

Outcomes evaluation on providing adherence consultation service by community pharmacists in Taiwan

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Backgrounds/Purpose

- Usually, after dispensing pharmacist may provide pharmaceutical advise for 1~2 minutes, however, the effect is questionable due to such a short counseling. To improve the adherence of patients' drug taking behavior, it is hoped that the pharmacists could provide 15~20 minutes adherence consultation service.
- The aim of this study was to build the model of and evaluate the effectiveness of professional adherence consultation service provided by pharmacist after dispensing.

Methods

- The practice model of adherence consultation service was developed by the Taiwan Pharmacist Association (TPA) with five open-ended questions be asked for each drug patient is taken to induce more description by the patient on their knowledge and drug taking behaviors at home.
- Community pharmacists were recruited after an 8-hour training program to conduct the service and every responses from the patients should be recorded in the computerized documentation system developed by TPA.
- Patients who take refill prescription to be dispensed in the community pharmacy can be recruited in the study.
- Taiwan FDA provides research funding to pay pharmacists NT\$200 per service provided.

Results

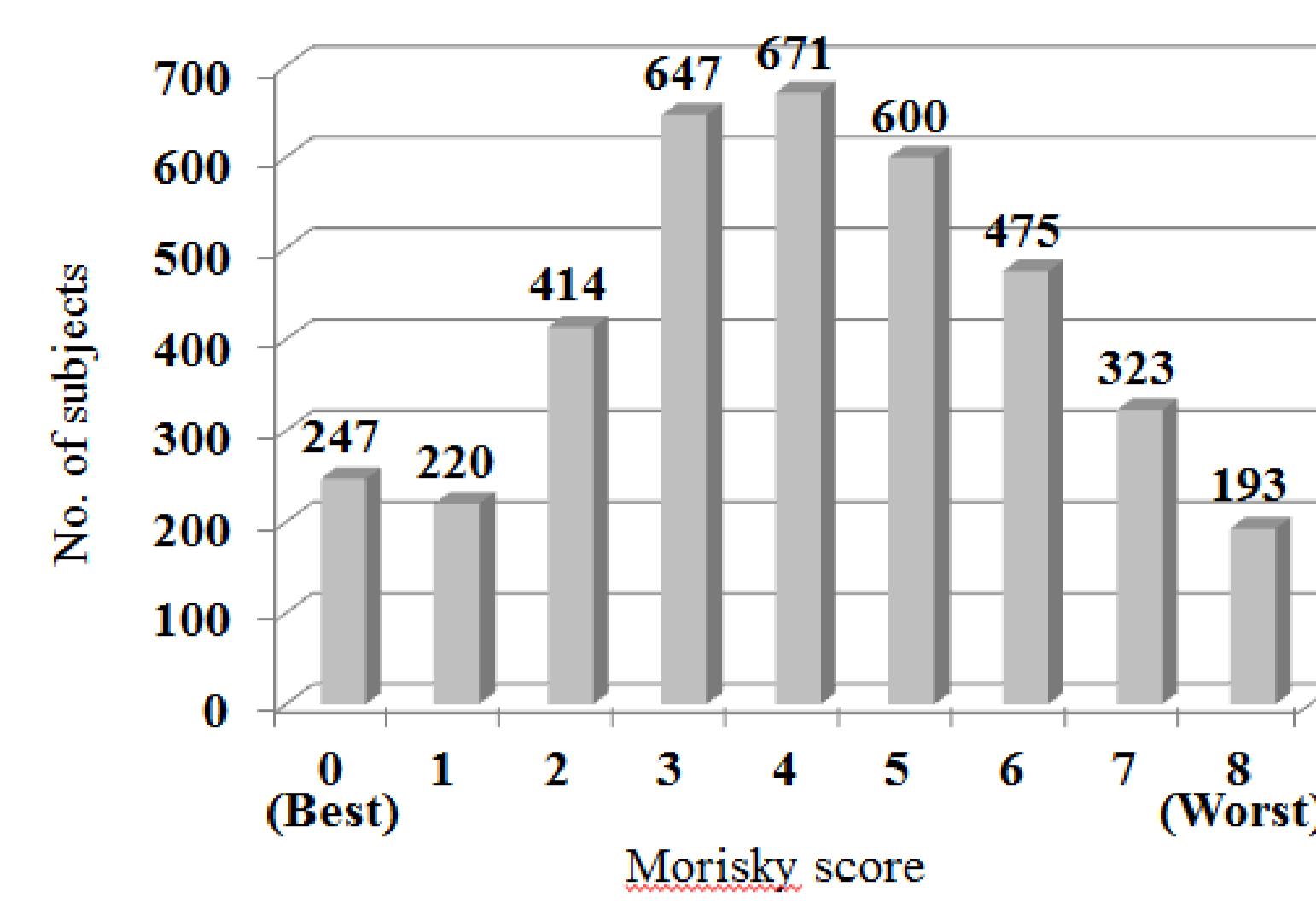
Total of 275 pharmacists participated in this study with 3,790 patients received adherence consultation service. In average, pharmacist spends 28 minutes for a service. Total of 15,929 medications were consulted, 82.2% of which required pharmacists to give correct information because patient do not know or with wrong behavior. Around 76.3% of the patients do not know what the drug is for, 77.5% took the drug at wrong time or wrong dosage, 47.3% took the dosage form incorrectly, 79.4% do not know the side effects, and 80.7% need more necessary drug information.

Conclusion

The face-to-face consultation could identify the knowledge gap and incorrect behavior of the patients taking their medications. By identify problems and resolve the problems, pharmacist could be a useful source of professional service at the community setting to increase adherence of the drug therapy and to satisfy patients' needs.

Table 1. Demographic characteristics of the patients

Variable	N=3,790	%
Gender		
Male	1,933	51.0%
Female	1,857	49.0%
Age (Mean±SD)	64.8±14.6	
Male	64.6±14.6	
Female	65.0±14.6	
Age (years> 65)	1,961	51.7%
Male	941	48.0%
Female	1,020	52.0%
Number of drugs		
1~4	2,072	54.7%
5~9	1,664	43.9%
≥ 10	54	1.4%
Consultation time		
<10 mins	337	8.9%
11~40 mins	2,994	79.9%
>40 mins	459	11.2%



Level of patients' medication adherence	n(%)
Low adherence (>2)	2,909 (76.8)
Middle adherence (1-2)	634 (16.7)
High adherence (=0)	247 (6.5)

Figure 1. Distribution of patients' Morisky score representing medication adherence

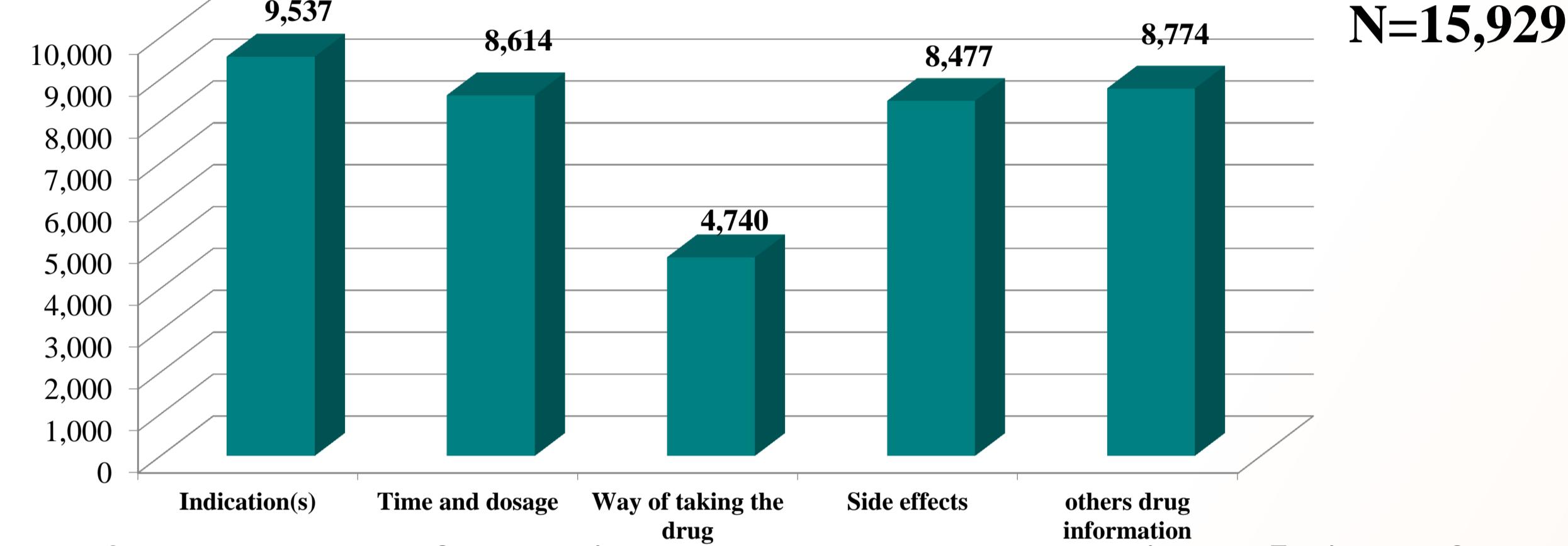


Figure 2. The number of educations conducted by pharmacist on 5 kinds of open-ended questions for each and every drugs patient is taking. Whatever patient's response is wrong or do not know, pharmacist should educate the correct information to the patient.

Around 76.3% of the patients do not know the indication of the drugs

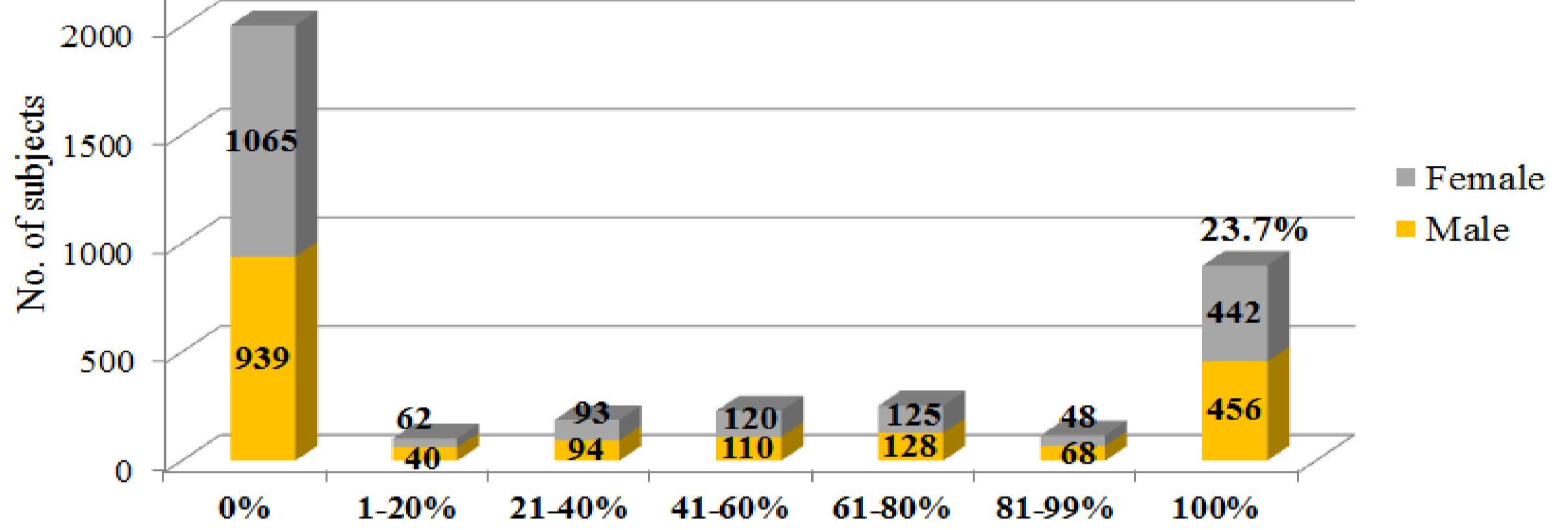


Figure 3. Degree of knowing the Indication of the drugs
=(number of drugs which indications was known by patients ÷ number of drugs taken by the patients)*100%

Around 77.5% of the patients took their drug with wrong time or wrong dosage

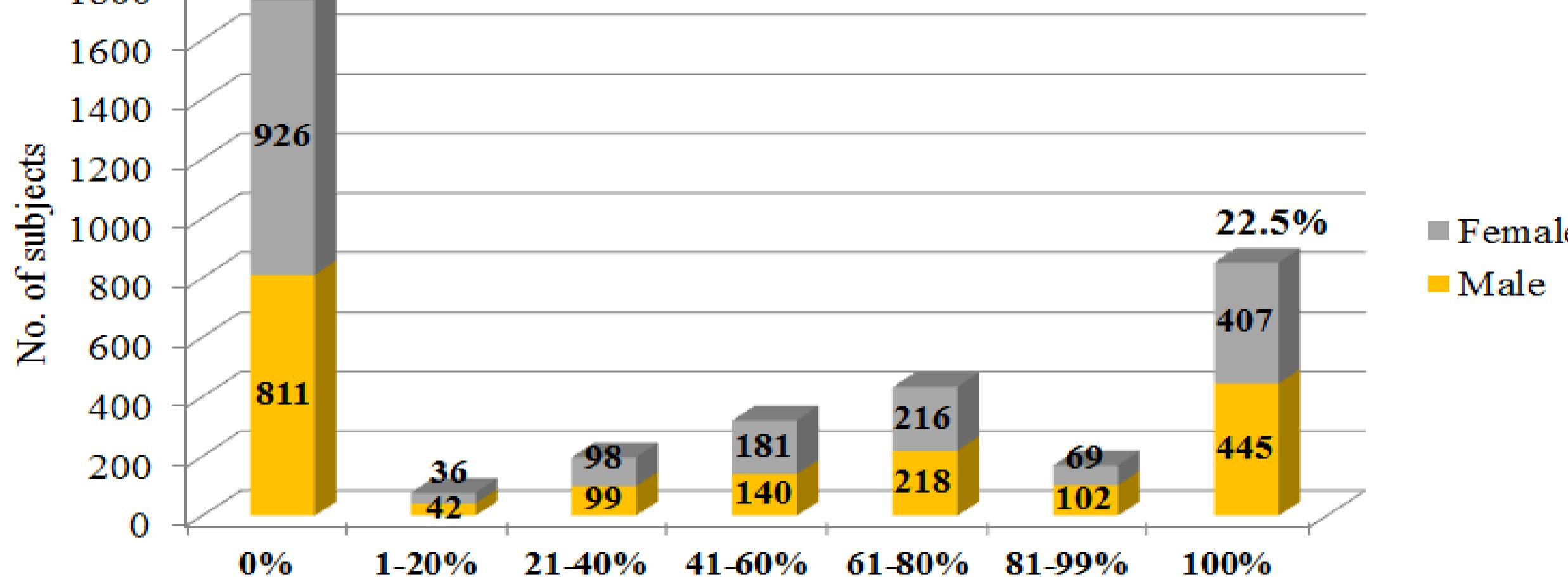


Figure4. Degree of knowing their drugs - Timing of administration and dosage
=(number of drugs when to take the drug and dosage was known by patients ÷ number of drugs taken by patients)*100%

Around 47.3% of the patients use the wrong way of taking the drug

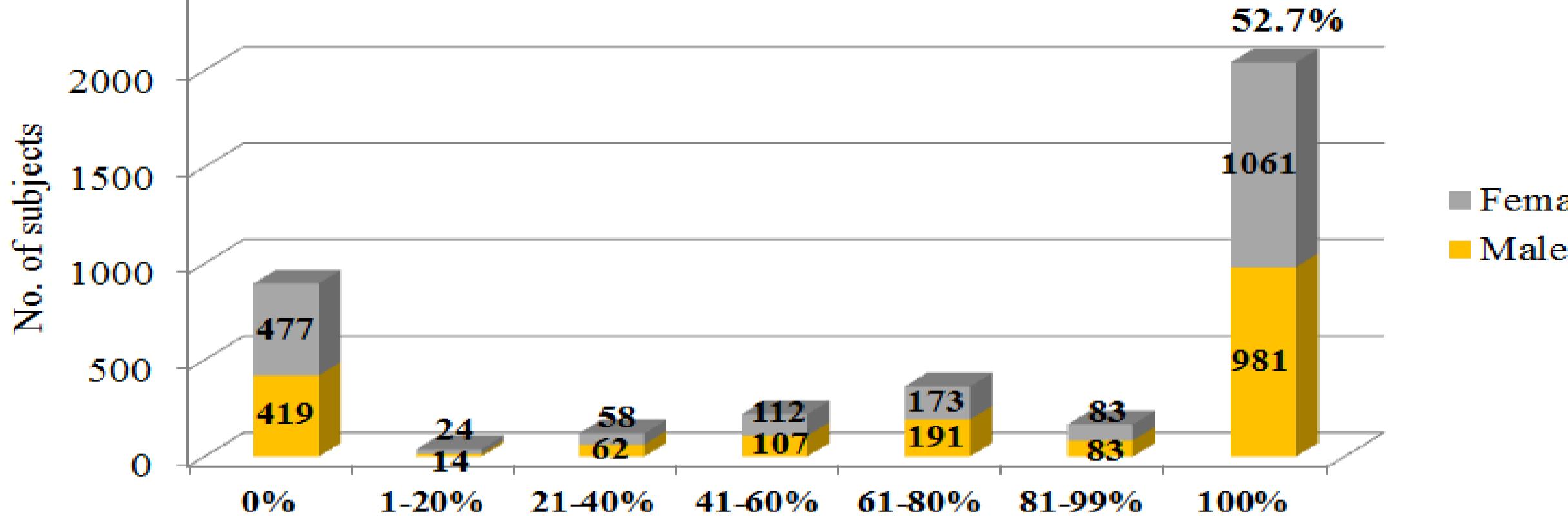


Figure5. Degree of knowing the correct way of using the drug dosage forms
=(number of drugs using the correct way of taking it by patients ÷ number of drugs taken by patients)*100%

Around 79.4% of the patients do not know the side effects

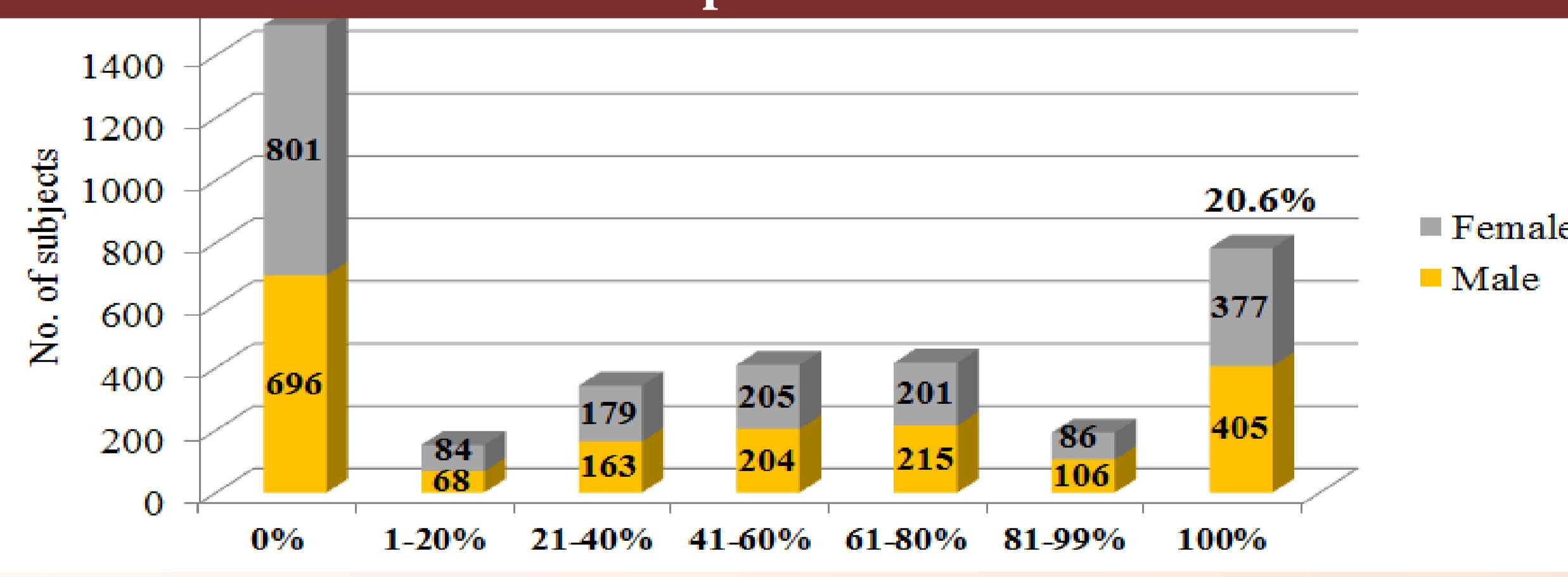


Figure6. Degree of knowing their drugs - Side effects
=(number of drugs which side effects was known by patients ÷ number of drugs taken by patients)*100%

Around 80.7% of the patients need more necessary drug information

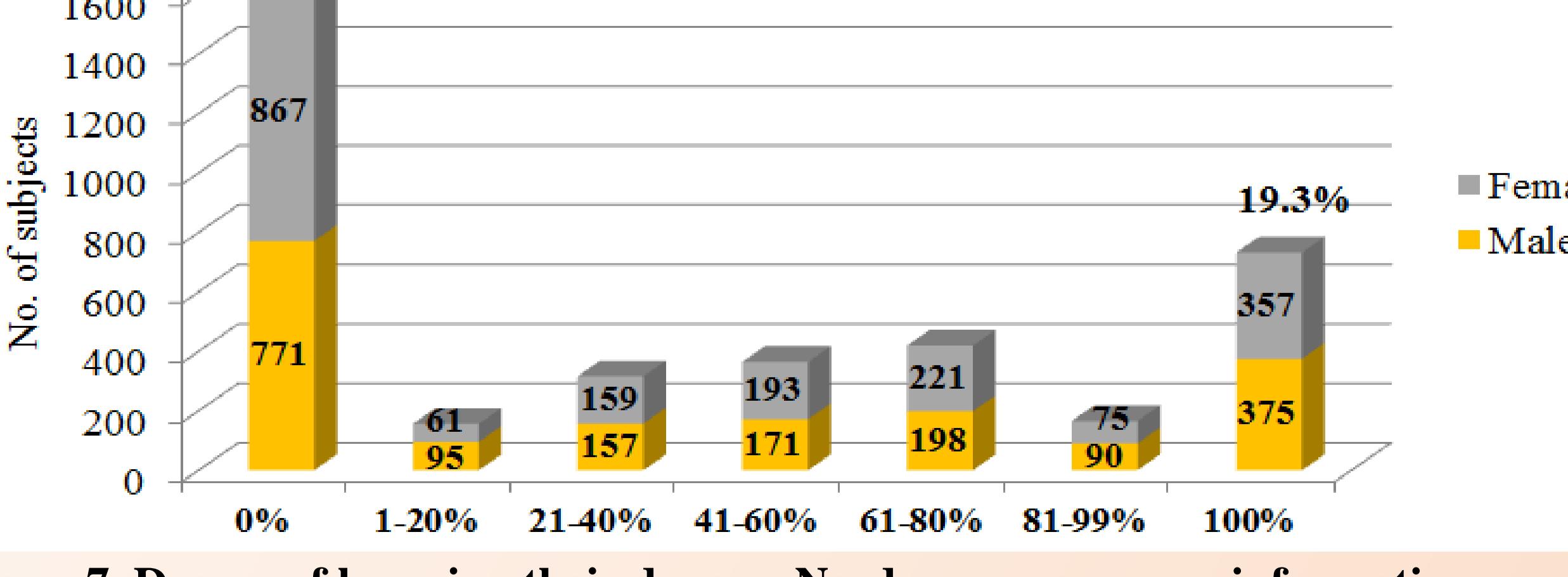


Figure7. Degree of knowing their drugs – Need more necessary information
=(number of drugs which necessary information was known by patients ÷ number of drugs taken by patients)*100%