



**DISPENSING PRACTICES OF PRESCRIPTION ONLY MEDICINES
(POM's) IN PRIVATE PHARMACIES IN JINJA MUNICIPALITY,
UGANDA.**

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ABSTRACT

Objective: To investigate the factors associated with dispensing prescription only medicines without a prescription in private pharmacies in Jinja Municipality, Uganda and scrutinize the causes of such practice.

Method: This was a cross sectional survey conducted in 13 randomly selected private pharmacies including 23 dispensers from them and 436 clients/patients who had been dispensed medications by the pharmacies.

Results: Dispensing Prescription Only Medicines without prescriptions at the private pharmacies was 56.1% of the total dispensing encounters. Clients demand, discrepancies between prescribed drug and available drug, survival in the market as well as need for profit were some of the reasons for dispensers engaging in such practices. 91.3% (21/23) of the dispensers in these private pharmacies were not knowledgeable on Prescription Only Medicine and none was a pharmacist. Antibiotics was found to be the highest (74.7%) category of prescription only medication that was dispensed without prescriptions.

Conclusion: This study raises concern about common bad dispensing practices of private pharmacies in the Jinja district in dispensing POMs without prescription. It also revealed the lack of pharmacist in private pharmacies which was detrimental to health care delivery and a high proportion of irrational use of antibiotics since it was mostly purchased and dispensed without any prescription. Thus, there is an urgent need by the regulatory bodies to address these issues to improve dispensing practices in the private pharmacies.

Keywords: Prescription only medication, dispensing, irrational use, pharmacies

A number of studies over the past couple of decades in developing countries have highlighted the abuse and irrational use as well as purchase and dispensing of certain drugs to be high and attribute this cause to certain practices in community and private pharmacies.¹ The World Health Organization in 1999 published a document prepared on Good Pharmacy Practice (GPP) by the International Pharmaceutical Federation to aid pharmacist in their line of work since they are essential constituent of Primary health care.² This was a major mark in curbing and solving some of the issues associated with dispensing practices from these service providers, yet the problem seems to persist.

In Uganda, like many developing countries, natives rely more on private and community pharmacies due to flexible opening hours, expediency as compared to public ones, shorter queues or waiting time, cheaper services as well as proximity.³ Studies have shown these private pharmacies are culpable and complicit in dispensing prescription-only medications (POM's) even when consumers present them with none. This can result in adverse drug reaction, allergic reactions, drug resistance and unproductive treatments which is a public health concern.⁴

Issues such as poor dispensing practices account partly for the global phenomenon of irrational use of drugs which is a global public health concern. WHO reports that more than 50% of all drugs are prescribed, dispensed or sold inappropriately, while 50% of patients imperfectly use them.⁵ In a study conducted on some pharmacies in Kampala, the capital of Uganda, only 14.5% of consumers acquired drugs on prescription, 56.7% had both prescription and non-prescription medicines for self-medication and 22.4% came to receive treatment initiated by the pharmaceutical service provider.⁶ In some studies, the increasing nature of this phenomenon of dispensing POM's has been linked to non-professionals or non-pharmacists who operate these community and private pharmacies which is inimical to healthcare delivery.⁷

Despite the passing of the National Drug Policy and Authority Act 1993 (Chapter 206) in Uganda,⁸ which clearly specifies which drugs are not to be dispensed without prescription, private pharmacies in a district, Jinja still dispense POM's without prescription. Even though there is no documentation, reports by the district health plan of 2010/2011 indicated more than half of clients to private pharmacies buy medications without prescriptions. Thus, one can envisage the level of irrational use of drugs in Jinja, Uganda.

This study aimed at assessing dispensing practices on prescription only medicine in private pharmacies in Jinja district, Uganda and reasons why clients/patients seek medicines without prescription, determine the main categories of prescription medicines dispensed without a prescription and find out the proportion of dispensers with knowledge on Prescription Only Medicines (POM) and dispensing guidelines.

MATERIALS/METHODS

Design and Setting

This cross sectional survey was conducted in and around Jinja municipality in Jinja district, located in south eastern Uganda, 80 Km from Kampala the capital of Uganda from January to July 2017. The study population was private pharmacies and the study unit was dispensers and their clients.

Sample size and sampling procedure

Thirteen pharmacies out of the list obtained from the district health inspector were selected randomly and included in the study. From each of these pharmacies two dispensing staff

was interviewed and clients were selected periodically, where every third client from the pharmacy was interviewed.

The Kish Leslie formula⁹ was used for survey sampling to calculate a required sample size which was 384; however a sample of 436 pharmacy clients participated in the study to cater for non-responses and other errors as well as 23 dispensing staff.

INSTRUMENTS AND INSTRUMENTATION

Ten research assistants were recruited and trained on administering questionnaires, correct recording of responses from interviews and on data collection methods. One criteria for selection as a research assistant was the ability of having knowledge of both the English language and the local language in Jinja, “Lusoga”.

The questionnaire was pre-tested through piloting among some selected pharmacies and clients not part of the study and feedback from the piloting was used to modify some of the questions and options. The refined questionnaire for the conduct of the field survey covered: 1) socio-demographics of the clients; 2) clients with prescriptions to purchase medications; 3) reasons for clients purchasing medicines without prescription; 4) the cadre of pharmacy health workers; 5) Dispensers with knowledge on prescription only medications; 6) reasons for dispensing POM's without prescription; 5) categories of POM's dispensed without prescriptions.

For each of the selected pharmacies, two research assistants were implored to collect data with one observing and interviewing the dispenser and the other engaging the clients after purchasing their medication. Data was collected within five days and mostly the researchers were deployed to the pharmacies during peak business hours in the morning from 9:30 am- 12:00am and evening

around 4:30-9:00pm with close supervision by the researchers. Consent was sought from each of the participants before engaging them in either the questionnaires or interviews with their identities remaining anonymous.

Approval was obtained from Higher Degrees Research and Ethics Committee at Makerere University School of Public Health, Uganda, before commencement of the study and the survey data was entered and processed using EpiData version 3.02. A separate file was exported to SPSS statistic 17.0 program for descriptive analysis of all variables.

RESULTS

More than a half, 56.2% (245/436) of the respondents were males. Majority of the respondents were above 25 years (62.2%). Most 52.8% (230/436) of the respondents purchased the drug category “prescription only medicines”. The distribution of the socio demographic characteristics are depicted in Table 1 below

Table 1: Socio-demographic characteristics of respondents (N= 436)

Variable	Frequency (N=436)	Percent (%)
Age		
15 - 25year	165	37.8
Above 25 years	271	62.2
Sex		
Male	245	56.2

Female	191	43.8
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Education

No education	32	7.3
Primary	80	18.3
O – level	96	22
A – level	125	28.7
Tertiary	103	23.6

Religion

Catholic	93	21.3
Muslim	121	27.8
Seventh day Adventists	21	4.8
Protestant	103	23.6
Born again	98	22.5

Occupation

Peasant/farmer	92	21.1
92		
Civil servant	79	18.8
Business person	190	43.3
Student	48	11
Other	27	6.2

Drug category

Over the counter	206	47.2
Prescription only medicines	230	52.8

Prescribed medicines

No	237	54.4
Yes	199	45.6

Presented prescription

No	244	56
Yes	192	44

Figure 1: Proportion of clients that acquired prescription only medicines without prescription (n=230)

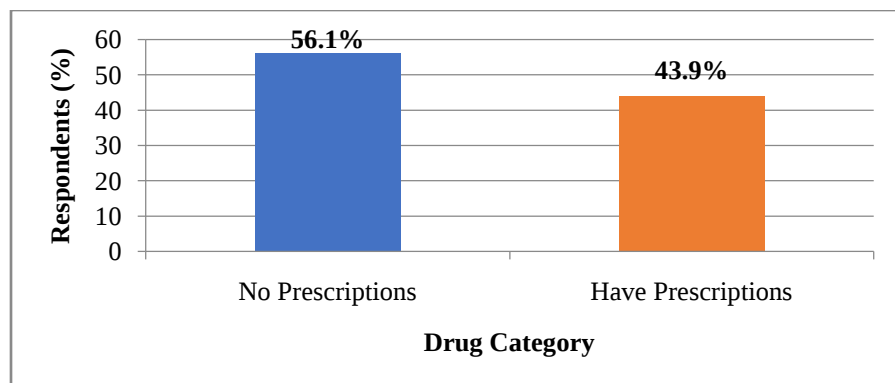
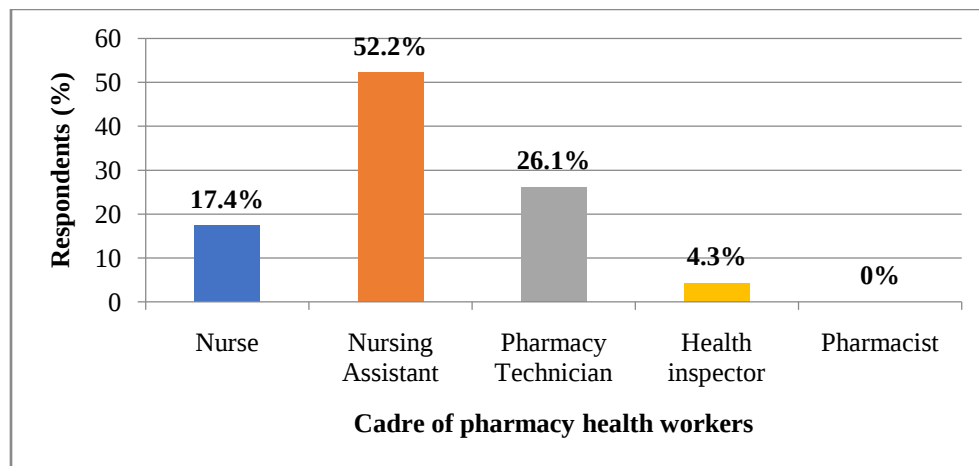


Figure 1 above depicts the respondents that acquired prescription only medicines, out of which 56.1% (95% CI 47.5 - 64.7) had no prescriptions and 43.9% (95% CI 34.2 - 53.6) had Prescriptions. These findings are statistically significant since all these confidence intervals do not include one.

Figure 2: Cadre of pharmacy health workers (N=23)

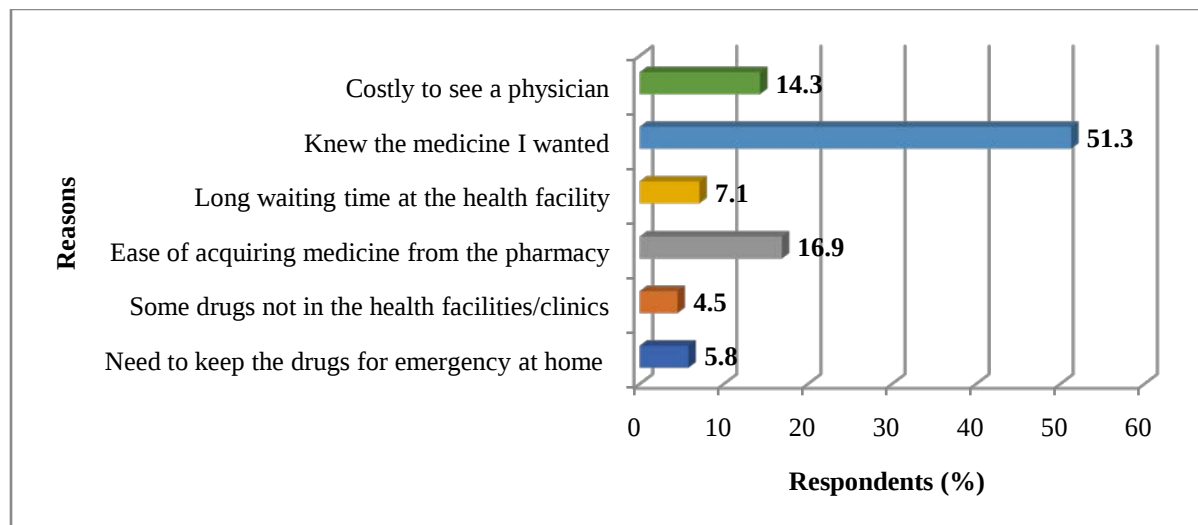


From figure 2, more than a half, 52.2% (12/23) of the respondents were nursing assistants, 26.1% (6/23) were pharmacy technicians, 17.4% (4/23) were nurses, and 4.3% (1/23) were health inspector and zero pharmacists. The study findings also revealed that most of the supervising pharmacists 52.2% visited the pharmacy premises only twice a month, 21.7% once and 17.4% thrice a month.

Proportion of dispensers with knowledge on Prescription Only Medicines

Most of the dispensers 91.3 % (21/23) were not knowledgeable on Prescription Only Medicines. No pharmacy had dispensing guidelines. None of the dispensers knew any dispensing guideline.

Figure 3: Reasons why clients/patients seek medicines without prescriptions



From fig 3 above, 51.3% of the respondents knew the medicine they wanted, the ease of acquiring medicine from the pharmacies was (16.93%) and drug stock out at health facility (4.50%) were the reasons mentioned by patients/clients for self-medication.

Table 2: Main categories of prescription only medicines dispensed without a prescription (n=190)

Main Prescription category	Frequency n=190	Percentage (%)
Antibiotics	142	74.7
Hypertensive	18	9.5
Antidiabetic	5	2.6
Injectable	3	1.6
Steroids	7	3.7
Sedative	15	7.9

Table 2 shows the main categories of prescription only medicines dispensed without a prescription with Antibiotics being the highest 74.7% (142/190) and injectables 1.6% (3/190) the lowest.

Table 3: Reasons for dispensing Prescription Only Medicines without Prescription (n=64)

Variable	Frequency (n=64)	Percentage (%)
Discrepancy between prescribed and available drugs	13	20.31
clients' demand	18	28.13
Need to survive in the market	9	14.06
Need to satisfy our clients	9	14.06
Type of medicine needed	6	9.38
some drug are not prescribed	6	9.38
Need to make profits	3	4.69

Table 3 shows clients' demand (28.13%) as the highest reason and need to make profits as the lowest (4.69%) in terms of reasons why dispensers sold prescription only medicines without prescription.

DISCUSSION

Due to the substantial outreach of private pharmacies to natives, they are visited more often by greater majority and serves as a critical and pivotal point for primary health care than the government or public health care units. Dispensers in these private pharmacies then tend to play a major service in health care delivery for which any mistake or negligence of proper dispensing practices will have dire consequences on patients or people patronizing drugs from them which overall will affect health care delivery.

Patients that seek for prescription medicines without a prescription

More than half (56.1%) of the respondents acquired prescription only medications without any prescription from a certified physician or personnel. This study is in line with works done by Kagashe et al., 2011¹ in Dar-es-salaam, Tanzania where findings was that, more than half of clients at private pharmacies requested POMs and that in their study majority of medicines dispensed in these pharmacies are upon request by customers or recommendation by dispensers. This shows a similar trend in dispensing practices in private pharmacies between these two countries all located in East Africa and is a major challenge and impediment to health care delivery. This phenomenon is likely to be one occurring in developing countries; in a study conducted in Bengaluru, India, it was also observed that a high proportion (45%) of individuals purchased and were dispensed POMs without prescription.² Studies from Hanoi in Vietnam and other Asian countries also indicates no regard for prescription for POMs by private pharmacies.¹⁰ Convenience as well as shorter time or period at such private pharmacies could account for the pattern seen in this study.

Reasons for dispensing POMs without prescription

The reasons such as demand from clients, discrepancy between prescribed and available drugs, market survival as responses from the dispensers for issuing out prescription only medicines without prescription is consistent with documented responses from a study done in Kampala district in Uganda.¹¹ The instance of dispensing POMs by private pharmacies without prescription to clients was attributed to sales and profit needs by operators of these pharmacies. This can be explained due to competition by other pharmacies hence not following dispensing regulations or practices in order not to lose their clients. These clients when denied will move to other pharmacy and purchase hence a loss to the earlier private facility. Hussain & Ibrahim in 2011 indicated from

their study how private pharmacy operations were more business-oriented than health-service oriented¹² and this is the bane for the manner of practice seen from this study.

Dispensers with knowledge on Prescription only medicines and dispensing guidelines

The findings from this study revealed that 91.3% (21/23) of the dispensers in these private pharmacies were not knowledgeable on Prescription Only Medicine. This worrying revelation was in synchrony with studies carried out in developing countries and low income countries like Nepal, Pakistan, Sri Lanka and India. This result is not surprising looking at the results obtained from the qualification of the dispensers, where none of them was a pharmacist out of the 23 interviewed. Same was the findings found in many Asian countries where despite legal requirement to have registered pharmacist on duty all times, pharmacies were operated by unauthorized staff.⁷

Main categories of prescription only medicines dispensed without a prescription.

Antibiotics was found to be the highest category of prescription only medication that was dispensed without prescriptions. In another study that was done in Kampala, Uganda, results also indicated antibiotics to be one of the highly dispensed POMs without prescription.⁶ Same results was obtained in Nepal where two-thirds of cases observed had dispensing staff of pharmacies providing antibiotics without a prescription.⁷ Majority of studies in developing countries and middle income countries has also indicated antibiotics amongst the highest category of Prescription Only Medication dispensed without prescriptions by private pharmacies.

Having used same medications by many of the clients after earlier prescriptions, client tend to purchase same drugs without prescription to treat similar symptoms. They also stated the ease of not joining long queues and waiting longer in public health facilities as well as non payment of

consultations fees before diagnosis on same or similar condition as a reason for visiting private pharmacies and this was similar to studies done in Amman, Jordan.¹³

Conclusion

The findings suggest the status of private pharmacies in Jinja is unacceptable in terms of good dispensing practices with higher proportions of Prescription Only Medications being dispensed without prescription. The lack of professionally trained attendants or pharmacist coupled with lack of knowledge on POMs by the dispensers at the private pharmacies is contributing to the irrational dispensing of drugs hence crucial to health care delivery in Jinja Municipality. The study also raises concerns about the irrational use of antibiotics by natives in Jinja since these drugs are dispensed without prescriptions by the poor dispensing practices from private pharmacies which could threaten future treatments outcomes resulting in conditions of resistance to antibiotics. The Government and concerned authorities in Jinja Municipality, Uganda needs to adopt strict strategies to monitor the dispensing practices of most of these private pharmacies as well as organize educational programs to inform natives about the need to have prescription for certain medications. It is also recommended that the government conduct further studies in all districts in the country to assess the magnitude of dispensing practices in pharmacies.

Declaration of Conflicting Interests

The author(s) declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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