The Prevalence of Self-Medication among Undergraduate Physical Therapy Students of JPMC

Abstract (Objectives): To assess the Frequency of taking self-medication among males and females and To assess The reason of self medication studying in Collage of physiotherapy JPMC.

Methods: This non experimental study was conducted in Jinnah Post graduate Centre, Physiotherapy department and data was collected from a sample of 100 people. The questionnaires were filled in the presence of principal investigator of this research report and consisting of questions related to their knowledge and opinion about self-medication. All the collected data was entered to SPSS 17 (statistical package for social sciences) for analysis.

Results: Our result revealed that self-medication is a common Practice among the undergraduate Physical Therapy Students of JPMC Karachi, Pakistan. It was observed that were taking self-medication on daily, weekly, monthly, yearly and occasional basis with usage percentage 7%, 11%, 32%, 05%, 43% respectively.

Conclusion: Headache is the main ailment for which students are practicing self-medication.

Keywords: Self-medication, Undergraduate students, Physical therapy, JPMC

I. INTRODUCTION

Background: William Osler once commented, "The desire to take medicine is perhaps the greatest feature which distinguishes man from animals". [1]

Therefore, Moses Ocean et al, conducted a systematic review and meta-analysis of the burden, risk factors and outcomes in developing countries of Household antimicrobial self-medication. A total of thirty four (34) studies involving 31,340 participants were included in the review. The overall prevalence of antimicrobial self-medication was 38.8 % (95 % CI: 29.5-48.1). Most studies assessed non-prescription use of antibacterial (17/34: 50 %) and anti malarial (5/34: 14.7 %) agents. The common disease symptoms managed were, respiratory (50 %), fever (47 %) and gastrointestinal (45 %).

The major sources of antimicrobials included, pharmacies (65.5 %), leftover drugs (50 %) and drug shops (37.5 %). Twelve (12) studies reported inappropriate drug use; not completing dose (6/12) and sharing of medicines (4/12). The main determinants of antimicrobial self-medication include, level of education, age, gender, past successful use, severity of illness and income. Reported negative outcomes of antimicrobial self-medication included, allergies (2/34: 5.9 %), lack of cure (4/34: 11.8 %) and causing death (2/34: 5.9 %). The commonly reported positive outcome was recovery from illness (4/34: 11.8 %).[2]

Self Medication is the practice whereby individuals treat their ailments and conditions with medicines which are approved and available without prescription, and which are protected and efficient when used as directed but has potential risks of side effects. Such products should be supported by information, which describes that how to use the medicines, its effects and possible side-effects, how the effects of the medicine should be monitored, possible drug interactions, precautions to be taken while handling drug, warnings, duration of use and when to seek professional advice.[3]

Self-medication is too defined as obtaining and administrating medicines without the advice of a registered/qualified physician either for treatment of self diagnosed disease or symptoms or recurrent disease.[4]

Self-medication is a behavior in which an individual uses unprescribed drugs to treat untreated and often undiagnosed medical ailments. The psychology of such behavior inside the specific context of using Recreational drugs, Psychoactive drugs, Alcohol and other self-soothing forms of behavior to alleviate symptoms of mental distress, stress and anxiety with mental illlesiess and psychological trauma. Self medicine is often seen as gaining personal independence from established medicine.[5]

Yasmin Mumtaz et al, find out frequency of self medication among university student of Karachi Pakistan by a cross sectional study that was July – August 2008. For the purpose of this study 207 students from 2 Universities of Karachi, one medical and one Non-medical were selected through non-probability convenience sampling. Data was collected through self administered questionnaire, analyzed using SPSS v 10. Among 207 participants’, 103 were students of Karachi University while 104 were studying at Dow University. Mean age was 22 years and male: female ratio was 1:4. Frequency of self medication was found to be 80.4%. The most common reason for not consulting the doctor was “Problem not serious” & the most common symptoms when self medicationsought were headache (62.3%) and fever (49.8%). The 62% participants’ knew that Self medication could be harmful. Conclusion of this study was Frequency of self medication was high in educated youth despite the fact that majority found aware of its harmful effects. There is need to revisit the definition and relative significance of ‘self-medication’ in our local setting.[6]

Self-medication also termed as “folk medicine” is increasing in prominence in relation to its counterpart, professional medicine. Reason for this shift includes, among other, changing disease patterns, shortage of health personal. In our country most of the population is uneducated and mostly lives below the poverty line and do not have the capacity to consult physician. Mostly they depend on the old prescription suggestion by a specialized or general practitioner. This prescription usually moves from one group of people to another for the purpose of self-medication.[7]

According to previous studies conducted in the field of self-medication revealed that 51% of such cases have been reported across the country. Self-medication practices are

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more common in women than men, those having a low socioeconomic status, people having more chronic ailments or certain psychiatric condition, young age and in students. The use of non-prescription drugs among students have become a very serious problem.[8]

According to a research conducted by Syed Nabeel Zafar et al conducted research to determine the Prevalence rate, knowledge among university students, mentioned that Prevalence rate of practicing self-medication is very high around the world with prevalence rate 68% in European countries, 31% in India, 59% in Nepal, 92% in Kuwait.[9] In Pakistan almost every pharmacy sells drugs without a prescription. This study presents the results of Pakistan youth’s knowledge and attitude towards self-medication.[10]

A survey conducted on widely advertised medication indicated that the majority of college students used the advertised drugs without discussing it with a physician.[11]

Risk factors of self-medication are lack of awareness, low socioeconomic class.[12] Robinson J found in his research that disadvantages of self-medication are anxiety, phobia.[13] Drug tolerance to particular drug, obesity, cardiac problem, GIT problem like nausea, vomiting, diarrhea, peptic ulcers, renal disease, liver problems are side effects of frequent use of medicines.[14]

A. Hypothesis

Null Hypothesis: Sels Medication is not a common practice among Physiotherapy students of JPMC.

Alternative Hypothesis: Sels Medication is a common practice among Physiotherapy students of JPMC.

B. Operational Definition

Self-care[15]: Self-care is what people do for themselves to establish and maintain health, prevent and deal with illness.

Self Medication[16]: Self-medication is defined as medication of oneself without the advice of a physician, own self-initiative or on advice of a lay person.

II. LITERATURE REVIEW

Gualano MR et al, performed a systematic review and proportion meta-analysis in order to investigate the prevalence and the adverse effects of the self-medication among the teenagers.

15 articles were chosen ‘143 213’ subjects involved. Overall, 50% of adolescents use to take drugs without consulting a physician. Further analyses stratified by number of drugs used demonstrated that in the studies reporting that adolescents use more than one type of drug the prevalence rises up to 63%. Only one study use more than one type of drug the prevalence rises up to 63%. Only one study reported the possible adverse effects related to the inappropriate use of drugs, which were experienced by 31.1% of the females and 19.6% of the males. He concluded further studies to determine self medication adverse effects are urgently needed, self medication is common among adolescents.[17]

KP Osemene et al, estimated the prevalence of self-medication with antibiotics and antimalarials among university students in southwestern Nigeria, he further evaluate the factors associated with self-medication. He used a pre-tested questionnaire to collect data from 2000 university students using convenient sampling technique. Prevalence of the practice of self-medication was estimated in percentages while factors associated with self-medication were evaluated using multiple regression analysis. The prevalence of the practice of self-medication was high among the age group of 25 – 44 years but lower in the 15 - 24 and ≥ 45 year age groups, respectively. Females exhibited higher prevalence of self-medication than males. Among undergraduates, self-medication increased as the students’ class level in the university increased. Postgraduate students exhibited low prevalence of self-medication practices. Self-medication was significantly associated with age, gender and students’ class level in the university at p < 0.001. A majority, 982 (53.8%), of the students used antibiotics for self medication while 845 (46.3 %) used anti-malarial drugs for self-medication. Sources of drugs for self medication were patent medicines store (901 or 49.3 %), community pharmacies (531 or 29.1 %), friends (210 or 11.5 %), relatives (130 or 7.1 %) and left-over drugs from previous prescriptions (55 or3.0 %). His study revealed that age, gender and students’ level in the university influenced self medication practices.[18]

S M Abay et al, assess self medication practice among medical, pharmacy and health science students by conducting a cross-sectional study with two-month illness recall. A Questionnaire consisting of demographic questions and questions on illnesses in the last two months prior to the interview and treatment strategies was prepared and administered to the 414 students, selected as the sample population, from the GCMHS students. Of a total of 414 students, 213 (51.5%) reported at least one episode of an illness, and 82 (38.5%) of them practiced self-medication. Most drugs for self-medication were obtained from the pharmacy or drug shops; and the most commonly used drugs were Paracetamol and NSAIDs (Non-steroidal anti-inflammatory drugs). Common reported illnesses were fever and headache (24.8%) followed by cough and common cold (23.9%). Prior experience and the non-seriousness of the illness were the top two reported factors for self-medication. Reading materials were the top reported source of information. He concluded, self-medication was practiced with a range of drugs from the conventional anti-pains to antibiotics. Although the practice of self-medication is inevitable; drug authorities and health professionals need to educate students about the pros and cons of self-medication.[19]

I Banerjee et al, assess the pattern of self-medication practice among undergraduate medical students in West Bengal Tertiary care medical college, India. A cross-sectional questionnaire-based study was conducted among the undergraduate medical students. Out of 500 students of the institute, 482 consented for the study and filled in the supplied questionnaire. Fourteen incomplete questionnaires were excluded and the remaining 468 analyzed. It was found that 267 (57.05%) respondents practiced self-medication. The principal morbidities for seeking self-medication included cough and common cold as reported by 94 students (35.21%) followed by diarrhea (68 students) (25.47%), fever (42 students) (15.73%), headache (40 students) (14.98%) and pain abdomen due to heartburn/ peptic ulcer (23 students) (8.61%). Drugs/ drug groups commonly used for self-medication included antibiotics (31.09%) followed by analgesics (23.21%), antipyretics (17.98%), antinflamer (8.99%), cough suppressant (7.87%), multivitamins (6.37%) and antihelminthics (4.49%). Among reasons for seeking self-medication, 126 students (47.19%) felt that their illness was mild while 76 (28.46%) preferred as it is time-saving. About 42 students (15.73%) cited cost-effectiveness as the primary reason while 23 (8.62%) preferred because of...
urgency. Conclusion of his study shows that self-medication is widely practiced among students of the institute. In this situation, faculties should create awareness and educate their students regarding advantages and disadvantages of self-medication.[20]

III. METHODOLOGY

A. Search strategy:
This is a non-experimental qualitative study. A study was conducted among Physiotherapy students of Jinnah Post Graduate Medical centre, Data was entered and cleaned in SPSS 19 statistical package of the social sciences. Data was presented in the form of tables and graphs. Descriptive statistics was used in the forms of numbers and percentages. Sources for this study included previous studies identified from a systematic search of computerized databases (PUBMED, BMC, WHO etc.), Hand-searching of self-medication journals, And studying bibliographies and reference lists. The Searches were limited to published articles in the English language.

B. Exclusion Criteria:
1. Students who were not enrolled in any university.
2. Foreign nationality holder students.
3. Age below 18 years and above 32 years.

C. Inclusion Criteria:
1. Pakistani Nationality holding students.
2. Age between 18 and 32 years.
3. Undergraduate Physical therapy students.

D. Duration of Study:
The total study period was 3 months

E. Sampling technique:
Sample size is calculated as 100 at 95% confidence interval and 0.05 margin of blunder.

F. Data collection:
A self-administered questionnaire was given to the students after informing the purpose of study and has taken written consent from the students.

IV. RESULT
Data was entered and analyzed by using SPSS version 22. Frequency and percentages were taken out as a part of descriptive statistics. At the time of recruitment participants were requested to fill the ‘Questionnaire’ based on prevalence, attitudes and practices towards self-medication.

Majority of the students were found practicing self-medication at yearly and occasional basis. It was observed that students were taking self-medication on daily, weekly, monthly, yearly and occasional basis with percentages 7%, 11%, 32%, 05%, 43% respectively. Respectively as shown in Table 1 and Table 2 shows the ailments for which students were taking self-medication.

Table 1: Frequency of taking self-medication in percentage

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>7</td>
<td>7.1</td>
</tr>
<tr>
<td>Weekly</td>
<td>11</td>
<td>18.4</td>
</tr>
<tr>
<td>Monthly</td>
<td>32</td>
<td>51</td>
</tr>
</tbody>
</table>

Table 2: Ailments for which self-medication was being used.

<table>
<thead>
<tr>
<th>Ailments</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>54.0</td>
<td>55.1</td>
</tr>
<tr>
<td>Depression</td>
<td>3.0</td>
<td>58.2</td>
</tr>
<tr>
<td>Fever</td>
<td>26.0</td>
<td>84.7</td>
</tr>
<tr>
<td>Allergies</td>
<td>6.0</td>
<td>90.8</td>
</tr>
<tr>
<td>Others</td>
<td>9.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Graph shows the ailments on x-axis while percentages of usage on y-axis.

V. DISCUSSION
This study was carried on undergraduate Physical therapy students of JPMC Karachi, Pakistan. Similar study carried out on self-medication among students of a Nigerian Tertiary Institution and the results were 67% students found to practice self-medication and instrument of data collection was a self-administered questionnaire.[21] In our study students practice self-medication as the symptomatic treatment of conditions like headache (54%), depression (3%), fever (26%), allergies (6%) and miscellaneous conditions (9%) in Table 2. In another study conducted on South Indian students, the common ailments for using self-medication were common cold (69%), fever (63%) and headache (60%). The students got awareness from their textbooks (39%) and seniors or classmates (38%) for the medications. Antipyretics (71%), analgesics (65%), antihistamines (37%) and antibiotics (34%) were the most common self-medicated drugs.[22]

Self-medication has many disadvantages as antipyretic and analgesic in large doses can cause liver failure and Paracetamol toxicity. Self-medication has many side effects like it is associated with risks such as use of excessive drug dosage, extended duration of use, drug interactions and polypharmacy, Paracetamol is, by far, the most common cause of acute liver failure, Valsartan is an anti-hypertensive drug.[23] It is highly effective when used in recommended quantity. The main consideration is the over usage of the drug might cause hypo-tension, which may eventually lead to heart, hepatic and renal failure. The World Health Organization
(WHO) has also pointed out that self-medication can help prevent and treat ailments that do not require medical consultation.[24] Self-medication has the risk of making an incorrect diagnosis, improper drug use and adverse effects. About the advantages of self-medication one research mentioned that self-medication is becoming an increasingly important area within healthcare it moves patients towards greater independence in making decisions about management of minor illnesses and it also decreases by the burden on their pockets while visiting consultants over and over again thereby promoting empowerment.[25] Self-medication with antibiotic and antimalarial was found to be significantly higher among females middle aged respondents aged 40-59 as compared to younger respondents and the people with lower income and higher level of education was also found to be significantly associated with the increase risk of self-medication with antibiotic.[26] The usage of cannabis as self-medication leads to the risk of schizophrenia.[27] The most common reason of practicing self-medication was previous experience (50.1%) but the people are using drug abuse for the treatment of depression". Kirk J Brower et al mentioned in his research that people also self-medicate for the symptomatic treatment of insomnia.[28] For tension-type headache and moderate to mild migraine ibuprofen and acetysalicylic acid found to be superior than placebo.[29] Our study also shows that biggest reason for self-medication among undergraduate students was headache indeed (table 2) but common cold was the ailment for which antibiotics are mostly being used among the people of Europe.[30] A study in Finland shows that women also practice self-medication for even vaginal infections and 49% had used within previous 6 months.[31] A study on the students of West Nepal shows that common reasons given by the medical students for self-medication were mild illness, earlier experience of treating a related illness, and non-availability of health personnel.[32] The elderly adults reported pain as the symptom most frequently self-treated with over the counter drugs.[33] Meconium passage was more common among pregnant females who had taken Castor oil recently as self-medication.[34] For the treatment of minor illnesses and diarrhea associated with travelling, travelers self-medicate.[35] A study carried out in Faisalabad, Pakistan concluded that self-medication is more common among males (64.5%) as compared to females (58.5%).[36] O.A Abosede also suggested that self-medication should be made part of primary health care system because it is commonly practiced even where health professionals are easily accessible.[37] There was also positive attitude to treat life threatening disease like asthma by self-medication.[38] Moreover Inappropriate drug use in self-medication leads to development of drug resistant pathogens.[39]

VI. CONCLUSION

Our result revealed that self-medication is common practice among the undergraduate Physical Therapy students of JPMC Pakistan. It was observed that students were taking self-medication on daily, weekly, monthly, yearly and occasional basis with usage percentage 7%, 11%, 32%, 05%, 43% respectively after evaluating the answer given by the Physical Therapy students of JPMC.

References

[16] VD Phalke, DB Phalke, PM Durgawale - Indian journal of community, 2006 - ijc.org.in