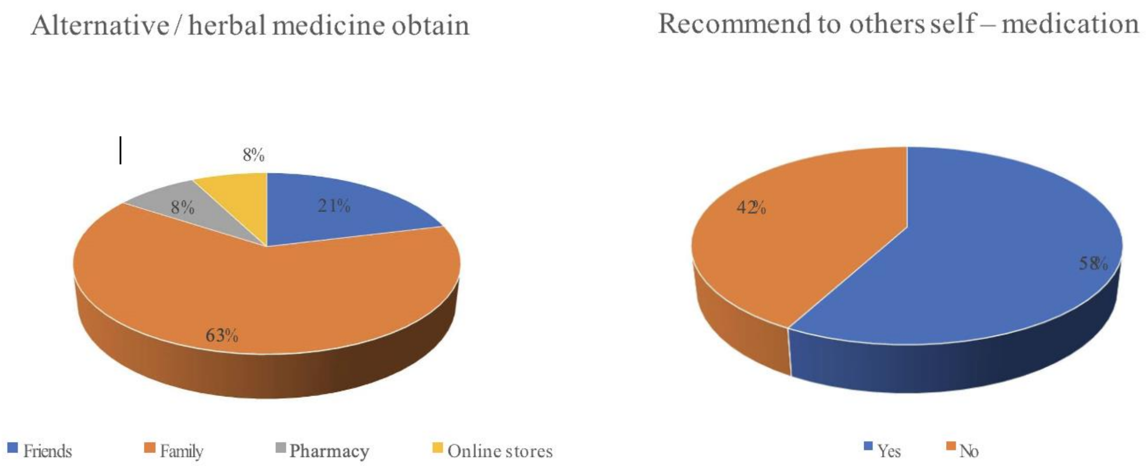

Figure. 6Sources of self-medication