

ORIGINAL RESEARCH

Nurses' choice of clinical field in early career

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Accepted for publication 10 July 2014

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ABRAHAMSEN B. (2014) Nurses' choice of clinical field in early career. *Journal of Advanced Nursing* 00(0), 000–000. doi: 10.1111/jan.12512

Abstract

Aim. To investigate how undergraduate nursing students' perceived professional qualifications and job values relate to their choice of clinical field after graduation, particularly about employment in care of older people and psychiatric fields.

Background. In the light of greater demand for highly qualified nurses, it is important to understand how professional qualifications and job values relate to career choices.

Design. A quantitative longitudinal study of 290 undergraduate nursing students based on a questionnaire survey and register data.

Methods. Data were analysed by multinomial logistic regression analyses. The questionnaire was distributed to all undergraduate nursing students during the final semester of study at two university colleges in Norway ($N = 411$) to collect the students' perceived professional qualifications and job values (2001). Register data on clinical fields after graduation (2002–2006) were merged into the survey data in 2008 (Statistics Norway).

Results. The tendency among undergraduate nursing students to choose care of older people rather than general hospital care after graduation increases as their score on altruism decreases, but is not correlated with their score on theoretical knowledge. The tendency to choose psychiatric fields rather than general hospital care increases with an increasing score on perceived practical skills and decreases with an increasing score on perceived theoretical knowledge.

Conclusion. The choice of clinical field after graduation correlates with undergraduate nursing students' perceived professional qualifications and job values.

Keywords: altruism, care of older people, clinical field, helping others, job values, nursing, practical skills, professional qualification, psychiatric care, theoretical knowledge

Introduction

Several studies have identified motives for choosing a career in nursing, but little is known about the motives behind nurses' choice of clinical field. The present study draws

attention to graduated nurses choosing less popular nursing fields such as care of older people and psychiatry. Care of older people seems to be one of the least popular clinical fields among nursing students in Western countries (Fagerberg *et al.* 2000, Happell 2002, Kloster *et al.* 2007), which is reflected in subsequent career choices made after

Why is this research or review needed?

- Several studies have identified motives behind choosing a career in nursing, but little is known about the motives behind choosing different nursing fields.
- Previous research has mainly focused on nursing students' perceptions, preferences and career plans about employment in clinical fields.
- Few studies have addressed how the professional qualifications and job values of nursing students influence their future career choices.

What are the key findings?

- Graduating nurses who choose a career in care of older people tend to have same score on perceived theoretical knowledge as those who choose general hospital care.
- Graduating nurses who choose a career in caring for the older people tend to be less likely to have a strong desire to help others than those who choose general hospital care.
- Graduating nurses who choose a career in psychiatric care tend to score higher on perceived practical skills and lower on perceived theoretical knowledge than those who choose general hospital care.

How should the findings be used influence policy/practice/research/education?

- Care of older people and psychiatric fields should develop recruitment strategies to attract qualified and motivated nurses to these fields.
- Undergraduate nursing education should expose students to the positive aspects and professional challenges in care of older people and psychiatry.
- Workplace education should be considered in clinical fields where recruitment of new graduates is difficult to address inadequate training during undergraduate nursing education.

graduation. Nor does a career in psychiatric care seem to be very popular among nursing students. Psychiatric care is however, generally ranked higher than care of older people but definitely lower than general hospital care (Kloster *et al.* 2007, Hoekstra *et al.* 2010).

Given the increased demand for highly qualified professionals in nursing it is important to understand the weight that graduates place on professional qualifications and job values when making career choices. Some major concerns include nurses' theoretical professional knowledge and altruism (i.e. a strong desire to help others). The importance of theoretical professional knowledge is frequently highlighted both among nurses in practice and among teachers in nursing

colleges (Benner *et al.* 2010, Karnick 2013). The demand for such knowledge is likely to intensify in the coming years, particularly in care of older people where the professional challenges will increase dramatically. Further, people-oriented values like helping others are seen as particularly important to professionals in the health sector and are viewed as a core element in nursing (Öhlén & Segesten 1998). The nursing students are a heterogeneous group and the motives for choosing a career in nursing vary (Rognstad 2002, Tveit 2008). Nurses in care of older people and psychiatric care work directly with patients and it is crucial that they have a genuine interest in helping people.

This article investigates how graduates' choice of clinical field relates to their perceived professional qualifications and job values. Two dimensions of perceived professional qualifications are examined: perceived theoretical knowledge and perceived practical skills. That is the knowledge and skills the students consider developed in the respective subjects during their undergraduate nursing education. The study also identifies whether graduates' choice of clinical field relate to their desire to help other people. The article will shed light on the relevance of altruism (the desire to help others) and of other aspects of job values in the choice of clinical field. Students' job values reflect their motivation for working and are defined as 'conceptions of what is desirable that individuals hold with respect to their work activity' (Kalleberg 1977, p. 129).

The present study examines job values and perceptions of knowledge and skills among undergraduate nursing students at two university colleges in Norway. The curriculum is based on the national general plan for undergraduate nursing education, which means that all undergraduate nursing students in Norway are trained in the same subjects independent of which university college the students attend. (Kyrkjebø *et al.* 2002). After completing an undergraduate nursing education, they obtain a general nursing authorization and can work in both hospitals and in the community health service. A long-lasting shortage of nursing personnel in Norway (as in other Western countries) has given rise to excellent opportunities for newly graduated nurses to obtain a job in their preferred clinical field. There is presumably even greater opportunity in the less popular nursing fields where the shortage of qualified nurses is more acute than in general hospital care.

Background

Few studies that addressed factors influencing graduates' choices of clinical field were found. Previous research has mainly focused on nursing students' perceptions, career

plans and preferences about employment in clinical fields (Marsland & Hickey 2003, Kloster *et al.* 2007). Most nursing students seem to enter a nursing school with a preconceived notion of the type of patients they envision providing care after graduation (Kloster *et al.* 2007). However, many students change perceptions of clinical fields during the nursing education. According to previous studies, course experience and exposure to a clinical field via placement are influential factors for nursing students' career choice (Marsland & Hickey 2003, Fenush & Hupcey 2008).

Present study is based on the assumption that graduates want to pursue careers in fields that corresponds to the professional qualifications and values that they have developed during their undergraduate nursing education. The idea is congruent with social cognitive career theory (Lent *et al.* 1994) which is an extensively researched theory of career choice and performance. This theory is linked to Bandura's (1986) theory whereby individuals choose careers that fit with their expertise and past successes to maintain self-efficacy and ensure a greater likelihood of future success (Lindley 2005). Although all Norwegian undergraduate nursing students are trained in the same subjects and practice situations, significant variations were found among these students about professional knowledge and skills (Smeby & Heggen 2014) and job values (Rognstad 2002, Tveit 2008). According to 'Social cognitive career theory', these results reflect significant variations in students' professional interests and career preferences.

When nursing students were debating about their future choice of nursing field, the students' descriptions of clinical fields often became polarized (Fagerberg *et al.* 2000). The polarity was demonstrated by contrasting care of older people and acute care, with care of older people described as requiring less knowledge and demanding skills than acute care. Other aspects frequently mentioned include insufficient staffing and the lack of an apparent support system in care of older people (Fagerberg *et al.* 2000, Kloster *et al.* 2007). The nursing students' descriptions are to a large degree confirmed by the composition of health personnel. The majority of personnel in the Norwegian care of older people, which also includes dementia care, are auxiliary nurses or unskilled staff (Høst *et al.* 2010). Registered nurses (obtained a general nursing authorization) are the smallest group among health personnel and usually the only highly educated professionals at work. Physicians are usually only available on request. In psychiatric care, the situation is different. In contrast to care of older people, registered nurses represent the largest group of professionals in psychiatry. Further, the highest percentage of nursing

specialists is in psychiatry (Dæhlen & Seip 2009), which indicates an emphasis on theoretical knowledge-based psychiatric treatment. According to Kloster *et al.* (2007), the increased popularity of psychiatric nursing among undergraduate nursing students after placement in the field is due to their experience of psychiatric nursing as professionally challenging. Students pointed out that in psychiatric nursing they engage in different types of activities in addition to basic nursing care.

In nursing, there is a major focus on theoretical knowledge, which primarily comprises concepts and theories from different subjects and clinical fields. Research has indicated that a lack of theoretical knowledge limits nurses' conception of theory and its utility as a vital component of practice (Karnick 2013). However, the relationship between nursing theory and practice is challenging and nursing students frequently report a relevance gap between practical and theoretical knowledge (Benner *et al.* 2010). In Norway, many undergraduate nursing students are demanding less focus on theoretical knowledge and more on practical training (Alvsvåg 2006). Nursing is mainly a practical profession and in line with the social cognitive career theory, it can be argued that variations in students' theoretical knowledge reflect different professional interests and different career ambitions. Based on undergraduate nursing students' perceptions of different clinical fields, the hypothesis is that a high score on perceived theoretical knowledge decreases the tendency to choose care of older people but not the tendency to select psychiatry, compared with the tendency to choose general hospital care. In contrast, a relationship between choice of clinical field and students' scores on perceived practical skills is not expected.

It is likely that graduated nurses consider several aspects of work when they seek available positions (Rognstad 2002). Researchers usually differentiate between intrinsic and extrinsic job values, which distinguish between the 'meaning' and the 'goal' of work, respectively (Johnson 2001). Helping others is defined as an intrinsic job value and according to previous research altruism is highly prevalent among nursing students (Rognstad *et al.* 2004, Price 2009, Eley *et al.* 2012). A desire to help others is a consistently recognized value, which supports the long-held stereotype that nursing is a caring profession. Students with little desire for helping others presumably quit or eventually plan to seek jobs outside nursing after graduation. Based on the strong connection between helping others and nursing (caring), the hypothesis is that graduates' choice of clinical field in nursing does not correlate with the score on altruism. Based on the assumption that individuals want to realize their own values and seek employment where the opportunity for realization is most successful,

extrinsic job values is also expected to affect graduates' choice of clinical field.

The study

Aim

The aim is to explore how undergraduate nursing students' professional qualifications and job values relate to their choice of clinical field early in their careers. Particular attention is paid to choice of care of older people and psychiatry.

Design

A longitudinal quantitative study of 290 undergraduate nursing students' perceived professional qualifications and job values in the final study semester and their choice of clinical field after graduation.

Sample

All students attending final study semester of an undergraduate nursing education at two university colleges in Norway ($N = 411$).

Data collection

The analyses are based on data from a questionnaire survey (StudData) and register data collected by Statistics Norway. StudData is a longitudinal panel survey developed and made available by the Centre for the Study of Professions (CSP) at Oslo and Akershus University College of Applied Sciences. A questionnaire survey was distributed to undergraduate nursing students in their final semester in 2001. The response rate was 71. In the present study, register data on clinical fields at the end of 2002–2006 were used. The register data were merged and depersonalized at the end of 2008 by Statistics Norway. The data were made available for analysis by CSP in 2009.

Variables

Clinical fields

Clinical fields are divided into four categories: general hospital care, care for older people and disabled persons, psychiatry and drug abuse treatment and others (includes fields of work outside nursing). The groups are based on nurses' employment fields defined by Statistics Norway. The

category 'care for elderly and disabled' comprises both care in nursing homes and care in patients' homes. The students' clinical fields for 2002–2006 are shown in Table 1. In the multinomial regression analysis (Table 3), general hospital care is the reference category.

Professional qualifications

Two dimensions of perceived professional qualifications are included in the analysis: perceived theoretical knowledge and perceived practical skills. The responses refer to the following questions given to the undergraduate nursing students in their final study semester:

- 'To what extent did you acquire specific theoretical professional knowledge during the undergraduate nursing education?'
- 'To what extent did you acquire practical skills during the undergraduate nursing education?'

The responses were registered on a five-point Likert scale (0–4). The mean and standard deviation values for each dimension are shown in Table 2.

Job values

Job values refer to students' responses in their final study semester. A set of five items is used. The students responded to the following questions:

- 1 'How important is job security when you consider a job?'
- 2 'How important are good opportunities for advancement when you consider a job?'
- 3 'How important is the opportunity for autonomy when you consider a job?'
- 4 'How important is the opportunity to help other persons when you consider a job?'
- 5 'How important is the opportunity for creativity when you consider a job?'

Their responses were measured on a five-point Likert scale (0–4). The mean and standard deviation values for each job value are shown in Table 2.

Age

Students' age was recorded on a rising scale (0 = 20 years, 1 = 21 years, 2 = 22 years, etc.) The average age (total) was 28.1 years (SD 6.23).

Gender

Of the 290 undergraduate nursing students included in this study, about 87% were women (women = 0, men = 1).

Ethical considerations

Research Ethics Committee approval was obtained from the university colleges before commencing this study. The survey, including the questionnaire and the storage of data, was approved by Norwegian Social Science Data Services. A week before the questionnaire was distributed the students were informed via the students' internal website with assurance that participation was voluntary. They were informed that they could reject the merging of survey data and register data.

Data analysis

The data were analysed with the Statistical Package for the Social Sciences (SPSS), version 20 (Armonk, NY, USA). Descriptive statistics (percent, mean, SD) were generated for all variables included (Tables 1 and 2). The distributions of perceived professional qualifications and job values in clinical fields are presented in Figures 1a and 1b, respectively. The figures show the average estimates of 1-year (2002) and 5 years (2006) after the survey questionnaire. Multinomial logistic regression analyses were performed to examine the relationship between graduates' choice of clinical fields and their perceived professional qualifications and job values (Table 3). Odds-ratios, 95% Confidence Intervals and *P* values are presented.

Validity and reliability

Self-reported job values and perceptions of professional knowledge and skills were used in this study. The job value measures have been employed in several studies and can be considered as established measures (Johnson 2001). The items of perceived professional knowledge and skills were

Table 1 Clinical fields in 2002–2006.*

	Clinical fields 2002 (%)	Clinical fields 2006 (%)
Hospital care	59%	56%
Care of older people	26%	28%
Psychiatry	7%	10%
Other fields	8%	6%
Sum	100%	100%
<i>n</i>	289	287

*Hospital care indicates General hospital care; Care of older people, care for older people and disabled persons; Psychiatry, psychiatry and drug abuse treatment; Other fields, other fields including fields outside nursing.

Table 2 Perceived professional qualifications and job values among nursing students (*n* = 289) in final study semester, 2001. Mean (SD), rising scale 0–4.

	Final study semester, 2001
Perceived professional qualifications	
Practical skills	2.72 (1.02)
Theoretical knowledge	3.06 (0.78)
Job values	
Helping others	3.28 (0.64)
Job security	3.07 (0.95)
Advancements	2.98 (0.72)
Autonomy	2.99 (0.79)
Creativity	3.06 (0.77)

not part of a well-established measurement instrument, but included in a student survey developed by researchers to map students' evaluation of their professional education. Perceived theoretical knowledge and practical skills and the five aspects of job values are measured by one item each. Using single items are usually considered as a disadvantage because increased random measurement error can be estimated. However, single items also weakened the correlations and regression estimates (Ritchey 2006).

Results

Descriptive statistics

Table 1 shows graduates' choice of clinical fields in 2002–2006. In the first year after graduation (2002), nearly 60% of the respondents are employed in general hospitals, 26% in care of older people, 7% in psychiatry and 8% in other fields (including fields outside nursing). Nearly all graduated nurses chose to work in one of the core nursing fields.

Nurses' employment fields are quite similar in the fifth year after graduation (2006). Table 1 shows that the distributions across the various clinical fields are approximately equal at the two points in time. A closer examination of the data shows that about 85% of the nurses are employed in the same field in 2002–2006, whereas 15% of the nurses have moved to another field.

Table 2 shows average scores on perceived professional qualifications and job values of undergraduate nursing students in their final study semester (all variables are recorded on a Likert scale, 0–4). The average score on perceived theoretical knowledge (3.06) is significantly higher than the average score on perceived practical skills (2.72). Helping others has the highest average score (3.28) of all job values included in the analyses. The average score on all other job values are close to 3 (2.97–3.07).

Table 3 Multinomial logistic regression analysis. Clinical fields in early career. Nurses graduated in 2001. General hospital care is the reference category.*

	Care of older people			Psychiatry			Other fields		
	OR	95% CI	P (Wald)	OR	95% CI	P (Wald)	OR	95% CI	P (Wald)
Clinical fields 2002 (<i>n</i> = 246) [†]									
Men	0.43	0.14–1.35	0.14	2.08	0.54–8.06	0.28	0.87	0.17–4.53	0.86
Age	1.06	1.01–1.12	0.02	1.08	0.99–1.18	0.07	0.88	0.75–1.04	0.12
Practical skills	1.05	0.70–1.55	0.82	2.36	1.01–5.54	0.04	0.93	0.54–1.59	0.78
Theor. knowl.	0.87	0.53–1.42	0.56	0.28	0.11–0.72	0.01	0.99	0.48–2.04	0.98
Helping others	0.38	0.21–0.69	0.01	0.39	0.14–1.04	0.06	0.72	0.45–1.17	0.45
Job security	1.05	0.75–1.48	0.77	0.94	0.54–1.61	0.81	0.72	0.30–1.72	0.18
Autonomy	2.02	1.20–3.40	0.01	2.46	0.93–6.51	0.06	1.53	0.73–3.21	0.26
Creativity	1.70	1.04–2.78	0.03	1.48	0.60–3.63	0.39	1.11	0.56–2.19	0.76
Advancements	1.17	0.76–1.80	0.47	1.09	0.49–2.40	0.83	1.03	0.57–1.90	0.92
Clinical fields 2006 (<i>n</i> = 229) [‡]									
Men	0.68	0.22–2.06	0.49	2.18	0.67–7.14	0.19	2.30	0.49–10.89	0.29
Age	1.10	1.04–1.16	0.01	1.07	0.98–1.16	0.12	1.07	0.97–1.19	0.17
Practical skills	0.78	0.51–1.19	0.24	1.61	0.84–3.04	0.14	0.59	0.29–1.21	0.14
Theor. knowl.	1.13	0.66–1.93	0.66	0.33	0.16–0.70	0.01	1.39	0.52–3.73	0.50
Helping others	0.23	0.11–0.47	0.01	0.64	0.24–1.63	0.34	0.31	0.09–1.09	0.06
Job security	1.49	1.02–2.18	0.04	1.24	0.75–2.07	0.40	1.22	0.65–2.29	0.53
Autonomy	2.40	1.34–4.31	0.01	1.46	0.65–3.31	0.36	2.16	0.71–6.63	0.17
Creativity	1.78	1.05–3.04	0.03	1.37	0.67–2.83	0.39	1.28	0.49–3.32	0.61
Advancements	0.91	0.58–1.44	0.69	1.03	0.52–2.03	0.93	1.19	0.48–2.93	0.70

OR, Odds-ratio; CI, Confidence interval; P (Wald), P value.

*Care of older people indicates care for older people and disabled persons; Psychiatry, psychiatry and drug abuse treatment; Other fields, other fields including fields outside nursing; Theor. knowl., perceived theoretical knowledge; Practical skills, perceived practical skills.

[†]Pseudo R^2 (Nagelkerke) = 0,228; $-2\log$ -likelihood = 451,459.

[‡]Pseudo R^2 (Nagelkerke) = 0,258; $-2\log$ -likelihood = 426,980.

Perceived professional qualifications and job values across clinical fields

Figures 1a and 1b show average scores on perceived professional qualifications and job values in different clinical fields (average estimates of 2002–2006 levels). The results reflect the perceived professional qualifications and job values that undergraduate nursing students bring into each clinical field after graduation. About 15% of the nurses changed clinical fields during the period under study (2002–2006), but information on how many moves they made and when they moved is not available. Average estimates limit the uncertainty of such moves. High estimates in Figure 1A relate to a high average score on perceived knowledge and skills. High numbers in Figure 1b indicate strong agreement about job values (all scales 0–4).

Figure 1a reveals a lower average score on perceived theoretical knowledge in psychiatry (2.65) compared with general hospital care (3.00) and care of older people (3.05). The differences between psychiatry and the other clinical fields are significant ($P < 0.05$). The average score on perceived practical skills among graduated nurses are

approximately equal in the three nursing fields (not significant differences).

Figure 1b shows nurses' average score on job values (reported in final study semester). The average score on helping others is highest in general hospital care (3.30) followed by care of older people (3.15) and psychiatry (3.05). The estimates of autonomy, creativity and job security are also identified, revealing similar patterns. The differences between the clinical fields are not significant.

It has to be mentioned that significant differences between clinical fields about average score on helping others are identified for clinical fields in 2006 (the estimates are not shown). Nursing students who choose general hospital care score significantly higher on helping others than students who choose care of older people or psychiatry ($P < 0.05$).

Multinomial regression analysis

Table 3 shows the results of the multinomial logistic regression analysis of clinical fields in 2002–2006 among nurses who graduated in 2001. Odds-ratios, 95% Confidence

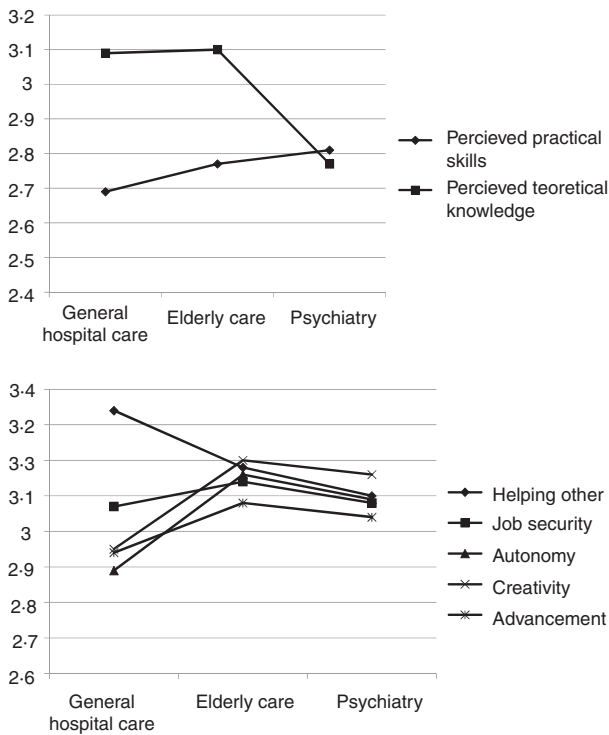


Figure 1 (a) Perceived professional qualifications in clinical fields. (b) Job values in clinical fields. Average estimates (2002–2006). The estimates presented are average estimates of 2002–2006 levels. Average estimates (of 1 year and of 5 years after graduation) increase the validity of the estimates compared with each estimate. Employment 2002: general hospital care, $n = 165$; care of older people, $n = 72$; psychiatry, $n = 20$. Employment 2006: general hospital care, $n = 151$; care of older people, $n = 74$; psychiatry, $n = 26$.

Intervals (CI) and P values are estimated. Nurses' clinical fields are divided into four categories: general hospital care (the reference category); care for older people and disabled persons, psychiatry and drug abuse treatment; and other employment fields. Several independent variables are included in the regressions. Two dimensions of perceived professional qualifications: perceived theoretical professional knowledge and perceived practical skills. Furthermore, five job value items are included: job security, advancement opportunity, autonomy, helping others and creativity. In addition, gender and age are included.

The results show that undergraduate nursing students' perceived theoretical knowledge, perceived practical skills and job values are relevant factors ($P < 0.05$) based on choice of clinical field after graduation. More specifically, the results about psychiatry show that the higher the score on perceived theoretical knowledge, the lower the tendency (odds) to choose psychiatric care after graduation (as opposed to choosing general hospital care). The odds-ratio (OR) for this relationship in 2002 is 0.28 (CI = 0.11–0.72)

and for 2006 the ratio is 0.33 (CI = 0.16–0.70). Further, the results show that the higher the score on perceived practical skills, the higher the odds are to choose psychiatric care (as opposed to choosing general hospital care). The odds-ratio for this relationship is 2.36 (CI = 1.00–5.54) in 2002 and 1.61 (CI = 0.84–3.04) in 2006. It must also be mentioned that job values not seem to correlate significantly with graduates' choice of psychiatric care either in 2002 or 2006.

Differences between the results obtained about nurses' choice of care of older people and psychiatry are identified. Perceived practical skills and perceived theoretical knowledge do not relate to nurses' choice of care of older people (as opposed to nurses' selection of general hospital care) in 2002 or in 2006. By contrast, the odds-ratios of several items of job values about nurses' choice of care of older people are significant and some of them grew slightly stronger during the period from 2002–2006. Whereas students' tendency to choose care of older people (as opposed to choosing general hospital care) decreases with an increasing score on helping others, the opposite is true about job values like autonomy and creativity. The odds-ratio for the relationship between the desire to help others and the choice of care of older people is 0.38 (CI = 0.21–0.69) and 0.23 (CI = 0.11–0.47) in 2002–2006, respectively. Job security does not significantly relate to nurses' choice of care of older people in 2002 but the relationship is significant in 2006. The tendency to choose care of older people increases with an increasing score on job security as opposed to those who choose general hospital care. In contrast, nurses' score on advancement does not correlate significantly to their choice of clinical field in the early stage of their careers.

The choice of care of older people also relates to a nurse's age. The tendency to choose care of older people as opposed to choosing general hospital care increases with age. Gender, however, does not correlate with choice of nursing field (when controlling for perceived professional qualifications, job values and age).

Discussion

This study reveals a relationship between graduates' choice of clinical field and their perceived professional qualifications and job values. Most attention is given perceived theoretical knowledge and the desire to help others. Based on the assumption that graduates desire a job that corresponds to their professional qualifications and job values, some of the results are contrary to what is expected.

In contrast to the hypothesis graduating nurses who choose a career in care of older people tend to have same score on perceived theoretical knowledge as those who

choose general hospital care. The results might indicate that undergraduate nursing education has succeeded in exposing students to the professional challenges in care of older people. This is promising however because of the increasing complexity in patients' diagnoses in this sector (Heggen 2012). Patients are being discharged sooner from hospitals to community care and the need for technically skilled nurses in care of older people is greater than before (Kloster *et al.* 2007). However, the labour market situation for nurses should be considered in the interpretation of the results. One year after graduation, 26% of the nurses included in the study work in care of older people. This proportion is surprisingly high given that previous research reports that only 4% of final-year undergraduate nursing students desire to work in care of older people (Lund 2012). This discrepancy might reflect the strong competition for nursing positions in general hospital care. A substantial proportion of the nurses who had general hospital care as their first priority were most probably content themselves with employment in care of older people in the face of keen competition for a limited number of general care positions. The shortage of nurses in care of older people appear to moderate the relationship between perceived theoretical knowledge and the choice care of older people.

Unexpectedly, graduating nurses who choose a career in psychiatric care tend to score higher on perceived practical skills and lower on perceived theoretical knowledge than those who choose general hospital care. The results may reflect a distinct occupational interest (or identity) among graduates who choose psychiatry. According to Hoekstra *et al.* (2010) undergraduate nursing students can be divided into two groups according to the type of nurse they want to be. Some want to act efficiently and solve problems. They prefer the technical aspects of the profession. The other type of student focuses primarily on interaction and establishing a therapeutic relationship with patients. Only this second type of student considers mental health as an attractive career option. A substantial interest in practical and interpersonal skills among nursing students who prefer psychiatry as a career path is identified (Ganz & Kahana 2006, Kloster *et al.* 2007). It has to be mentioned however, that the relationship between perceived practical skills and the choice of psychiatry weakened slightly during the period from 2002–2006 (not significant in 2006). Furthermore, the average score (2002–2006) on perceived practical skills is only slightly higher among nurses who choose psychiatry than among those who choose general hospital or care of older people (insignificant differences). These findings indicate that the results must be interpreted carefully.

The negative relationship between perceived theoretical knowledge and the graduates' choice of psychiatry is consistent with the low ranking of psychiatric nursing in the society and in nursing education. It is reasonable that graduates' choice of clinical fields reflects more than individual interests and desires. Several researchers have pointed out the influence of the cultural context on students' perceptions of clinical areas (Karaoz 2004). The society it serves shapes nursing attitudes and practices and ranks clinical fields. In Norway, as in many other Western countries, care of older people and psychiatry are ranked lowest in status while general hospital care is ranked at the top. The ranking is maintained by the amount of economic resources put into different fields. Despite increasing economic resources used in Norwegian health care, care of older people and psychiatry suffer from insufficient resources. The lack of financial resources in these fields is reflected both in the composition of the personnel (particularly in care of older people) and in the undervalued need for treatment for persons with psychiatric illnesses and nursing for older people. Happell (1999) has pointed that nursing attitudes also are shaped in the professional culture. Nursing students are socialized into the care/cure dichotomy, where high technology and cures are seen as more appealing than the caring aspects of nursing. The empirical results in present study indicate that the undergraduate nursing education does not succeed in showing the students the positive aspects and professional challenges inherent in care of older people and psychiatry in particular.

A key part of the present study involved exploring the association between undergraduate nursing students' job values and their choice of clinical field. Unexpectedly, students' score on altruism (helping others) appears to relate significantly to the choice of clinical field students make. Graduates who choose a career in care of older people tend to be less likely to have a strong desire to help others than those who choose general hospital care. The consequence seems, however, not very dramatic. The average score (2002–2006) on helping others is only slightly lower among graduates in care of older people than in general hospital care (insignificant differences). This finding indicates that few undergraduate nursing students report a low score on altruism.

Significant relationships between job values and choice of career path have also been identified in previous research about specialization in medicine (Vaglum *et al.* 1999). In the present study, the relationship between undergraduate nursing students' job values and choice of clinical field seems to be strengthened during the early stage of a nurse's career. The strengthening relates to graduates' job moves and indicates that many nurses do not succeed in realizing

their own job values in their first job after graduation. Four of the five job values included in the analyses (Table 3) relate significantly to graduates' choice of nursing field in the early stage of their careers. The tendency to choose care of older people as opposed to general hospital care increases with graduating nurses' scores on job security, autonomy and creativity.

The study shows that the tendency to choose care of older people as opposed to general hospital care increases with age. This result indicates that work experience before undergraduate nursing education and a graduate's life situation may affect their choice of clinical field. Unfortunately, such information is not available in the present study. How graduates' life situation and work experience affect their choice of clinical field needs further investigations.

Limitations

Limitations of the study include the small size of the sample and a population that comprises undergraduate nursing students from only two university colleges. Therefore, it is not possible to generalize the findings to the whole population of undergraduate nursing students in Norway. The choice of clinical field might vary in different geographical areas because of differences in local labour market opportunities. The distribution of clinical fields in the present study is, however, close to the national distribution.

The study captures graduated nurses' choice of clinical fields in 2002–2006. A relevant question is whether the results are still valid. A key factor is whether the labour market context at the time the data were collected remains current. Although social and economic changes have occurred, the labour market situation for nurses in Norway has remained relative stable over the last decades. The shortage of nurses, which is particularly prevalent in care of older people, is a challenge today as it was in 2002–2006.

Several countries face similar challenges to Norway about graduates' ranking of general hospital care over care of older people and psychiatry (Happell 2002, Hoekstra *et al.* 2010). The study is presumably relevant for nurses in other Western as well. However, the labour market situation for nurses in the country in question should be taken into account. The labour market situation appears to moderate the influence of perceived professional qualifications and job values on graduates' career decisions.

Conclusion

The findings indicate that less popular nursing fields like care of older people and psychiatry need to develop

recruitment strategies as to entice qualified nurses to choose these fields. A major concern includes graduates' theoretical professional knowledge. It is therefore positive that graduating nurses who choose care of older people tend to have same score on perceived theoretical knowledge as those who choose general hospital care. A relevant question however, is whether the undergraduate nursing students need more help to recognize the relevance of altruism in care of older people. Graduates who choose a career in care of older people tend to be less likely to have a strong desire to help others than those who choose general hospital care.

The study reveals that undergraduate nursing students who choose psychiatric fields after graduation tend to score lower on perceived theoretical knowledge than those who choose general hospital care. This might have negative consequences about the theoretical knowledge base for nurses in psychiatric care. However, it should be possible to compensate for insufficient theoretical knowledge among graduates. Workplace education should be considered in clinical fields where recruitment of adequate trained new graduates is difficult.

Further research should pay greater attention to motives behind nurses' choice of career path. Of particularly interest is job moves into and out of care of older people and psychiatry. The increasing demand for highly qualified professionals in those fields highlights the need to understand nurses' career decisions in early career and in later stages of the career. A focus on motivation is essential to develop strategies both about recruitment and to ensure that nurses remain working in those fields.

Funding

The Research Council of Norway has financed the research project 'Qualifying for Professional Careers' (2009–2013). The author was participating in this research project.

Conflict of interest

No conflict of interest.

Author contributions

All authors have agreed on the final version and meet at least one of the following criteria [recommended by the ICMJE (http://www.icmje.org/ethical_1author.html)]:

- substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;

- drafting the article or revising it critically for important intellectual content.

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