



COMPARISON OF SELF-MEDICATION AMONG RURAL POPULACE AND RURAL IMMIGRANTS IN AN URBAN CENTRE OF PAKISTAN

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ABSTRACT

Background: Self-medication refers to the treatment of diseases by oneself without consulting a qualified healthcare practitioner. It is good to some extent as it empowers patients in making decisions about management of minor illnesses and reduces burden on healthcare facilities.^{[1]Error! Reference source not found.} At the other hand if limitations are breached excess and inappropriate use can be harmful. This survey is a contribution to this issue with a different aspect. **Objective:** The study intends to find if any connection exists between self-medication trends between two groups of people i.e. native rural and rural immigrants in an urban centre. **Method:** A cross sectional, self-administered, questionnaire based, randomized sampling study was conducted at a public tertiary care hospital in Karachi from June, 2016 to October, 2016. Then it was compared statistically. **Results:** Out of 388 respondents 60.6% were rural natives and 39.4% were rural immigrants. Gender was not a criteria for discrimination. 43.4% of rural individuals and 40.5% of rural immigrants answered poverty as the main reason of self-medication. More than 65% of rural populace and more than 58% of rural immigrants did not find it necessary to consult a doctor, which is alarming. Allopathic mode is the most preferable mode. 54.5% of rural population and 45.5% of rural immigrants alter the duration of their prescription. **Conclusion:** No difference could be found in self-medication rates between rural immigrants and rural natives. The groups differed in the aspects of mode, reason and duration of self-medication. They also differed on the issue of advising others on self-medication.

KEYWORDS: self-medication, native rural, rural immigrant.

INTRODUCTION

Self-medication is defined as the selection and use of medicines by individuals (or a member of the individuals' family) to treat self-recognized or self-diagnosed conditions or symptoms.^[2] Self-medication is not considered in itself to be harmful because it usually refers to the self-administration of over-the-counter (OTC) drugs which are termed OTC drugs as such because are deemed safe to be self-administered. This can reduce the load on health facilities and the time more effectively spent on more serious diseases.^[3]

In the context of Pakistan however the same does not stand true. Being a low income country,^[4] with meagre resources, uneven distribution of wealth, poverty at 30% and, according to 2014 data, one of the world's lowest percentages of GDP (0.9%) being spent on public health a majority of population self-medicates.^[5] This is all the more problematic since majority of drugs are available without prescription in pharmacies throughout Pakistan. The easy availability of drugs increases this practice.

This also includes antibiotics, the unrestrained, non-prescribed and wrongly advised use of which, can lead to and is leading to drug resistance.^[6] Microsoft founder and philanthropist, Bill Gates, has stated that the world faces a decade of risk from antibiotic resistant organisms.^[7] It can also cause undue adverse effects.

Various surveys have been done regarding self-medication in Pakistan. A lot has also been done to compare self-medication trends between the rural and urban population of Pakistan.^[8] This particular survey takes on a different aspect to the issue of self-medication in Pakistan by comparing them between two categories: the first category is rural populace that has not immigrated to an urban center while the second group concerns rural populace that has immigrated to an urban center. Such an aspect has not yet been studied. The objective was to relate self-medication and associated factors between the two groups and find differences, if any.

METHODOLOGY

This was a cross sectional study with a non-probability convenience sampling technique. The sample size was calculated from the Online Open Epi software as 388. The duration and place of study was 5 months from June, 2016 to October, 2016, from a public tertiary care hospital in Karachi, Pakistan.

A pretested questionnaire derived from numerous questionnaires from similar articles was used. Every sound minded individual above the age of 14 was considered. Individuals living in a rural area and those who had immigrated to an urban centre i.e. Karachi (in a few cases other than Karachi) and had spent at least, or more than, 2 years in the urban centre were included. Individuals living in Karachi since birth were excluded.

The questionnaire dealt with whether the individuals self-medicated or not as well as the mode, reason, and duration of self-medication. It also asked the immigrants whether living in an urban area had any effect on their stance on self-medication among other things. Demographic details were also asked. The data was entered on SPSS v.16.0 and analyzed. Frequency and percentages were calculated for the variables and Chi square test was applied to see the significance of the study statistically.

RESULT

Of the 388 individuals 60.6% (235) were native rural individuals while 39.4% (153) were rural immigrants in an urban center. 84% (326) were males and 16% (62) were females. Such a disproportionate gender division has its justifications. A balance was tried to be maintained between the number of males and females but reluctance of females to talk and convey information and a strong prevailing patriarchal system eventually led to the disparate gender divide. Level of education amongst the 388 respondents is presented below in Table 1; the marital status is given in Table 2.

All the 388 respondents were asked what they preferred to do as soon as the symptom(s) appeared. Of the 235 native rural population 34.9% (82) preferred consulting a doctor, 15.3% (36) preferred self-medication, while 49.8% (117) only started self-medication in case of minor illness (minor disease included flu, cough, headache and other common diseases). In comparison, out of 153 rural immigrants 40.5% (62) consulted a doctor, 14.4% (22) prefer to self-medicate for whatsoever disease that came their way, while 45.1% (69) only preferred self-medication for minor illness. It can be deduced that self-medication percentages for rural immigrants are comparable to those of rural native.

Response to the mode of self-medication ($p=0.041$) is shown below in Bar Chart 1. Of the 235 native rural respondents 77% (181) preferred allopathic medication, 11.5% (27) preferred home remedy. While from 153

rural immigrants 66.7% (102) preferred allopathic medication and 22.2% (34) preferred home remedy. When asked about the source of information ($p=0.610$) for practicing self-medication, native rural consumers stated that they took advice from drug dispenser [49.4% (116/235)], from family, friends and neighbors [30.2% (71/235)], from no one [15.7% (37/235)], and from faith healer [4.7% (11/235)]. Same was asked from rural immigrants with [45.8% (70/153)], [30.7% (47/153)], [15.7% (24/153)], and [7.8% (12/153)] respective results. This points toward the easy availability of drugs over the counter.

When the rural native respondents were asked about the reason for self-medication ($p=0.010$) they replied with poverty [43.4% (102/235)], other personal reasons [29.5% (70/235)], lack of health facility [9.8% (23/235)], bought drugs from the prescription of the previously same disease [8.5% (20/235)], and afraid of injections and bitter drugs [5.1% (12/235)]. Reply of rural immigrants were [40.5% (62/153)], [24.2% (37/153)], [13.1% (20/153)], [11.8% (18/153)], and [0.7% (1/153)], respectively (Bar Chart 2). This shows that poverty has its role in developing antibiotic resistance, drug related organ failure, hypersensitivity reactions and so forth.

When respondents were asked of advising others to self-medicate if self-medication had been successful ($p=0.022$), the answer from native rural was yes in 57% (134/235) and no in 43% (101/235). Answer from rural immigrants were 45.1% (69/153) and 54.9% (84/153) respectively.

The duration for which self-medicated drug was taken ($p=0.044$) was asked and replies from the native rural were: stopped as soon as the symptoms disappeared (57%), decide based on the past experience (23.4%), follow someone else's advice (12.3%), and follow the doctor's advice, in case of using the drug from old prescription (7.2%). Replies from rural immigrants were (56.9%), 29.9%, 7.2% and 15%, respectively.

When asked what they did if the self-medicated drug failed to cure? ($p=0.393$) Did they shift to a new drug or not? Native rural replied yes in 44.3% and no by 55.7%. Same question and relatively comparable result was seen in rural immigrants with 39.9% in favor of shifting to a new drug while 60.1% in against.

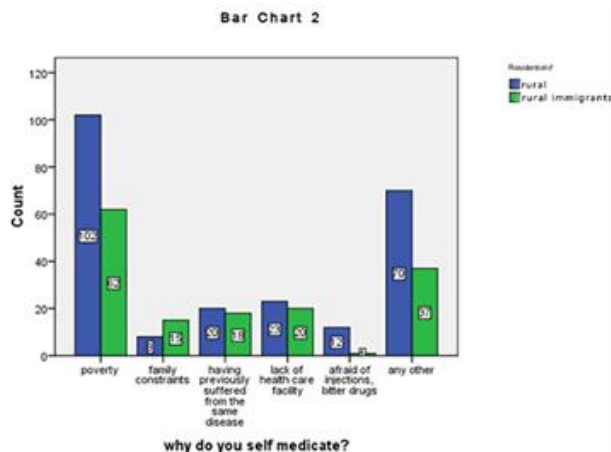
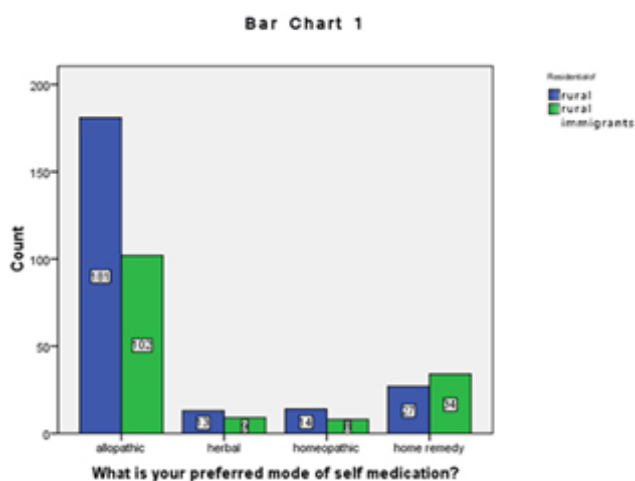
Respondents were asked what they did if they suffered from a disease they thought they had had before in the past ($p=0.649$). The native rural then preferred to consult a doctor in 74.9%, while 12.8% still preferred self-medication and 12.3% reused a previously prescribed medication. Reply of rural immigrants to the above options were 73.9%, 15.7% and 10.5% respectively. On the consultation of a doctor for their family members 88.5% of the native rural answered yes while 11.5% said no. Same was asked from rural immigrants which resulted in 86.3% Yes and 13.7% No.

When all the 388 were asked about altering the prescription (p=0.615) the native rural answered with 85.1% no, while 14.9% replied yes. While rural immigrants replied as 86.9% no and 13.1% yes. When asked about the entire drug intake duration as prescribed (p=0.033) 54.5% (128/235) rural native replied no. and 45.5% (107/235) answered yes. Results to the same options in rural immigrants were [65.4% (100/153)] and [34.6 (53/153)] respectively.

At last it was asked from the 388 respondents that if they get cured from either self-medication or after consulting a doctor do they then guide others to self-medicate? (p=0.022). 57% (134/235) native rural replied Yes while 43% (101/235) said No. Answers from rural immigrants were [45.1% (69/153)] and [54.9% (84/153)] respectively.

Educational Level	Frequency	Percentage (%)
Uneducated	202	52.1
Primary	72	18.6
Secondary	69	17.8
Intermediate	24	6.2
Undergraduate	21	5.4
Total	388	100%

Marital Status	Frequency	Percentage (%)
Single	58	14.9
Married	330	85.1
Total	388	100%



DISCUSSION

All individuals were asked questions regardless of whether they self-medicated or not. The justification for it was that while a certain percentage did consult a doctor when suffering from a disease minor or major, nearly all had practiced self-medication at some point of their lives. Thus, it was felt they could give valid and meaningful replies to questions that ideally would only have been asked of respondents that self-medicated.

The research intended to find any differences in self-medication, and associated factors, between two groups of people i.e. rural native and rural immigrant as has already been discussed above. From the available data and the above stated results the important things that can be gleaned are that we could not find any statistically significant difference between the two groups as far as self-medication is considered. However, under the same umbrella we could find statistically significant differences considering certain aspects.

The differences could be found on the secondary aspects of the research. Firstly, related to the mode of self-medication, rural natives had a higher percentage of using allopathic, herbal and homeopathic medicines but a lower percentage of home remedy in contrast to the rural immigrants. More rural proper individuals have faith in allopathic medicines and less in home remedies as might be expected of them. Rural immigrants had a lower rate of use of allopathic medicines and a higher rate of home remedies. This goes against the general belief where the urban populace because of better availability of allopathic drugs must use them more. This general belief has been expounded in an Indian research carried out in 2013-14.^[9]

The reasons for self-medication also had differences between the populations. While poverty was the biggest reason for both groups, poverty still featured as a bigger reason for the rural populace than rural immigrants. While it may be unjust to conclude that rural immigrants are very better off than their rural proper counterparts based on this result, however, a slight better percentage may mean they still are slightly better off. Also, rural

immigrants were more liable to buy drugs from a previous prescription than the rural natives.

Relation between poverty and self-medication is not a new one. Many studies have come to the same connection. A research conducted in Nigeria in 2007 also made a connection between financial constraints and minor nature of the disease and self-medication.^[10]

The mode of self-medication differed as well. While it doesn't fall within a statistically significant value the overall percentages show that both the respective groups consulted a drug dispenser for self-medication purposes. A similar result has been obtained in a 2002 study conducted in Western Nepal.^[11] A trained pharmacist can be a much needed contribution to advising patients and the general populace regarding medications as was discussed in a WHO group meeting^[12]. However once again the same doesn't stand valid for a country like Pakistan where opening a drug store is easy with no tight regulations and the drug dispenser not a qualified pharmacist in majority of the cases. Thus drug dispensers advising people in Pakistan can be counterproductive because they have not been trained in this regard.

Duration of use of self-medicated drug also differed amongst the two groups. Both groups concurred that they stopped the drug as soon as they felt better. However, a greater majority of rural immigrants followed the doctor's advice or decided on the basis of past experience as to when to stop self-medication.

On the issue of advising others to self-medicate rural immigrants were less likely to do so than rural natives. Also, a significantly higher percentage of rural immigrants were likely to take the drug for the duration prescribed whereas rural natives stopped medication as soon as symptoms disappeared.

The rural immigrants unequivocally rejected that living in Karachi had any effect on their stance on self-medication at a percentage of 90.2. Our general assumption for this query, on which we broadly hinged our study, was that when rural people came and settled in an urban centre they would be exposed to an environment consisting of people who were well educated and with better availability of information regarding drugs this would have a positive impact on their stance of self-medication. This did not prove to be the case. Many researches have shown an exorbitantly high percentage of self-medication in urban areas. A 2015 study in Karachi^[13] found the prevalence of self-medication in an area to be 88.4%. Understandably, this is not a conducive environment for changing peoples' perception regarding self-medication.

While meticulous care was taken during the data collection and analysis, human error, recall bias of the respondents, language barrier, and lack of honesty by the respondents must all be taken into account when viewing

this article. The authors believe that a more detailed study must be taken to view if self-medication rates have any difference between rural natives and rural immigrants.

Multiple surveys can better make or refute any connection that might exist between rural natives and rural immigrants regarding self-medication. Hence, more studies should be done to find any association. Regardless of what our study achieved self-medication remains a dire issue in all developing and low HDI countries. Steps should thus be taken to encounter this life threatening issue. More awareness is required, as we have mentioned above that a greater proportion of population alters the prescription which can be termed a minor interpretation of self-medication.

CONCLUSION

No difference could be found in self-medication rates between rural immigrants and rural natives. The groups differed in the aspects of mode, reason and duration of self-medication. They also differed on the issue of advising others on self-medication.

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