Cultural Factors Responsible for Self-Medication in Swat Khyber-Pakhtunkhwa, Pakistan

Ahmad Ali1, Sameer Ul Khaliq Jan2, Muhammad Hussain3, Hussain Ali4, Shakeel Ahmad5, Muhammad Niqab6, Ashraf Ali7, Basit Ali8, Amir Alam9,
1Department of Sociology, Abdul Wali Khan University Mardan, Pakistan, 2Corresponding Author, 3Department of Social Work, Shaheed Benazir Bhutto University Dir (U) Pakistan, 4Department of Sociology, University of Peshawar, Pakistan, 5Department of Sociology, Abdul Wali Khan University Mardan, Pakistan, 6Department of Sociology, Kohat University of Science and Technology, Pakistan, 7Department of Education, Shaheed Benazir Bhutto University Dir (U) Pakistan, 8Department of Sociology, Kohat University of Science and Technology, Pakistan, 9Department of Education, Shaheed Benazir Bhutto University Dir (U) Pakistan, Emails: 1dr.ahmadaup@gmail.com, 2Sameerulkhalijian@gmail.com, 3ahmad_uom@yahoo.com
4hussainalikhian07@gmail.com, 5shakeel.sociologist@gmail.com, 6niqab2@gmail.com, 7Ashrafalilaw@awkum.edu.pk, 8basitswat76@gmail.com, 9malakamiralam@gmail.com

Self-medication is practiced throughout the world, despite of the fact that public at large know its harmful effects. The main objective of this paper is to investigate the factors causing self-medication in the area and its association with cultural factors behind self-medication. This paper is qualitative in nature and was carried out in District Swat, Khyber Pakhtunkhwa, Pakistan. A validated questionnaire was used for data collection from doctors, medical practitioners and lab attendants. The results revealed that over the counter (OTC) practice, quacks, joint family, trade name, colour, shape, common use, purdah of womenfolk, misguidance about medicine, advertising strategies, purchase of medicines through old prescriptions, quick relief from illness, sympathy of family, Complementary medicines, low-cost alternative, high fee of doctors/physician and administration of left-over medicine at home were found significant (P < 0.05) with self-medication practice in the area. This study concluded that various cultural factors are responsible for the practice of self-medication. Furthermore, pharmacy shops and OTC medicines need to be properly regulated, media advertisements need to be reviewed by concerned authorities and the doctors should adopt the method of “treating the patient not treating the disease”.

Key words: Self-medication, cultural factors, OTC medicines; Media; Supplementary medicines
1. Introduction

This study has been carried out with the objectives to measure the level of association between cultural factors behind self-medication. In this way due to some complex factors, the experience of self-treatment in modern society is on the rise. Self-medication is widely used for common diseases such as; constipation, diarrhea, relieve pain, allergic diseases excessive of gastric acid etc. Generally a good variety of drugs are accepted and recommended in self-medication. Overdose, prolonged use, misdiagnose etc. are likely to occur due to self-treatment (Hughes et al., 2001). In almost all economically underprivileged countries, self-serving drugs are lower-cost alternative than prescribed by physicians, reaching almost 60-80% of health-related problems (Awad et al., 2005 & Abay & Amelo, 2010). Numerous factors are responsible for encouraging self-medication which include; time shortage, financial problems, free sales, friends and family influence, consumer expectation and attitude and media advertising (Kristiansson et al., 2008 and Barros, Griep & Rotenberg, 2009).

Most of the people do self-medication for pain relief. The availability of OTC analgesics medicines accelerated and domesticated this practice (Mehuys et al., 2019).

Some people do self-medication for headache and visit pharmacies which is not a valuable observatory for the study of headaches. The continuity this practice causes chronic migraine (Brusa et al., 2019). The greatly used drugs especially among the students are analgesics, antipyretics and anti-inflammatory for treating fever, chills, headache and common cold. Furthermore, lots of resources are also being wasted on self-medication due to high usage of antibiotics that leads resistance to pathogens and harm the community (Sajith et al., 2017). Self-medication with antibiotics through leftover or over-the-counter (OTC) medicines use, causes to antimicrobial resistance which is more common in Asian countries (Lescure et al., 2018).

Factors that determine health behavior can be observed in physical, economic, political, social, cultural contexts. According to Shaikh & Hatcher (2005), the health care system which may be formal/informal or public/private sector depend on the socio-demographic factors, women status, gender discrimination, cultural practices, cultural beliefs, educational level, political status, economic status, social status, environment and disease type. Different people take different ways to deal with mild symptoms, encourage people to take care of themselves, relying on careful of interventions for health seeking behavior. Some people attempt to use medicines from his own side at the first symptom of the diseases while others are waiting for development of the symptoms. Some people use modern medicine for treatment after consultation with general practitioners or pharmacists but most of the people practice self-medication (James & French, 2008). OTC medicines are usually effective and cheap for young people but is not likely to be used for special population groups such as children, elders, lactating and pregnant mothers (Murray & Callahan, 2003).
Most of the doctors fail to know about fatal diseases symptoms disappearing due to improper self-medication. Sex variance is one of the significant reasons of self-medication among young people although the ratio of acquiring medicines for self-medication is higher in female than male. In Mexico the practice of self-medication in women had a higher proportion (61.9%) than men (38.1%). Women are identified as essential elements for the consumption of drugs and the use of medicines, and the doctors should actively seek self-medication cases for research in this Mexican population (Angeles et al., 1991 & Figueiras et al., 2000 & Carrasco et al., 2008). Research consistently finds that men use all types of drugs more frequently and extensively than women however the misuse of prescription tranquilizers provides an exception to women (Dollar & Hendrix, 2018).

The self-medication prevalence in Brazil was 16.1% being highest in the Northeast region 23.8%. Following the adjusted analysis, self-medication was observed to be associated with females, inhabitants from the North, Northeast and Midwest regions and individuals that have had one, or two or more chronic diseases (Arrais et al., 2016).

Self-medications use in Iraq was prevalent among 92.4% of students. Antipyretics and antibiotics were the most used medicines. Self-medication was higher among urban residents (AlAmeri et al., 2017).

The prevalence of self-medication among the pharmacy students of Saudi Arabia was reported at 19.61%. Prevalence of self-medication at the medical college was documented at 49.3%. The prevalence of multivitamin use was reported at 30.53%, analgesics; 72.35%, antihistamines; 39.16%, and antibiotic use at 16.59%. The prevalence of anti-diarrheal medicines and antacids use among students was found to be 8.63% and 6.64%, respectively (Albusalih et al., 2017).

Self-medication in Pakistan is increasing day by day. The 90% individuals do self-medication due to convenience and lack of trust on prescriber. The selection of medicines was based on 40% previous doctor’s prescription. The medicines are obtained from community pharmacy. About 70% of the people partly understand the instructions come with the package insert while 10% didn’t understand it. While selection of medicines people consider indication for use by 100%. Majority of People, about 70% considered self-medication is the acceptable practice while 20% said it is not acceptable practice (Nazir, & Azim, 2017).

The community pharmacists play a key role in avoiding the misuse of medicines especially antibiotic and pain killer. They can support community regarding public health, guaranteeing the safety of dispensing and avoiding self-medication. They play their role in developing responsible self-medication, means supporting the patient with more autonomy, within the limits of pharmaceutical advice, while responding to current issues of societal change and access to primary care (Savanovitch et al., 2020).
Among the educated young people in Pakistan, majority are aware of the adverse effects self-medication but still they buy, sell it for earning money and practice/use it for relief. Because of the above argumentations there is an urgent need for a cross sectional analysis of self-medication practice in the area (Zafar et al., 2008).

2. Methodology

This study was carried out in District Swat, Khyber Pakhtunkhwa, Pakistan. A conceptual framework comprises of independent variable “Cultural Aspects Responsible for Self – medication” and dependent variable “self-medication practice” The total number of doctors, medical practitioners and laboratory attendants were 1775 which constituted population for this study. On the basis of Krejcie & Morgan (1970), devised rules for calculating sample size, 317 sample size is enough for 1775 population. The data was randomly collected from the aforementioned respondents in the study area through a well thought out questionnaire. The collected data was entered into SPSS-22 for analysis and getting desired results i.e. chi square test was carried out for measuring association between independent variable (cultural aspect) statements and dependent variable (self-medication)

3. Results

Association between various cultural factors and self-medication

The relationship between independent variable (cultural aspect) based on various statements were crossed (bi-variate analysis) with dependent variable (self-medication practice). The results are as; The results declared a significant relationship of OTC medicines (P=0.002), Quackery practice (P = 0.005) and Joint family system’s poor health seeking behaviour (P = 0.051) with self-medication practice. Similarly, Company name, shape, colour and public use of medicines also showed a significant (P=0.005) association with self-medication practice. Misguidance and inappropriate concepts about medicine (P=0.007) and shame/purdah factor for womenfolk (P=0.001), getting quick relief from illness (P=0.043), family sympathy with family sick member (P=0.006) and complementary medicines’ low-cost alternative to health care (P=0.021) were found significant with self-medication in the study area. Furthermore, friend’s advice about common medicines, media advertising strategies, high fee of the doctors/physician and administration of left over old, prescribed medicines at home were found highly significant (P=0.000) with self-medication practice.
Table 1.
Association between various cultural factors and self-medication

<table>
<thead>
<tr>
<th>Cultural Aspects Responsible for Self – medication (Independent Variable)</th>
<th>Dependent Variable</th>
<th>“χ²” value</th>
<th>“P” Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>“OTC” medicines</td>
<td>Self-Medication</td>
<td>12.63</td>
<td>0.002*</td>
</tr>
<tr>
<td>Quackery/Fake medical practitioners.</td>
<td>Self-Medication</td>
<td>14.92</td>
<td>0.005*</td>
</tr>
<tr>
<td>Joint family poor health seeking behavior.</td>
<td>Self-Medication</td>
<td>9.43</td>
<td>0.051*</td>
</tr>
<tr>
<td>Name, shape, color and public use of medicines.</td>
<td>Self-Medication</td>
<td>14.92</td>
<td>0.005*</td>
</tr>
<tr>
<td>Misguidance and inappropriate concepts about medicine</td>
<td>Self-Medication</td>
<td>14.17</td>
<td>0.007*</td>
</tr>
<tr>
<td>Shame/Purdah for womenfolk.</td>
<td>Self-Medication</td>
<td>17.71</td>
<td>0.001*</td>
</tr>
<tr>
<td>To get quick relief from illness.</td>
<td>Self-Medication</td>
<td>10.08</td>
<td>0.043*</td>
</tr>
<tr>
<td>Sympathy with sick member of the family.</td>
<td>Self-Medication</td>
<td>14.56</td>
<td>0.006*</td>
</tr>
<tr>
<td>Complementary medicines are low cost alternative.</td>
<td>Self-Medication</td>
<td>11.51</td>
<td>0.020*</td>
</tr>
<tr>
<td>Media and advertising strategies accelerate this practice</td>
<td>Self-Medication</td>
<td>40.60</td>
<td>0.000**</td>
</tr>
<tr>
<td>Friends influence and advice about common medicines.</td>
<td>Self-Medication</td>
<td>55.52</td>
<td>0.000**</td>
</tr>
<tr>
<td>High fees of doctor/physician.</td>
<td>Self-Medication</td>
<td>81.43</td>
<td>0.000**</td>
</tr>
<tr>
<td>Use of left over or old prescribed medicines at home.</td>
<td>Self-Medication</td>
<td>53.10</td>
<td>0.000**</td>
</tr>
</tbody>
</table>

*0.05 is taken as level of confidence. * is significant while ** is highly significant

4. Discussion

In general it is obvious from the literature that patient satisfaction level from the physician (WHO, 1998), quality of health services (Zineldin, 2006), poor communication of health care practitioner (Kessler, 1991), taking risk of the sick person (Sharma, Verma, Sharma & Kapoor, 2005), taking the disease with non-serious attitude, Prior experience about ill person’s self-diagnose (Hogard, 1999), past experience with the pain management (Amin et al., 2014), feel the same symptoms and signs is to use their own identity to diagnose the same disease; and taking the same drugs (Vuckovic & Nichter, 1997), the disease with non-serious approach (Pray & Popovich, 2000) (men 35.48% and women 15.56%) shortage of time (Upadhyay & Joshi, 2011) Addictive illnesses as a patient’s impulse to find specific drugs (Khantzian & et al., 2006) pharmacists, pharmacy assistants, medical assistants (Shankar et al., 2002) and friends information to purchase medicines (Afolabi, 2008), Crave for looking smart (Wen, Lieber, Wan & Hong, 1987) are the main causes of self-medication. In addition educated and rich people are more likely to have self-treatment than uneducated and poor through mass media (Klemenc et al., 2010 & Martins et al., 2002 & Buor, 2005).
The use of OTC products has been increasing, which is available with pharmacist, this trend is exacerbating self-medication practice (Bond, 2001). Some other factors behind the use of (OTC) to supplement their own practice are the positive factors of developing countries like Pakistan, which save time and resources of the country (Amin et al., 2014). In Nigeria and Cameroon, the most used self-drug sources are patent/street drug traffickers, local healers and local hawkers (Bond, 2001). One expert reported that self-care had become the norm of disease (Vuckovic & Nichter, 1997). Remembering name of the product, sometimes with its generic name, shape, color, action, and popular usage name lead to self-medication (Yelland & Veitch, 1989).

Witter (1996) reported that advertising medicine in media is considered as a motivating factor for medicine selling, specifically antibiotics and vitamins in Vietnam. Moreover, Burak & Damico (2000), stated that the abuse of medicine is more widespread due to media commercial strategies in youth segment of society. Khantzian (1997), also supports the idea that misleading beliefs may sometimes be the cause of self-medication. In addition, the personal observation of the researchers also witnessed the mother of certain drugs for the incorrect faith, some of the treatment of drugs and some of the nature of the impact of self-medication can be calculated in the practice of treatment. Shame and purdah especially in rural areas, patriarchal society and the concept of male family members are respected, self-medication practice is high in women folk (Major, Vincze, et al., 2007).

In Pakistan family members and friend’s recommendation also play a vibrant role in practicing self-medication. This is perhaps due to the strong social bondages in the rural societies, the influence of friends and family members is relatively large, which may play an important role in promoting a positive view of self-medication (Amin et al., 2014). Medicines left in the family cupboard have been reasons behind self-medication by purchasing from previous prescriptions and excessive consumption of medicines. The reason may be that the cost of drugs in Pakistan is too high, and the government allocate a negligible to health department, as a result people re-use and re-submitting old prescriptions to save money and resources to avoid going to the hospitals (Bond, 2001).

Sympathy with patient also leads to self-medication. The extended and joint family cannot go to hospital for every little bit of illness for the family members; as feeling of sympathy is natural thing with the family member especially in illness, which plays a significant role in self-medication (Phalke et al., 2006). Those who cannot afford the doctor’s consultation high expenses due to poverty they use the alternate way due to lower cost-substitute, therefore majority of the people have been relying on complementary and alternative medicines (Worku & Mariam, 2003).
In Asian region, 26.67% of women and 32.26% of men are self-treated due to high consultancy costs (Upadhyay & Joshi, 2011). It is a fact that preserving drugs at home leads to self-medication due to some of the popular drugs can be easily known by their trademark or generic labels, shapes, and colors that certain physiotherapists prescribe for certain diseases (Tse, Chung & Mungo, 1989 & Hugues et al., 1990).

5. Conclusion

This study focused on the various cultural factors behind the self-medication. The study concluded that, self-medication is a common phenomenon everywhere. Some responsible factors for self-medication such as; OTC medicines, Quackery, joint family system, company name, shape of medicines, colour of medicines, misguidance/misconception about medicine, media advertising strategy, friends advice, familiarity with common medicines, shame and purdah for women, purchase of old prescribed medicines, quick relief from illness, family sympathy and administration of left over drugs at home are some of the responsible factors associated with self-medication. In addition, self-medication is a low-cost alternative, the poor cannot afford the high fee cost of doctors/physician therefore they practice it. Moreover, ignorance from the side effects of medicine also leads to this harmful act.

6. Recommendations

After a careful study of the association between various cultural factors and self-medication, this study recommends that pharmacy shops and (OTC) medicines need to be properly regulated by the concerned authority. It is also necessary to strengthen health literacy through awareness programs and seminars for illiterate and literate people by the ministry of health. Media advertisements need to be reviewed and top-class health professionals should examine the health product carefully before advertisement. To establish a good rapport and to build the confidence of the patients, the doctor should adopt the method of “treating the patient not treating the disease” for the sake of removing any gap for Quakers and medical practitioners.

Contribution of this Article
The current study highlights the issue of self-medication to investigate the responsible factors which leads to self-medication in the research area and to measure the level of association between cultural factors behind self-medication which has not been investigated before.

Key words
Self-medication; cultural factors; OTC medicines; Media; Supplementary medicines

Conflict of Interest
Author and Co-authors have no conflict of interest
Funding sources
The author received no fund for writing this paper

Covering Letter

I am writing that the manuscript “Cultural Factors Responsible for Self-Medication in Swat Khyber-Pakhtunkhwa, Pakistan”. Short title (Culture and Self-Medication) Why I felt need to investigate this topic, it is because that I observed in ordinary/rural/traditional society that the poor and ignorant people always self-medicated due to poverty, ignorance, purdah, easy availability, black market, OTC and no check and balance on medicine sale. Through this they becomes addicts of some medicines which then functions as drugs like heroin, alcohol, etc. simply it’s the addiction process which work like a drug in later stage. This subject remained relatively unstudied in many areas of Pakistan as well as in other second and third world countries. Keeping in view the importance of the study the researcher spent from his own resources. In simple the researcher got no fund for writing this paper. The purpose of this research was to dig out about the term self-medication and some cultural factors responsible for self-medication through scientific methodology. While, writing this paper i.e. data collection, analysis and finalization a vast literature was kept under consideration. Furthermore, ethics, cultural values, traditional values like purdah, data security and hospitality were also given full attention. Moreover, this article is original work of the researcher in the said area. The manuscript is checked through turnitin software which stood at 5-6.00%. In addition, this article is neither published nor recommended anywhere. Furthermore, this article has no conflict of interest.

Author and Corresponding Author:

Ahmad Ali, Assistant Professor, Department of Sociology, Abdul Wali Khan University Mardan. Author and Corresponding Author. ORCID iD: Ahmad Ali https://orcid.org/0000-0001-6739-9384 Cell: +923469401375 Email: dr.ahmadaup@gmail.com
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