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A Study on the prevalence of self-medication among urban population in Makkah region

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ABSTRACT

The majorities of the population pay little attention to the health issues and accord little or no priority to medical checkup which leads to the preference of Self-Medication practice. This study was conducted to determine the knowledge and practice of the prevalence of self-medication among urban population in Makkah region. A descriptive cross-sectional study was conducted with a target population of 1000 participants over the period of three months. The data was collected in the form of well designed specific questionnaires related to self-medication along with other informations related to the bio-informatics of the individual, etc., both in English and Arabic language. This cross-sectional survey study was conducted by blending both qualitative and quantitative methods of data collection during an awareness campaign and through direct interview with the participant. The collected data were analysed by the Microsoft Excel and SPSS. The values were presented as numbers (%). IBM SPSS, IBM Corp., Armonk, N.Y., USA, version 23 was utilized for analysis. Statistical comparisons were made by Pearson Chi- Square test. The data were significant if P-values were < 0.05. The analysed results of the collected data suggested that the effort was needed in ensuring that the drive is required to discourage the practice of the self-medication and encourage the visit to the medical practitioners to follow the proper guidelines of the prescribed medications. It is necessary to study the factors associated with the uptake of medications among the studied population and avoid the complications of self-medication.

Keywords: Makkah, Prevalence, Self-medication, Urban population

1. INTRODUCTION

The concept of the self-medication had became one of the most common practice especially among the urban population of the world due to the abundance access of the web based medications also known as medico-media in the modern society (World Health Organization, 2016). The current society void the visit to the physician for various factors rather take their own medication in a click of the button in their gadgets (Ruiz, 2010). This has led to the increase in the ratio of self-medications among the world population. The WHO has shared the alarming dangers of self –medications which leads to the severe complications which can be fatal to the human lives (World Health Organization, 2016; Ruiz, 2010). The intermittent clinical assessment of self-medication significant in forestalling a few illnesses and diminishing their significant difficulties, in this manner it's advantageous to give a superior solid local area and diminishing monetary misfortune (Kassie et al., 2017). Concentrating on convictions, mindfulness, practice, and impact factors locally will be a helpful technique to advance wellbeing among the population (World Health Organization, 2016; Cohen, 1988).

This study was aimed to seek out the prevalence of self-medication of drugs and associated factors among urban communities. This study being a cross section survey questionaires targeted towards the urban community of the Makkah Region in the Kingdom of Saudi Arabia provides adequate data vital in preventing some of their major complications and reducing its application in day to day life by creating the awareness among the population (Alaranta et al., 2008). Thus it's beneficial to provide a better healthy community and reducing financial or human loss by studying beliefs, awareness, practice, and influencing factors in the community to promote health among the population (World Health Organization, 2016; Tscholl et al., 2008; Tobaiqi et al., 2021). This review was additionally pointed toward surveying the mentality of respondents who had encountered self-medication. The self-medication depicted as the individuals who utilized and chose to treat self-perceived symptoms or ailments customary, natural restorative items. The self-medication drugs require a functioning satisfactory for the patient (Khan et al., 2020; Miyan & Khan, 2015).

The self-medication may not be a completely protected person of well being, particularly in instances of thoughtless or inconsistent practice a high admission of healthful enhancements and therapeutic items in created nations. It's normal among proficient competitors at a very alarming notable rate of practice (Khan et al., 2020; Klemenc-Ketis et al., 2010). For most of the cases, the medications are suggested by group of specialists for emerging nations. Sharing dependable information on self-medications drugs that have brought up issues of health leading to the severe complications (Miyan & Khan, 2015; Federspiel et al., 1997; Khan et al., 2020). These self-medicated drugs ought to be went with subtleties disclosing the direction to utilize the therapeutic items; impacts and possible incidental effects and follow the restorative impacts of its associations (Tesfamariam et al., 2019). In the course of the most recent years, the drug specialist's work has changed due to the practice of self-medication among the community.

The drug specialist at this point not a maker of medications and a concocter of clinical items but additionally a colleague associated with conveying medical services to the clinic or to the local drug store and to the research center. The population retreat their infections and sicknesses with non-solution authorized and accessible prescriptions that are protected and compelling when utilized as coordinated (Khan et al., 2020; Khan et al., 2020; Tscholl et al., 2010). The precautionary measures and alerts for the length of utilization and when to look for vocation direction or exhortation. The part of the medication expert in self-care and self-prescription where the medication expert has a couple of limitations outlined out underneath. As a communicator the medication expert should begin a trade with the agreement (and the patient's primary care physician, when essential) to get a satisfactory quick and dirty drug history to address the state of the seeing fittingly the medication expert should ask the calm key inquiries and give relevant information to the person in question regarding the require of the medications and ways to deal with safety issues (Khan et al., 2020; Baptist et al., 2012).

The medication expert should be organized and sufficiently ready to play out a proper evaluating for specific conditions and diseases without interferometer with the prescriber's trained professional. The medication expert should give target information around medicos. The previous considers on self-medications in the Makkah region of the Saudi Arabia among purchasers in local area pharmacies are limited. In this way, the fact of the matter is to choose the transcendence of self-medication in the metropolitan people and to perceive any factors adding to self-drug (Albusalih et al., 2017; Khan, 2016). The review has the classes of variables recognized which were economics of people that included age, gender and past infection, worried about self-medication information included inquiries identified with feelings practically self-medicine practice guilty pleasure in the training recurrence of self-medicine each month. The wellspring of information concerning something similar, sort and nature of arrangements used, and put off getting meds, just as normal signs, experienced affecting self-drug.

The self-medicine being a worldwide marvel and possible factor for the enhancement resistant microorganism towards the antibiotics which contributes a great danger to the human population (World Health Organization, 2016; Ruiz, 2010; Sankdia et al.,

2017; World Anti-Doping Agency, 2019). The half knowledged outcomes of such practices ought to consistently be underscored to the local area and steps to check it. The uncontrolled utilization of antibiotics without clinical direction might bring about more prominent likelihood of unseemly, wrong, or unjustifiable treatment, missed finding, delays in fitting treatment, microorganism obstruction and expanded bleakness (Gorski et al., 2011). This survey zeroed in on the self-prescription of the medications, their utilization, its wellbeing and justification for utilizing it. It would be protected, if individuals who are utilizing it, have adequate information about its portion, season of admission, incidental effect on over portion, yet because of absence of data it can cause genuine impacts like anti-microbial opposition, skin issue, excessive touchiness and sensitivity. There is need to increase mindfulness and execute enactments to advance wise and safe practices. Further developed information and comprehension about self-medicine might bring about reasoning use and hence limit arising microbial obstruction issue (World Health Organization, 2016; Khan et al., 2020; Khan, 2016).

2. MATERIALS AND METHODS

The research investigation entitled "A study on the prevalence of self-medication among urban population in Makkah region"was approved by Ibn Sina National Collage. Institutional Human Ethics Committee (H-09-13082020) with the protocol identification number 009SRC02082020. This study was a cross-sectional survey conducted for a period of three months from 15August 2020 until 14 November 2020 in the Makkah region, Saudi Arabia. The data was collected in the form of well designed specific questionaires related to seld-medication along with other informations related to the bio-informatics of the individual, etc both in English and Arabic language. This cross-sectional survey study was conducted by blending both qualitative and quantitative methods of data collection during an awareness campaign and through direct interview with the participants. The expected target population was 1000 participants. The collected data were analysed by the Microsoft Excel and SPSS (Tesfamariam et al., 2019). The values were presented as numbers (%). IBM SPSS, IBM Corp., Armonk, N.Y., USA, version 23 was utilized for analysis. Statistical comparisons were made by Pearson Chi- Square test (Kassie et al., 2017; Tesfamariam et al., 2019). The data were significant if P-values were < 0.05.

3. RESULTS AND DISCUSSION

The target population for the sample collection for this study was 1000 samples but due to overwhelming response data collected was about 1122 sample participates in this survey. The collected data were analysed by the Microsoft Excel and SPSS (Kassie et al., 2017; Tesfamariam et al., 2019). The values were presented as numbers (%). IBM SPSS, IBM Corp., Armonk, N.Y., USA, version 23 was utilized for analysis. Statistical comparisons were made by Pearson Chi- Square test. The data were significant if P-values were < 0.05. The analysed data were well tabulated with the response percentage along with the P-value significance for their respective questionaires in the Table-1

Table 1 A cumulative data analysis for the cross sectional questionnaires with their response percentage along with P-value significance for a study on the prevalence of self-medication among urban population in Makkah region

Questionaires	Response percentage	P-value significance
Distribution of region		< 0.05
Makkah	23	
Jeddah	48	
Taif	2	
Others	27	
Nationality		< 0.05
Saudi	84.86	
Non-Saudi	15.14	
Age groups		< 0.001.
12 to 18	10.70	
19-24 years	53.30	
25 to 40 years	26.50	
41-60 years	9.50	

Gender		< 0.04
Male	47.32	
Female	52.68	
Language		< 0.681
Arabic	93.4	
English	6.6	
Education levels		< 0.001.
Undergraduate	62.97	
Graduate	27.22	
Post Graduate	4.43	
Others	5.38	
Do you prefer to visit a doctor for medication		< 0.001
Yes	73.82	
No	26.18	
May be	0	
Do you prefer to ask friend for medication		< 0.001
Yes	26.18	
No	73.82	
May be	0	
Do you take full course of medication as prescribed by the doctor		< 0.01
Yes	55.21	
No	12.62	
May be	32.18	
Do you know that some medications need to be taken in the specific doses		< 0.236.
Yes	90.85	
No	4.42	
May be	4.73	
Do you prefer self-medication based on Social media recommendations		< 0.013
Yes	5.36	
No	55.52	
May be	39.12	
Do you ever take a medication without doctor's prescription		< 0.233
Yes	66.88	
No	20.19	
May be	12.93	
Do you prefer self-medication due to cost effective than visiting a		< 0.001

doctor		
Yes	28.12	
No	40.58	
May be	31.30	
Do you prefer self-medication due to side effects		< 0.214
Yes	36.62	
No	25.16	
May be	38.22	
Do you know that some medications can cause adverse reactions		< 0.0011
Yes	79.81	
No	13.25	
May be	6.94	
Do you think self-medication is as same as prescribed medicine		< 0.326
Yes	22.08	
No	38.80	
May be	39.12	
Did you faced any complications due to self Mediations		< 0.671
Yes	11.36	
No	84.54	
May be	4.10	
Medications taken without doctor's prescription		< 0.07
Paracetamol	79.69	
Anti-histamine	9.58	
Antibiotic (used before)	8.43	
Others	2.30	
Complications faced due to Self Medication		< 0.015.
Normal	12.5	
Nausea	3.75	
Vomitting& Diarrhea	13.75	
Fever	21.25	
Stomachache	28.75	
Allergy	20	

This study was conducted in the Makkah region of the Kingdom of Saudi Arabi Which Includes Makkah, Jeddah, Taif cities and other urban areas of the region. The study show Makkah and Jeddah participants were in large numbers with the participants of Makkah were 23%, Jeddah were 48%, Taif were 2% and other urban areas were 27%. The distribution of the participants were described in the form of donut (Figure 1) symbolically with the P-value obtained by performing the Person Chi-Square test was < 0.05 for the Makkah and Jeddah when compared to the Taif and other regions which shown the significant differences in the participants in the region studied.

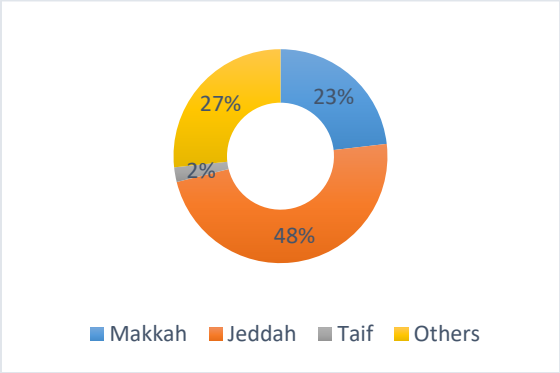

Figure 1 Distribution of the region

The general bio-information survey questionaires were conducted based upon the nationality, age group, gender, language and education and was depicted in the form of histogram (Figure 2) based on the participants. The most of the participants were Saudi nationals with 84.86% to the 15.14 non–Saudi participant with the clear significant difference of < 0.05 P-value was obtained by performing the Person Chi-Square test. The most that participated in the survey group of age 19-24 years which were 53.30%. with 26.50% in the age group of 25-40 and 10.7.% were between 12-18 where as 9.50% were between 41-60 years old respectively. The achieved significant difference in terms of the P- value obtained by performing the Person Chi-Square test was < 0.001. Regarding the gender distribution about 52.68% were female participants and 47.32% were male participants with the P- value obtained by performing the Person Chi-Square test was < 0.04. There was a clear significant difference in the P- value obtained by performing the Person Chi-Square test which was < 0.681 regarding the language distribution of the participants with 93.4% were Arabic and only 6.6% were English participants. The distribution of education level showed that the large group of participants were were undergraduate with 62.97% followed by graduate with 27.22%, post graduate 4.43% and others with 5.38% with the P- value obtained by performing the Person Chi-Square test was < 0.001.

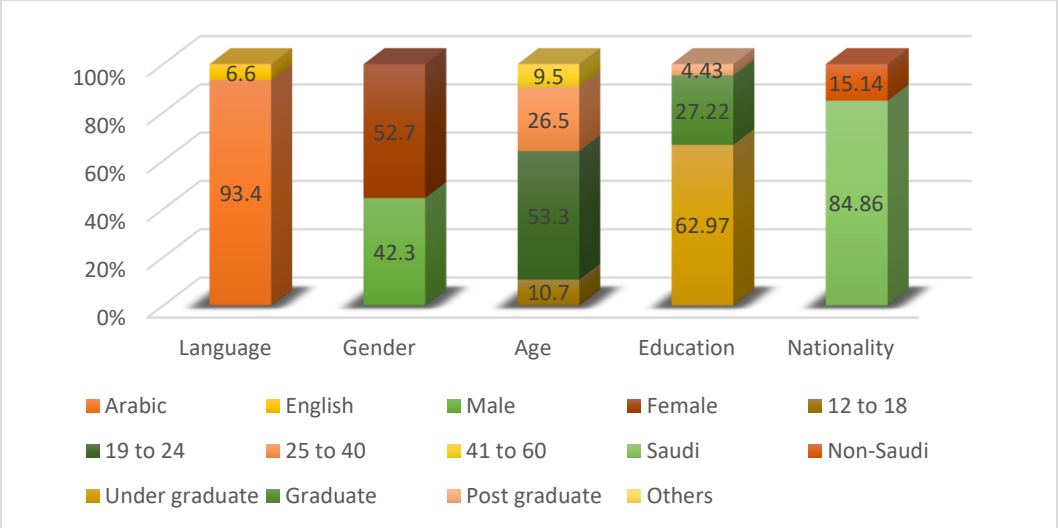

Figure 2 General bio information

The set of prescription based questionaires were described in the form of the histogram (Figure 3) based on the percentage of response received. Regarding the questionaire "Do you prefer to visit a doctor for medication', the response was 73.82% participants answered Yes while 26.18% answered No while none answered May be with the significant difference of < 0.001 P-value obtained by performing the Person Chi-Square test. The same P- value< 0.001 was obtained by performing the Person Chi-Square test for the reciprocal questionnaire to the previous with the same response rate of 26.18% answered Yes while 73.82% and none answered May be for answering to the questionnaire "Do you prefer to ask friend for medication". The response answers of 55.21% for Yes with 12.62 % No and for May be 32.18% was achieved with the significant difference of < 0.01 P- value obtained by performing the Person Chi-Square test for the questionnaire "Do you take full course of medication as prescribed by the

doctor"/The final questionnaire in this category of questionnaire was regarding "Do you know that some medications need to be taken in the specific doses" for which a significant 90.85% answered Yes while 4.42% answered No while may be was 4.73% with the significant difference of P- value obtained by performing the Person Chi-Square test for the questionnaire was < 0.236.

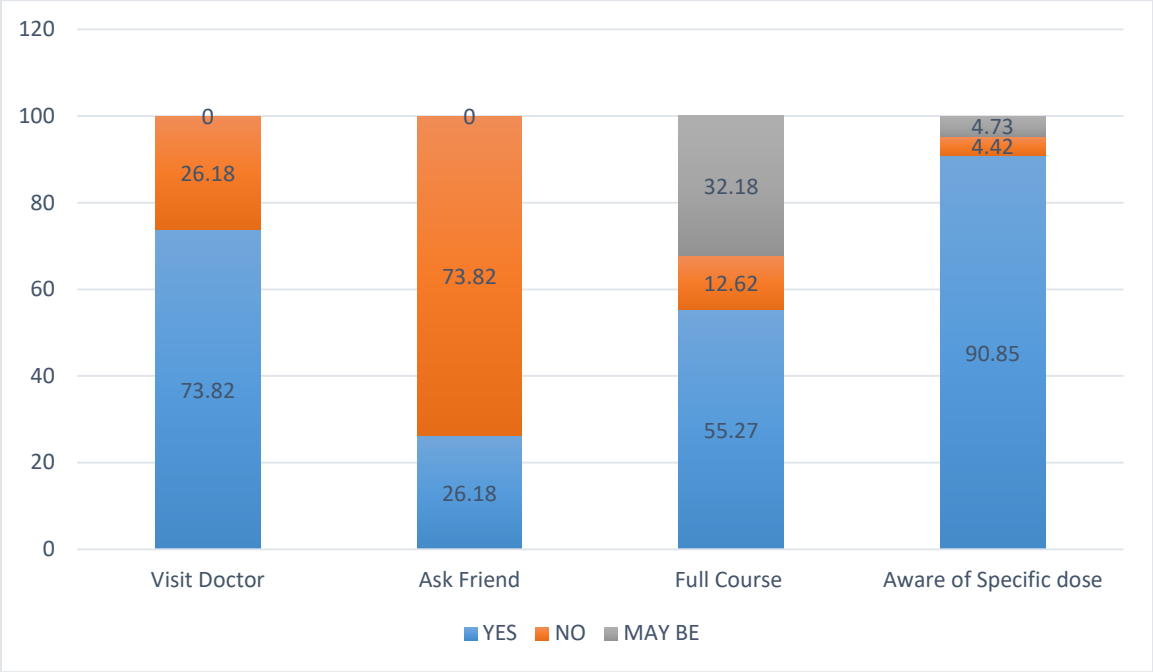

Figure 3 Prescription based questionnaire percentage

A category of questionaires were designed specifically based upon the awareness of self –medication towards the target population and were presented in the histogram (Figure 4) based upon the percentage of responses achieved for each. The response for the first questionnaire of this category was based on the questionnaire "Do you prefer self-medication based on Social media recommendations" for which answer for the option Yes was 5.36% while for No it was 55.52% and May be was 39.12% with the significant difference of P- value obtained by performing the Person Chi-Square test for the questionnaire was < 0.013. The second questionnaire of this category was "Do you ever take a medication without doctor's prescription" for which the significant difference of P- value obtained by performing the Person Chi-Square test for the questionnaire was < 0.233 with majority of the participants answered Yes with 66.88% while No was 20.19% and May be with 12.93% answers respectively. The next target questionnaire of this category was "Do you prefer self-medication due to cost effective than visiting a doctor " and the response answer of Yes was 28.12% while No 40.58% and may be with 31.30% with the the significant difference of < 0.001 P- value obtained by performing the Person Chi-Square test.

Answering to the next questionnaire of this categaory the option Yes received 36.62% and No with 25.16% while May be with 38.22% responses for the questionnaire "Do you prefer self-medication due to side effects" while the the significant difference of P-value obtained by performing the Person Chi-Square test for the questionnaire was < 0.214. The next questionnaire in this category was "Do you know that some medications can cause adverse reactions" for which the obtained response for Yes was 79.81% while No was 13.25% and May be was 6.94% with the the significant difference of P-value obtained by performing the Person Chi-Square test for the questionnaire was < 0.0011. The next questionnaire in this category was about "Do you think self-medication is as same as prescribed medicine" for which the response answer for Yes was 22.08% while No was % 38.80% and May be was 39.12% with the significant difference of < 0.326 P- value obtained by performing the Person Chi-Square test. The final questionnaire of this category was "Did you faced any complications due to self Mediations" for which the response answer achieved for Yes was 11.36% while No was 84.54% and May be was 4.10% with the calculated P-value with a clear significance of < 0.671 obtained by performing the Person Chi-Square test.

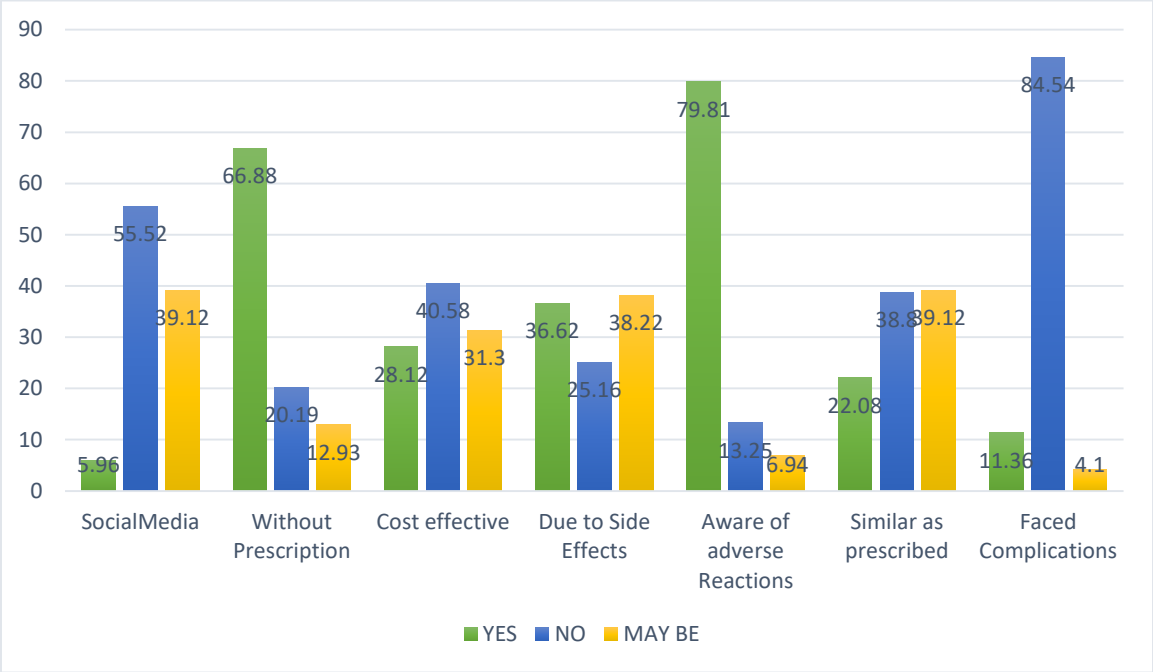

Figure 4 Self medication based questionnaire percentage

A questionnaire was framed to study the general category of medications consumed by the participants without the poper prescription of the doctor and the results percentage were described in the bar chart (Figure 5). The framed questionnaire towards the target population was "Medications taken without doctor's prescription for which the response for the medication Paracetamol was 79.69% which out performed the medications due to its popularity and easy to pursue over the counter without the prescription of the physician. The other responses were 9.58% for Anti-histamine while previously prescribed Antibiotic (used before) received 8.43% while the Other Medications received 2.30%. The P- value obtained by performing the Person Chi-Square test was < 0.07 which was clear significant difference

Figure 5 Questionnaire percentage for medication taken without Doctor's prescription

The final questionnaire of this cross-sectional study was specifically designed to study the complications faced due to self-medications and the response percentage was depicted in the form of bar chart (Figure 6). This questionnaire was strategically placed during finishing cross–sectional survey stage to create the awareness among the target population reagarding the compications of sel-medication.The questionnaire designed was "Complications faced due to Self Medication" for which only mere 12.5% answered Normal with no complications due to self-medications while 87.5% faced complications. The complications faced responses for the questionnaire were 3.75% faced Nausea, 13.75% faced vomiting & diarrhea while 21.25% had fever and majority of the participants with mere 28.75% answered that they had Stomache while 20% faced complication of Allergic reactions due to self medications. The significant difference of P- value obtained by performing the Person Chi-Square test for the questionnaire was < 0.015.

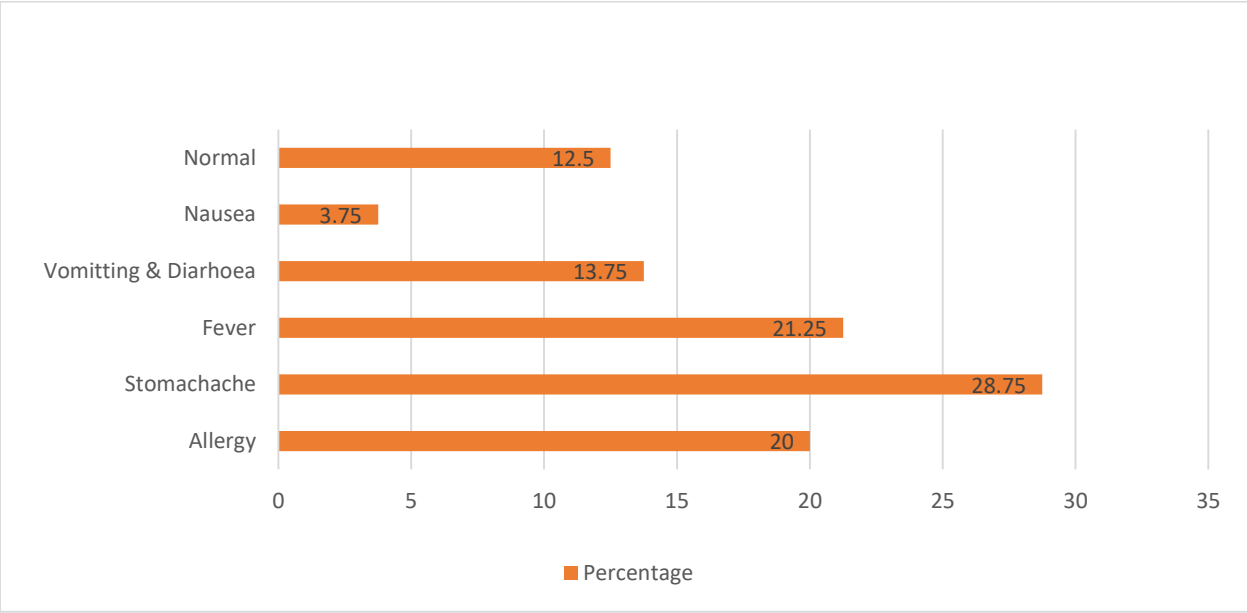

Figure 6 Questionnaire percentage for complications faced due to self medication

4. CONCLUSION

In this study it was discussed about prevalence of self-medication among urban population in the Makkah region which was a very common behavior among urban society without a proper medical prescription. It was a welcoming response from some of the target population they choose to take the full course of the drug to protect themself from resistance risk of antibiotics. There was a huge number of target population prefer to take pain killer without precipitation. The research objective was to analyse the potential dangers of the self –medication and create the awareness to minimize the risk to the lowest by encouraging the need to visit a medical practitioners for proper medications. There is a need to study the factors associated with the uptake of medications among the studied population and effort should be made by health agencies to educate the community to administer proper medications and avoid the complications of self-medication. This study was an attempt to highlight the importance of such studies in mere future to enlighten the importance of boycotting the practice of self-medication and creating the awareness among the society regarding the proper prescribed medication especially among the urban population for a brighter future.

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Author Contributions

All authors contributed equally to this manuscript work & production.

Ethical approval

The study was approved by the Medical Ethics Committee of Ibn Sina National Collage. Institutional Human Ethics Committee (H-09-13082020) with the protocol identification number 009SRC02082020.

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Conflict of interests
The authors declare that there are no conflicts of interests.

Data and materials availability
All data associated with this study are present in the paper.

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