

## ABSTRACT

Pharmaceutical health promotion emphasises the need of information on shared responsibility and essential interaction of the consumer, service provider, industry and the regulations at various levels to ensure quality and safe use of medicine by the consumer.

A community-based survey and a pharmacy-based study were carried out to describe pharmaceutical consumption by adults, their satisfaction with available private pharmacy services, quality of private pharmacy practice in selected urban and rural communities. Information on implementation of pharmaceutical regulatory activities was supplemented with a qualitative study conducted among a sample of Food and Drug Inspectors (FDI).

The community based study was carried out among permanent residents over 18 years of age in the two districts. Twenty pharmacies in the urban and 18 in the rural sector were selected for the pharmacy based study. In this component, the compliance of pharmacies with Good Pharmacy Practice (GPP) using LQAS method, 30 clients purchasing medicines at a pharmacy and all pharmacy assistants involved in dispensing were studied.

A pre-tested, interviewer administered questionnaire was used to gather information on medication use in the community based study. Two self-administered, scales validated in an urban and rural population as a part of this study were utilized in the assessment of perceived satisfaction with available private pharmacy services and access to medical care. Two observational checklists and an interviewer administered questionnaire were used in the pharmacy based component.

Western drugs (urban-92%; rural-85%) had been used predominantly. Among the users of Western medicine, self medication use was significantly higher in the urban sector (urban-37.2%; rural-25.6%, $p<0.009$ ). These differences were significant after adjusting for age ( $p=0.04$ ), educational status ( $p=0.04$ ) and income ( $p=0.04$ ) of the respondents.

Among predisposing factors to self medication, household number  $\leq$  two ( $p=0.003$ ) was associated with self-medication in the urban sector. Higher perceived "Technical quality of Care (TC)" of the pharmacy staff was the only dimension of satisfaction with pharmacy services that was significantly associated with self-medication in the rural sector ( $p=0.03$ ).

Measures of perceived access to medical care shown to be associated with prescribed medication were : "Acceptability of Services and Regularity of service provision (AC & RS)" ( $p=0.03$ ) in the urban sector and "Affordability of Services (AF)" ( $p\leq 0.001$ ) in the rural sector. A higher number of reported symptoms was associated with prescribed medication ( $p<0.001$ ) in both sectors.

Discontinuation of medicines before the prescribed period (urban-40%; rural-33%) taking a dose lower than the prescribed (urban-21; rural-16%) and postponement of buying drugs (urban-19%; rural-16%) were the most common practices of non-compliance with the instructions of the prescriber. The disappearance of symptoms (urban-78%; rural-75%) and the high cost of medicines (urban-24%; rural-21%) were the major reasons for discontinuation of medicines before the prescribed period ended. The main mechanism of paying for medicines remained the out-of pocket payment while insurance cover (urban-3.2%; rural-0.6%) and reimbursement from the place of work (urban-4.4%; rural - 0.1%) was negligible.

Among dimensions of satisfaction with pharmacy services, "Affordability of Medicine" (%mean-36%), "Availability of an Insurance Scheme" (% mean- 40%) and Inter personal aspect-II (Consideration) (% mean-48%) were not perceived as satisfactory in the urban sector while in the rural sector, perceived satisfaction with dimensions other than "Access to private pharmacy Services" (% mean-53%) and "Continuity with the same Pharmacy" (% mean-56%) were poor. Perceived satisfaction with "Affordability of available medicines (% mean-urban-36%; rural-43.5%)" was significantly higher in the rural sector ( $p<0.003$ ). Satisfaction with all other dimensions except " Continuity with the same Pharmacy" ( $p=0.39$ ), "Availability of an Insurance scheme" ( $p=0.84$ ) and "Considerateness" ( $p=0.16$ ) were perceived to be significantly higher in the urban sector.

Maintenance of the Cold Chain (%mean score: urban-30.2%; rural-32.7%) and dispensing (%mean score- urban-34.4%; rural-23.6%) were poor in pharmacies in both sectors. A majority of items in the sub-system "storage" was found to be defective.

The pharmacy staff identifying drugs for clients purchasing without a prescription (urban-5%;rural-26%) was significantly higher in the rural sector( $p<0.001$ ). They were also found to contravene Drug Regulations by issue of Schedule II B drugs without a prescription (urban-79%; rural-76%). Dispensing in a majority of pharmacies were managed by pharmacy assistants (urban-84%; rural-92%) who had not undergone a basic training in managing a pharmacy (urban-71%;rural-67%). The knowledge of the pharmacy staff on selected diseases and drugs was poor (% mean score: rural-49.8%; urban-40.9%).

The qualitative component highlighted managerial and organisational deficiencies in implementing the Drug Regulations. It was evident that these problems lead to infrequent pharmacy inspections and inspections of low quality by the authorised officers.

The study concludes that the self-medication prevalence (urban-12%; rural-8%) was significantly higher in the urban sector ( $p=0.004$ ). Pre ponderance of self-selection of medicines for perceived mild conditions by clients suggest their increased familiarity with Western medicines. In the rural sector, pharmacy was shown to be not only a place where medicines are bought but also a place where people seek advice for minor conditions(urban-5%;rural-26%).

Compliance with GPP was poor in both sectors and poor storage conditions of both non-refrigerated and refrigerated drugs violate the main objective of the supply of efficacious drugs. The overall quality of dispensing and the suitability of the pharmacy staff involved in dispensing were not satisfactory. Supervisory activities of FDIs are inadequate and less comprehensive. Shortcomings highlighted by the study can be improved with little extra effort aimed at improving the frequency and the quality of routine pharmacy inspections by FDIs.