Stimuli-responsive survey of Hellenic Pharmaceutical Society (HPS) to detect learning attitudes and needs of Greek pharmacists towards Continuing Professional Development (CPD)

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ABSTRACT

The purpose of this study was to examine pharmacists' attitudes, behaviorisms, and preferences towards continuous professional development (CPD) in Greece. The Hellenic Pharmaceutical Society (HPS) in Greece developed a questionnaire that was available online for the Greek pharmacists from all working fields to fill out. All responses were included in the data collection and survey results were compiled into Excel software spreadsheets for analysis. Pharmacists in Greece seem to understand the need of CPD in their profession and are willing to undertake courses to enhance CPD opportunities: all of the respondents agreed on the need to strengthen their knowledge and 57% of them indicated that they would be willing to participate in a complete program of high level interactive training that leads to certification after suitable examinations and, 31% were willing to participate in interactive training and 12% were willing to participate in a basic training. Almost half of the respondents were willing to spend more than 8 hours per month on their continuing education indicating that Greek pharmacists are willing to adopt a complete CE system. This study provides and assesses important baseline data on pharmacists and CPD in Greece to provide guidance to future efforts towards development of a CPD program.

1. Introduction

Healthcare in the developed world constitutes a very challenging field due to a number of significant changes in science, technology, information processing and access, as well as demographic changes that have taken place during the last decades. The most prominent change affecting healthcare is definitely ageing. Indeed, populations are living longer, often with chronic disease and are associated with lifestyle changes that increase risk for cardio-respiratory, neuropsychiatric, musculoskeletal, metabolic disease and other conditions (EFPIA, 2014).

In this ever-changing healthcare environment, health care professionals require a constant provision of high quality information for updating their knowledge and improving their practices and skills. Maintaining competence throughout their careers is a lifelong challenge for all health care professionals, such as medical doctors, dentists, nurses, pharmacists and other professionals in the health care sector (Kostagiolas et al., 2009, Brooksbank et al., 2015).

Professional associations and authorities alike have started developing formal lifelong learning systems with the aim of sustaining competence and ensuring the provision of quality patient care. Traditionally, these systems were based on continuing education (CE). However, in the last few years, there has been a shift towards continuing professional development (CPD) of competencies. In this process the individual practitioner determines his own learning needs, makes plans to meet those objectives, executes those plans, and finally evaluates whether the actions were successful. These steps and progress made are usually recorded and maintained in a CPD portfolio. In comparison, CE can be seen as one part of the CPD process, encompassing such traditional teaching methods as lectures, workshops, and distance learning courses (Driessen et al., 2007).

The European Federation for Pharmaceutical Sciences (EUFPS), established in 1991, is a voluntary association of national pharmaceutical societies and individual scientists, established to advance medicines and related research in the pharmaceutical sciences in the European region. This is done by promoting cooperation between national, regional and European societies and associations, also playing a role on the global scene, which aim at the advancement of pharmaceutical sciences and by encouraging cooperation between and with other pharmaceutical organisations and individual pharmaceutical scientists (Gaspar et al., 2012).

The EUFPS seeks to achieve its objectives by the following means (Gaspar et al., 2012):

1. To facilitate the exchange of scientific information between European pharmaceutical scientists by organising a European...
Pharmaceutical (Pharm) Sciences (Sci) Congress or Fair, at regular intervals and in different European countries; organizing specialized meetings on relevant topics of multidisciplinary aspects of drug research; encouraging the organization of joint meetings between member societies; publication of a European Journal of Pharmaceutical Sciences.

2. To collect and disseminate information on the activities of the member societies, including the production of a calendar of events, as doable.

3. To enhance the recognition of the pharmaceutical sciences and to contribute to public policies relevant to the pharmaceutical sciences and drug-related issues at the European level.

Cooperation between health care professionals with relevant and up-to-date competencies are fundamental in order to provide the right prevention, diagnosis and treatment to the right patient at and for the right time (Rousse, 2004, Austin et al., 2005, Wilburn, 2004). In Table 1 the definition of CPD in pharmaceutical sciences and other significant definitions of education terminology are presented (Rousse, 2004, Austin et al. 2005, Bellanger and Shank, 2010). The purpose of the HPS portfolio is to design and develop a CPD cycle for Greek pharmacists and pharmaceutical scientists with a better learning model that pharmacists maintain their skills, knowledge and competencies to practice through their careers in the European Health Ecosystem, with new updated experience.

Pharmacists play an important role in the health care scheme as they are the most easily accessible health professionals. Also, they are able to effectively and efficiently contribute to the implementation of public health programs as well as to improve patient’s adherence to a safe therapeutic plan including prevention, pharmaceutical and non-pharmaceutical therapy. Pharmacists are nowadays not only drug centered educated but also patient centered educated and trained and as a result, their role has evolved from that of a supplier of pharmaceutical products towards that of a provider of good services, useful advice and clear information, i.e., relevant pharmaceutical care for the today’s individuals and the public.

The International Pharmaceutical Federation (FIP) is the global body representing pharmacy and pharmaceutical sciences, and supports the development of the pharmacy profession, through practice and emerging scientific innovations, in order to meet the world’s health care needs and expectations. The FIP Bureau believes that if the pharmaceutical profession would be utilized effectively they could, using their proven expertise and with the support of already existing or future technologies, initiate adequate prevention programs and thus make a unique contribution to the outcome of drug therapy, and by this consequently to the patients’ quality of life. In 2015, the FIP Bureau decided to set up the “FIP working group on the effective utilization of pharmacists and pharmaceutical care in the fight against non communicable diseases” with the main objectives to collect and comment upon the available evidence for the role and impact of pharmacists’ interventions in the fight against non-communicable diseases (NCD); to provide an overview of existing national and regional policies around the fight against NCD that support pharmacists’ involvement in such activities, with a focus on concrete experiences/best practices. By that means, they would specifically address the question of what the pharmacists’ added value could be in the prevention, implementation and supervision of the therapeutic plan and how could they be supported in this task by new technologies (International Pharmaceutical Federation, 2015).

As FIP is advancing the pharmacy practice and pharmaceutical sciences worldwide, and EUFEPS focuses on the advancement of sciences for better medicines and health, in Europe and wider, the goals and mission of the Hellenic Pharmaceutical Society (HPS) in Greece include supporting education, training and development of the profession. This is done by offering programs of education and high quality training that will shape the education and training needed to advance practice, in meeting the public and individual citizens’ needs and expectations. The purpose of HPS portfolio is to design and develop a CPD circle for Greek pharmacists with a better learning model under which pharmacists maintain their skills, knowledge and competencies to practice through their careers in the European Health Ecosystem, with newly updated experience. Even though CPD in Greece has still not been implemented as mandatory, gradual introduction through voluntary attendance in structured processes (seminars, conferences, etc.). which intend to support the continuous development of individual professionals in maintaining and enhancing their professional competence, is already in place. However, little has been known to date about the views on CPD among the Greek pharmacists. The HPS structured survey was set up in order to investigate the pharmacists’ views on CPD particularly on their preferred CPD activities and the time willing to spend in order to achieve successful CPD participation (Scheme 1).

2. Materials and Methods

2.1. Questionnaire

A questionnaire was developed to examine the pharmacists’ views towards CPD. The questionnaire comprised of the following themes; understanding the need of CPD, time willing to spend on CPD and CPD activities, in which respondents were more likely to participate. The questions are presented in Table 2.

Table 1: Definitions of education terminology.

Definitions:

**Continuing professional development**: an ongoing, self-directed, structured, outcomes-focused cycle of learning and personal improvement. It is an approach or process which should be a normal part of how you plan and manage the whole working life.

**Competence**: The ability to perform one’s duties accurately, make correct judgments and interact appropriately with patients and with colleagues. Professional competence is characterized by good problem-solving and decision making abilities, a strong knowledge base, and the ability to apply knowledge and experience to diverse patient-care situations.

**Lifelong learning**: All learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective.

**Continuing education (for the profession of pharmacy)**: is a structured process of education designed or intended to support the continuous development of pharmacists to maintain and enhance their professional competence. Continuing education should promote-solving and critical thinking and be applicable to the practice of pharmacy.

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2.2. Sample

The questionnaire was made available online in the Hellenic Pharmaceutical Society website (http://www.efe.org.gr/) and pharmacists in Greece from all different working fields (community and hospital pharmacy, industry, academia, etc.) were invited via email and other means of social networks to respond to the survey. This method was chosen as it saved time and enabled a greater geographical region to be accessed.

2.3. Data analysis

All data from the survey were recorded and entered into the excel software for windows spreadsheets. The descriptive statistics that were used to describe the pharmacists’ responses were percentages and several charts were developed for better visualisation of the responses.

3. Results and Discussion

The preliminary results include 376 responses received by Greek pharmacists in a period of 2 months. The most commonly cited practice areas for respondents were community pharmacists (294 respondents [78.19%]), followed by pharmacists working in pharmaceutical companies (25 respondents [6.65%]), university or other research sectors (20 respondents [5.32%]), hospital pharmacy (16 respondents [4.26%]), public sector or in national health insurance system (13 respondents [3.46%]), as clinical pharmacists (6 respondents [1.60%]) and in parapharmaceutical or other cosmetic companies (2 respondents [0.53%]) (Table 2).

When asked about their opinion of their current adequacy concerning their professional specialisation the 70% of the respondents admitted that they suffice for ‘everyday needs but have to study further for complicate enquiries’ indicating a good basic knowledge but also a need of continuing education (Fig. 1).

The survey asked pharmacists to state their educational resources that met their learning needs (Tables 3 and 4). The most commonly used sources of education were undergraduate studies, postgraduate studies, scientific journals, one-day workshops, seminars and conferences. This fact indicates that Greek pharmacists value the education offered by Universities both in undergraduate and postgraduate level but also continue to seek additional education through scientific journals while try to participate in one-day workshops, seminars and conferences. The lowest ranking sources of education were daily professional activities and pharmacy placements, books and general internet search engines.

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**Table 2. Survey questions.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is/are your current pharmaceutical practice setting(s)?</td>
<td></td>
</tr>
<tr>
<td>Rank your scientific knowledge in relation to your professional practice.</td>
<td></td>
</tr>
<tr>
<td>Which educational resources you use to meet your learning needs?</td>
<td></td>
</tr>
<tr>
<td>Do you feel that there is a need to enforce your knowledge?</td>
<td></td>
</tr>
<tr>
<td>State the degree of participation in a CE programme.</td>
<td></td>
</tr>
<tr>
<td>State the time that you could dedicate in a CE programme.</td>
<td></td>
</tr>
<tr>
<td>Which key aspects or components would make up your ideal CE programme?</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3. Practice setting of pharmacists-respondents to survey.**

<table>
<thead>
<tr>
<th>Practice setting</th>
<th>No of pharmacists</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmaceutical Company</td>
<td>25</td>
<td>6.65</td>
</tr>
<tr>
<td>Hospital Pharmacy</td>
<td>16</td>
<td>4.26</td>
</tr>
<tr>
<td>Community Pharmacy</td>
<td>294</td>
<td>78.19</td>
</tr>
<tr>
<td>University/Research Sector</td>
<td>20</td>
<td>5.32</td>
</tr>
<tr>
<td>Clinical Pharmacist</td>
<td>6</td>
<td>1.60</td>
</tr>
<tr>
<td>Parapharmaceutical/Cosmetic Company</td>
<td>2</td>
<td>0.53</td>
</tr>
<tr>
<td>Public Sector/National Health System</td>
<td>13</td>
<td>3.46</td>
</tr>
</tbody>
</table>

**Table 4. Educational resources that met pharmacists’ learning needs.**

<table>
<thead>
<tr>
<th>Educational resources</th>
<th>No of respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate studies</td>
<td>376</td>
<td>100</td>
</tr>
<tr>
<td>Postgraduate studies</td>
<td>358</td>
<td>95.21</td>
</tr>
<tr>
<td>Day workshops</td>
<td>345</td>
<td>91.76</td>
</tr>
<tr>
<td>Daily professional activities</td>
<td>23</td>
<td>6.18</td>
</tr>
<tr>
<td>Pharmacy placements</td>
<td>61</td>
<td>16.22</td>
</tr>
<tr>
<td>General internet search engine</td>
<td>124</td>
<td>32.18</td>
</tr>
<tr>
<td>Textbooks/reference books</td>
<td>182</td>
<td>20.66</td>
</tr>
<tr>
<td>Seminars</td>
<td>321</td>
<td>85.37</td>
</tr>
<tr>
<td>Scientific journals</td>
<td>345</td>
<td>91.76</td>
</tr>
<tr>
<td>Conferences</td>
<td>293</td>
<td>77.93</td>
</tr>
</tbody>
</table>

Fig. 1. Pharmacists’ opinion on their current adequacy concerning their professional specialisation.

Fig. 2. Pharmacists’ potential training level.
These responses indicate the need for better everyday educational activities and the re-definition of the pharmacy placements in Greece. The reminder of the survey centered on respondents’ attitudes on CE, potential training level, time willing to spend as well as their preferred subject for training. When asked if they agreed to strengthen their knowledge 74% were totally positive, 24% were positive and 2% were neither positive nor negative, but 0% disagreed. To reinforce this statement 57% of the respondents stated they were willing to participate in a complete program of high level interactive training that leads to examination on the acquiring and implementation of knowledge and will provide certification, 31% were willing to participate in interactive training and 12% were willing to participate in a basic training (Fig. 2). When asked about the time they were willing to spend on CE almost half of the respondents (49%) replied that they were willing to spend more than 8 hours per month on their education while 35% of respondents were willing to spend 5 to 8 hours per month while 16% of respondents were willing to spend 2 to 4 hours per month.

Although most participants in similar surveys around the world (Gidman et al., 2007, Wilbur, 2010, Aziza et al., 2013) cited time and resource constraint issues, the survey presented herein indicates that Greek pharmacists are willing to adopt a CE system that aims towards the highest training level possible and are determined to spend the time required to accomplish it.

When asked about the preferred subject for training most of the pharmacists indicated the subjects of medicine provision to patients (323 respondents), pharmaceutical compounding (235 respondents), natural products and phytotherapy (227 respondents), biotechnological medicines and special patient categories (323 respondents), and medicines provision to patients. Activities, side effects, medicine interactions with other medicines or foods (235 respondents) (Fig. 3).

4. Conclusions

The results of this study revealed that Greek pharmacists appreciate the need of CPD to maintain their professional competencies. The findings of the survey may be used by policy makers, employers, and CPD facilitators to help support its implementation. In this context, Hellenic Pharmaceutical Society can be the main pylon as it is able to develop, run and supervise a suitably elaborate CE system as the pharmacists in the country seem to aim towards the highest training level possible and seem to be willing to spend the time and effort required to accomplish it. Our vision is that academic/university level education and training for pharmacists and pharmaceutical sciences structured around flexible programs that will be able to address different needs and preferences concerning both scientific and practical topics, depth-of-knowledge and time invested.

Conflict of Interest and Funding

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References