

A Sociological Analysis of 'Self-Medication' among the students University of Sindh Jamshoro

**Ahsan Illahi Nizamani^{1*}, Dr. Aijaz Ali Wasan²,
and Hameeda Narejo³**

¹M.Phil Scholar, Department of Sociology, University of Karachi, Sindh, Pakistan.

²Prof Department of Sociology, Department of Sociology,
University of Sindh, Jamshoro, Sindh, Pakistan.

³Lecturer at Department of Sociology, University of Sindh, Jamshoro, Sindh, Pakistan.

Abstract

Self-medication is a common type of health care behaviour across the world. However, the practice and pattern of self-medication varies from country to country and region to region. Therefore, this study was designed to analyse self-medication practice and pattern in the socio-cultural context among the students of University of Sindh Jamshoro. The nature of this socio-cultural analysis of self-medication was explanatory. Data were analysed on SPSS. By the purposive sampling method, 103 respondents were hand-picked for this research. The structured-questionnaire was self-administered among the students of University of Sindh, Jamshoro. The results show prevalence of self-medication was high among the students. Quick relief is found to be reason for students practicing self-medication. Furthermore, the perceived gender was related to students' knowledge concerning self-medication. There was no relationship between religious belief and self-medication. On the basis of results, it is recommended for parents and teachers should promote responsible self-medication as well as highlight health hazardous related to irresponsible self-medication.

Keywords: Self-Medication; Nature of Disease; Serious Disease; Gender; Custom.

*)Corresponding Author.
Email: ahsanillahi79@gmail.com

1. Introduction

Self-medication is an attempt of individual himself to cure self-recognized illness by use of medicines, herbs; the individual does not consult a doctor. "The Self-medication is the use of medication by a Patient on his own initiative or on the advice of a Pharmacist or a lay person instead of consulting a medical practitioner" (WHO, 2000). In brief, the self-medication is the use of medication for self-treatment without prior consultation concerning dosage and duration of treatment. The self-medication encompasses multi-dimensional self-treatment behaviours such as use of medicines, herbs etc. Medicine is a branch of science used for the treatment and prevention of disease/illness whereas herbs are the natural substances used to resolve the health issues. Self-medication ranges as complex as the use of medicines and as simple as use of home remedies; such as use of coffee or tea for headache relief. This all comes within the scope of self-medication as all such are types of self-care or self-treatment. Hence, medication refers to both chemical as well as natural substance while self implies individual's himself/herself use of such chemical or natural substances without the professional medical consultation and prescription.

Self-medication is a potential contributor to human pathogen hindrance to antibiotics. The adverse effects of such practices needed to be emphasized to the community and steps to constrain it. The rampant irrational use of antimicrobials, including herbs, without medical consultation may result in high probability of missed diagnosis or delays in appropriate treatment, and increased morbidity. This might be safe, if the user has adequate level of knowledge about the drug's dose, time of intake, increasing dosage's side effects, but owing to inappropriate information it can cause serious consequences such as antibiotic resistance, skin problem, hypersensitivity and allergy. On the other hand, careful use of self-medication may provide quick relief and saves clinic expenditure. In addition, this can also help to reduce the overburden on the health care organisations. Therefore public awareness needed to be augmented and implementation of legislations to promote judicious and safe practices of self-medication so that society at large can benefit from it.

Self-medication is pervasive almost everywhere. People use it even if they don't have sufficient knowledge how, when and what type of medicine to take. This paper explains and presents the issues related to self-medication. This study results are informative for every student, teacher, parents and the country in general. In addition a legislative authority can take effective action in the light of the recommendations in this study.

This study is significant since the previous studies on self-medication have focused specifically on medical perspective. The related review of literature revealed self-medication was commonly practised. However, the gaps are identified in these studies i.e., it was not succinctly elaborated why self-medication is common everywhere and why individuals often do so. More importantly the socio-cultural factors are not analysed in relation to self-medication. This study aimed to explain such gaps. Hence, this topic is selected to analyse self-medication in the socio-cultural context so that it can contribute to the improvement of communal knowledge and understanding concerning self-medication. This is likely to result in rationale use of medicines and thus curb to microbial resistance issues.

This study analysis the practice self-medication at the University of Sindh, Jamshoro and analyse it from the sociological perspectives. Self-medication varies from culture to culture in terms of prevalence, techniques, and medicine/herbs. Therefore, Self-medication is not only a method of health care, but also a socio-cultural phenomenon. Hence, this study would be revolving around prevalence pattern and practice of self-medication among the students of university of Sindh, Jamshoro. Thus, this study mainly focuses on self-medication in the socio-cultural context.

1.2 Objectives of the study

The study has both general and specific objectives which are given below.

1.3 General objective

- To explain potential socio-cultural reasons and factors related to self-medication among the university of Sindh students.

- To identify prevalence and practice of self-medication among the University of Sindh students.
- To identify the relationship between students' gender and their knowledge about self-medication.
- To find out the relationship between students' religious belief and self-medication.

1.4 Hypotheses of the study

This study focused on the following hypotheses:

- There might be a relationship between students' regional/cultural background and their practice of self-medication.
- The serious the disease, the less chances of self-medication among students.
- The gender is, probably, related to the students' knowledge regarding self-medication.
- There is probably a relationship between self-medication and religious belief.

1.4 Variables

Variables are the building blocks for hypothesis in the research process. In this study both the independent and dependent variables are defined, respectively, in the following table.

1.4.1 Independent Variable

Students' regional background
Serious disease
Gender
Religious beliefs

1.4.2 Dependent Variable

Self-medication
Knowledge regarding self-medication

1.5 Key Concepts

1.5.1 Regional Background

an area of a country, especially one that has a particular characteristic (Cambridge Dictionary). This study employs regional background variable to measure the rural and urban differences on the health care behaviour of the students.

1.5.2 Serious disease

“Serious illness” is a condition that carries a high risk of mortality, negatively impacts quality of life and daily function, and/or is burdensome in symptoms, treatments, or caregiver stress” (Kelle, 2014). This study attempted to measure serious disease that has high threat to life and well-being of man.

1.5.3 Gender

Either of the two sexes (male and female), especially when considered with reference to social and cultural differences rather than biological ones. Undoubtedly, gender refers to socially expected roles from male and female respectively. This study measures the differences in the male and female gender role to self-medication.

1.5.4 Knowledge of respondents

This refers to respondents' level of information regarding self-medication. This study measure the level of information student possess about self-medication.

2. Review of Literature

The self-medication is not harmful per se i.e., responsible self-medication gives immediate cure. This needs certain level of knowledge about medication. This responsible self-medication helps to reduce the over-burden on health care professionals and saves money wasted at the doctor fees. However, this is not free of risk which can increase burden and expenses since it may result adverse health effects and requires medical interventions (self-medication, 2014).

Self-medication is practiced everywhere across the world, though with varying degree and techniques of use. Health care is a worldwide issue. The review of literature revealed self-medication is practiced all over the world. ‘‘Self-medication is a growing trend of self-care which has its both positive and negative aspects’’ (Geissler PW, Nokes K, Prince RJ, Achieng RO, Aagaard-hansen J, Ouma JH, 2000) . Porteous expands the previous argument and present a logical elaboration about the responsible self-medication, which he postulates is confined to over the counter (OTC) drugs, may have a number of substantial net benefit flows to economies such as through saving in travel and consultation time and the direct financial cost of treatment (Porteous T, Bond C, and Hannaford P , 2005). Other reasons found as antibiotic’s availability over the counter (OTC) and poor access to health care. Unequivocally, Self-medication is economical, time saving; spend at the clinical formalities, waiting for physician and so on. Individuals view there is no need to visit doctor in case of minor illness. Moreover, majority of the individuals do not bother to consult a physician, since their experience convinces them to buy, commonly used drugs over the counter (OTC). Further, individuals often stock antibiotic at their home and use them when needs. Thus, use of safe and valid drugs mostly helps them to pull a patient round on the spot at once. ‘‘The main reasons for the self-medication included non-serious health problem, seeking quick relief, and avoiding waiting hours at clinics. Reasons against the self-medication were risks of adverse effects, using the wrong medication, drug interaction, misdiagnosis and drug abuse and dependence’’ (Suleiman Ibrahim Sharif, Osama Hussein Mohamed Ibrahim, Laila Mousli and Riham Waisi, 2012). However, sometimes self-medication creates serious problems. ‘‘The major problems associated with self-medication are wastage of resources, increased resistance of Pathogens, and generally entails serious health hazards such as adverse reaction and prolonged suffering’’ (Pagane JA, Ross S, Yaw J, Polsky D, 2007). This usually happens in case of irresponsible self-medication.

The self-medication is usually supposed to be confined to non-health care population; those who are unaware of the potential harmful consequences of the practice of self-medication. This is not an absolute fact; the self-medication encompasses, broadly, the health care population as well. A study identified 76% was the

prevalence of self-medication between medical and non-medical students. There was not found any significant difference between medical and non-medical students. Moreover, headache, flu, and fever are the common symptoms (Syed Nabeel Zafar, Reema Syed, Sana Waqar, Akbar Jaleel Zubairi, Talha Vaqar, 2008). Another study is consistent to the preceding one. In this study medical and non-medical students were reported high rate of self-medication up to 98%. In this study some of the 4 new variables relationship is determined. 'males were more inclined to use ant allergic medications (OR¼1.48) than females. Medical students were more likely to use laxatives/ anti-diarrheal agents (OR¼1.49) than nonmedical students. Respondents with high a self-care orientation were more inclined to use headache relievers (OR¼2.22) compared to those with low self-care orientation'' (F.Sawalha, 2008). The university students use antibiotics irrationally (Cagri Bukea, Mine Hosgor-Limoncub, Safak Ermertcanb, Meltem Ciceklioglu, Murside Tuncela, Timur Ko "sed, Saban Eren, 2005).

The self-medication is reported commonly in this country. Self-medication is reported 95% consisting of the similar previous comparative studies between medical and non-medical students. Gender is not significantly associated with self-medication at all (Hanif Ullah, Shujaat A. Khan, Sayyad Ali, Sabiha Karim, Abdul Baseer, Ossam Chohan , Syed M. F. Hassan, Kashif M. Khan,, 2013) .The consistent is the study of Karachi and Dow University where the self-medication is observed commonly. The prevalence of self-medication is high in youth, despite the fact it is potentially harmful for health (Yasmin Mumtaz, S. M. Ashraf Jahangeer, Tahira Mujtaba, Shahla Zafar, Sara Adnan, 2011) .However, this is not the case everywhere such as at the Islamabad. The use of self-medication, there, was relatively low among the engineering and management science students 43% and 41%, respectively (Azhar Hussain, Asifa Khanu, 2008).

3. Research Design

This is an explanatory research design. Therefore, this study primarily revolves around the reasons that account for self-medication among the respondents.

3.1 Study Design

This explanatory research design used a cross-sectional study design. This study was used to collect data at one point in time in the university.

3.2 Sampling Design and Size

Sample was drawn from the study population university. Each year's students were part of the sample. Sample size was 103; male and female, both, were equally part of the sample. 'Purposive sampling' method was used. Purposive sampling method is one of the types of non-probability sampling technique. The nature of purposive sampling holds the judgment of researcher as who can probably provide the best information that is why it is also called judgmental sampling. Therefore, boys and girls were nearly equally handpicked for the research boys (49.5% and girls 48.6% constituted the sampling). Furthermore, purposive sampling technique was supportive to identify and sought rural and urban regional background students.

3.3 Locale of the Study

This study was conducted at the University of Sindh, Jamshoro (Sindh), Pakistan. This university is situated in the near city Jamshoro at a distance of 17.7 km from Hyderabad. According to University of Sindh official website there are currently 32480 students learning in diverse departments. Thus, Students of University of Sindh constituted the targeted population for this study whereby sample was selected.

3.4 Method of Data Collection

In this study a structured questionnaire was used to collect the required data from the University of Sindh students. The questionnaire was specifically developed and designed that focused on the overall objectives of this study.

3.5 Pre-Testing

The information cannot be revealed unless researcher is sure about reliability, validity and suitability of all methods of data

collection. A pilot study was conducted in order to remove errors and ambiguities. Some modifications were made regarding the wording and structure of some questions.

3.6 Statistical method of Data Analysis

The data analysis was made on SPSS (statistical package for social sciences). The chi-square test was used on SPSS to examine the association between variables.

3.7 Chi-square

Chi-square test is the important statistical test in social sciences research. Chi-square is based on the null hypothesis: there is no relationship. This test is employed to verify the association of relationship assumed by the research known as research hypothesis. The variable were analysed at the p-value 0.05 level of significance.

Contingency Table 4.1

H₀: There is no relationship between regional/cultural background and students' practice of self-medication.

H₁: There might be a relationship between regional/cultural background and students' practice of self-medication.

Regional background * practice of self-medication Crosstabulation

	Did you practice self-medication in the past two months?		Total
	yes	No	
Count Urban	14	28	42
Expected Count	21.0	21.0	42.0
Count Rural	34	20	54
Expected Count	27.0	27.0	54.0
Count Total	48	48	96
Expected Count	48.0	48.0	96.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.296 ^a	1	.004		
Continuity Correction ^b	7.153	1	.007		
Likelihood Ratio	8.429	1	.004		
Fisher's Exact Test				.007	.004
Linear-by-Linear Association	8.210	1	.004		
N of Valid Cases	96				

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 21.00.
- b. Computed only for a 2x2 table

As the significance level (0.05) is high than the P value (0.004) therefore, the researcher can't accepted null hypothesis. As a result it is concluded that there exists a relationship between regional background and practice of self-medication

In other words the Continuity Correction^b 7.153 which is computed as the degree of freedom is only 1, it is still larger than the tabulated value 3.84; therefore, null hypothesis is rejected.

3.8. Interpretation of Results

A test of Independence is a chi-square technique employed to determine whether two variables are related or independent of each other. In this research chi-square test of independence is used on the data of contingency Table No. 1 to determine the independence of the two variables i.e. regional background and practice of self-medication

The table indicates H_1 : is accepted and H_0 : is rejected. The p-value is 0.004; therefore, the degree of association between two variables i.e. regional background and practice of self-medication is also strongly interconnected. Keeping in mind the aforementioned data, it is concluded that H_1 : There might be a relationship between regional/cultural background and students' practice of self-medication.

Contingency Table 4.2

H₀: No relation between the serious the disease and Less chances of self-medication among students.

H₁: The serious the disease, The Less chances of self-medication among students.

In case of seriousness/severity of disease, what will you do? * in case of serious disease, will you reduce self-medication?
Crosstabulation

	In case of serious disease, will you reduce self-medication?			Total
	i will completely reduce the self-medication	i will slightly decrease the use of self-medication	i will not decrease the self-medication	
In case of seriousness/severity of disease, I will consult a doctor.	76	12	2	90
What will you do? I will practice self-medication	2	3	3	8
Total	78	15	5	98

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.986 ^a	2	.000
Likelihood Ratio	15.072	2	.001
Linear-by-Linear Association	22.340	1	.000
N of Valid Cases	98		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.00.

As the significance level (0.05) is high than the P value (0.000) therefore, the researcher can't accepted null hypothesis. As a result it is concluded that there exists a relationship between serious disease and chances of self-medication.

In other words the computed value 23.986 is larger than the tabulated value 5.99; therefore, null hypothesis is rejected.

3.9. Interpretation of Results

A test of Independence is a chi-square technique employed to determine whether two variables are related or independent of each other. In this research chi-square test of independence is used on the data of contingency Table No. 2 to determine the independence of the two variables i.e. serious disease and chances of self-medication.

The table indicates H_1 : is accepted and H_0 : is rejected. The p-value is 0.000; therefore, the degree of association between two variables i.e. serious disease and chances of self-medication. It is also strongly interconnected. Keeping in mind the aforementioned data, it is concluded that H_1 : The serious the disease, The Less chances of self-medication among students.

Contingency Table 4.3

H_0 : the gender is, probably, related to the students' knowledge regarding self-medication.

H_1 : the gender is, probably, related to the students' knowledge regarding self-medication.

gender * Increasing or decreasing drug dosage can be harmful Cross tabulation

			Increasing or decreasing drug dosage can be harmful		Total
			agree	strongly agree	
gender	male	Count	32	17	49
		Expected Count	26.2	22.8	49.0
	female	Count	21	29	50
		Expected Count	26.8	23.2	50.0
Total	Count		53	46	99
	Expected Count		53.0	46.0	99.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.404 ^a	1	.020		
Continuity Correction ^b	4.508	1	.034		
Likelihood Ratio	5.457	1	.019		
Fisher's Exact Test				.027	.017
Linear-by-Linear Association	5.349	1	.021		
N of Valid Cases	99				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 22.77.

b. Computed only for a 2x2 table

As the significance level (0.05) is high than the P value (0.017) therefore, the researcher can't accepted null hypothesis. As a result it is concluded that there exists a relationship between gender and knowledge regarding self-medication.

In other words the Continuity Correction^b 4.508 which is computed as the degree of freedom is only 1, it is still larger than the tabulated value 3.84; therefore, null hypothesis is rejected.

3.10. Interpretation of Results

A test of Independence is a chi-square technique employed to determine whether two variables are related or independent of each other. In this research chi-square test of independence is used on the data of contingency Table No. 3 to determine the independence of the two variables i.e. gender and knowledge regarding self-medication.

The table indicates H_1 : is accepted and H_0 : is rejected. The p-value is 0.017; therefore, the degree of association between two variables i.e. gender and knowledge regarding self-medication is also strongly interconnected. Keeping in mind the aforementioned data, it is concluded that H_1 : the gender is, probably, related to the students' knowledge regarding self-medication.

Contingency Table 4.4

H_0 : there is no relationship between self-medication and students' religious beliefs.

H_1 : there is perhaps relationship between self-medication and religious belief.

practice of self-medication * faith healing is sufficient to cure the disease Crosstabulation

			faith healing is sufficient to cure the disease		Total
			Agree	disagree	
did you practice self-medication in the past two months?	yes	Count	27	21	48
		Expected Count	26.7	21.3	48.0
	no	Count	28	23	51
		Expected Count	28.3	22.7	51.0
Total		Count	55	44	99
		Expected Count	55.0	44.0	99.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.018 ^a	1	.893	1.000	.527
Continuity Correction ^b	.000	1	1.000		
Likelihood Ratio	.018	1	.893		
Fisher's Exact Test					
Linear-by-Linear Association	.018	1	.893		
N of Valid Cases	99				

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 21.33.
- b. Computed only for a 2x2 table

As the significance level (0.05) is less than the P-value (0.527) therefore, the researcher can't reject null hypothesis. As a result it is concluded that there does not exist a relationship between self-medication and students' religious beliefs.

In other words the Continuity Correction^b .000 which is computed as the degree of freedom is only 1, it is less than the tabulated value 3.84; therefore, null hypothesis cannot be rejected.

3.11. Interpretation of Results

A test of Independence is a chi-square technique employed to determine whether two variables are related or independent of each other. In this research chi-square test of independence is used on the data of contingency Table No. 4 to determine the independence of the two variables i.e. self-medication and students' religious beliefs.

The table indicates H_1 : is rejected and H_0 : is accepted. The p-value is .527; therefore, there is no association between two variables i.e. self-medication and students' religious beliefs. Keeping in mind the aforementioned data, it is concluded that H_0 : there is no relationship between self-medication and students' religious beliefs.

4. Discussion

Self-medication is practiced as usual. "In most illness episodes; self-medication is the first option which makes it a common practice worldwide" (self-medication, 2014). The students practice self-medication at first, but if it does not work, they usually prefer to go for medical consultation. The chi-square test 1 confirms that there is a significant relationship between nature of disease/illness and self-medication. This is explored a solid reasoning, why students practice self-medication. Students practice self-medication if they encounter a minor or non-serious health problem. But when they confront a serious health problem or the self-medication fails to cure the self-recognized symptoms, they would consult a health care professional. Sociological imagination (C. Wright Mills, 1959) it is an ability to see the connections between our personal lives and society in which we live. The sociological imagination enables us to better understand

individual in the social context (Abdul Hameed Taga and Abdul Aziz Taga, 2013). Self-medication is not an individual's issue; it is rather a societal phenomenon as majority of respondents practice self-medication. Self-medication found common practice for non-serious health problems, to seek quick relief and respondents use self-medication for one week (Suleiman Ibrahim Sharif, Osama Hussein Mohamed Ibrahim, Laila Mousli and Riham Waisi, 2012). This study is consistent with the previous study in terms of the duration. Most of the respondents practice self-medication for one week but thereafter consult medical consultation. This is a trend students attempt to seek quick relief, but failure leads them to any health care professional. In this way, the present study expands the previous knowledge and bridges the gap found as why they do the way they do. Students do self-treatment because this is the cheapest and easy option available at their disposal. They are trapped by study and other burdens; this option does not require any consultation fees and waiting long hours at clinics. Hence, practice of self-medication is perpetuated and become a custom of society.

This study initiated to find out socio-cultural reasons and factors in relation to self-medication. This study explored the reason as cited in the previous paragraph; self-medication provides quick relief, and self-medication is done over and over again for minor diseases as well as it is most appropriately seen in first episodes of illness. However, the factors are also determined. The socio-cultural factor is the regional/cultural background. The hypothesis no.2 is significantly accepted that students' Rural or Urban background has relationship with self-medication. This study identifies rural students have a tendency to self-treat, while Urban students' incline towards medical consultation. This is not as usual, sometimes urban students too practice self-medication but they are more cautious and seek medical professional help so that they can avoid any ensuing risk. Urban people are aware of the new technology in all fields and in particular medical. This is because urban culture is equipped with modern way of life; including civic amenities such as internet, better transport, roads, schools, Universities, Commerce, both private and civil hospitals etc. On the other hand, the rural environment is rather static and stagnant in the development of quality of life. Rural people retain the traditional way of life and are usually deprived of the modern

facilities as compare to urban regions. Rural region is endowed with economic problems, lack of educational facilities, and lack of adequate civic amenities and trapped by traditionalism (Rao, 2006). Therefore, they do not have well access to proper medical consultation in addition to reckless attitude. Thus, distinction between rural and urban environment inculcates different habits. The more a person interacts with his environment, the higher are the chances he will be adopting the way of life. Hence self-medication is related to students' regional environment.

This study is consistent with the following research studies in terms of the gender equivalent use of self-medication. Fadare and Tamun's study found no strong association between gender; level of education and the practice of self-medication. Another combined comparative study undertaken by (Hanif Ullah, Shujaat A. Khan, Sayyad Ali, Sabiha Karim, Abdul Baseer, Ossam Chohan, Syed M. F. Hassan, Kashif M. Khan., 2013) presented the same results. The male and female were equally involved in the self-medication. However this study goes beyond the previous studies. Thus present study explores another social factor related to self-medication. There is found a relationship between gender and knowledge of respondents regarding self-medication. "If one wants to solve a problem, one must generally know what the problem is. It can be said that a large part of the problem lies in knowing what one is trying to do" (Kerlinger, 2011). Know how is essential in responsible and beneficial self-medication. Generally, it is supposed that females visit clinics more than male counterparts. Girls often seek professional help when buying and using drugs as remedies for self-medication (Zalika Klemenc-Keti, Aiga Hladnik and Janko Kersnik, 2011).

This study contradicts with the conclusion "the poorest people and middle class use OTC drugs for self-medication twice or 0.7 times less often than the rich, respectively" (Mihailovic Natasa, Snezana Radovanovic, Dragan Vasiljevic, Sanja Kocic, Mihajlo Jakovljevic). In the present study there was not seen relationship between economic class and use of OTC drugs. However, this study found the upper class take vitamins more than lower and middle class.

5. Limitations of the Study

Although findings of the thesis expand understanding regarding the self-medication in socio-cultural context, however, some important limitations should be elaborated. First, relatively not large enough sample size was drawn from study population. Second, this study is limited to the practice of self-medication in relation to socio-cultural context. This does not analyse self-medication from the medical perspective. As a mixture of medical and social context nature of disease requires qualitative in-depth analysis.

5.1 Recommendations

Keeping in view the results of this study the following recommendations are proposed:

1. The current study found self-medication as a custom. This trend is inculcated through socialization. Therefore parents and teachers both can play a crucial role in promoting awareness regarding the responsible self-medication. Parents need to socialize their children to use drugs carefully as well as consult physicians. Teachers should arrange guest physician's sessions and workshops for highlighting health hazards and rational use of drugs at the University of Sindh, Jamshoro.
2. The results show regional background is related to students' self-medication. The rural region students, relatively, more practice self-medication than urban ones. The rural regions are deprived of the advanced health facilities. This precipitates rural people to practice self-medication repeatedly and thus becomes a habit. Hence rural areas needed to be provided adequate health facilities including physicians and available out-of-date basic health units need to be reformed.
3. This study found students' gender is related knowledge regarding self-medication. Females possess adequate level of knowledge regarding self-medication than male students. Thus males tend to be at high risk than females. The males should pay heed to the health and prioritize health protection over all other activities.

4. At the macro level state should play its role through legislation. State should introduce a law regarding the irrational use and easy availability of drugs without prescription and state should ensure its strict implementation so that hazards resulting from irresponsible self-medication can be inhibited.
5. At last but not the least, it is suggested for future researchers in the related subject area that a mixed method strategy would yield further underlying factors. Thus, complete knowledge of the subject area would be possibly sought.

6. Conclusion

Nature of disease persuades the sick student whether to go doctor or self-medicate. Therefore, self-medication is common in minor diseases and rarely practiced in serious health problems. Students prefer self-medication in first episode of illness. Since serious disease is likely to last longer, therefore, students seek medical consultancy in these cases. Gender relates knowledge of students. Furthermore, regional background is related with students' habit of self-medication. To put in a nutshell, self-medication is inculcated into students as a custom of society and that's why it is increasingly practiced.

References

- Abdul Hameed Taga and Abdul Aziz Taga. (2013). *An introduction to Sociology*. Lahore.
- Azhar Hussain, Asifa Khanu. (2008). Self medication among university students of Islamabad, Pakistan - a Preliminary Study. 1(1).
- Cagri Bukea, Mine Hosgor-Limoncub, Safak Ermertcanb, Meltem Cicekliogluc, Murside Tuncela, Timur Ko "sed, Saban Eren. (2005). Irrational use of antibiotics among university students. *Journal of Infection*, 135-139.
- Cambridge dictionary*. (n.d.). Retrieved November Monday, 2018, from <https://dictionary.cambridge.org/dictionary/english/region>

- F.Sawalha, A. (2008). descriptive study of self-medication practices among Palestinian medical and nonmedical university students. *Research in Social and Administrative pharmacy*4, 164-172.
- Geissler PW, Nokes K, Prince RJ, Achieng RO, Aagaard-hansen J, Ouma JH. (2000). children and medicines: self-treatment of sommon illnesses among Luo school children in western Kenya. *Social science Medicine* , 1771-1783.
- Hanif Ullah, Shujaat A. Khan, Sayyad Ali, Sabiha Karim, Abdul Baseer, Ossam Chohan , Syed M. F. Hassan, Kashif M. Khan,. (2013). Evaluation Of Self-Medication Amongst University Students In Abbottabad, Pakistan; Prevalence, Attitude And Causes. *Acta Poloniae Pharmaceutica ñ Drug Research*, 70, 919-922.
- Joseph O. Fadare and Igbiks Tamun. (2011, may). Antibiotic self-medication among University medical undergraduates in Northern Nigeria. *journal of public health and Epidemiology*, 3 (5), 217-220.
- Kelle, A. S. (2014, August 9). Defining serious illness. *Journal of Palliative Medicine*.
- Kerlinger. (2011). *the importance of formulating a research problem*. research methodology.
- KP Osemene and A Lamikanra. (2012). A Study of the Prevalence of Self-Medication Practice among University Students in Southwestern Nigeria . *Tropical Journal of Pharmaceutical Research* 11 (4), 683-689 .
- Lisandra Damian, Cătălina Elena Lupușoru2, Cristina Mihaela Ghiciuc. (2014). Self-Medication With Antimicrobial Drugs Among University Students In A Northeast Region Of Romani. *Preventive Medicine Laboratory*, 118.
- Maxwell, J. A. (2005). Qualitative Research Design: An interactive approach. *Thousand Oaks* .
- Mihailovic Natasa, Snezana Radovanovic, Dragan Vasiljevic, Sanja Kocic, Mihajlo Jakovljevic. (n.d.). Sociodemographic Characteristics Of The Over-The-Counter Drug Users In Serbia.
- oxforddictionaries*. (n.d.). Retrieved November Monday, 2018, from English oxford living dictionary: <https://en.oxforddictionaries.com/definition/gender>

- Pagane JA, Ross S, Yaw J, Polsky D. (2007). Self-medication and health insurance coverage in Mexico. *health policy*, 75: 170-177.
- Phillipson. (1971). *Juvenile Delinquency- The School's in Carson, W.G (Ed) Crime and Delinquency in Britai*. London: Martin Robertson Publishers.
- Porteous T, Bond C, and Hannaford P . (2005). Sinclair: how and why is Non-prescription analgesics used in Scotland? *FAM Pract*, 22: 78-85.
- Rao, C. S. (2006). *Sociology* (Vol. sixth). Mangalore.
- S. Kayalvizhi And Dr. R. Senapath. (N.D.). Evaluation Of The Perception, Attitude And Practice Of Self Medication Among Business Students In 3 Select Cities, South India. *International Journal of Enterprise and Innovation Management Studies (IJEIMS)*, 1.
- Sean Esteban McCabe, John R. Knight, Christian J. Teter & Henry Wechsle. (2004). *Non-medical use of prescription stimulants among US college students: prevalence and correlates from a national survey*. US.
- Self-medication. (2014). *Sudan journal of rational use of medicine*, 4.
- Suleiman Ibrahim Sharif, Osama Hussein Mohamed Ibrahim, Laila Mousli and Riham Waisi. (2012). Evaluation of self-medication among pharmacy students. *American journal of Pharmacology and Toxicology*(1557-4962), 135-140.
- Syed Nabeel Zafar, Reema Syed, Sana Waqar, Akbar Jaleel Zubairi, Talha Vaqar. (2008). Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes. *Student's Corner Original Article*.
- Usindh. (2018). *usindh*. Retrieved october 27, 2018, from <http://usindh.edu.pk/home-2/>
- WHO. (2000). world health organisation guideliness.
- Yasmin Mumtaz, S. M. Ashraf Jahangeer, Tahira Mujtaba, Shahla Zafar, Sara Adnan. (2011). Self Medication among University Students of Karachi. *10*.
- Zalika Klemenc-Keti, @iga Hladnik2 and Janko Kersnik. (2011). A Cross Sectional Study of Sex Differences in Self-Medication Practices among University Students in Slovenia. *Coll. Antropol*, 329-334.