

A Study to Evaluate the Awareness on OTC Health Education among Young Female Adolescents

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Abstract:

Background: Adolescence is a phase of rapid growth and development during which physical, physiological and behavioural changes occur. Young and growing children have poor knowledge and lack awareness about the ill health affecting them. OTC use of drugs for minor ailments as well as getting used to harmful dosages and drugs is growing health challenge to the society. The present study aims to understand the use of OTC in adolescent girls and analyse the factors that may influence the use of OTC Medication. **Materials and Methods:** The study was conducted in 3 retail pharmacies in Hyderabad, Telangana. The common complaints for which the adolescent girls visited the pharmacies were recorded. Adolescents were interviewed to know the common reasons and the knowledge related to adverse effects of OTC. During this study period (one month), adolescent girls (n=168) visited pharmacies without prescription. **Results:** Most commonly dispensed OTC drugs were analgesics (45.2%), antipyretics (19%), antihistamines (10.1%), Oral Contraceptive pills (8.33%), antibiotics (7.15%), antacids (4.8%), and others (5.36%). The commonly dispensed antibiotics were Cifran (500mg) for dental infection and Amoxicillin (500mg) for upper respiratory tract infection and Bactrim DS for UTIs. The most common complaint for the use of OTC drugs was pain (33.92%), fever (19%), dysmenorrhea (11.3%), UTI (8.9%) and others (26.79%). Only 7% of adolescents agreed that they were aware of the harmful effects of drugs. **Conclusion:** The use of OTC drugs is considerably high in young girls and youth and pharmacists need to be educated regarding rationale use/dispensing of drugs.

Key Words: Over the counter drugs, Awareness, Adolescents, Health education.

Introduction:

According to WHO Data In India there are estimated to be around 170 Million Girls/Women in the age Group of 12 and above who have an OTC Drug Exposure due to lack of proper Health Education¹. Self-medication is one element of self-care. Over the counter drugs (OTC) are sold without the prescription of a registered medical practitioner. There are reports that OTC drug market in India is on the rise. This is attributed to the rising cost of health care, difficulty in accessing healthcare, and an alarming tendency to self-manage symptoms. The outcome of this is over use of OTC and related adverse effects, abuse, and hospitalizations. Literature on OTC use by adolescents in India is very limited. In developing countries like India where diseases are still considered as taboos in the society; patients, especially the growing children and women are unaware of scientific facts due to lack of basic Healthcare Education tend to go for over-the-counter (OTC) medicines to self-manage their day to day ailments. Various other factors like lifestyle, previous experiences of treating similar illness, other constraints like socioeconomic factors, access to drugs, autonomy and the increased potential to manage mild illness through self-care are also adding to the over use of OTC in youngsters and women in specific². However some OTC medicines may lead to over use, (drug abuse), addiction and harms like, adverse drug reactions (ADR): Various studies have shown that the use of OTC drugs is twice as common as that of prescribed medication. Also, it has been observed that self-medication is often used along with prescribed medication. OTC related adverse effects are predominantly gastrointestinal complaints, allergic reaction, psychosis, tachycardia, seizures dizziness leading to increase in the number of hospital admissions. Adolescents prefer to use the morning after pill without consulting a medical practitioner In India, OTC related adverse effects, abuse, and hospitalizations are on the

rise. Hence, this study was undertaken to evaluate the dispensing pattern of over the counter drugs in retail pharmacies in three selected pharmacy outlets in Hyderabad, Telangana.

Background:

Adolescence is a phase of rapid growth and development during which physical, physiological and behavioural changes occur. According to WHO, adolescents are defined as young people between the ages of 10 and 19 years. Adolescents form a large section of population; comprise 22.8 % of our population and about 1/5th of world's population. There are an estimated 1.2 billion adolescent's one in every five person in the world today¹. Young and growing children have poor knowledge and lack awareness about the changes and the ill health affecting them. In particular, young girls who live in poverty face major disadvantages. They are more likely to work and may never attend school or may drop out from school at early stages. They may also get engaged in risky sexual behaviours, go for early marriage and bear children. In spite of definite health problems they may have, it is a common observation that adolescents do not access the existing health care services, especially the adolescent girls. Among other such disparities, OTC medicine abuse and misuse by young girls is a recognized problem internationally but it is understudied and least understood. Adolescent girls definitely constitute a socially disadvantaged group in our society, especially in rural areas. Many adolescent girls are sexually active but lack information and skill for self-protection (low level of information on Family Planning, low contraception use). Existing social stigmas and lack of "connectedness" with parents and other adults prevents transmission of health messages and crucial skills, leading to adoption of risky behaviour, substance abuse like taking OTC medication without doctor consultation. Legal products that can be ingested include over-the-counter medications like cough syrup, antihistamines, and cold medications; prescription drugs like OxyContin; and common household products like cooking extracts, disinfectant liquids, mouthwash, and other products high in ethanol (Banerji & Anderson, 2001³; Fleming, McElnay, & Hughes, 2004⁴;). Research is needed to quantify such scale of abuse, evaluate interventions and capture individual experiences, to inform policy, regulation and interventions for appropriate policy guidelines formulation.

Significance of the problem:

Underlying Reasons for OTC Medication: The reasons that an increasing number of teens are abusing prescription and OTC drugs are not completely understood. Many teens think that these drugs are safe because they have legitimate uses and are often found at home in the medicine cabinet. Parents purchase OTC drugs for family use and may not realize that their kids are abusing these products. Teenagers generally lack a sense that OTC and prescription medications can be dangerous or addictive. As a rule, teens do not see any negative consequences of using OTC preparations, nor do they think that they can get in trouble if caught using them. OTC drug misuse often begins innocently with teens "borrowing" medications from each other. Adolescents also misuse OTC medications, and they rarely consider the emotional risks that can be associated with OTC drugs⁵. Many teens start experimenting with these medications to relieve stress or anxiety, increase alertness for studies, or to fit in socially.

Major Health problems in adolescent girls due to Lack of Health Education:

- Sexual and reproductive health problems:

One out of ten children in India is sexually abused at any given point of time. It is estimated that 150 million girls under 18 have experienced forced sexual intercourse or other forms of sexual violence involving physical contact. As a result and also due to lack of immunization, unwanted pregnancy, fungal infection and STDs become prevalent (50% of women in India had a child before reaching the age of 20. (Indian Paediatrics, January 2004)⁶ and the victims are more likely to access the OTC medication to avoid social exposure.

- Problems due to developing body parts:

There are many changes in the breast which though normal for this age yet a great source of anxiety. Physiological breast swelling and pain, radiating to axilla and arm may occur on a cyclic basis, most commonly during premenstrual phase. Medication often needed to alleviate the discomfort; however, there is a great chance of drug over doing if drugs are taken without proper medical consultation or as an OTC.

- Depression due to Hormonal changes:

The hormonal changes during adolescent may impact the length of menstrual cycle, Amenorrhea or cause absence of menstruation, abnormal vaginal bleeding, Painful menstrual cramps, and may lead to depression. With lack of advice and proper guidance, the female subjects try doing self-medication and ask for OTC drugs.

Objectives:

To study the:

1. Drug dispensing pattern of pharmacies without prescription
2. Commonly reported illness for the use of OTC drugs
3. Knowledge about the use of OTC drugs by adolescent girls

Material and Methods:

The study was conducted in 3 retail pharmacies in Hyderabad, Telangana State. It was conducted for a period of four weeks in June 2017. Adolescents were interviewed by using a structured questionnaire in the respective pharmacies on demographic details, complaints, factors influencing in the use of OTC and awareness about the adverse effects, and contraindications of the dispensed drugs. Data was analysed by descriptive statistics using Microsoft Excel.

Results: A total of 168 adolescents girls were recorded using OTC without prescription in the prescribed time period of data collection from the identified pharmacies during the study hours without prescription. The most commonly dispensed OTC drugs (Fig.1) were analgesics (45.2%), antipyretics (19%), antihistamines (10.1%), Oral Contraceptive (OC) pills (8.33%), antibiotics (7.15%), antacids (4.8%), and others (5.36%). The commonly dispensed antibiotics were Cifran (500mg) for dental infection and Amoxicillin (500mg) for upper respiratory tract infection and Bactrim DS for UTIs. The most common complaint for the use of OTC drugs was (Fig.2) pain (33.92%), fever (19%), dysmenorrhea (11.3%), UTI (8.9%) and others (26.79%). Only 7% of adolescents agreed that they were aware of the harmful effects of drugs. Data from the WHO revealed analgesic use for headache in 48.9% of boys and 65.9% of girls, with medication for stomach-ache used in 20.5% of boys and 34.6% of girls.

OTC exposure and reported adverse events:

Groups of OTC medications frequently used as a practice of self-medication include: analgesics for pain, medications for cough, cold other respiratory problems, indigestion treatment, vitamins mineral tablets, acne and other skin problems, OC pills, pills to delay menstruation etc. Self-medication is dangerous and it has wide range of ill effects. The ill effects include nausea, vomiting, diarrhoea, constipation, dizziness, allergies, and headaches, dryness in the mouth, stomach ache, blurred vision, ringing in the ear, restlessness, confusion, reduced concentration etc⁷. All of these drugs when combined with other drugs or alcohol have the potential for addiction, and this risk is amplified when they are abused. Also, as with other drugs, abuse of prescription and OTC drugs can alter a person's judgment and decision making, leading to dangerous behaviours such as unsafe sex and drugged driving

Birth control pills carry many severe possible side effects, including uncontrollable uterine bleeding, kidney disorders, migraines, hair loss and weight gain. Additionally, many young women suffered heart attacks after taking birth control pill. The pill raises potassium levels, and too much potassium can lead to cardiac arrest and death. Experts warned that drinking sports drinks or eating foods high in potassium could put young women at an increased risk.

One of the most popular pain reliever acetaminophen (paracetamol) is the top cause of acute liver failure which is commonly used to treat fevers, minor pain, headaches and body aches in children and adolescents. It is available over the counter in regular strength and extra strength forms. Parents should monitor the amount of paracetamol their children consume during 24 hour periods and be sure not to combine the drug with other products containing acetaminophen.

In relation to harms from two analgesic combination products paracetamol and codeine (co-codamol) and ibuprofen and codeine were considered problematic⁸. For Ibuprofen and codeine combination, it was noted the side effects of perforated gastric ulcers. Hypokalaemia secondary to renal acidosis was identified as a result of abuse of this combination product⁹.

Dextromethorphan can cause impaired motor function, numbness, nausea or vomiting, and increased heart rate and blood pressure. On rare occasions, hypoxic brain damage caused by severe respiratory depression and a lack of oxygen to the brain has occurred due to the combination of dextromethorphan with decongestants often found in the medication.

Major findings of the study:

N=168

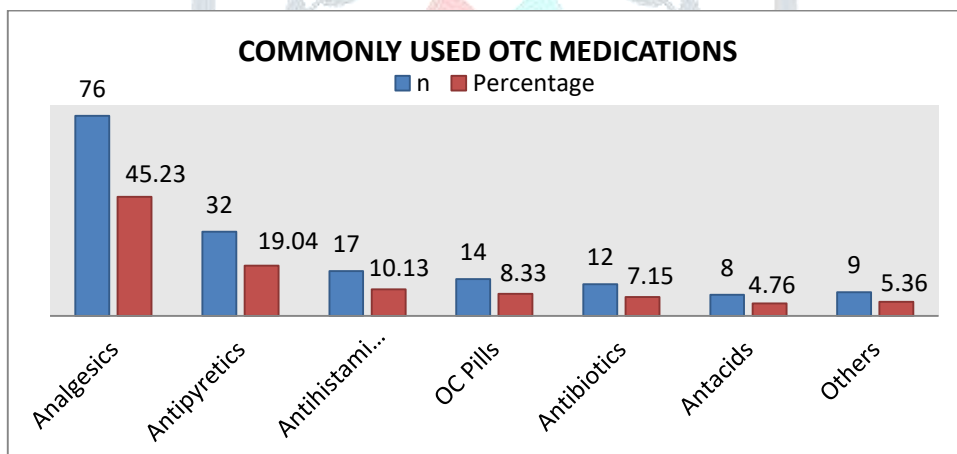


Figure 1. Distribution of OTC Medication commonly used by adolescent girls

N=168

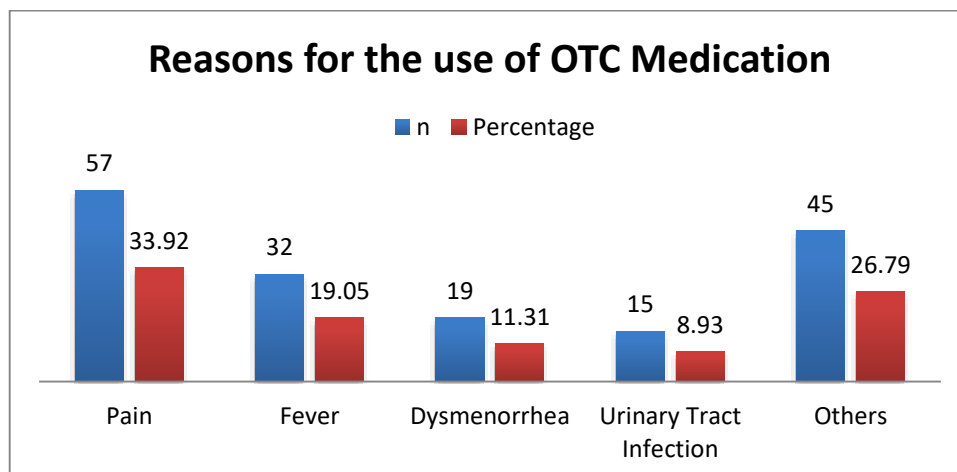


Figure 2. Distribution of reasons for the use of OTC Medication by adolescent girls

N=168

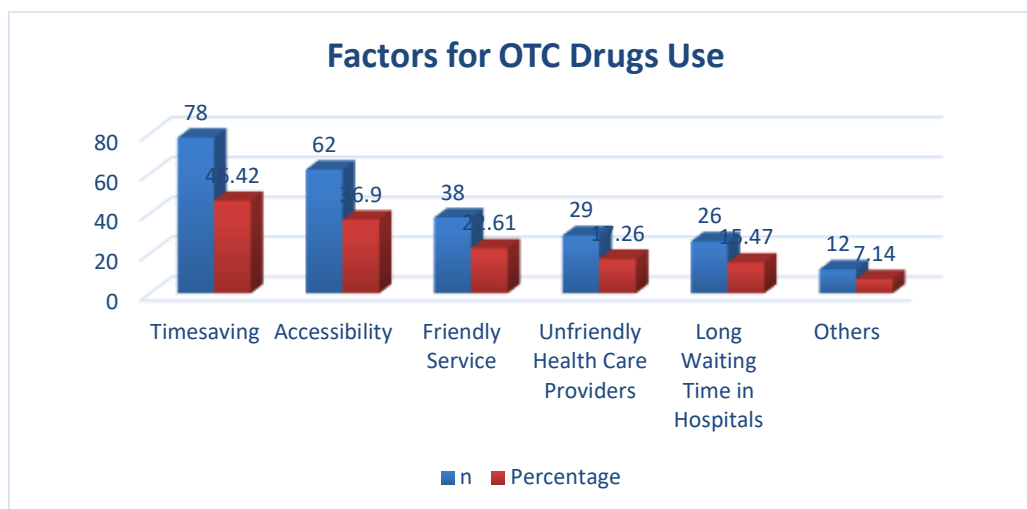


Figure 3. Distribution of factors influencing the OTC Drugs Use in adolescent girls

Discussion:

In developing countries like India where diseases are still considered as taboos in the society; patients, especially the growing children and women are unaware of scientific facts due to lack of basic Healthcare Education tend to go for over-the-counter (OTC) medicines to self-manage their day to day ailments. Various other factors like lifestyle, previous experiences of treating similar illness, other constraints like socioeconomic factors, access to drugs, autonomy and the increased potential to manage mild illness through self-care are also adding to the over use of OTC in youngsters and women in specific. A study done by Gazibara TD et al¹⁰, showed those analgesics were the most commonly dispensed OTC drugs. In this study also, the most commonly dispensed OTC drugs were analgesics of which NSAID were the commonest. The other categories of drugs dispensed were antihistamines, antacids, antibiotics, antipyretics and miscellaneous. The most common illness for the purchase of OTC drugs was pain which included dental pain, dysmenorrhoea, headaches, and body pains. OC pills were also dispensed for the postponement of menstrual cycles. Other illnesses were gastro intestinal problems like diarrhoea, constipation, respiratory illness like cough, fever etc. The frequent reported reason for buying antibiotic was cough and fever. In this study, antibiotics were mainly dispensed for fever, cough and dental infection. In previous studies Ceftriaxone, Amoxicillin and Co amoxiclav were most commonly dispensed antibiotics and prescription was given for 3-7 days duration. In this study cefran was most commonly dispensed antibiotic and the duration of prescription was only for 3 days.

Limitations: The limitations of this study were its short duration and limited number of pharmacy outlets and only adolescent girls were included.

Conclusion: The most commonly dispensed OTC drugs were analgesics. Most of the adolescent girls were not aware of the contraindications or undesirable effects of the dispensed drugs. The use of OTC drugs is considerably high in young girls and youth and pharmacists need to be educated regarding rationale use/dispensing of drugs. This could be attained through the effective use of mass media and regular training of pharmacists. Also, drug regulatory authorities should strictly enforce laws pertaining to drug dispensing. Many of the health problems occur in adolescents girls in association with OTC drugs and other poly drug use. Along with developing habits that can influence health for the rest of young people's lives, further research should investigate the OTC drug use in light of the evidence that adolescents younger than 18 years often reported with the issue. It is needed to inform policy, regulation and the preparedness of a range of health care professionals to avoid harm to those high risk adolescent girl populations who purchase OTC medicines that may be liable to abuse and misuse.

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