



NPM: Quality of advice provided in pharmacies and parapharmacies



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Background

As the consumption of non-prescription medicines (NPM) increases, the need to guarantee high quality counselling becomes more important to ensure the responsible use of medicines^[1]. In Portugal, NPM are available in pharmacies and in drug stores since 2005. The presence of a pharmacist is compulsory at all times in pharmacies^[2], unlike drug stores which can be remotely supervised^[3]. In a number of countries parapharmacies are commonly referred as drug stores and those may not sell PM. Therefore, it becomes relevant to evaluate the performance of health care professionals in these two locations^[4].

Objectives

This study aimed at evaluating the quality of advice when dispensing non-prescription medicines (NPM) in pharmacies and drug stores. This evaluation took into account: the quality of the **initial patient assessment**; the quality of the **therapeutic decision** (considering effectiveness, safety and necessity); and the quality of **transmission of information** upon medicine dispensing.

Methods

A covert observational cross-sectional study was used, through mystery shopping technique. Two scenarios were designed:

1

Direct product request of emergency oral contraception (EOC) for personal use



2

Direct product request of an NSAID (aspirin) for a grand-mother



The two scenarios were designed so that ideally, pharmacists or technicians would identify that the client did not have an indication for EOC, as she had forgotten to take one of the placebo pills of her contraception, in the first scenario, and the client's grandmother was taking a potentially unsafe drug to be taken together with the NSAID (warfarin)^[5], in the second scenario .

Two target groups were set: pharmacies (n=30) and drug stores (n=30). The performance of health professionals was measured through an evaluation grid, developed based on the Good Pharmacy Practice National Standards^[6]. The mystery shopper memorized the encounter and registered all after leaving the site. The possible scores ranged from 0 to 17 in scenario 1 and from 0 to 20 in scenario 2. The results were analyzed using the version 24.0 of SPSS for Windows, using independent samples Student T test and Mann-Whitney test, considering a 5% significance level.

Discussion and Conclusions

This study suggests that the performance in pharmacies is better than in drug stores, although it is necessary to develop larger studies to confirm these data given its innovative nature. Representative organisations should play a more active role in the implementation of counselling protocols that ensure a higher quality of performance. Aspirin and levonogestrel are classified as NMP in Portugal, rather than pharmacy-only, as in other EU countries. This suggests a revision of classification could be useful^[7]. In future studies, the grid should be further tested and improved, a limitation of the current study.

References

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Results

A total of 120 visits were made.

Figure 1 – Comparison of proportion of correctly solved scenarios in the 2 sites

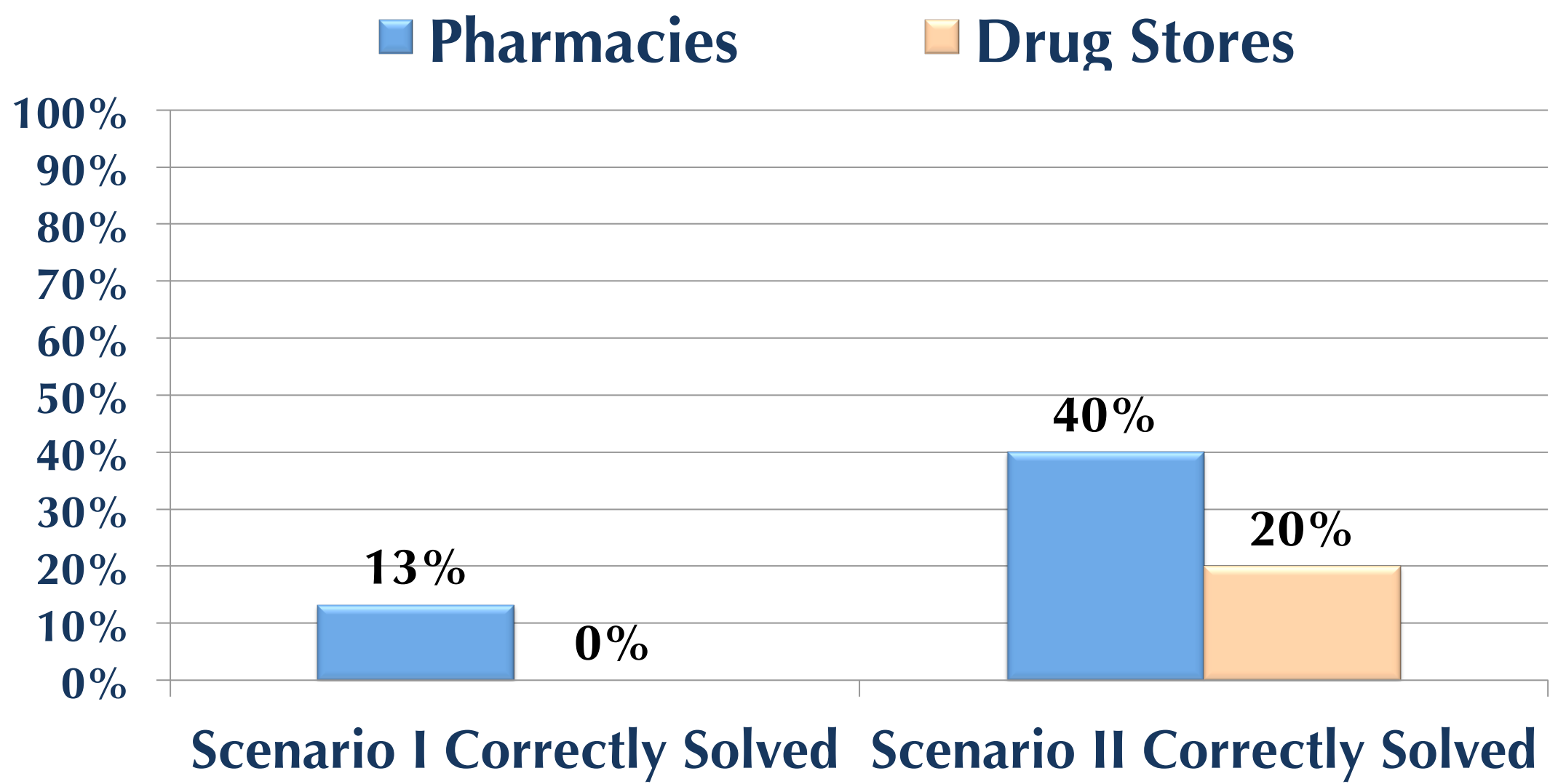


Table 1– Comparison of overall performance within setting by scenario

Group	Overall Performance Scenario I	Overall Performance Scenario II	p ¹
Pharmacies	5,03 (σ= 4,06)	5,53 (σ= 5,90)	0,657
Drug Stores	1,55 (σ= 1,07)	2,37 (σ= 4,43)	0,119

¹T-Student Test for the paired sample

Data shows that within each setting, the performance was similar, regardless of the scenario presented (p>0.05).

Table 2 – Comparison of performance in the EOC scenario by setting

Section	Pharmacies (n=30)	Drug Stores (n=11)	p ¹
Initial patient assessment (section I)	3,10 (σ= 2,49)	1,09 (σ= 0,97)	0,017
Therapeutic decision (section II)	0,80 (σ= 2,07)	0,0 (σ= 0,0)	0,208
Transmission of information (section III)	2,17 (σ= 1,91)	0,82 (σ=1,08)	0,034
Overall	5,03 (σ= 4,06)	1,55 (σ=1,57)	0,010

¹Mann-Whitney Test

For the EOC scenario, pharmacies perfomed significantly better performance than drug stores, overall and in sections 1 and 3 of the assessment (p <0.05).

Table 3 – Comparison of performance in the NSAID scenario by setting

Section	Pharmacies (n=30)	Drug Stores (n=30)	p ¹
Initial patient assessment (section I)	1,10 (σ= 1,09)	0,40 (σ= 0,67)	0.208
Therapeutic decision (section II)	3,60 (σ= 4,48)	1,50 (σ= 3,13)	0.549
Transmission of information (section III)	0,83 (σ= 1,02)	0,17 (σ=0,38)	0.022
Overall	5,53 (σ= 5,90)	2,37 (σ=4,43)	0.512

¹Independent samples Students’ T-test; ² Kolmogorov-Smirnov distribution (σ = 0,000)

There was a trend for a better performance of pharmacies in the NSAID scenario, albeit only significant in section III, *i.e.*, information provision (p <0.05).