How community pharmacists prioritize cognitive pharmaceutical services

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ABSTRACT

Introduction: There is broad consensus that community pharmacists should focus on the provision of pharmaceutical care. Studies, however, have shown that community pharmacists still spend a considerable amount of time on traditional activities such as dispensing instead of cognitive pharmaceutical services (CPS). It is not clear whether community pharmacists prefer their current time-utilization or if they are willing to spend more time on CPS.

Aim: The aim of this study was to identify how community pharmacists ideally would prioritize CPS compared to other daily activities.

Methods: A cross-sectional study design with Q-methodology was used to identify different viewpoints regarding task prioritization. Community pharmacists were asked to rank a total of 48 daily activities. Data was collected online using FlashQ©. Q-sorts were analyzed by principal component factor analysis and varimax rotation using PQmethod 2.35.

Results: In total, 166 community pharmacists participated in this study. Three distinguishing groups were found based on task prioritization explaining 59% of the total variance among respondents. All groups ranked the provision of CPS as important, in differing degrees. Group 1 ranked CPS as most important and was also the group that contained most participants. Group 2 and 3 ranked quality assurance as most important with CPS as second. Logistics and pharmacy management were ranked low by all groups.

Discussion and conclusion: Community pharmacists rank the provision of CPS as important. So factors, probably other than task prioritization, are keeping the pharmacist from focusing on CPS in daily practice. In other studies, time constraints are mostly mentioned as major barrier. Activities such as logistics and pharmacy management are given less priority and should be delegated to supporting staff members as much as possible, to enable pharmacists to focus their available time on activities they deem important.

Introduction

The role of the community pharmacist is shifting from traditional 'product centered' activities, such as compounding and dispensing, to a more 'patient centered' approach by providing cognitive pharmaceutical services (CPS) such as medication review and discharge counselling. Due to the ageing population and the increasing complexity of drug therapy, policy makers and professional bodies are of the opinion that this shift to CPS is necessary to maintain a sustainable healthcare system.[1]

In the past 20 years, time utilization by community pharmacists has been studied multiple times in different countries. These studies generally show that community pharmacists spend a considerable amount

of time on logistics and pharmacy management and are therefore less capable of focusing the available time on CPS. There seems to be limited change in community pharmacists time-utilization over the past years.[2–13]

Competing activities hamper the community pharmacist in the provision of CPS. This is emphasized by studies that aimed to introduce care related services in the community pharmacy setting. Pharmacists frequently complained about a lack of time to adequately implement these new services in their daily routine.[1,14–17]

The aforementioned studies gave insight in the actual time utilization, but most lack information about the preferences of community pharmacists regarding the amount of time spent on CPS.

An important driver for time utilization in daily practice may be

how community pharmacists ideally prioritize their daily activities.

Therefore, the primary aim of this study was to identify how community pharmacists ideally would prioritize CPS compared to other daily recurring activities in the community pharmacy setting. Also, this study aimed to identify potential differences in task prioritization between community pharmacists.

Methods

Study design and population

A cross-sectional study design with Q-methodology was used to identify different viewpoints regarding task prioritization in community pharmacy practice. Q-methodology, developed in the 1930's, is useful to study both agreement and diverging opinions among participants[18,19] and has been used in several other studies.[20,21] By using Q-methodology it is possible to identify both shared understandings and diverging opinions about a certain subject. Other than Likert-scale questionnaires, Q-methodology forces the participant to rank statements.[19]

Practicing community pharmacists from the Utrecht Pharmacy Practice network for Education and Research (UPPER) network were invited by e-mail. Approximately 65% (1295 out of 2000) of all Dutch community pharmacies is affiliated with the UPPER network.[22]

A random sample of 100 pharmacies were additionally contacted by phone (JvdP). In order to increase attention for the study an item was published in the UPPER newsletter and on the website of The Royal Dutch Pharmacists Association (KNMP).

Development of Q-set

Q-methodology consists of several steps. The first step is the construction of the Q-set. A Q-set consists of multiple statements regarding a specific subject. Specifically for this study, potential activities of community pharmacists, rather than statements were presented. The activities considered for this Q-study were based on a previous time-utilization research in which actual time-utilization in daily practice was obtained.[13] It was deliberately aimed to have a balanced set of traditional and more innovative activities. In total 61 activities were defined.

These 61 activities were reviewed by a panel of ten practicing community pharmacists. Activities were rated based on whether they were performed on a daily, weekly or monthly basis and checked if activities were clearly written. Based on the feedback provided by the panel, 13 activities were discarded because they were deemed not relevant or not practiced on a regular basis. Activities were reformulated if the panel did not deem the activity clearly written. The remaining 48 activities were divided into 5 different categories: Cognitive pharmaceutical services (CPS; 17), logistics (L; 12), Pharmacy management (PM; 10), quality assurance (QA; 6) and other (O; 3).

The list of the 61 starting activities and final 48 activities can be found in appendix B.

Data collection: Q-sorting by the participants

The next step in Q-methodology is Q-sorting. Participants were asked to rank the importance of certain activities that they could perform in community pharmacy practice. When ranking the activities, participants were explicitly asked to rank the importance of these activities regarding their role as a pharmacist and not taking the current restrictions and possibilities from daily practice into account. Participants were first asked to categorize the 48 activities as "important", "neutral" or "not important". Next, participants were asked to place the activities in the Q-grid (see Fig. 1). Participants were obliged to adhere to the Q-grid. This forced them to carefully consider the position of every activity. Participants used the online software program FlashQ©, which takes participants through the Q-sorting process step by step in order to facilitate the Q-sorting process.[23]

Data analysis

Factor analysis was used to identify correlation between participants with similar task prioritization. A group of participating pharmacists that correlate regarding task prioritization is called a factor.[24] A factor can be seen as a group of individuals that share a common understanding regarding the prioritization of the activities. However, for sake of readability, a factor will be called a group. Factor analysis can also render a subset of individuals that do not belong to any group. The number of factors/groups found is based on the amount of variance they explain.

Analysis of the Q-sorts was performed using PQmethod 2.35 software.[25] Principal component factor analysis (PCFA) and varimax rotation were used to obtain the least amount of groups that explain the most of the variance. This approach renders factors/groups that can be statistically explained instead of allowing the researcher to influence the dataset to obtain certain groups.[19]

Idealized Q-sorts were constructed for each group. These Q-sorts give insight in how a typical participant within this group would rank the 48 activities. Activities were considered important when they were ranked from +1 to +4, not important when ranked −1 to −4 and neutral when ranked as 0. Descriptive statistics were used to define each group based on their task prioritization and background characteristics of the participants.

Results

Study population

A total of 166 community pharmacists participated in this study. Baseline characteristics are shown in Table 1 and are representative for the overall population of Dutch community pharmacists.[26] In total, 148 out of 166 pharmacists were included in three different groups (Table 2). Appendix A shows detailed background information of the participants in the different groups.

Q-analysis of the Q-sorts supported seven groups in total. Only three groups were chosen as the most desirable solution. These three groups cumulatively explained 59% of the variance in the dataset with a total of 148 of 166 participants included in one of these three groups. An analysis with 7 groups would explain only 11% of additional variance and the four additional groups contained less than 5 participants each.

Table 3 shows how a participant would rank the 48 activities when completely agreeing with one of the 3 groups. The activity groups are organized alphabetically.

Fig. 2 shows how typical pharmacists in the three groups ranked the activity groups.

All groups regard CPS as important (Q-grid score > 0). Group 1 ranks CPS as most important, while group 2 and 3 rank quality assurance as most important. Logistics and pharmacy management are both considered as not important (Q-grid score < 0) by all three groups.

The results show that participants have a shared understanding regarding some specific activities. All pharmacists give high priority to activities related to CPS, such as those that are associated with medication review (activity 41, 42 and 44). However, the pharmacists in group 2 and 3 rated a patient interview less important compared to the pharmacists in group 1. Quality assurance (QA) in the form of checking prescriptions and clinical risk management alerts (activity 47 and 48) are also considered important by all.

Some activities regarding Pharmacy management (PM) or logistics were considered not important by all participants, such as salary administration or stock taking.

Group 1 gives less priority to Pharmacy management (PM) and Quality assurance (QA) (Fig. 2). The differences in prioritization of PM are mostly due to differences in the ranking of activities considering personnel (activity 21) or financial management (activity 29 and 40).
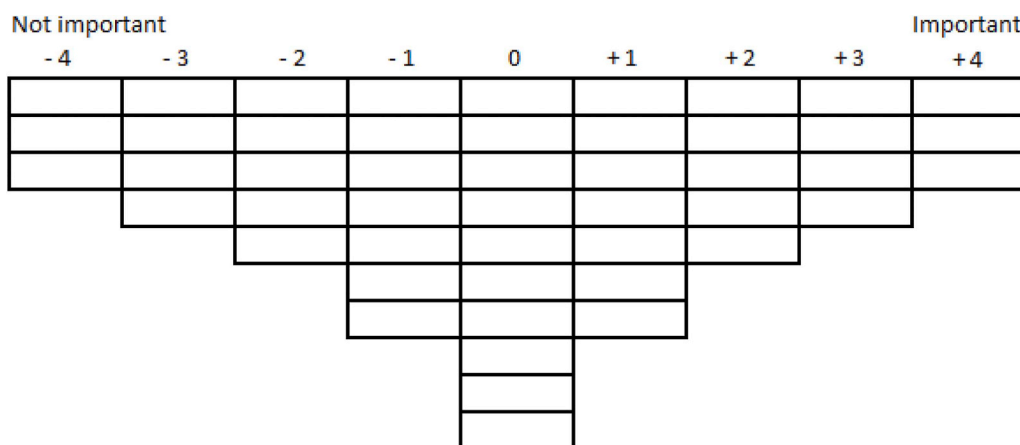
Fig. 1. Q-grid used to fill in the 48 activities.

Table 1
Characteristics of the participants.

Characteristic of the participants	Total population (N = 166)
Age, years (mean ± SD)	40.0 ± 10.7
Female gender, n (%)	103 (62.0%)
Working experience in years (mean ± SD)	13.5 ± 10.0
Type of pharmacist, n (%)	
• Resident and owner	33 (19.9%)
• Resident in paid employment	92 (55.4%)
• Non-resident in paid employment	41 (24.7%)
Working hours per week (mean ± SD)	37.0 ± 6.4
More than one pharmacist in the pharmacy, n (%)	107 (64.5%)

Table 2
Distribution of participants among the three defined groups.

Characteristic	Group		
	1	2	3
	N = 76	N = 27	N = 45
Explained variance (%)	29	12	18
Cumulative (%)	29	41	59
Correlation between groups	**1**	**2**	**3**
1	1.00	0.51	0.77
2	0.51	1.00	0.46
3	0.77	0.46	1.00

Discussion

Next to similarities in task prioritization, diverging preferences (differences in emphasis) can be found in task prioritization and thereby creating three distinguishable groups: "the CPS providing pharmacist" (group 1), "the logistics focused pharmacist" (group 2) and "the (quality) management focused pharmacist" (group 3). There is a fair amount of correlation between the groups. Correlation ranges from 0,46 (between group 2 and 3) to 0,77 (between group 1 and 3) [see Table 2]. This is illustrated by the fact that some activities are rated equally (un)important by all three groups.

All three groups perceived CPS as important, as all three groups ranked CPS activities on average more than zero. However, pharmacists who are part of group 1 give CPS a much higher priority, which is especially reflected in high prioritization of activities with direct patient contact such as a 'Patient interview for a medication review' (activity 41) and 'Counselling patients to improve medication adherence' (activity 13). Though Q-methodology is not designed to identify prevalence, it is notable to see that participants identify most frequently with group 1 (76 out of 166).

Based on Table 3, pharmacists who give higher priority to CPS, seem to be willing to save time on activities such as checking prescriptions and clinical risk management alerts. These are generally considered routine tasks of pharmacists. Pharmacists in group 2 and 3 still rate these activities as very important.

Based on these results, it seems that QA and PM compete with CPS over the priority given to them by the community pharmacists in this study. This is probably due to the fact that pharmacists also feel responsibility towards their traditional roles and are needed to run the pharmacy. This has several causes, one of them being that the pharmacy's revenue is heavily dependent on logistics and dispensing and not on the provision of CPS.[1]

This is partly in line with a review on consumer and pharmacists views on community pharmacy.[27] This review suggested that community pharmacists are positive about the provision of CPS, but consider these services secondary to traditional roles, such as dispensing.

In a recent focus group study, some pharmacists were still reluctant to relinquish their drug distribution role.[28] The current study suggests that community pharmacists generally rank logistics as an unimportant daily activity. Some pharmacists explained in the comments that logistics do not require the expertise of a pharmacist. In the Dutch situation, logistics is mostly handled by pharmacy assistants. This is consistent with the study of Schommer et al.[11] where also a decline in the amount of time that has to be spent on logistics is preferred.

Regarding pharmacy management, participating pharmacists state that some of these activities can be easily delegated to supporting staff members. This is consistent with an earlier study in which pharmacists prefer to spend less time on management than the actual time they are spending on this type of activity.[11]

Due to the perceived unimportance of PM and logistics by community pharmacists, it is important to investigate ways to delegate these activities. One example could be to delegate some managerial activities to a pharmacy technician or a store manager. This would save time for the community pharmacist which could be spent on CPS that is ranked important.[13]

The three groups differ in their prioritization of quality assurance (QA). Differences between group 1 and 3 regarding QA mostly come from the final checking of prescriptions (activity 47) and checking the clinical risk management alerts (activity 48). Some pharmacists in group 1 stated that they experience these activities as time consuming without having a clear added benefit and lacks visibility to both patients and other healthcare professionals. A possible welcome development for group 1 would be to delegate these activities (to a certain degree) to pharmacy technicians.[29] On the other hand, pharmacists belonging to group 3 state that they consider that these activities need

Table 3
Ranking of activities for a typical pharmacist within a group.

#	ACTIVITY	ACTIVITY GROUP	GROUP 1	GROUP 2	GROUP 3
2	Maintaining the local drug formulary	CPS	0*	−4*	0*
3	Diagnostics (e.g. blood pressure, glucose level or cholesterol levels)	CPS	−1*	−4	−4
5	Organizing an informational session for patients	CPS	0*	−4*	−1*
7	Having a leading role within the primary healthcare organization	CPS	2*	−3*	0*
9	Organize and start healthcare projects with other healthcare providers	CPS	3*	0*	2*
13	Counselling patients to improve medication adherence	CPS	2	1	0*
22	Providing advice on OTC products	CPS	0*	1*	−2*
28	Prepare and lead the pharmacotherapy quality circles between GP's and pharmacists	CPS	3	0*	2
33	Updating lab results in the patients' files	CPS	−1*	2*	−2*
34	Discharge counselling	CPS	2	2	0*
38	Counselling at first dispensing of a new medicine	CPS	1*	3*	−1*
41	Patient interview for a medication review	CPS	4*	2*	1*
42	Discussing the results from a medication review with the GP	CPS	4	4	4
43	Updating patient files	CPS	1	1	0
44	Analyzing the medication of a patient in light of a pharmacist-led medication review	CPS	4	3*	4
45	Checks and intervention based on clinical rules (e.g. stop start criteria)	CPS	1	2*	1
46	Clinical risk management of drug-drug and drug-disease interactions and other potential prescribing errors	CPS	3	4*	3
1	Stock taking	Logistics	−4	−3*	−4
17	Adjusting stock parameters based on sales	Logistics	−2	−2	0*
18	Adjusting stock to the preference of health insurance companies or to achieve optimal margins	Logistics	−2*	0	−1
27	Adjusting stock in computer based on stock taking	Logistics	−3	−1*	−3*
4	Compounding medicines	Logistics	−1	−2	−4*
6	Releasing a compounded drug	Logistics	0*	−1*	1*
14	Judging pharmacotherapeutic and pharmaceutical rationality of requested compounded drugs	Logistics	1	−2*	2
15[+]	Finding an alternative supplier in case of drug shortages	Logistics	−1	−2	−1
20	Filling prescriptions and checking filled prescriptions	Logistics	−2*	1*	−3*
24	Judging the need to repeat a prescription	Logistics	1*	0	0
36	Processing a prescription into the pharmacy information system	Logistics	−1*	2*	−2*
39	Dispensing a filled prescription to a patient	Logistics	0*	3*	−1*
10	Salary administration	PM	−3*	−3	−2
12	Looking for a refresher course for supporting pharmacy staff	PM	0*	−1*	0*
16[+]	Making a work schedule	PM	−2	−2	−2
19	Accounting	PM	−3*	−3	−3
21	Performance appraisal of supporting staff	PM	1*	0*	3*
23	Cashing out the cash register	PM	−4*	−1*	−3*
26	Checking financial indicators	PM	−1	−1	1*
29	Claiming provided medicine and care related activities at healthcare insurer	PM	−2*	1*	0*
32	Organizing a staff work meeting	PM	0*	1	1
40	Administrative tasks for patients (e.g. credit or cancelling an invoice)	PM	−3*	−1	−1
8	Perform and analyze the results from customer satisfaction research	QA	0	0	1*
11	Performing a prospective risk analysis	QA	0*	−1*	1*
25	Analyze complaints by customers and mistakes made at the pharmacy	QA	0	1	2
30	Updating the quality manual	QA	−1	0	0*
47	Final check of dispensed prescriptions	QA	1*	4	3
48	Checking the clinical risk management alerts (e.g. drug-drug interactions)	QA	2*	3*	4*
37	Maintenance of electronical equipment	Other	−4*	0*	−1*
31	Informal contact with patients and healthcare providers	Other	2	0*	2
35	Post graduate education or reading professional literature	Other	3*	0*	3*

Ranking follows the same scale as mentioned in Fig. 1 (from −4 to +4). CPS: Cognitive Pharmaceutical Services, PM: Pharmacy Management, QA: Quality Assurance. + indicates a consensus activity (15 and 16).

to be performed by pharmacists to ensure the safe use of drugs.

The characteristics of pharmacists belonging to one of the three different groups (see also Appendix A) are slightly different. Group 2 has a higher proportion of male participants in comparison to group 1 and 3 and also consists of more pharmacy owners. Pharmacists in group 2 are also slightly older than participants in group 1 and 3.

This suggests that older, male pharmacists that own a community pharmacy regard logistics and QA as relatively more important. Surprisingly even these pharmacists, who more frequently own a pharmacy do not give high priority to pharmacy management.

Strengths and limitations

The first strength of this study is the use of Q-methodology, which forced participants to prioritize activities. Therefore Q-methodology may generate more valuable information compared to the Likert-scale questionnaires that are generally used for this type of study.

Second, community pharmacists were able to participate online anonymously. This lowers the threshold to participate and therefore

enhances the response rate.[30]

Third, a comparison with previously reported characteristics of community pharmacists in The Netherlands suggests that the group of participating pharmacists in this study resemble the Dutch population of community pharmacists.[26] Still, we cannot exclude that a certain subset of community pharmacists responded to partake in this research and therefore limiting the generalizability of the results found in this study.

Q-methodology also comes with limitations. First, Q-methodology is not designed to provide the precise prevalence of the different groups found. So, the distribution of participants has to be interpreted reservedly.

Also, Q-methodology ranks individual activities. However, combining activities into several activity groups is arbitrary.

Participants were given the explicit instruction to disregard all current limitations in daily community pharmacy practice and to prioritize based on a desired situation. A possible limitation of the study could be that participating pharmacists found it difficult to prioritize activities without their knowledge of the current limitations in community pharmacy practice.
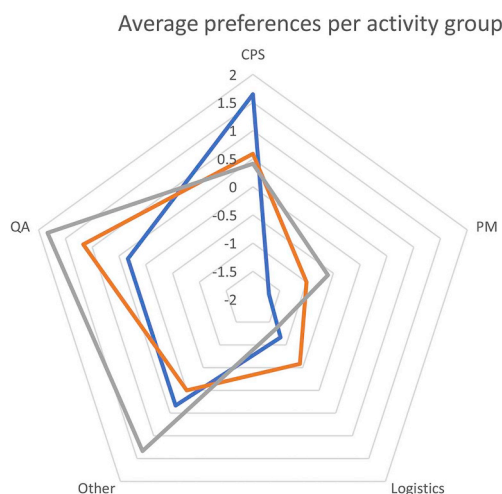
Average preferences per activity group

Fig. 2. Distribution of average preferences per activity group.

Also, due to the cross sectional design of this study, results found are a snapshot in time. However, we do not expected that task prioritization will change rapidly, as participants were explicitly asked to prioritize based on a desired situation and not on their current situation.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.sapharm.2018.09.012.

Conclusion

Previous studies showed that community pharmacists spend little time on CPS, but were not clear on whether community pharmacist prefer to devote more time to the provision of CPS. This study shows that the group that prioritizes CPS the highest, also contains the majority of participating pharmacists. All participating community pharmacists give low priority to logistics and pharmacy management, whereas previous studies have shown that in daily practice substantial time is devoted to these activities. Policymakers and the pharmacy profession should join forces to delegate the latter activities in order to enable community pharmacists to increase their commitment to CPS.

Conflicts of interest

None.

Funding

Acknowledgements

Appendix A

Characteristic of the participants	Total	Group 1	Group 2	Group 3	No group*
Number of respondents	166	76	27	45	18
Age in years (mean $\pm$ SD)	40.0 $\pm$ 10.7	38.3 $\pm$ 9.8	45.6 $\pm$ 11.3	38.0 $\pm$ 10.0	43.5 $\pm$ 11.9
Gender					
• Male	63 (38.0%)	25 (32.5%)	15 (57.7%)	12 (27.9%)	11 (55.0%)
Graduation year (mean $\pm$ SD)	2003 $\pm$ 10	2004 $\pm$ 9	1998 $\pm$ 11	2004 $\pm$ 10	2000 $\pm$ 12
Working experience in years (mean $\pm$ SD)	13.5 $\pm$ 10.0	11.9 $\pm$ 9.1	18.4 $\pm$ 10.9	12.1 $\pm$ 9.7	15.9 $\pm$ 11.0
Type of pharmacist					
• Resident and owner	33 (19.9%)	15 (19.4%)	8 (30.8%)	4 (9.3%)	6 (30.0%)
• Resident in paid employment	92 (55.4%)	37 (48.1%)	13 (50.0%)	29 (67.4%)	13 (65.0%)
• Non-resident in paid employment	41 (24.7%)	25 (32.5%)	5 (19.2%)	10 (23.3%)	1 (5.0%)
Working hours per week (mean $\pm$ SD)	37.0 $\pm$ 6.4	35.9 $\pm$ 7.6	39.5 $\pm$ 4.7	37.2 $\pm$ 5.6	37.2 $\pm$ 3.3
Characteristics of the community pharmacy and surroundings					
More than one pharmacist in the pharmacy					
• Yes	107 (64.5%)	47 (61.0%)	17 (65.4%)	33 (76.7%)	10 (50.0%)
Average socioeconomic status					
• Poor residential area	29 (17.5%)	12 (15.6%)	3 (11.5%)	7 (16.3%)	7 (35.0%)
• Middle class residential area	117 (70.5%)	57 (74.0%)	17 (65.4%)	32 (74.4%)	11 (55.0%)
• Wealthy residential area	20 (12.0%)	8 (10.4%)	6 (23.1%)	4 (9.3%)	2 (10.0%)
Average age of population					
• Mostly young inhabitants	4 (2.4%)	2 (2.6%)	1 (3.8%)	1 (2.3%)	0 (0.0%)
• Both young and older inhabitants	120 (72.3%)	61 (79.2%)	19 (73.1%)	28 (65.1%)	12 (60.0%)
• Mostly older inhabitants	42 (25.3%)	14 (18.2%)	6 (23.1%)	14 (32.6%)	8 (40.0%)
Level of urbanization					
• Not urbanized (rural)	23 (13.9%)	16 (20.8%)	1 (3.8%)	2 (4.6%)	4 (20.0%)
• Hardly urbanized	28 (16.9%)	11 (14.3%)	4 (15.4%)	10 (23.3%)	3 (15.0%)
• Moderately urbanized	80 (48.2%)	38 (49.4%)	13 (50.0%)	21 (48.8%)	8 (40.0%)
• Heavily urbanized (big city)	35 (21.1%)	12 (15.6%)	8 (30.8%)	10 (23.3%)	5 (25.0%)
Part of a chain of pharmacies or a partnership					
• No	45 (27.1%)	20 (26.0%)	11 (42.3%)	9 (20.9%)	5 (25.0%)
• Yes, < 5 pharmacies in total	36 (21.7%)	18 (23.4%)	5 (19.2%)	8 (18.6%)	5 (25.0%)
• Yes, with 5–25 pharmacies in total	19 (11.4%)	7 (9.1%)	4 (15.4%)	8 (18.6%)	0 (0.0%)
• Yes, > 25 pharmacies in total	66 (39.8%)	32 (41.6%)	6 (23.1%)	18 (41.9%)	10 (50.0%)
Grading (1–10) the cooperation between the pharmacist and general practitioner	7.8 $\pm$ 1.3	8.1 $\pm$ 1.1	7.9 $\pm$ 1.5	7.6 $\pm$ 1.5	7.4 $\pm$ 1.5

*Community pharmacists that did not load statistically significant on one of the three groups.

Appendix B

#	Activity
1	Stock taking
2	Maintaining the local drug formulary
3	Diagnostics(e.g. blood pressure, glucose level or cholesterol levels)
4	Compounding medicines
5	Organizing an informational session for patients
6	Releasing a compounded drug
7	Having a leading role within the primary healthcare organization
8	Perform and analyze the results from customer satisfaction research
9	Organize and start healthcare projects with other healthcare providers
10	Salary administration
11	Performing a prospective risk analysis
12	Looking for a refresher course for supporting pharmacy staff
13	Counselling patients to improve medication adherence
14	Judging pharmacotherapeutic and pharmaceutical rationality of requested compounded drugs
15	Finding an alternative supplier in case of drug shortages
16	Making a work schedule
17	Adjusting stock parameters based on sales
18	Adjusting stock to the preference of health insurance companies or to achieve optimal margins
19	Accounting
20	Filling prescriptions and checking filled prescriptions
21	Performance appraisal of supporting staff
22	Providing advice on OTC products
23	Cashing out the cash register
24	Judging the need to repeat a prescription
25	Analyze complaints by customers and mistakes made at the pharmacy
26	Checking financial indicators
27	Adjusting stock in computer based on stock taking
28	Prepare and lead the pharmacotherapy quality circles between GP's and pharmacists
29	Claiming provided medicine and care related activities at healthcare insurer
30	Updating the quality manual
31	Informal contact with patients and healthcare providers
32	Organizing a staff work meeting
33	Updating lab results in the patients' files
34	Discharge counselling
35	Post graduate education or reading professional literature
36	Processing a prescription into the pharmacy information system
37	Maintenance of electronical equipment
38	Counseling at first dispensing of a new medicine
39	Dispensing a filled prescription to a patient
40	Administrative tasks for patients (e.g. credit or cancelling an invoice)
41	Patient interview for a medication review
42	Discussing the results from a medication review with the GP
43	Updating patient files
44	Analyzing the medication of a patient in light of a pharmacist-led medication review
45	Checks and intervention based on clinical rules (e.g. stop start criteria)
46	Clinical risk management of drug-drug and drug-disease interactions and other potential prescribing errors
47	Final check of dispensed prescriptions
48	Checking the clinical risk management alerts (e.g. drug-drug interactions)
49	Cleaning the community pharmacy
50	Buying groceries for the community pharmacy
51	Negotiate with healthcare insurer
52	Checking expiration dates of stock
53	Perform and analyze the results from healthcare professional satisfaction research
54	Conducting- or participating in pharmacy practice research
55	Judge changes in weekly medication of multi-dose dispensing systems
56	Explain insurance issues to patients
57	Checking order before processing
58	Performing a recall
59	Supervise an intern
60	Adjusting stock parameters
61	Starting a new project in the pharmacy

Activity 49 to 61 (shaded) were eventually discarded by the panel of practicing community pharmacists.

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