

UNDERSTANDING TOWARDS NON-PRESCRIPTION MEDICINES AMONG JIMMA TOWN DRUG RETAIL OUTLETS' CUSTOMERS, ETHIOPIA

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ABSTRACT

Background: The consumption of non-prescription medicines is on the rise globally. The use of non-prescription drug is often perceived as safe albeit they cause numerous health problems through duplication of therapies, interaction with prescribed medicines and other products.

Objective: The objective of this study was to assess customers' knowledge and attitude towards safety of non-prescription medicines.

Methods: an interview based study was conducted among 169 consumers in a randomly selected 10 private pharmacies in Jimma Town, Southwest Ethiopia, from January 28 to February 10, 2013

Results: a total of 169 complete questionnaires were available for analysis of which 46(27.2%) bought prescription only medicines whereas 123(72.8%) bought non-prescription medicines: either alone 97(57.4%) or in combination with prescription only medicines 26(15.4%). The decision to use these drugs was mainly (55.3%) based on a pharmacist (55.3%) or on the basis of a personal decisions. The most non-prescription medicines purchased were Anti-helmentic drugs, followed by dermatologicals, NSAIDs and Paracetamol. Around 45.5% and 8.9% claimed to read carefully the package inserts and to ask pharmacists information about non-prescription medicines respectively.

Conclusions: our study discovered a great misconception among consumers towards nonprescription medicines. To the worst, both community pharmacists and physicians backed patients to consume non-prescription medication without appropriate guidance. Thus, giving drug information and awareness creation need to be strengthened to improve knowledge and attitude of Jimma town private pharmacy customers, community pharmacists and physicians about risk factors for nonprescription medicines.

Key Words: nonprescription, medicines, customers, safety, drugs

Introduction

In general, medicines are categorized either prescription only medicines which are supplied to the public only if prescribed by physicians, nor onprescription medicines comprise pharmacy supervised drugs (sold under the supervision of

pharmacist), and over the counter (OTC) drugs freely available to the public (1).

These groups of medicines are consumed in great numbers throughout the world due to the prerogatives that non-prescription medicines are safe both by the customers, pharmacist and physicians. Even if there availability various among countries (2), the volume

of this medication use is on the rise, partly due to the switching of drugs status from prescription only to non-Prescription Drug (3,4).

Regarding the benefits of nonprescription medications, decreased potential frequency of physician visits, increased patient autonomy and reduced cost for the national health system are among the list (5). However this kind of treatments are not devoid of risks of interactions with prescribed medicines and other products, duplication of therapies, over dosing, and side effects (6). So, customers should have appropriate understanding of medications that they are using and the aspect of information and education becomes even more important (7).

The consumers' discretion of the benefits and risks of nonprescription medicines is what determines their rational use. The global increase in the consumption of medications underpins the need for studying medication knowledge and behaviors (7). Medication knowledge assessment is used to assess a person's knowledge and ability to read and understand information necessary for appropriate medication use. This, information from the medication knowledge assessment, in turn can serve as the basis to focused knowledge improvement plan (8). Use and not knowing of nonprescription medicines use is not without consequences. It results in depletion of resources, increase in resistance of pathogen/s and generally entails serious health hazards such as adverse drug reactions and prolonged sufferings (3). Various studies have shown that many people took and used their medication incorrectly because of lack of knowledge and information which leads also to loss of efficacy and an efficient use of the considerable resources (9).

Surveys in the USA showed that only 34% of the public was able to identify the active ingredient in the brand of the purchased drug. One third took more than the recommended dose of the non-prescription medicine, believing that this will increase the effectiveness of the product. Only one in the ten read the label for possible adverse reaction or warnings when buying or taking a non-prescription drug for the first time and 41% believed that these medications are too weak to cause any problem (10, 11). Similarly, Research done in Italia, Verona, revealed 55.4% of customers believe that non-prescription medicines are safe and 55.3% of the customers reported to have been at least a prescription drug in association with the non-prescription medicine (10).

To avoid the irrational use of drugs, both the public and health professionals require more and better education. If action is not taken, the danger of drug interaction and side effect could increase because it is expected that adverse drug reactions mostly under reported since use of over the counter drug may not recorded or reported to the doctors (12, 13). The consequences of poor understanding towards these medications in a resource poor setting like Ethiopia is conspicuously morbid as most of its population are not literate.

As far as the authors' knowledge is concerned, there is no research conducted to reveal the extent of these problems in the Jimma town, even for that matter in Ethiopia. Therefore, we believe that this research show the magnitude of problems so as to initiates interventions by the concerned authorities and community as well. So, the purpose of this study was to analyze the nonprescription drug use among a population of Jimma town customers in order to elucidate their attitude and knowledge towards these medicines in the private pharmacies.

Methods

Study area and study period

The study was conducted from January 28 to February 10, 2013 at Jimma Town Oromia Region, South West Ethiopia. Jimma is located 357 Kms South West of Addis Ababa, the Capital City of Ethiopia and is bordered in south by the Southern Nations and Nationalities and Peoples Region, the northwest by Illubabor Zone, in the north by East Welega Zone, and in the northeast by West Shewa Zone. The total projected population of the zone is 2,486,155 of which 89.69% are rural inhabitants; 0.03% is pastoralists while that of Jimma Town is 120, 960 (CSA 2007). As per to the health institutions, the town has 2 public hospitals, 3 health centers, and 21 private pharmacy.

Study Samples

From a total of 21 Jimma towns private pharmacy Jimma 10 were randomly selected and customers visiting these centers during the study period were included. A total of 185 customers were contacted. But, the numbers of completed and clean interview were 169. Informed verbal consent was acquired from pharmacists who adhered to the study.

Eligible study participants were all customers, aged over 18 years, purchasing a non-prescription

medicine. In every pharmacy, a specially trained interviewer (over a 4-h period) approached all customers who bought a non-prescription medicine, informed them on the aim of the study and asked if they agreed to participate. In this case, customers had to give their consent.

Customers were interviewed face-to-face on the basis of a pre-structured questionnaire. This kind of approach was chosen based on the belief that the data from an interviewer-Administered questionnaire could provide more reliable and complete information than a self-administered questionnaire, which often results in inappropriate compilation and misinterpretation of the items (10).

Data collection

The de novo, pre-structured questionnaire was anonymous and adopted from different researches (10). It was also pre-tested in a small sample of subjects to ensure content validity and clarity. The instrument was further refined and the final version included information about socio-demographic characteristics of the interviewed subjects (age, gender, level of education, occupational status and place of residence). The items used to assess customers' perspective were: (1) the kind of non-prescription medicine purchased, for which symptom/disease and reason for use; (2) General product knowledge in relation to quality and risks; (3) attitudes toward this kind of drugs; (4) concurrent prescription drug use; (5) the quality of relationship/communication with the pharmacist. The average time requested for every interview was approximately 15 - 20 minutes.

Data management

Data was entered to and analyzed using Microsoft® Excel 2010. Data has been presented by tables, figures and narrations.

Ethical consideration

The proposal to conduct this study was approved by Ethical Review Committee of College of Public Health and Medical Science, Jimma University. In addition the entire study participant was informed about the purpose of the study and finally their oral consent was obtained before interview. The respondent was notified about their right to refuse or terminate at any point of the interview. The information provided by each respondent has been kept confidential and would only be for research purpose.

Results

A total of 185 pharmacy customers were contacted. But, only the 169 (91.4%) customers were fully interviewed and completely documented. The remaining 16 interviews were excluded because of participation refusal and incompleteness. Of the 169, 46(27.2%) bought prescription only medicines whereas 123(72.8%) bought non-prescription medicines: either alone 97(57.4%) or in combination with prescription only medicines 26(15.4%) (Table 1).

From now on "customers" will refer to the 123 participants who bought non-prescription medicine. Our participants were mainly comprised of subjects aged 26-50 years (53.7%), males (69.9%), and ones with no formal education (48%). Around 75% of interviewees reported to have been taking ≥ 3 non-prescription medicines in the last 12 months (Table 1).

The decision to use these drugs was mainly based on a pharmacist (55.3%). Extension of long-term use, physician advice and friend advice were the immediate causes for 24.1%, 9.5% and 9.8% of the consumers. Only 1.3% of interviewees reported to be influenced by advertisers.

A total of 170 different non-prescription medicines were purchased. The active compounds of anthelmintics were Albendazole, Niclosamide, Piperazine, Mebendazole, and while Anti-fungal, Anti-bacterial, and Anti-inflammatory for the dermatologicals. The usually mentioned NSAIDs were Diclofenac and Ibuprofen. Metronidazole and malaria medications were the top purchased Antiprotozoals. The major purposes for using these kinds of therapies were to treat abdominal pain, dermatologic problems, pains, fever or inflammatory diseases (Figure 1).

Around 21.1% of customers reported to have been taking prescription drugs in association with the non-prescription medicine. Prescriptions with antibacterials were on the top (40.54%) followed by asthma drugs (16.2%). These therapies were referred to the pharmacist by 23.3% of customers, who received information by pharmacists about possible risks of interaction in 29% of cases (Table 2).

Regarding attitudes of customers, 45.5% and 8.9% claimed to read carefully the package inserts and to ask information to pharmacists about non-prescription medicines respectively. Besides, 61.8% of interviewees considered non-prescription medicines easy to manage, with a specific pharmacological activity (95.1%) that should be used only for minor ailments (39%) and for short periods (25.2%). Likewise, 62.6% of interviewees believed that non-prescription drugs are safe and that they should be sold only in pharmacies (95.1%) and only 8.9% believing this mode of purchasing unsafe (Table 3).

6 Discussion

The present study assessed the knowledge and attitude of Jimma private pharmacy customers towards nonprescription medicine. Our findings suggest that knowledge of customers toward non-prescription medicines is not up to the level that promotes safe use of these drugs. Information and education on a safe use of non-prescription medicines play an important role, as the range of medications available without prescription has expanded dramatically and is likely to continue in the future. The public needs to be more aware that non-prescription medicines (12).

The evidence of wide-spread safety problems associated with medicines supplied without prescription is scares. However, their extensive and increasing use, due in part to the switching of drugs from prescription-only to a nonprescription status (3, 4), requires health-care professionals and regulatory authorities to be vigilant for potential issues. This should be more stringent in a developing country with most of its people illiterate and the potential for counterfeit medications is high. As an example, terfenadine was one of the first products to become available without prescription in the UK, but returned to a prescription status after reports of cardio toxicity. This rare event became apparent only after terfenadine had been used extensively by a less selected population (14).

A similar scenario that these kinds of medications are gaining consciousness is the fact that FDA has announced the daily allowed dose of paracetamol to be 3g than the previously 4g(15). These both incidences demonstrate that the situation drugs to be used without prescription are far from the public understanding. These scenarios taken together prompt the Drug administration and Control

Authority of Ethiopia to revise its drug lists with regards to some NSAIDs and nasal decongestants.

The Jimma town private customer has quiet inappropriate knowledge towards non-prescription medicines. The misconception observed here are far greater than the misconceptions observed in developed countries (11-13) . Most of our study participants' literacy and socioeconomic status may explain this gap. In Jimma town, most of the customers preferred to buy drugs without prescription to save time lost for diagnosis, keeping of laboratory result and cost lose for laboratory as well as patients card in addition to medicines' cost. So mostly customers prefer to purchase in pharmacies where a pharmacist is available to advice. It has been reported that the place of purchase may influence perceptions of the public about the safety of medicines. Our interviewees bought these drugs on the pharmacist advice (1).

This reinforces the important advisory role that pharmacists play in determining the choices of their customers. In other countries, where non-prescription medicines are available from any retail outlet, customers obtain information about these drugs from a variety of sources not always reliable (11). Moreover, perceptions of the public about the safety of these drugs are likely different (11, 12), particularly as regards the risk for potential drug interactions and patients seem to be more concerned with the benefits of non-prescription medicines than with their potential side effects (10).

On top of the observed misconceptions about the potential side effects of these groups of medications, the influence of advertisers, though little, has been demonstrated. But, when coupled with the fact that 55.3% of our interviewees bought the non-prescription medicine on the basis of a pharmacist advice rings the bell that this behavior leads to inappropriate use of medication without definite diagnosis of disease example without laboratory finding and physical examination. The currently uprising of mass media based promotion of pharmaceutical needs a greater attention if we are to be determined to keep the public safe.

The other alert was that anthelmintics were the mostly purchased non-prescription medicines. It is well recognized that these groups of medications are prone to abuse in a way that patients fail to finish their treatment regimen and remain with medication

left overs. This in turn opens the gate for the undesired irrational drug of medicines sharing.

The last but not least scenario deserving equal attention was that antibiotics were the most frequently co-taken medicines. A potential pharmacological interaction could have occurred with anti-helmentics that may leads to disturbance of normal flora and super infection. Even though NSAIDs were top prescribed in this particular scenario, they have be implicated for multiple pharmacodynamic interactions. This can be demonstrated as follows: when oral anticoagulants and diuretics are taken in with NSAIDs (16) or calcium supplements and antacids with dioxin and levothyroxine (8, 17). Similarly, Paracetamol has been documented to be responsible for an annual death of 450 only in USA; mainly due to its co-use with alcohol (15). So, the aspect of interactions between non-prescription medicines and prescription drugs needs attention among health-care professionals. These actual and potential interactions underpins that, no drug is safe unless it is consumed in certain professionally guided way.

In fact, patients tend not to disclose their use of non-prescription medicines to physicians and pharmacists simply because they do not view these products as drugs: hospital records frequently fail to identify the use of non-prescription drugs in medical histories (18). But an on occasionally of potentially interacting non-prescription medicines should be avoided because of an unfavorable risk/benefit ratio. In this case, it should be difficult for community pharmacists to identify and manage potential drug interactions in occasional customers, while the situation is different with regular customers.

In conclusion, this study, the first of its kind, discovered that a great misconception among consumers has been obtained. To the worst, both community pharmacists and physicians backed patients to consume non-prescription medication without appropriate guidance. Thus, giving drug information and awareness creation need to be strength to improve knowledge and attitude of Jimma town private pharmacy customers, community pharmacists and physicians about risk factors for nonprescription medicines. Persons using prescribed drugs chronically and nonprescription medicines at the same time should have more knowledge about the combinations. Information and education about the aspect of a safe use of non-prescription medicines should be given by pharmacists. Pharmacists and

customers should both be stimulated to ask questions. Additional training about pharmacovigilance in Jimma town faculties of pharmacy could also improve the relationship with customers in the pharmacy.

Though this study reveals significant issue, it hasn't bare of weaknesses. Our study population regarded only an area which may not be representative of other realities which may limit its generalizability. However, our study is important because this area of research is limited and therefore could add something to what is known in this topic.

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Authors' contributions

Study concept and design: TE, AW, TR . Data collection: TE, AW. Statistical analysis: TE, AW, TR, MT and EM. Analysis and interpretation of data: TE, AW, TR, MT and EM. Drafting of the manuscript: TE, TR, MT and EM . Critical revision of the manuscript for important intellectual content: TE, TR, MT and EM. Study supervision: TE. All authors read and approved the final manuscript.

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Tables

Table 1 Sociodemographic and pharmaceutical characteristics of customers (n=123)

Respondents' characteristics		n (%)
Age	18-25	28 (22.7)
	26 -50	66 (53.7)
	>51	29 (23.6)
Gender	Female	37 (30.1)
	Male	86 (69.9)
Education	No formal education	59 (48)
	Primary/secondary school	21 (17)
	High school	25 (20)
	Higher education	18 (15)
Employment	Yes	59 (48)
	No	64 (52)
Area of residence	In Jimma town	90 (73.2)
	In rural area around Jimma town	33 (26.8)
For whom they bought	For self	74 (60)
	Children	26 (21)
	Spouse	10 (8)
	For parents	8 (6.5)
	Others	5 (4.5)

Table 2 Prescription drugs that has been taken along with non-prescription drugs

Medication category	n(%)
Anti-bacterials	15 (40.5)
Asthma	6 (16.2)
Central Nervous system drugs	5 (13.5)
Anti fungals	4 (10.8)
Contraceptives	4 (10.8)
Anti-hypertensive drugs	2 (5.4)
Antidiabetic drugs	1 (2.7)

Table 3 Attitude & knowledge of Jimma town customers about nonprescription medicines

	Customers said “yes” (%)
Do you read the package insert?	8.9
Do you ask information to pharmacist?	45.5
Are non-prescription medicines easy to manage?	61.8
Have non-prescription medicines a pharmacologic activity?	95.1
Should non-prescription medicines be used only for minor ailments?	39.0
Should non-prescription medicines be used only for short period?	25.2
Are non-prescription medicines safe?	62.6

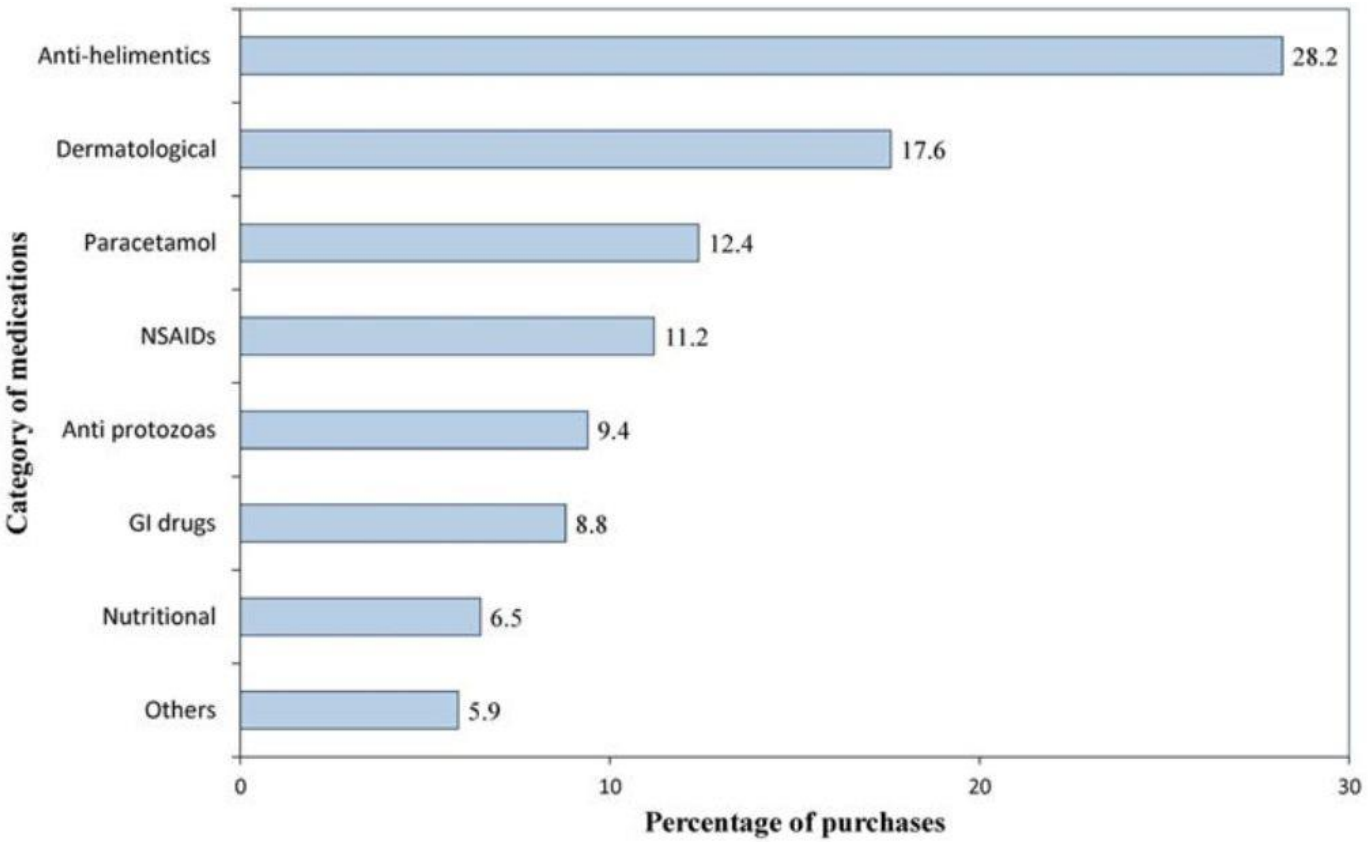


Figure 1 Medicines bought by customers during the study period (n = 170): (GI drugs: Gastrointestinal drugs, NSAIDs: non steroidal anti inflammatory drugs)