Strategies for continuing professional development among nurses in different career stages: a biographical approach

Introduction

People learn continuously and across their whole lives (Alheit and Dausien, 2002, Billett, 2010). From birth until death humans experience new things and acquire new skills and knowledge. This learning can be trivial or meaningful, but people cannot not learn and are therefore by definition life-long learners (Alheit and Dausien, 2002, Grotendorst and Van Wijgaarden, 2005). In society the importance of lifelong learning is stressed increasingly (Commission of the European Communities, 2000). Lifetime employment with a single employer is no longer guaranteed, hence people need to develop continuously to keep up to date and to maintain their value on the labour market. Moreover, changing demographics leading to an aging workforce increase the need for organizations to retain older workers and sustain their employability beyond existing retirement ages. As a result, continuing professional development has become essential for the individual worker, for organisations as well as for society in general.

This holds for health care also. Nurses work in rapidly changing environments due to the pace of technological change and advancements in knowledge. Continuous learning plays a vital role in nurses’ professional development, job satisfaction, and improvement of patient care (Skår, 2010). For this reason managers and educators create various professional development approaches, such as introducing personal development plans, designing e-learning modules, and organising training programmes.

Individual nurses decide how to engage with what is afforded to them (Billett, 2006). Their ideas and beliefs about learning can be different from those of other actors in health care, such as employers and professional bodies (Grisci and Jacono, 2006, Munro, 2008). As active meaning makers, who do much to shape the direction and intensity of the learning processes (Billett, 2010), they participate and learn in ways directed towards the continuity of their interests and goals (Billett, 2006). This may count even more for nurses in the Netherlands, where CPD is not required for renewal of registration, than for nurses in other countries as Canada or the United Kingdom with standards and requirements on CPD.

The interests and goals are likely to change, depending on career stage (Gould et al., 2007b). This can explain why workers above 50 years of age appear less likely to participate in formal learning activities, such as courses, than younger workers (Pool et al., 2013b, Wray et al., 2009). They still want to learn, but use other learning activities than their younger colleagues do (Lammintakanen and Kivinen, 2012). Buchan (1999) suggested that nurses from different ages have different requirements and attitudes to nursing work. This is supported by insights from the field of life-span psychology, which show that work-related motives are influenced by age (Baltes et al., 1999, Carstensen et al., 1999, Kanfer and Ackerman, 2004, Kooij et al., 2011). The changing perception of time influences the selection of social goals (Carstensen et al., 1999) and the way people allocate resources to various goals of development differs across the life span. Therefore, we assume that nurses’ CPD motives and learning activities change during their career.

The body of knowledge about CPD in nursing is growing, including studies that show how nurses learn in their work (Berings, 2006, Estabrooks et al., 2005, Eraut, 2007), what factors influence their participation in CPD (Brekelmans et al., 2013, Gould et al., 2007a) and how they perceive CPD (Gopee, 2001, Hughes, 2005). However, a literature review
revealed that the knowledge of nurses’ CPD in different career stages is limited (Pool et al., 2013b).

The aim of the current study was to explore nurses’ CPD strategies in three career stages. We defined CPD strategies as a combination of learning activities that together contribute to a certain explicit or implicit CPD motive (c.f. Berings, 2007). We used interviews with a biographical perspective, assuming that motives to undertake CPD are interwoven with someone’s life and life history.

A biographical perspective
Biographical research studies life histories to gain insight in the experiences, meanings and action strategies of individuals in relation to their social and societal context (Stroobants, 2001). A learning biography can be seen as a particularisation of biography: a representation of someone’s learning history (Grotendorst and Van Wijgaarden, 2005). A biographical approach seems promising when investigating nurses’ CPD strategies in different career stages.

First, a biographical approach is useful because it treats humans as actors who actively give meaning to their lives and learning (Stroobants, 2005, Billett, 2010). It takes into account the complex interwoven relation between social structure and individual subjectivity (Alheit, 1994, Stroobants, 2005, Hallqvist et al., 2012). It acknowledges that nurses carve their own routes through the learning opportunities offered to them. They direct these learning paths at their interests and goals (Poell and Van der Krogt, 2013).

Second, a biographical approach to learning includes not only formal and organized aspects of learning (Hallqvist et al., 2012). Learning biographies are detailed and rich descriptions of personal learning experiences, which do not draw explicit lines between different modes of learning (Grotendorst and Van Wijgaarden, 2005). It recognizes that nurses develop through various learning activities (Berings et al., 2007, Estabrooks et al., 2005, Eraut, 2007). Their CPD can take place intentionally and explicitly, for instance in continuing education or in clinical teaching sessions at the ward. It can also occur during work experiences with patients or in social interaction with colleagues, without the subject being aware of it. Berings (2007) divided this variety of learning activities into six categories: learning by doing’s one regular job, by applying something new in the job, by social interaction, by theory or supervision, by reflection, and by learning through life outside work. These learning activities can contribute to retention of core skills, improvement of career opportunities, and extension of nursing roles (Drey et al., 2009, Gould et al., 2007a, Pool et al., 2013a).

Third, biographies are useful in this context, because they make connections among different life domains and stages. This enables the investigation of developments in nurses’ professional lives, focusing on the relationship between their lives, their careers and their learning (c.f. (Smilde, 2009). It is acknowledged that these three domains are interrelated and possibilities are thus created to explore whether CPD strategies are connected to certain career stages.

Methods
We employed a qualitative study design with a biographical approach using interviews to answer our main research question: to what extent do nurses’ CPD strategies differ across three career stages.
Participants
Nurses were selected according to principles of purposive and theoretical sampling (Miles and Huberman, 1994). We selected nurses from three age groups. We expected that differences in age reflect differences in working experience, career stage, life stage and perspectives of the future. In accordance with previous research (Schulz and Stamov Roßnagel, 2010, Van der Heijden, 2006, Pool et al., 2013a) the following three age groups were distinguished: 24-34 years, 35-49 years, and 50-65 years old. In addition, we strived for diversity, selecting nurses with different nursing specialties, working in academic and general hospitals, with or without extra roles, and with or without children. Nurses had to have worked at least two years as a registered nurse. Nurses had to work in direct patient care, and not solely as a manager or educator. Nurses were recruited in accordance with these criteria using intermediaries from the network of the first author, such as nurse team leaders and educators.

Data collection
Data were collected between February and August 2013 using semi-structured interviews. In these interviews nurses told their life stories retrospectively, giving an active interpretation of their lives (Stroobants, 2001). In advance of the interview, nurses were asked to describe their biographies briefly on a time line including (1) important life events, such as own and childrens’ birth dates, marriage, and illness, (2) their career, and (3) their education. Inspiration for this timeline was found in Grotendorst and Van Wijngaarden (2005).

The interviews started with an open question: “You have written down your life and career. Can you elaborate on this”? The interviewer did not interrupt the narration that followed, but used verbal and paralinguistic expressions of interest to encourage the interviewee (Apitzsch and Siouti, 2007). The interviewer took notes to keep track of the narration. Only after the interviewee would interrupt her/his story the interviewer would ask for clarification or further exploration of topics and themes mentioned (Apitzsch and Siouti, 2007). The main thread in this part of the interview were the nurses’ life stories, in particular their career and learning biographies, and the motives for turning points in their career.

In the second part of the interview we focused on the learning episodes or moments that were of importance to the interviewee. We asked three open questions: (a) what were important learning moments in your career, (b) which learning moments or episodes have been crucial to do your current job properly, and (c) what are milestones in your development as a nurse?

In the last part of the interview the interviewees were asked to narrate about their CPD strategies in the previous months: which learning activities did they engage in and what were their motives for doing so? Finally, interviewees were asked to describe their perceptions of work and professional development for the next five years. In this way nurses’ CPD was narrated from a perspective of the past, the present, and the future. After asking whether they had missed or wanted to add anything the interview was closed. The interviews took approximately one and a half hour.

Ethical considerations
Consistent with national practice in the Netherlands, no ethical approval was required for this study because no patients were involved. The Academy of Human Resource Development standards on ethics and integrity (Russ-Eft et al., 1999) were followed. We informed interviewees in the invitation e-mail, and at the start of the interview, about the purpose of the study and the approach used, and sought their informed consent. We explained that we
would anonymise transcripts as much as possible by removing names and dates, but that we could not guarantee complete anonymity because one’s biography is unique.

Data analysis
All interviews were audio recorded and transcribed verbatim. The interviews were analysed using a vertical (within case) and horizontal (cross case) process of analysis (Hunter, 2010, Stroobants, 2001). Rather than locating distinct themes across interviews, we first listened ‘to the voices within each narrative’ (Chase, 2005). We noticed that by coding the transcript the essences of the individual stories and the situated nature of the text were gradually lost (McCormack, 2004, Hunter, 2010, Chase, 2005, Stroobants, 2001). Therefore, we started with a vertical analysis. Each interview was summarised onto four to six pages to create an individual learning biography using the participant’s own words. We used a flexible framework to guarantee that the research questions had a place in each learning biography and to enable the comparison of outcomes, but also ensured that the uniqueness of each nurse would emerge (Smilde, 2009). The learning biographies were sent to the interviewees for validation. Nurses were asked whether they agreed with the summary of the interview and to suggest a pseudonym of their name. Eight made minor changes at sentence level and linguistic level. We explored the learning biographies for similarities and differences. This vertical process informed the horizontal analysis.

With a horizontal analysis we aimed at discovering themes across the interviews by coding the transcripts. To aid in the coding and retrieving of data, Maxqda 2007 software was used. The first eight interviews were coded partially deductively by codes stemming from the theoretical framework and the vertical analysis, and partially inductively. Four researchers discussed the assigned codes a number of times until consensus was reached and regrouped the codes into six categories referring to career stage, life events, motives for learning, motives for working, triggers to learn, and CPD learning activities. These categories and codes were used for deductive coding of the remaining transcripts, while keeping an open eye for possible new codes to be included. After coding had finished, themes and trends were identified and propositions for an explanatory framework were tested against the data (Miles and Huberman, 1994).

Results

Characteristics of the interviewees
Twenty-one nurses were interviewed, the majority of which were female (n= 17). Nine nurses worked at various wards in general hospitals and 12 in university hospitals. As expected, age and tenure were highly related. The educational level of group I seemed slightly higher than that of the other two groups. All nurses but three participated in post-graduate education in a nursing specialty such as oncology, intensive care, or pediatrics (see Table 1).

Table 1. Characteristics of interviewees

<table>
<thead>
<tr>
<th></th>
<th>Group I 20 – 34 years</th>
<th>Children</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>pseudonym</td>
<td>age hospital</td>
<td>tenure with present department</td>
<td></td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>female</td>
<td>general hospital setting</td>
</tr>
<tr>
<td>-----------</td>
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<td>--------------------------</td>
</tr>
<tr>
<td>Rachel</td>
<td>x</td>
<td>24</td>
<td>x</td>
</tr>
<tr>
<td>Harry</td>
<td>x</td>
<td>24</td>
<td>x</td>
</tr>
<tr>
<td>Mathilde</td>
<td>x</td>
<td>26</td>
<td>x</td>
</tr>
<tr>
<td>Marianne</td>
<td>x</td>
<td>27</td>
<td>x</td>
</tr>
<tr>
<td>Andrea</td>
<td>x</td>
<td>29</td>
<td>x</td>
</tr>
<tr>
<td>Esther</td>
<td>x</td>
<td>29</td>
<td>x</td>
</tr>
<tr>
<td>Miranda</td>
<td>x</td>
<td>34</td>
<td>x</td>
</tr>
</tbody>
</table>

**Group II 35 - 49 years**

<table>
<thead>
<tr>
<th></th>
<th>male</th>
<th>female</th>
<th>general hospital setting</th>
<th>academic hospital setting</th>
<th>Family with children at home (+ ages)</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emma</td>
<td>x</td>
<td>37</td>
<td>x</td>
<td>9 years</td>
<td>chirurgical-oncology</td>
<td>Bachelor, Oncology</td>
</tr>
<tr>
<td>Silvia</td>
<td>x</td>
<td>45</td>
<td>x</td>
<td>13 years</td>
<td>dermatology</td>
<td>In-service education hospital Dermatology</td>
</tr>
<tr>
<td>Danielle</td>
<td>x</td>
<td>45</td>
<td>x</td>
<td>9 years</td>
<td>pediatrics</td>
<td>In-service education hospital, Bachelor, Paediatrics</td>
</tr>
<tr>
<td>David</td>
<td>x</td>
<td>46</td>
<td>x</td>
<td>13 years</td>
<td>neuro-chirurgical</td>
<td>In-service education hospital</td>
</tr>
<tr>
<td>Carien</td>
<td>x</td>
<td>46</td>
<td>x</td>
<td>15 years</td>
<td>cardio-lung, oncology</td>
<td>Vocational, Oncology</td>
</tr>
<tr>
<td>Ina</td>
<td>x</td>
<td>48</td>
<td>x</td>
<td>12 years</td>
<td>emergency room</td>
<td>In-service education hospital, Intensive care, Emergency room Preceptor</td>
</tr>
<tr>
<td>Tessa</td>
<td>x</td>
<td>48</td>
<td>x</td>
<td>10 years</td>
<td>obstetrics</td>
<td>In-service education hospital, Management, Obstetrics &amp; gynaecology</td>
</tr>
</tbody>
</table>

**Group III 50 – 65 years**

<table>
<thead>
<tr>
<th></th>
<th>male</th>
<th>female</th>
<th>general hospital setting</th>
<th>academic hospital setting</th>
<th>Family with children at home (+ ages)</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Willemien</td>
<td>x</td>
<td>54</td>
<td>x</td>
<td>18 years</td>
<td>Intensive care</td>
<td>In-service education hospital, Management, Oncology, Intensive care</td>
</tr>
<tr>
<td>Anne</td>
<td>x</td>
<td>54</td>
<td>x</td>
<td>30 years</td>
<td>intensive care</td>
<td>In-service education hospital, Paediatrics, Intensive care neonatology</td>
</tr>
<tr>
<td>Jeanet</td>
<td>x</td>
<td>54</td>
<td>x</td>
<td>32 years</td>
<td>pulmonary care</td>
<td>In-service education hospital, Management</td>
</tr>
</tbody>
</table>
Six clusters of learning activities
The analysis revealed six clusters of learning activities: (1) self-directed learning activities, (2) organised learning activities at the ward, (3) short training programmes and symposia outside the ward, (4) longer (post-graduate) education programmes, (5) e-learning, and (6) experiences in private life.

Nurses in early stage of career (20-34 years)
All nurses of group I, except Miranda, had a maximum of 4 years of working experience at the present ward.

Motives for working and learning
This stage is characterised by intensive learning periods. Work and learning motives were focused on building up experience as a nurse and in a nursing specialty. Learning was important to get prepared for unfamiliar situations and to expand knowledge. The nurses were aware they were gaining expertise, as Marianne said:

When I look at when I just finished and now, in the first year I had a bit more experience. But now, four years later, I have even more experience (…). There is a basic group of patients, but now I also know better how to react on the exceptions. And the fact that I know answers to students’ questions is also an indicator.

Additionally, career development and task enrichment were a focus. All nurses, except for three nurses following post-graduate education, had additional tasks next to direct patient care. These extra tasks also served as a trigger for learning. Rachel learned to look beyond the borders of her own ward by participating in a hospital committee preparing the move to a new building. Miranda and Marianne had additional tasks as a nursing educator and preceptor respectively. They engaged in learning activities outside the ward for these tasks. For some of group I building a curriculum vitae was also a focus. They displayed a desire to distinguish themselves from others, also with a view to future job applications. For this purpose, Harry registered all his learning activities in a portfolio:
An employer will get a better impression of me than from a curriculum vitae alone. Many nurses say: ‘I do my job, and the rest around me I will be told by others’. They are not actively expanding their knowledge. I want to show I am actively involved in it.

**Learning activities**
At this career stage, most nurses (n=14), also from group II and III, took post-graduate education in a nursing specialty. Some also took education programmes for other nursing roles such as education (Miranda) and management (group II n=1, group III n=5). Besides participating in long education programmes, nurses of group I also learned from short training programmes, symposia, and e-learning courses.

The nurses of group I indicated to learn at the ward from organised learning activities such as clinical teaching sessions and training sessions. Essential was also self-directed learning. Mathilde told:

> I learn a lot by talking about things, by asking doctors ‘why is this so?’ or by asking experienced colleagues ‘how do you do this, or that?’ And when it is quiet at the ward I take a book or search for certain topics at the Internet.

**Perception of the future**
The future still seems open to most of group I nurses. When work is not challenging anymore, they want to move on. Five of them considered the possibility to engage in post-graduate education in another nursing specialty or to obtain a master’s degree in nursing. Two nurses indicated that work probably would get a different place in their lives. They expected to start a family and would prefer working part-time with small children. They thought their learning motives would be focussed on improving their current jobs.

**Nurses in middle stage of career (35-49 years)**
Nurses of group II had worked between 9 and 15 years on the ward.

**Motives for working and learning**
In this stage balancing life at home and work was clearly more of an issue. Four nurses of group II had children. For some time, two of them had also had caring duties for seriously ill family members. Two nurses decided to work less than two-and-a-half days a week when the children were small. Silvia illustrated how private life, work, and learning required balancing:

> When all goes well at home, I can develop. But when you don’t have child care, a child gets ill, or something else happens (...) your beautiful picture collapses.

Some of the nurses of group II strived to keep their work attractive. Both Silvia and Tessa remarked that it seems a paradox: working long-time on one ward, and desiring new challenges. They stressed that they looked for their own challenges. Ina brought variety in her work by combining two jobs: nursing and precepting. Others enriched their work by adding tasks, such as participating in committees. These new tasks formed a trigger for learning, as nurses strived to be prepared to perform those tasks. Danielle had another solution:
I can keep simmering this way, but that is not very pleasant. That’s why I have recently decided to start with a Master’s course in nursing. (…) It is nice to get challenged again.

Another reason to participate in learning activities laid in its compulsory nature. Just as in the other two groups, nurses were obliged by their employer to participate in certain learning activities, such as clinical lessons and e-learning. Participation in these learning activities was not questioned, because of their practical applicability and often short duration. David commented:

Skills trainings (….) I have followed a lot of them (…) it is appropriate to learn again how to administer an infusion (…) it keeps you up-to-date (…) this training usually takes 45 minutes and you come earlier or stay longer. This does not reduce time for patient care.

Learning activities

More than group I did, nurses of group II stressed the importance of learning from private life. They felt that life experience helped them to better support patients.

Just as the other two groups, nurses had the feeling they learned almost every day.

Tessa:

As a nurse, you continuously develop, and not with an official training, but everyday you learn.

This learning seemed to take place primarily at the ward, by participating in organised learning activities and by self-directed learning. Nurses stressed the importance of working in a team, which gave them the possibility to learn from each other. Tessa:

I like to make use of the qualities of others. Some love to take care of dirty wounds, while others are good with technology. If I have to take care of wounds, I prefer to consult someone who is good with it. Then, I can learn a lot.

Learning at the ward appeared to be associated with the number of working hours. Silvia remarked that it requires more efforts to keep up-to-date when working part-time with mainly late shifts. Carien, who kept working full-time with small children, remarked about nurses who work less than 50%:

You miss a lot of the changes at the ward. Sometimes when you are away for a week and a half many things happen. By e-mail you read about it, but it differs if you continually participate in it.

In this career stage fewer nurses participated in education than in the previous stage. Five nurses (three from group II and two from group III) engaged in post-graduate education in a nursing specialty. One took an education program to become a preceptor.

Perception of the future

One nurse had concrete plans to start with a master’s course in nursing. Three others mentioned the possibility to take further education, but had no concrete plans. Emma
expected to have more time and energy for work and learning when her small children would
go to school. This was also true for Silvia. She had recently taken the opportunity to get
another nursing role now her children had left primary school. Learning in the future would
be linked with getting more competencies in this new role. Also Ina thought that her future
learning would be focussed on expanding her competencies in her recent new task as
preceptor. The others expected to learn as they did before, and an important trigger for
learning would be organisational changes in the foreseeable future.

**Nurses in later career stage (50-65 years)**

All nurses of group III had a long working experience at the ward (between 14 and 34 years). Karin seemed an exception with three years. However, she had 30 years working experience at different wards in the same paediatric department and had worked previously on the present ward.

**Motives for working and learning**

Also in this group two nurses stressed the paradox of long tenure at one ward and having challenging work. Anne, working at an intensive care neonatology unit, said:

> Everybody thinks that 30 years at the same ward is tedious. But of course, such a ward is never boring. There is always something happening; new equipment, new insights, the age limit for treatment changed from 28 weeks to 24 weeks. That makes a huge difference.

Other learning biographies seemed to support this. They revealed significant changes in nursing work over the years. In the past three decades nursing care has become more complex and intensive, with a shortening of inpatient care. All nurses experienced organisational changes, with reorganisations leading to an alteration of patient categories at the ward. This combined with technological changes and new insights were important triggers for learning.

Unlike in the other career stages, furthering a career seemed no longer a motive for learning. Other motives remained similar to those in earlier career stages. In this later career stage understanding patient cases still motivated learning. For instance, Simon and Robert described how in geriatrics and psychiatry respectively, the clinical pictures of a disease can vary, which motivated them to learn together with colleagues and other professionals.

Nurses participated in learning activities because they were required to do so, too.

Similar to the middle career stage, there seemed to be a distinction between nurses who explicitly strived for variety in their job by adding extra tasks, and nurses who did not seem to have this drive. These extra tasks triggered learning.

**Learning activities**

Also nurses from group III stressed the importance of learning from private life. Life experiences helped them to better understand patients and families. Edith said:

> A strong example is the death of my parents. I have always given palliative care with my heart and soul. I did this well, but you cannot imagine what it means for people until you experience it. Since then, I address people differently, with more patience and empathy.
Additionally, learning from others during work seemed essential. Karin, who had considered changing her job to become a pedicurist, finally preferred working in a team. She indicated to learn from her colleagues, though not always consciously. And Anne was glad to have colleagues to support her, as getting used to a new mechanical ventilator was demanding for her, working only seven days a month. Nurses learned also from doctors when they make their rounds, and on other occasions. Willemien told:

Physicians come up with new things. They go to symposia, read literature and return with new things.

In this career stage, nurses did not engage in long education programmes. Two nurses did not engage in short learning activities outside the hospital either. Karin said that symposia did not teach her many new things, so she stopped visiting them. The others confirmed that symposia were not always as informative, but meeting industry representatives and colleagues from other organisations sometimes brought them new ideas.

**Perception of the future**
Looking at the future, the nurses of group III hoped to keep on working as they did. Simon said:

I have come to the point that I just want to keep on working agreeably with all my efforts, to do some projects and to teach. (...) You keep on learning, but when you do not have that feeling or when you are not open to learning (...) you become frustrated.

Some questioned whether they would physically endure the job until retirement. Jeanet saw an escape in preceptor-ship if daily care would become physically too heavy. The two oldest nurses had hoped to stop in the nearby future, or to slowly phase out, but were confronted with changing retirement policies, which would probably force them to work longer than expected. Learning in the future was located in what the nurses called ‘small things’. Some nurses had an explicit goal for learning, such as improving power-point skills for teaching, or learn some additional technical nursing skills. Others indicated they had no clear goals, but would participate in what would come along. Edith said:

It is not that I have one goal; something I want to learn. But when an interesting course on dementia crosses my path, I would say yes.

**Conclusions and discussion**
This exploratory study aimed to investigate nurses’ CPD strategies in three career stages by creating individual learning biographies. To our knowledge this study is the first to use a biographical approach to study nurses’ CPD. This approach bridges insights from theories of workplace learning and life-span psychology. By locating nurses’ CPD in their social and situational context, we got a better understanding of nurses’ learning motives in different career stages. We have found similarities and differences in motives and learning activities in these stages, and uncovered the importance of work motives in understanding nurses’ CPD strategies. Similar in all stages is the importance of learning at the ward. As in other studies (Jantzen, 2008, Eraut, 2007, Berings, 2006) daily work provides important sources for
learning, both through self-directed learning and organised learning activities. Keeping up-to-date with work changes, understanding patient cases and getting competent appear to be crucial motivators for learning at the ward. This learning appears to be more intensive in the first career stage compared to the other stages, unless a nurse performs a new task or role. This is consistent with earlier findings that competence development is characterised by a rapid growth period during the first 10 years of clinical experience, and in particular in the first few years, followed by more stable periods (Takase, 2013).

Differences in CPD strategies among the three career stages appear to be related to alterations in work motives. The importance of career development seems to decrease with longer careers. In line with this finding, nurses in the third career stage do not engage in postgraduate education, while nurses in the first and second career stages participate in these education programmes in order to become competent in a new nursing speciality or a new nursing role. This conclusion supports earlier findings showing an age-related decline in preferences for growth (Kooij et al., 2011). In addition, alterations in work motives can also be (temporarily) influenced by life events, such as having small children. Some nurses who prefer to work part-time (less than three days a week) show a (temporary) decline in growth motives, which can be a barrier to pursuing additional education (Morgenthaler, 2009).

When examining CPD strategies in three career stages, one key observation appears to be irrespective of career stage. The learning biographies revealed nurses who preferred a diverse or challenging job, and nurses who are happy with a job that is stable over a long period of time. By regularly taking the initiative to add new and extra tasks, the first group of nurses created extra triggers for learning. Combining direct patient care with other nursing roles or tasks, such as preceptor-ship or participating in a committee, seems to be related with an increase in learning activities, as they have a broader area to be competent in than do nurses who restrict their job to direct patient care. This finding is consistent with earlier findings showing that one group of nurses has a narrow scope of development and learns in reaction to changes at the ward, while another group seems more pro-active and motivated to develop and improve their work (Pool et al., 2013a). Therefore, besides a difference in work motives also a different conception of nursing work might be a factor influencing their participation in CPD.

Limitations
We need to recognize some important limitations of this study. First, it is likely that nurses preferring certain learning paths were not present at the middle and older group of nurses, because they left direct patient care during the first career stage and took on other nursing roles. This can potentially bias the comparison of the learning biographies of the three groups.

Second, the differences found in nurses' CPD strategies cannot solely be explained by career stages. The cross-sectional design makes it impossible to disentangle age and generational differences. Generational cohorts grow up in the same time. This may lead to similar values, opinions and preferences. The learning biographies show also that the three groups were educated in times that differed in terms of the values and competencies regarding life long learning. This may have had an impact on their CPD strategies also.

Third, as a result of the open interview strategy employed, nurses talked about learning experiences that mattered to them. The fact that certain other things were not mentioned does not necessarily imply that they did not happen. For instance, one nurse did not mention participating in e-learning until the interview was almost closed. She did not mention these
learning activities because she did not find these informative and she did not consider them to contribute to her learning.

**Implications of findings**

First of all, our findings suggest we need to rethink the concept of CPD. Friedman and Phillips (2004) revealed that opinions vary on the learning activities that can be qualified as CPD. Our study showed that CPD is more than participation in learning activities organised by others. Nurses also develop professionally by self-directed learning and they learn spontaneously from life experiences. This broader understanding of CPD gives a more nuanced view on nurses' CPD, and of older nurses' CPD in particular. Stereotypical views state that older workers are less motivated to learn than their younger colleagues (Gary and McGregor, 2003). This may be true for formally organised learning activities; however, our results support earlier studies indicating that older workers continue to learn through other learning activities (Fenwick, 2012, Fuller and Unwin, 2005). Hence, future research should report in a more detailed way on relationships between age and different types of learning activities.

Another suggestion for future research is to investigate more thoroughly the relationship between work motives and learning motives. In addition, examination of the relation between learning motives and learning activities will extend our understanding of why workers prefer certain learning activities. Studies on learning styles (Berings, 2006) give useful insights in these preferences; however, it may be expected that learning and work motives also affect the types of learning activities that a nurse undertakes.

A third area for study is on the appropriateness of short education and training programmes outside the ward for older nurses. Do these programmes sufficiently meet the needs of nurses with many years of nursing experience?

Our study has three main practical implications. First of all, since daily practice is a rich resource for learning in all career stages, its learning potential should be recognized and systematically used (Lammintakanen and Kivinen, 2012, Jantzen, 2008). Nurse managers and HRD professionals play a crucial role in creating a supportive learning environment. For instance, they can enable the organisation of learning activities at the ward or facilitate self-directed learning by providing information resources such as protocols and literature. In addition, we found that new tasks trigger learning. Managers should encourage nurses who loom to limit their work to what they already know, to perform new tasks and to take on challenging patient cases. Finally, since learning and work motives appear to be related, organizations should take a life-span perspective on CPD. By getting more insight in the life issues of nurses in different career stages, organisations are better able to develop CPD approaches that fit individual needs.

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