

Flemish community pharmacists' motivation and views related to continuing education

• Annelies Driesen, Lies Leemans, Herman Baert and Gert Laekeman

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A. Driesen (correspondence, e-mail: Annelies.Driesen@pharm.kuleuven.ac.be), **L. Leemans**, **G. Laekeman**: Division of Drug and Patient Information, Faculty of Pharmaceutical Sciences, K.U.Leuven, Belgium

H. Baert: Department of Educational Sciences, Centre for Research on Adult and Continuing Education, K.U.Leuven, Belgium

Key words

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Survey

Abstract

Objective: IPSA (Institute for Permanent Study for Pharmacists) wanted to assess community pharmacists' opinion on CE-related issues in order to develop more tailored CE programs.

Method: A survey for self-administration was sent to 1691 community pharmacists. The method of stratified sampling was used to include pharmacists who do not take up CE courses as well.

Main outcome measures: (1) Preferences for course formats, topics of interest and opinion on different CE providers; (2) Facilitators and barriers for participation in CE courses; (3) Opinion on rewarding and participation, obligation and willingness to pay.

Results: A response rate of 62.8% was obtained after three mailings. Lectures remain the most favorite course format. Topics related to pharmaceutical care are the most wanted. The strongest facilitators for attending CE courses are *gathering practical knowledge* and *keeping scientific knowledge up to standard*. *Social contact with colleagues* and *receiving a syllabus* are perceived as moderately motivating factors. Most frequently mentioned barriers were *lack of time*, *family constraints*, *distance to the classes* and *uninteresting subjects*. Around 2/3rd of questioned pharmacists are willing to invest more time in CE when participation would be rewarded. When it comes to opinion on mandatory CE, disagreement exists between pharmacists who take up CE courses and those who don't, the latter being less in favor.

Conclusion: This survey revealed community pharmacists' opinions, wishes and needs concerning CE. This should enable CE providers to develop more tailored CE programs.

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Introduction

Flemish pharmacists are under pressure to prove their professional competence. During the last decades, the role of the community pharmacist has changed from medication dispenser to counselor and provider of pharmaceutical care. Society expects pharmacists to embrace this new role¹. If not, medicines may just as well be sold in supermarkets. At least that is the conclusion of a mystery shopping study by a Belgian consumer organization². To meet these changing needs, education plays an important role. The European Association of Faculties of Pharmacy (EAFF) suggests that pharmaceutical care should be integrated in the curriculum of pharmacy students³. In the meantime continuing education has to provide opportunities for education about these new challenges of pharmacy practice.

Previous research revealed that Belgian pharmacists make efforts to stay up to date by reading professional journals intensively and attending CE courses regularly^{4,5}.

In Flanders, the Flemish-speaking part of Belgium, several professional associations have been organizing independent CE activities in co-operation with the universities. Since January 2003 they all joined forces and funded IPSA (*Institute for Permanent Study for Pharmacists*). So far, IPSA has been organizing two courses each year, a spring course consisting of five evening lectures on a specific theme (e.g. inflammatory diseases) and an autumn course, also consisting of five evening lectures, on different topics that are current (e.g. new drugs). Membership of IPSA amounts to €145 or €75 a year (for 2005) depending on whether you are a pharmacist-owner/manager or not. This fee includes free participation in the courses, a 3-monthly journal and the syllabi of the courses. Employees can make use of training vouchers from the Flemish government to recover half of their membership fee. The aim of IPSA is to become the bench-mark for effective and independent CE for all community pharmacists. Because the prerequisite for effective programs is that they must meet participants' needs⁶, IPSA considered this needs assessment as a first-thing-to-be-done as to determine the vector line for their future policy. In order to reach *all* community pharmacists, IPSA was also interested in the opinions of pharmacists who don't take up their CE courses.

The catholic university of Leuven (K.U.Leuven) was chosen to execute this study. The aim of this investigation was to get answers on the following research questions:

1. What are the preferences for course formats, the topics of interest and the current opinion on different CE providers?
2. Which facilitators and barriers influence pharmacists' participation in CE courses?
3. What do pharmacists think about some structural conditions (e.g. remuneration, obligation)?
4. Do pharmacists differ in opinion on these issues according to whether they take up CE courses or not?

Method

The first three research questions were translated into a seven-page survey for self-administration. To process the fourth research question, the method of stratified sampling was used.

Design

The questionnaire was designed in co-operation with the Centre for Research on Adult and Continuing Education from the Department of Educational Sciences. It consisted mainly of closed-ended questions⁷. A four point Likert scale was used mostly. Respondents

could clarify their views in open space next to the question. To control for face and content validity the survey was piloted by four research fellows and seven community pharmacists from the group *Focus Clinical Pharmacy*.

Sampling

To select pharmacists the database of IPSA was used. At the time of sampling 3375 pharmacists were in this database as registered IPSA-members. A randomized stratified sample was taken in order to include not only pharmacists who take up the evening courses of IPSA but also those who don't. Strata were defined by attendance (*At*) or absence (*Ab*) on the last spring course of IPSA (inflammatory diseases). Pharmacists in the *At-group* attended at least to one of the five lessons. Fifty percent of all listed pharmacists were selected randomly.

Data collection

The questionnaire, together with a cover letter and a self-addressed, prepaid reply envelope were mailed to 1691 pharmacists, 654 of which belonged to the *At-group* and 1037 to the *Ab-group*. The cover letter emphasized the institute's commitment to seek pharmacists' input and participation in the development of new postgraduate programs. It also mentioned the average time needed to fill in the questionnaire (which was 15–20 min) and the fact that all participants completing the survey had an equal chance of winning one of forty €25 gift vouchers. This incentive was designed to improve the response rate. After five weeks a reminder was sent to the non-responders. Another five weeks later, a third mailing including a reminding letter and the questionnaire was distributed to the remaining non-responders.

Data analysis

Data analysis was carried out using SPSS 11.5 for Windows. To meet the fourth research question, the analysis was mainly focused on the differences between *Attendants* and *Absentees* (variable 'stratum').

Logistic regression analysis was mostly used with the variable 'stratum' together with the demographic variables 'gender' and 'employment position' as co-variables. Significant differences obtained with these variables are also reported. Other statistical techniques were chi square, *t*-test and Mantel-Haenszel chi square. A 95% confidence interval was maintained.

Results

Response rate

After the third mailing, a total response rate of 62.8% ($n = 1062$) was obtained. 1032 surveys were suitable for processing.

Excluded were retired (four), hospital (10) and industrial pharmacists (four), clinical biologists (one), pharmacists who no longer worked in a community pharmacy (six) and pharmacists who returned the questionnaire incomplete (five). The overall response rate was 60% after the first, 10% after the second and 30% after the last mailing. *Attendants* responded earlier than *Absentees* ($P = 0.008$). Of the *At-group* 50% responded after the first mailing, 8% after the second and 19% after the third, resulting in a total response rate in this group of 77%. In the *Ab-group*, 31% responded after the first, 5% after the second and 18% after the third mailing which makes a total of 54%.

Demographics

Table 1 shows the differences in the demographic characteristics between the strata *Ab* and *At*. Chi square analysis revealed no difference for the variable age. The distribution of men/women was around 1/3 in the *At-group* and around 1/2 in the *Ab-group* ($P = 0.021$). In the *Ab-group* the number of owners was significantly higher than in the *At-group*, which had in turn more employees ($P < 0.001$). As there was a statistical significant difference with respect to 'employment position' and 'gender', these variables were included as controlling variables for the variable 'stratum' in the logistic regression analysis.

Table 1 Comparison of demographic characteristics between stratum *Ab* ($n = 552$) and stratum *At* ($n = 480$)

Characteristic	Stratum		χ^2	P-value
	<i>Ab</i> %	<i>At</i> %		
<i>Gender</i>				
Male	32	26	5.286	0.021
Female	68	74		
<i>Employment position</i> ^a				
Adjunct	26	41	25.101	<0.001
Manager	13	11		
Owner	56	43		
Locum	5	5		
<i>Age</i>				
<34	29	31	1.536	0.674
34–44	29	27		
44–54	25	26		
>54	17	16		

^aAdjunct = staff pharmacist; manager = principal staff pharmacist; owner = pharmacist-owner.

In the *At-group* 17% of pharmacists had attended one lesson, 18% two, 21% three, 26% four and 18% five lessons.

Apart from participation in CE courses provided by IPSA, pharmacists indicated having attended courses provided by cosmetic companies ($n = 314$), pharmaceutical companies ($n = 397$), professional associations ($n = 208$), university ($n = 125$) and wholesalers ($n = 46$).

A response analysis was conducted as well. All demographic variables remained stable after each mailing.

Research question 1: preferences for course formats, topics of interest and opinion on different providers of CE Lectures remain the most favorite course format among pharmacists. With a score of 95% (*At*) and 80% (*Ab*) both groups indicated lectures as first choice format, followed by workshops or interactive sessions. The third preference was for conferences and symposia: 61% of pharmacists showed interest. Different formats of distance learning (e.g. internet, CD-rom, DVD, ...) scored about 50% in the *Ab-group* compared to nearly 40% in the *At-group* ($P < 0.001$). Four of the five most wanted topics were pharmaceutical care related: *information provision on first drug issue, detecting problems at the counter* (e.g. drug interactions, side effects,...), *drugs during pregnancy* and *polypharmacy in the elderly*. Least interest was shown towards *smoking cessation* and *emergency contraception* (Table 2). Of the *Attendants* 65% set IPSA as preferable CE provider compared to 46% of *Absentees* ($P < 0.001$). University and professional associations scored around 36% in the category "preferable" and around 38% in the category "appealing". Around 52% of pharmacists perceived pharmaceutical companies as "appealing", whereas wholesalers got the label "neutral" from 53% of the responders.

Research question 2: facilitators and barriers

Intrinsic motivating factors such as *gathering practical knowledge* and *keeping scientific knowledge up to standard* are strongly motivating reasons for attending CE courses. In the category 'moderately motivating', more extrinsic factors were found such as *social contact with colleagues* and *receiving a syllabus* (Tables 3 and 4). Logistic regression analysis revealed significant differences between men and women. Of female pharmacists 54% are motivated by receiving a present when going to CE activities, compared to 26% of men ($P < 0.001$). On the other hand, men are more likely to enjoy the learning activity in itself ($P = 0.006$).

Age influences pharmacists' motivation as well. Mantel-Haenszel chi square analysis showed a significant linear association between age and sense of duty ($P < 0.001$). Gamma was moderately positive ($\gamma = 0.206$). It seems that older pharmacists feel more dutiful than their younger colleagues ($P < 0.001$).

Lack of time, family commitments and uninteresting subjects are the most important reasons for non-participation (Table 5). Logistic regression showed that owners are more likely to stay away from courses because of *distance to the classes* ($P = 0.001$) and *reluctance to make the trip* ($P = 0.036$) compared to employees. These barriers were also significant for women compared to their male colleagues (*distance*: $P < 0.001$; *reluctance*; $P < 0.001$). Another finding was that women more often feel inhibited by *family commitments* ($P < 0.001$). Men on the other hand are more likely to be impeded because of *coincidence with other (sports, ...) activities* ($P = 0.038$) and because they *don't have the feeling they should continue to learn* ($P = 0.013$).

Research question 3: structural conditions

Rewarding and participation. Of all investigated pharmacists 61% are willing to invest more time in CE when participation would be rewarded. About 68% of

Table 2 Priority for CE courses on different subjects (%)

	Stratum			
	Ab		At	
	High priority	Low priority or no need	High priority	Low priority or no need
Information provision on first drug issue*	73	27	83	17
Detecting problems at the counter*	74	26	83	17
Drugs during pregnancy	62	38	69	31
Polypharmacy in the elderly*	59	41	71	29
Pediatric diseases*	61	39	68	32
Smoking cessation	11	89	10	90
Selecting and classifying pharmacy-related documentation	27	73	26	74
Emergency contraception	20	80	21	79
Pharmacy management (accountancy, pharmacy design, personnel management)	38	62	32	68
Communication with colleagues and GPs	25	75	22	78

*Significant correlation with stratum ($P < 0.05$), controlled for gender and employment position, Ab = Absentees; At = Attendants.

Table 3 Top five strongly motivating factors for attending CE courses (%)

	Stratum					
	Ab			At		
	Strongly motivating	Moderately motivating	Not motivating	Strongly motivating	Moderately motivating	Not motivating
Gathering practical knowledge to improve information provision skills	91	8	1	96	3	1
Keeping scientific knowledge up to standard	88	11	1	98	2	0
Curiosity about new scientific information	74	24	2	88	10	2
Receiving product information	73	24	3	84	15	1
Job satisfaction*	66	29	5	81	17	2

*Significant correlation with stratum ($P < 0.05$), controlled for gender and employment position, Ab = Absentees; At = Attendants; $n(\text{Ab}) = 552$; $n(\text{At}) = 480$.

Table 4 Top five moderately motivating factors for attending CE courses (%)

	Stratum					
	Ab			At		
	Strongly motivating	Moderately motivating	Not motivating	Strongly motivating	Moderately motivating	Not motivating
Keeping in touch with colleagues*	20	56	24	23	59	18
Keeping up professional ethics*	13	51	36	27	43	30
Learning is pleasant*	39	48	13	53	39	8
Active participation	11	44	45	13	46	41
Receiving a syllabus	43	43	14	48	41	11

*Significant correlation with stratum ($P < 0.05$), controlled for gender and employment position, Ab = Absentees; At = Attendants; $n(\text{Ab}) = 552$; $n(\text{At}) = 480$.

Table 5 Top 7 inhibiting factors for attending CE courses (%)

	Stratum					
	Ab			At		
	Keeps me from going	Makes it difficult to go	No inhibiting factor	Keeps me from going	Makes it difficult to go	No inhibiting factor
Lack of time*	27	69	4	10	79	11
Uninteresting subjects*	58	20	22	68	19	13
Family matters*	27	48	25	17	48	35
Coinciding with other (sports, ...) activities	18	45	27	9	56	35
Distance to classes	29	36	35	30	34	36
Too specialized approach of subjects	21	40	39	19	45	36
Reluctance to make the trip to the classes	16	41	43	7	40	53

*Significant correlation with stratum ($P < 0.05$), controlled for gender and employment position, Ab = Absentees; At = Attendants.

the pharmacists were partially or totally convinced that as long as CE is not compulsory, the number of people attending the courses will not increase. No difference is seen between *Attendants* and *Absentees* on these questions.

Obligation. Regarding obligation, pharmacists are less unanimous. *Attendants* are pro: 73% agree with the statement that a pharmacist can only keep on practicing his job if regularly attending CE courses. *Absentees* are less positive: 51% agree. Pharmacists disagree for different reasons, e.g.:

"A patient who wants a valuable explanation can sense by himself who is well trained and who is not."

"If you like your job, you want to participate in CE courses to do your job better. It should be a moral duty, not an obligation."

"I'm afraid obligation leads to similar problems as with general practitioners: they come, get their stamp and after five minutes their assistant calls for an 'urgent case' and they leave."

"Now people attend courses because they are interested. Obligation means uninterested persons will disturb the lessons."

Willingness to pay. Pharmacists were asked how much they are willing to spend on CE a year. CE was defined as continuing education in its totality. Membership fee of IPSA, buying scientific books and subscription to journals were given as examples. The majority of the employees is willing to spend a maximum of €100 a year compared to nearly €300 for the owners (Figure 1). On the question "what would you like in return for your money spent on CE?", the most cited answers were: more practical information ($n = 169$), a good syllabus ($n = 98$), rewards ($n = 40$) and tools (documentation) for information provision to patients ($n = 26$). Also mentioned were catering, courses near home, qualified teachers, objective scientific information and learning about the latest developments. Twenty-six pharmacists said they did not want to spend money on CE either because their employer should pay for them or because they wanted to be

treated like general practitioners who are sponsored by pharmaceutical companies for their CE courses.

Discussion

Before discussing the most relevant findings of this research it is necessary to be aware of the fact that all collected data are self-reported. It is possible that individual professionals may not always be clearly aware of their learning needs, their knowledge gaps and practice deficiencies¹. However, individuals' perceptions of specific conditions, opportunities and needs may motivate them to participate in continuing education^{8,9}.

Lectures remain the most preferred instruction method. This is in line with results obtained from other researchers¹⁰⁻¹². Although some hesitation exists about interactive course formats, pharmacists – especially the younger ones – regard active participation as a stimulating factor to take part in CE courses. Encouraging results were also found in the question on topics of interest. Pharmacists show much interest in pharmaceutical care. Cordero et al. concluded the same from a survey among community pharmacists in Galicia⁹. The concept of patient centered care seems to gain general acceptance.

With respect to factors influencing participation in CE courses, most strongly motivating factors are inherent to the learning activity. Pharmacists attend CE courses because they are eager to learn about new scientific pharmaceutical information, which they preferably obtain in a practice oriented way in order to improve their information provision skills. The benefit for patients must be clear. In addition, pharmacists are moderately motivated by factors related to material incentives and social contact. Business combining with pleasure could be a strategy for CE providers to attract more pharmacists to their CE courses.

Through surveys and focus group discussions researchers have determined barriers to pharmacists' participation in CE courses¹³⁻¹⁶. The most frequently mentioned were family commitments and time constraints. This study however revealed that lack of time and family engagements are not always insurmountable reasons for non-participation. Barriers that actually keep pharmacists from going are uninteresting subjects and to a lesser degree distance to the lectures. These findings suggest that the will to participate is present but only when it is worth the effort (and not too far away). Needs assessment on a regular basis seems necessary to continuously meet participants' interests.

In Belgium, CE is not mandatory and a lot of community pharmacists deny themselves from going. In order to reach also these pharmacists IPSA wanted to know if they have different needs and opinions compared to pharmacists who do take up CE courses. The final research question reflected on this. A pharmacist was classified *Attendant* if he/she attended at least one of five lectures of the spring course 2003. Although this is a random picture, comparison of chi square analyses on all studied variables revealed that pharmacists who attended only one lesson showed more similarity with the *At-group* compared to the *Ab-group*. Response analysis revealed that *Absentees* were less likely to return the questionnaire and were more likely to answer after the second or third

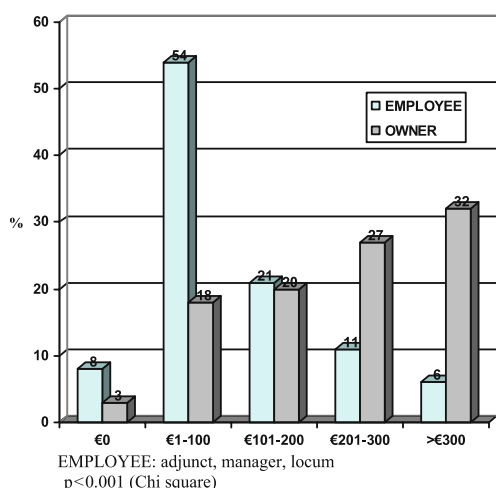


Figure 1 Willingness to pay for CE a year compared for owners and employees.

mailing. This may mean that they are less interested in continuing education. Investigation of facilitators and barriers revealed that this group is on average less motivated and more inhibited to attend CE courses than the *At-group*. Time constraints seem to be a major problem, which can be related to the fact that more pharmacists in the *Ab-group* are owners who have much administrative work after closing time. 'Time' however is both an objective and a subjective factor. Everyone has 24 h a day but how to spend these hours is also a matter of choice for what is valuable to invest time. Possible actions to undertake are motivation of the *Absentees*, providing courses about wanted topics and the development of distance learning facilities.

An unexpected finding was that 88 pharmacists of the *Ab-group* reported having followed the classification course of inflammatory diseases. It is possible that because of this there was a misclassification. It could be that pharmacists read the syllabus without going to the lectures or that entrance tickets –which are at name – were changed between employer and employee. Although this finding is in fact a bias one can argue that it strengthens the results because even with this bias significant difference was found between *Attendants* and *Absentees*. If the misclassified pharmacists were allocated in the right group, the results would probably be even more explicit.

A limitation of the study is the fact that the IPSA-database was used to select pharmacists for the survey. Due to privacy constraints the National Order of Pharmacists could not release the addresses of all registered Flemish community pharmacists. Although most Flemish community pharmacists are member of IPSA, care should be taken in extrapolating these findings to all Flemish practicing community pharmacists.

Conclusion

The aim of this study was to answer well-defined CE-related research questions so as to build a basis on which further research can rely⁶. When the difficulties and needs concerning CE are discovered, strategies can be developed to overcome detected problems and efforts can be made to meet to pharmacists' expectations as much as possible. The high response rate confirms that practicing pharmacists consider continuing education an important area for investigation.

Pharmacist profiles based on common characteristics and attitudes towards CE will be defined based on

the data obtained from this survey. This will allow CE providers like IPSA to modify their courses to the needs of different pharmacist profiles and provide tailored CE programs.

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