Prevalence of Self-medication and Drug use behaviour among Housewives in an Urban Slum area, Visakhapatnam

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Abstract: *Introduction: Popping pills without a doctor's prescription, even if the ailment is minor, could have serious repercussions. Self-medication is defined as "The use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms". Objectives: To study the prevalence of self-medication and drug use behaviour among housewives in an urban slum area, Visakhapatnam city. Materials and Methods: A community based, cross sectional descriptive study was done among 147 housewives residing in an urban slum area during the month of May, 2015. A pretested, structured interview schedule was used to collect data. Data was analysed using MS Excel and Epi Info 7. Results: Mean age of the study population was 33.19 $\pm$ 6.91 years. Majority of the housewives had education up to primary level. About 58.5% practiced self-medication. Analgesics were the most commonly used self-medicated drugs. Only 62.5% of the participants had the habit of checking for expiry date before taking drugs. Conclusions: Though self-medication if promoted by WHO because of affordability and inaccessibility of health services in developing world, benefits must be weighed against adverse effects.*

Keywords: *Drug use behaviour, Housewives, over the counter, Self-medication, Urban slum*

I. Introduction

Popping pills without a doctor's prescription, even if the ailment is minor, could have serious repercussions. Currently, numerous drugs and drug combinations are available, and many of them have been released for general use and are sold directly to the public as over‑ the‑ counter (OTC) drugs. Self-medication is defined as "The use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms" [1]. Proprietary drugs which are sold over‑ the‑ counter include pain relievers, cough remedies, anti‑ allergies, laxatives, vitamins, tonics, antacids, and many others. Furthermore, dangerous drugs like the antibiotics and hormones can be procured without a valid prescription [2]. Self-medication with OTC medicines may initially result in reduction of distress but in long run, it may lead to serious issues like allergy, habituation, addiction, poisoning and depression. Inappropriate self‑ medication results in irrational use of drugs, wastage of resources, increased resistance of pathogens and entails serious health hazards such as adverse reactions and prolonged suffering [3]. Common reasons responsible for rise in the prevalence of self-medication are increased incidence of chronic diseases, urge of self-care, poverty, ignorance, educational status, misbeliefs, non-availability of the specialised person, use of drugs from informal sectors such as open markets and quacks etc [4]. To the best of our knowledge there is not much research conducted to reveal the extent of this problem in Visakhapatnam. Therefore we believe that this research may show the magnitude of problem in Visakhapatnam so as to initiate intervention by the concerned authorities and the community as well.

II. Objectives

To study the prevalence of self-medication and drug use behaviour among housewives in an urban slum area, Visakhapatnam city.

III. Materials and Methods

The study site is one of the major cities in northern Andhra Pradesh i.e., Visakhapatnam. The population of selected urban slum has good access to health facilities. There is one Tertiary care hospital, many dispensaries, pharmacy shops and private clinics within a radius of 5 kms. A community based, cross sectional descriptive study was done among housewives residing in an urban slum area during the month of May, 2015. A sample size of 147 was obtained based on the prevalence of self-medication (73%) in a previous study done in Northern India, with power of 80% and precision of 10% of prevalence [5]. A pretested, structured interview schedule was used to collect data about socio demographic details, the practice of self-medication and drug use behaviour within a recall period of six months preceding the survey. Housewives who gave informed consent were included in the study. House to house survey was conducted and every alternate house was included by

Systematic Random Sampling method. For those who could not be contacted in the first instance, two further visits were made to their houses before declaring the subject unavailable for the study. Data was analysed using MS Excel and Epi Info 7 (CDC Atlanta, Georgia, USA). Results were expressed in the form of percentages and figures. Univariate analysis was done.

IV.   Results

A total of 147 housewives were interviewed. Mean age of the study population was 33.19 $\pm$ 6.91 years. Most of the participants (80%) belonged to the age group of 21-40 years. Majority of the housewives had education up to primary level as shown in Fig. 1. Majority of the study population belonged to Class III (76%) followed by Class IV (22.4%) of modified BG Prasad's economic classification. About 83.5% of the study population reported to be using allopathic drugs on a regular basis while homeopathy medicines and Ayurvedic medicines were used by 11.5% and 5% of the study population respectively. About 79% (116 out of 147) were found to be having drugs stored in their house but only 58.5% (86 out of 147) practiced self-medication. Among those 116 participants who stored drugs in their house, only 53% stored drugs in a separate place, 38% stored the drugs in a classified manner, 43% kept those medicines out of reach for children while only 58% of them actually had a knowledge about the indications of the drugs stored. Analgesics were the most commonly used self-medicated drugs followed by nutritional supplements, anti-pyretic and cough syrups as shown in Fig. 2.

Regarding information source for self-medication, majority stated that they obtained information from pharmacy where they took medicines, followed by previous prescriptions as shown in Fig. 3. The most common reasons cited for self-medication were financial constraints (49%), followed by long waiting hours at hospitals (31%) and felt unnecessary to visit a doctor (20%). Regarding drug use behaviour, only 62.5% of the participants had the habit of checking for expiry date before taking drugs. About half of them (52%) had the knowledge of storage of drugs in the right place. Only 16% know what is patient information leaflet and its usefulness. Prescription information like dose, frequency and duration of treatment were correctly followed by 61% of the participants. About two thirds of the participants opined that self-medication is not right while 41% were aware of side effects of self-medication. On univariate analysis between literacy and drug use behaviour, it was observed that checking for expiry date, knowledge about patient information leaflet, adherence to prescription information and awareness on side effects of self-medication were significantly associated with being literate as shown in Table 1.

V.   Discussion

Our study showed that prevalence of self-medication was 58.5%. Similar findings were reported by Shankar PR et al [6] in their study in Western Nepal. Kaushal J et al [5] in their study in northern India reported a prevalence of 73% and VD Phalke et al [7] reported a prevalence of 81.5% in rural Maharashtra. Reasons for wide variations may be due to differences in education, socio-economic status between different study settings. Various studies carried out show a range of self-medication practices ranging from 15% to 65% [8, 9].

Allopathic medicines were used by 83.5% of the population in our study. VD Phalke [7] and Durgawale PM [9] reported that 73% and 79% of their respondent's used allopathic medicines respectively. Homeopathy and Ayurveda were used by 11.5% and 5% of the study participants respectively in our study.

Bradley CP et al [13] reported that 25% of the people used herbal drugs and 12.5% of the people practiced homeopathy. Pharmacists were the major source of information for self-medication in our study followed by previous prescriptions. In contrast to our findings, VD Phalke et al [7] reported that advertisement was the major source of information while Kaushal et al [5] reported that previous prescriptions followed by advertisements were the major source of information for self-medication. This difference may be due to easy access to pharmacies in our study setting. This highlights that legislative implementation in banning sale over the counter drugs without doctor's prescription.

The most commonly used medication in this study was found to be analgesics followed by nutritional supplements, anti-pyretic and cough syrups. Similar findings were also reported by Kaushal et al [5]. Also it was seen in this study that a large number of people were not aware of the potential damaging nature of the different medications self- administered by them. Similar results were shown in the study done by Kaushal et al [5] and Cindy et al [14]. In our study it was found that financial constraints was the major reason (49%) due to which self-medication is practiced. Similar findings were reported by other studies [5, 8-12]. Long waiting hours at hospitals and felt unnecessary to visit a doctor were the other reasons in our study which were similar to the findings reported by Shankar et al [6].

Regarding drug use behavior, in our study about 63% of the study participants had the habit of checking expiry date which was less as compared to Kaushal et al [5] where it was 80%. Prescription information regarding dose, frequency was strictly adhered to by 61% participants in our study which was high as compared to findings reported by Kaushal et al [5]. In our study about two thirds of the participants opined

that self-medication was not justified while 41% were aware of adverse effects of self-medication. Similar findings were also reported by Kaushal et al [5] and Lawan UM et al [16].

VI. Conclusions

Self-medication was found to be highly prevalent among housewives in our study. Some of housewives were not aware that it is necessary to check the expiry date of medicine before taking them and the fact that adverse effects can occur if medication is taken without doctor's advice. Financial constraints were quoted as the main reasons for opting self-medication.

VII. Recommendations

Some authors consider that self‑ medications appropriate [15]. Also World Health Organization is nowadays promoting the self‑ medication for trivial diseases to save the time and resource wasted in treating the minor diseases [4]. Though self-medication if promoted by WHO because of affordability and inaccessibility of health services in developing world, benefits must be weighed against adverse effects. Concerned authorities must ensure that all drug retail outlets and drug sellers are registered, controlled drugs are dispensed only on prescription of the physicians; and the laws safeguarding drug use must be duly enforced. Drug regulatory authority, Ministry of Health and development partners should strengthen efforts towards educating the entire public on the dangers of indiscriminate and in‑ appropriate drug use, and also to improve access of the general public to qualitative and affordable medical care in the hospitals, thus safeguarding them from the dangers of self-medication.

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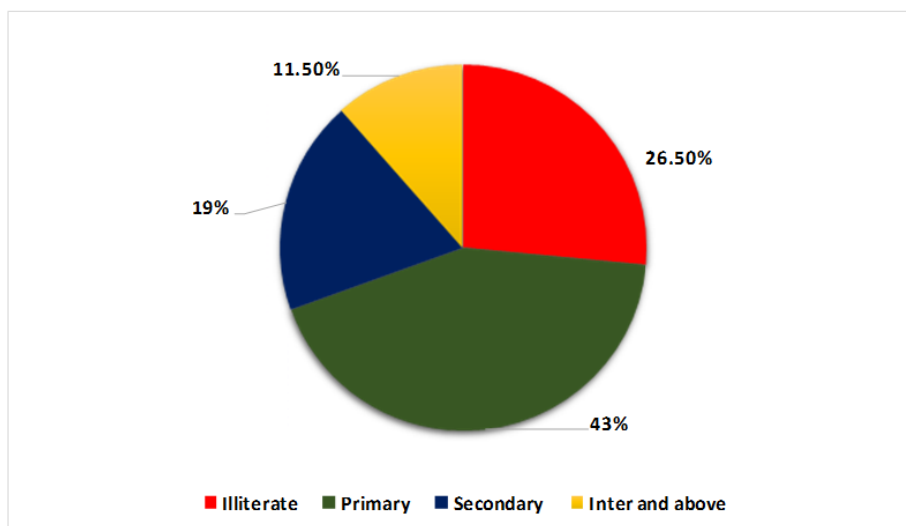
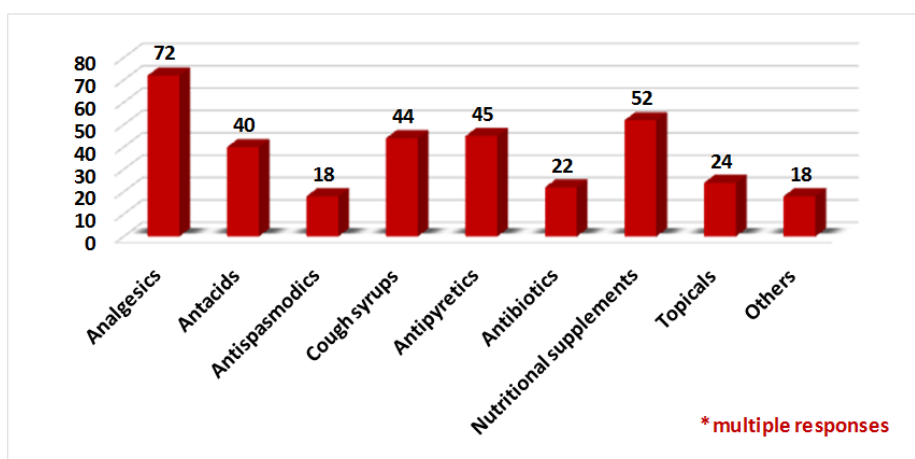**Figure 1: Education levels of housewives (n=147)**

Figure 2: Most common medications used in the practice of self-medication by study population
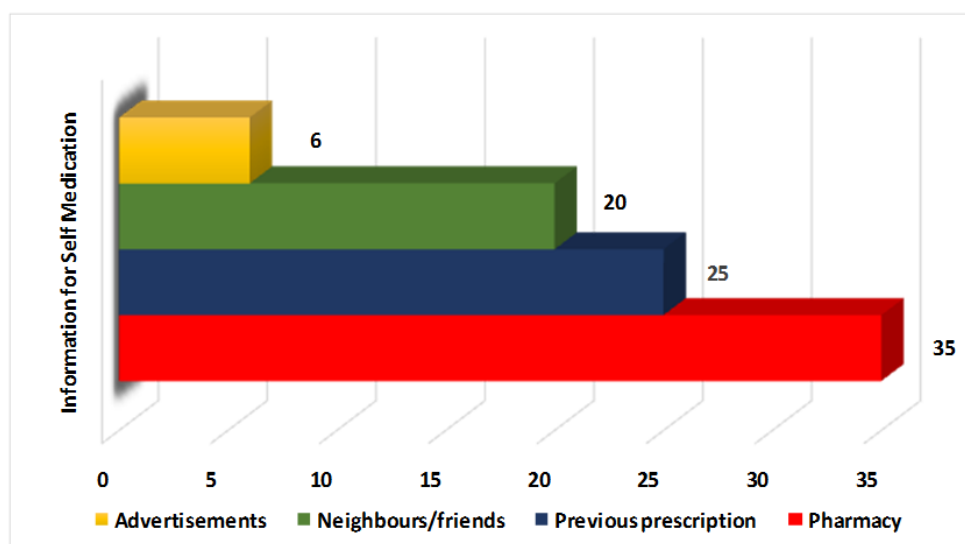

Figure 3: Information source for self-medication among study population (n=86)

Table 1: Literacy and Drug use behaviour among study population (N=147)

Drug use behaviour (N =147)	Response	Literate (n=108)	Illiterate (n=39)	N	OR (95% CI)
Check for expiry date	Yes	76	16	92	3.41 (1.59 - 7.3)
	No	32	23	55	
Storage of drugs in right place	Yes	58	19	77	1.22 (0.58 - 2.54)
	No	50	20	70	
Patient information leaflet	Yes	22	2	24	4.73 (1.05 - 21.16)
	No	86	37	123	
Prescription information	Yes	81	9	90	10 (4.21 - 23.7)
	No	27	30	57	
Self-medication is not right	Yes	70	27	97	0.81 (0.37 - 1.79)
	No	38	12	50	
Awareness on side effects of SM	Yes	52	9	61	3.09 (1.34 - 7.13)
	No	56	30	86	