



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

“OVERCONSUMPTION OF MEDICINE AND ITS ADVERSE EFFECT ON PUBLIC HEALTH”

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Abstract: The over-consumption of medicine has become a pressing concern in public health, particularly in regions where healthcare systems are overburdened or inadequately regulated. This research paper investigates the growing trend of medication overuse, characterized by self-medication, irrational prescriptions and the misuse of both over the counter and prescription drugs. Key drivers include increased accessibility to pharmaceuticals, lack of awareness among the public, insufficient regulatory enforcement, and the influence of aggressive pharmaceutical marketing. Commonly overused drugs – such as antibiotics, sedatives and antacids are often consumed without proper medical supervision, leading to serious health consequences like drug dependency, organ toxicity, weakened immunity and increased drug reactions. Findings suggest that among 125 respondents through online survey, the majority of people (49.2%) consume cold/flu medicines which indicates a tendency toward self-treatment for common ailments which might lead to dependency or addiction if not properly guided while 91.9% people want to know more about safe medicine use, during menstruation 77.5% women do not take medication while 22.5% does which must be monitored to avoid addiction and long term side effects, 35.6% women rely more on herbal remedies than modern medications, almost 80% parents do not give medications to their child without prescription while 16.7% parents does which indicate a serious need for parental guidance, child safe drug practices. This research concludes by recommending rational use of drugs, public health awareness and foster more responsible medication practices.

Index Terms - Over-consumption, self-medication, drug misuse, public health, antibiotic resistance, rational drug use.

I. INTRODUCTION

Medicines play a vital role in treating and preventing illnesses, improving life expectancy, and enhancing overall well being. Today, medicine is necessary requirement of every individual family, but in the past medicine is only focused on “Balancing” the body but today it is modern science. However, the misuse and over consumption of medicines have emerged as serious public health concerns in recent years. Over the counter availability, self-medication, lack of awareness, and increasing dependence on drugs for minor health issues have contributed to this growing problem. Over consumption refers to the frequent or excessive use of medications without proper medical guidance. This includes taking higher doses than prescribed, using medicines for longer than necessary, or consuming drugs without a prescription could lead to various health risks including drug resistance due to overuse of antibiotics, liver and kidney damage, weakened immunity, hormonal imbalance and in some cases, drug dependency or life-threatening complications. Several studies have shown that a significant portion of

the population especially in developing countries like India engage in self-medication, because easy access to pharmacies and limited healthcare access to pharmacies and limited healthcare access in rural areas make over the counter drug use are common. This research aims to explore the patterns of medicine overuse, understand the factors leading to it and examine its impact on public health based on a survey. The findings are intended to support the need for better health education, stricter regulations, and more responsible medication practices among the general population.

II. SCOPE

The study focuses on-

- Extent and pattern of over consumption
- Divers of over use of medicine
- Consequences of over consumption
- Role of traditional knowledge in cure illness
- Strategies of reduce medicinal waste

III. METHODOLOGY

This study was conducted using a quantitative, survey-based approach to assess the patterns of medicine over consumption and its adverse effects on public health. A structured online questionnaire (i.e. through Google Form) was designed and distributed through social media platforms and messaging apps to reach a diverse group of respondents. The questionnaire included both closed and multiple-choice questions, covering areas such as:

- Frequency of medicine usage.
- Reasons for self-medication.
- Types of medicines commonly used without prescription
- Experienced side effects
- Awareness of proper medications practices

Respondents included people from various age groups, educational backgrounds, and locations to ensure a broader understanding of public behaviors. Participation was voluntary and responses were only used for academic purposes without any physical, mental and emotional risks. Data collected from the survey were analyzed using percentage distribution to identify key trends and highlight public perceptions and experiences related to medicine overuse.

IV. RESULT AND OBSERVATION

4.1. Frequently consumed medicine: 49.2% people consume cold/flu medicines frequently, 18% vitamins/supplements, 12.3% rely on antibiotics, only 6.6% people consume painkillers and 13.9% people consume other medications maybe like antacids and sleeping.

4.2. Safe medicine usability: Majority of people i.e. 91.9% people are interested in receiving more information about safe medicine use in order to avoid side effects and health impacts, while 8.1% don't want to know.

4.3. Medication during menstrual cycle: According to analysis, 77.5% women do not take medications during menstruation means they avoid unnecessary medication while 22.5% women take medications which raises concern regarding side effects and misuse.

4.4. Herbal remedies are the most commonly used medications, accounting for 35.6% women of the total responses while pain relievers are used by 28.9% of women, other medications are used by 31.1% and least of all, hormonal treatments are used by 4.4% of women.

4.5. Medication with or without doctor: A significant majority, 83.3% parents indicated that they do not give children medicine without a doctor's prescription while 16.7% parents give them medicines without prescription.

4.6. The majority of parents (81.4%) confirmed that their child had not over-consumed medications and suffered from diseases, while 18.6% of parents indicated that their child had experienced over-consumption of medicines.

V. DISCUSSION

The majority of people are (49.2%) consume regular medicines compared to others who consume antibiotics, vitamins and other medications, this indicates a tendency toward self-treatment for common ailments which might lead to misuse if not properly guided but 91.9% people expressed interest in learning more about safe medicine use which indicates a positive attitude toward health education and the need for accessible awareness programs. From this analysis it is understood that developing countries are more prominent to use medicine without any prescription.

Woman is the major part of our society. During their menstruation, 22.5% take medication during their menstruation while 77.5% do not. This indicates that this small portion of females depend on medication for pain relief, which must be monitored to avoid long term side effects. In another chart, data showed that 35.6% women rely on herbal remedies, compared to others which shows the high preference of traditional remedies over modern medications.

During children's medicinal practices, 16.7% admit they give children medicines without prescription and 18.6% reported cases where over-consumption led to illness, these numbers indicate a serious need for parental guidance, doctor consultation and child safe drug practices.

Waste from medicine is another crucial part of our analysis. All over the nation medical waste increasing rapidly. It is very clear to understand through this analysis that the main key source of medical waste is UN-prescribed medicine, excess medicine does not use again, and the dependence of medicine for cure stress.

VI. CONCLUSION

The study clearly indicates that the over-consumption of medicines, particularly through self-medication and unsupervised drug use poses a significant threat to public health. Factors such as easy access to over-the-counter drugs, lack of awareness about proper dosage, and the tendency to rely on nonprofessional advice contribute heavily to this issue. Many individuals use medicines without fully understanding the risks involved, leading to adverse effects including side reactions, drug dependency, reduced drug efficiency and in more severe cases, long term damage to vital organs. The consequences of medicine overuse are not limited to individual health but extend to the wider healthcare system, contributing to problems such as antibiotic resistance, delayed diagnosis and increased financial burden on health services. This situation reflects a critical gap in public health education and highlights the urgent need for interventions, it is necessary to implement health literacy programs, promote responsible medication practices and enforce tighter regulations on the sale and use of medicines. Healthcare professionals should also play a proactive role in guiding patients and discouraging self-medication habits. By fostering a culture of informed and cautious medicine use, it is possible to reduce the negative impacts on both individual and community health.

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