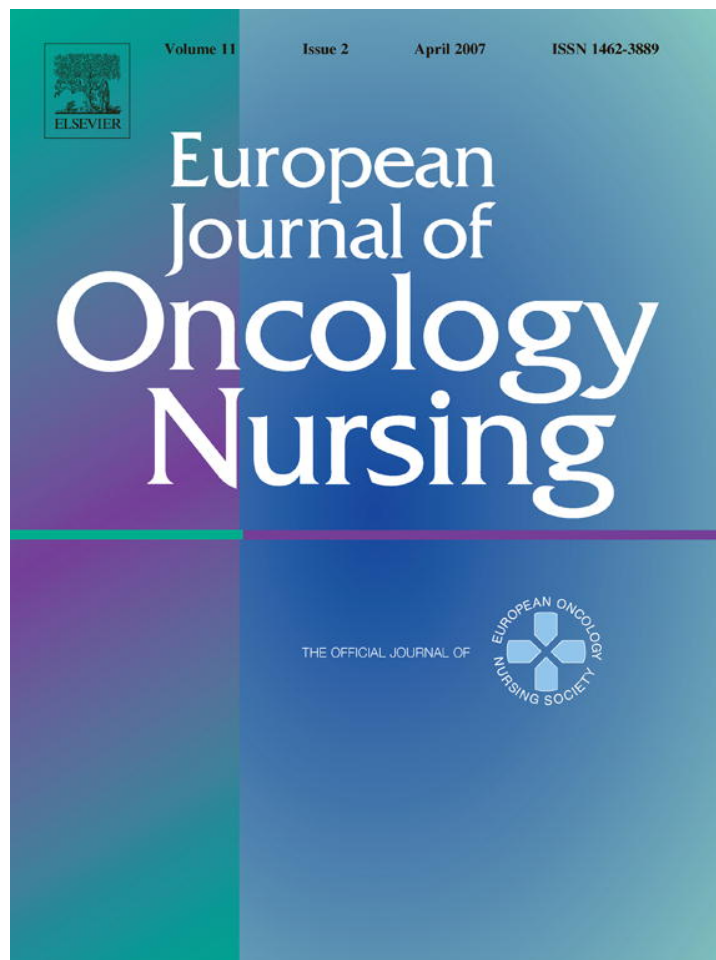


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Preparation for cancer care: Perceptions of newly qualified health care professionals

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KEYWORDS

Health care professionals;
Perceptions;
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Educational input

Summary

The present paper is derived from a larger survey which examined the perceptions of recently qualified health care professionals' experience on evidence-based practice, team working and cancer care. This study reports solely on the findings relating to cancer care. The perceptions of recently qualified professionals in relation to their initial educational input on issues such as confidence, anxiety, communication skills and practice in cancer care as well as adequacy of support, professional supervision and use of reflection were gathered using a cross-sectional postal survey design. A total of 50 graduates from each professional category in nursing, occupational therapy, physiotherapy, and social work were sampled yielding a total sample of 200. Eighty-five questionnaires were returned yielding a response rate of 43%. Twenty-eight (33%) respondents stated that they were currently involved in working with people with cancer. These were as follows: 5 nurses, 8 physiotherapists, 9 occupational therapists and 6 social workers. Despite the low response rate, the findings suggest that health care professionals' educational input and experiences of working with people with cancer were overall positive; for example, in the respondents' confidence, communication skills, decrease in anxiety and application of knowledge gained in classroom to professional practice. Moreover, most respondents learnt about caring for cancer patients through practice rather than classroom teaching. A high percentage (i.e. 64%;18) across all groups felt supported when caring for people with cancer and reported receiving professional supervision as well as being able to actively reflect on their practice. The implications for education and practice were discussed particularly as there have been few studies conducted in relation to the specific needs and collaborative learning of these health care professional groups.

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Zusammenfassung

Dieser Artikel basiert auf einem umfangreichen Survey, bei dem die Wahrnehmungen von Berufsanfängern aus Medizinberufen im Hinblick auf evidenzbasierte Praxis, Teamarbeit und Versorgung von Krebspatienten untersucht wurden. In einem postalischen Survey (Querschnitt-Studie) wurden die Wahrnehmungen von Berufsanfängern in Zusammenhang mit dem initialen pädagogischen Input zu diversen Themen (Vertrauen, Ängste,

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kommunikative Kompetenz und praktische Erfahrungen in der Pflege von Krebspatienten sowie Eignung unterstützender Maßnahmen, berufliche Betreuung und Anwendung der Reflexion) untersucht. Die Gesamtzahl der Probanden betrug 200, wobei jeweils 50 Absolventen einer der vier Berufsgruppen Krankenpflege, Ergotherapie, Physiotherapie und Sozialarbeit angehörten. Insgesamt 85 Fragebögen wurden zurückgesandt (Antwortquote: 43%). Insgesamt 28 (33%) Antwortende, darunter 5 Krankenpflegekräfte, 8 Physiotherapeuten, 9 Ergotherapeuten und 6 Sozialarbeiter, gaben an, sich gegenwärtig beruflich mit krebserkrankten Menschen zu beschäftigen. Trotz der niedrigen Antwortrate weisen die Ergebnisse darauf hin, dass bei den Angehörigen der Medizinberufe der pädagogische Input und die Erfahrungen mit der Versorgung krebserkrankter Menschen insgesamt als positiv zu beurteilen waren; beispielsweise erreichten im Laufe der Ausbildung die Kompetenzen der Antwortenden professionelle Qualität im Hinblick auf Vertrauen, kommunikative Fähigkeiten, Nachlassen von Ängsten und Anwendung von erworbenem Wissen. Darüber hinaus erwarben die meisten Antwortenden ihre Kompetenzen im Bereich der Versorgung von Krebspatienten vor allem in ihrer beruflichen Praxis und weniger in den Vorlesungen während ihrer Berufsausbildung. In allen Berufsgruppen gab ein hoher Anteil (64%; 18) der Antwortenden an, bei der Versorgung von Krebspatienten Unterstützung zu erhalten, beruflich betreut zu werden und in der Lage zu sein, aktiv über die berufliche Praxis zu reflektieren.

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Introduction

Cancer services in the UK

Cancer is a significant cause of morbidity and mortality in the United Kingdom (UK). An average of 275,000 newly diagnosed cases of cancer were registered per annum in the UK between 2001 and 2003. Nationally, cancer is the most common cause of mortality, accounting for 25% of all deaths (Office for National Statistics, 2006). The Calman-Hine report (DoH, 1995) was instrumental in changing the delivery of cancer services to patients in the UK. A radical reorganisation of cancer services was proposed by the NHS Cancer Plan (DOH, 2000a, b). This report highlighted the need for improvement in the areas of early cancer detection and the delivery of prompt and effective treatment through rapid access and referral systems. The specific aims include the need to save more lives, ensure that people with cancer receive the right support and care as well as the best treatments, tackle the inequalities in cancer care, and build for the future through investment in the cancer workforce.

More recently, the National Institute for Clinical Excellence (NICE) has initiated a drive to improve the process of patient assessment with the aim of developing a standardised approach to the assessment of patients' physical, psychological, social and spiritual needs for use by all health professionals caring for cancer patients (NICE, 2004; National Audit Office, 2005). Careful assessment of patient needs is seen as central to providing quality cancer care. The use of assessment tools is seen by cancer networks as central in improving communication between health care professionals and between health care professionals and their patients.

Whilst such reforms have been important, their successful implementation relies to a large extent on health care professionals directly involved in providing patient care and services. Health care professionals are thus pivotal with

regard to the impact these reforms may have on services and patient care.

Cancer patients and health care professionals: needs and delivery of care

Needs of cancer patients

Within the context of cancer care, patients and health care professionals have expressed their specific needs related to either the experience or provision of care respectively. Being diagnosed with cancer can cause considerable psychological distress both to cancer patients and to their families. The impact of a cancer diagnosis normally requires patients and their families to review their circumstances. This may include a period of adjustment to the diagnosis, changing family roles and financial implications (Germino and Funk, 1993; Bottomley et al., 1996; Bottomley and Jones, 1996; Copp, 1999). It is not uncommon for some patients to experience anxiety and depression; the level of anxiety varying according to disease type, stage and treatment (Bottomley, 1997). For those with advanced disease, psychiatric morbidity and the incidence of depression have been shown to increase with higher levels of physical debilitation (Bottomley and Jones, 1996; Higginson, 1997; Breitbart et al., 1998). The latter include pain, vomiting, nausea, constipation and dyspnoea which have been identified as the most prevalent symptoms in the last year of life for cancer patients (Higginson, 1997).

Previous studies have highlighted specific attributes that are valued by cancer patients from their carers. For example, Morasso et al. (1999), in a study of 94 patients with terminal cancer, found that the area of unmet need most frequently reported was that of symptom control (63%). In contrast, personal care was reported far less frequently as an area of unmet need (15%). Radwin (2001) showed that professional knowledge, continuity of care, attentiveness, co-ordination of care, partnership (nurses

empowering patients to become partners in their care through sharing professional knowledge), individualisation, rapport, and caring are important to cancer patients undergoing treatment. Diggleby and Wright (2004) found that elderly patients with advanced cancer receiving palliative care at home valued honest provision of information. Bredart et al. (2001) found that patients valued the provision of medical information and wanted this to be improved. Anderson et al. (2001) estimated that between 24% and 31% of social functioning problems reported by patients have not been addressed by professionals.

Needs of health care professionals in delivering care

Health care professionals working in cancer care have long been identified as a group at risk for stress (de Carvalho et al., 2005). Patients' anxiety has been perceived by some nurses in cancer care as stressful in their clinical practice (Fitch et al., 1999; Rustoen et al., 2003). Caring for cancer patients is not only emotionally demanding but may also have profound impact on the carers (Fitch et al., 1999; Copp, 1999; Odling et al., 2001; Corner, 2002). In their study of nurses caring for women with advanced breast cancer, Odling et al. (2001) found that nurses reported feelings of discomfort, powerlessness and reduced self-esteem. Similarly, a larger scale study of health care professionals working in medical oncology found 53% of the physicians and 37% of the allied health professionals experienced emotional exhaustion (Fitch et al., 1999). When asked about their feelings of personal accomplishment, 48% of the physicians and 54% of the allied health professionals reported this as low. Other studies found psychosocial communication (Sivesind et al., 2003), pain and symptom management (Langton and Blunden, 2000) as most difficult areas of care experienced by health care professionals.

A key area of anxiety often expressed by health care professionals relates to the lack of confidence and skills in communication with cancer patients. The Cancer Plan (DoH, 2000a) outlines the importance of good communication skills and of making high quality information available to cancer patients. However, the evidence shows that health care professionals continue to encounter difficulties when communicating with cancer patients and find this most stressful (Corner and Wilson-Barnett, 1992; Georgaki et al., 2002; Sasahara et al., 2003; Field and Copp, 1999; Cunningham et al., 2006). Poor communication can influence patients' perceptions of their disease, their psychological adjustment and possible survival outcomes (Freedman, 2003). Communication issues also impact upon patients' families: Davis et al. (2003) found that after pain management, poor communication with health professionals created the most distress for the families of cancer patients. Kruijver et al. (2001) found that when ward nurses interacted with cancer patients they predominately employed instrumental communication, mostly consisting of giving information about medical topics. There was an imbalance in favour of instrumental communication at the expense of affective communication.

The effectiveness of pain management and symptom control also remains problematic. In a study on the misconceptions of doctors and nurses on effective pain management, Bauwens et al. (2001) found that rigid beliefs

and attitudes could be overcome through educational initiatives, helping to correct the erroneous beliefs held by doctors and nurses. While there is some evidence that nurses report feeling more confident in providing physical care rather than psychosocial support (Corner and Wilson-Barnett, 1992; McCaughan and Parahoo, 2000), difficulties have been reported concerning the provision of physical nursing care in order to minimise or prevent side effects of treatment (Corner and Wilson-Barnett, 1992; Fitch et al., 1999). This seems to suggest that although nurses may appear more confident in providing physical care of a personal nature, they may be less aware of the specialist symptom control that cancer patients require. In a survey conducted on General Practitioners (GPs), Shipman et al. (2001) found that out of 1061 GPs, just over half perceived they needed education on symptom control. These studies appear to be significant considering that GPs and nurses play a pivotal role in cancer care.

Preparation of health care professionals in cancer care

Inequality of education and training

There appears to be increasing evidence that professionals working in cancer care continue to receive inadequate education or support (Llamas et al., 2001; Georgaki et al., 2002; Kelly et al., 2006) and that the majority of cancer patients' needs remain unmet (RCN, 2003; Richardson et al., 2005). These trends have led to national educational policies aimed at increasing the knowledge, skills and competencies of those whose work involve cancer care. During the last two decades the educational preparation of health care professionals remains topical and high on the national public agenda. However the focus lies predominantly on the education and training of doctors and nurses (DOH, 2000a, b; Llamas et al., 2001; RCN, 2003) and to a lesser extent, other professionals such as social workers, physiotherapists and occupational therapists who make up the multiprofessional team, frequently perceived as key to the delivery of quality cancer care. Moreover, there is evidence to suggest that successful team working remains hindered by confusion over the skills and knowledge of different health care professions (Newall and Matthew, 1997; Bliss et al., 2000; Seymour et al., 2002; Sasahara et al., 2003).

Recently it has been acknowledged that the emphasis for education in cancer care should be placed on the preparation of a suitably trained workforce' (NICE, 2004). Such developments are significant in terms of their recognition of the need to prepare an effective and informed workforce (other than doctors and nurses) for cancer care and at all health care levels including the preparation of pre-registration nurses (RCN, 2003; Cunningham et al., 2006). The involvement of key local voluntary cancer care organisations, including Marie Curie, Macmillan Cancer Relief, and hospices have been highlighted as essential in the design and delivery of needs-based curricula (RCN, 2003).

Key areas of educational needs

Formal educational training could be effective in enhancing both the ability to manage symptoms and communication

skills. For instance, positive outcomes have been reported from nurses who participated in a highly structured clinical training course providing education in cancer pain (Plymale et al., 2001). There is some evidence from small-scale studies to suggest that interprofessional education across primary and secondary care may assist in improving the delivery of symptom control for cancer patients (Leslie et al., 2003). A collaborative approach between oncologists and specialist palliative care services, both hospital and community-based, has been suggested as having an important role to play in assisting health and social care professionals to manage symptoms more effectively (DoH, 1995; Lidstone et al., 2003).

The evidence concerning the effectiveness of communication skills training remains ambiguous. Whilst some studies indicate that communication skills can improve through education and training (Maguire et al., 1996; Razavi et al., 2000; Wilkinson et al., 2002), other studies suggest that the skills obtained from communication courses have not been applied within the clinical setting (Kruijver et al., 2000, 2001). Nonetheless, the drive to improve the patient assessment using a standardised approach by all health professionals has placed assessment of patients' needs (and communication skills) as central to the whole process of providing quality cancer care (NICE, 2004; National Audit Office, 2005). Developments in the area of patient assessments and needs are likely to impact on health care professionals involved in caring for cancer patients. There appears to be a need for further training in communication skills as health care professionals vary widely in their abilities to elicit relevant information from patients (Richardson et al., 2005). The Advanced Communication Skills Training Programme developed in response to the Cancer Plan (Department of Health, 2000a) and NICE Supportive and Palliative Care Guidance (2004) will be crucial in meeting this need.

It appears, therefore, that the constantly evolving nature of health care practice necessitates the continual development of educational programmes designed to prepare individuals for professional practice. Current evidence indicates that health care professionals' abilities to provide adequate cancer and palliative care may not be sufficient to meet current guidelines.

Purpose of study

The present paper is derived from a larger study which examined the perceptions of recently qualified health care professionals' (i.e. nurses, occupational therapists, physiotherapists, and social workers) experience on evidence-based practice, team working and cancer care (see Caldwell et al., 2006a, b). This paper therefore reports specifically on findings relating to health care professionals' initial educational preparation and its impact on confidence, communication skills, anxiety, and practice of the above professional groups in caring for people with cancer.

The specific objectives were as follows:

- To explore recently qualified professionals' perceptions of their initial educational input in relation to their

confidence, anxiety, communication skills, and practice in cancer care.

- To establish the adequacy of support received in relation to cancer care. This involves issues such as perception of support, professional supervision, and use of reflection.

Methods

Study design

The research design required using an approach that would yield information about the perceptions of recently qualified health care professionals' (i.e. nurses, occupational therapists, physiotherapists, and social workers) initial educational input in cancer care. As such, a descriptive design was utilised using a cross-sectional structured questionnaire postal survey (Polit and Hungler 1995; Robson, 1993). Ethical approval was obtained from the Universities' Ethics Committees. The study was conducted in compliance with the Data Protection Act, 1998.

Sample

The sample comprised UK-based graduates in nursing, occupational therapy, physiotherapy, and social work who had completed their undergraduate training between December 2001 and June 2003 at one of the three London universities. The sample was randomly generated from the universities' graduate databases by university data managers not otherwise involved in the study. University graduate databases were utilised as they provided the best means to capture the full range of work in which recent graduates were engaged. This was balanced against the recognition that such databases were likely to be incomplete and thus response rates would be limited. A total of 50 graduates from each professional category were sampled yielding an overall sample of 200. Where graduates from a professional group were from more than one university, the sample was split equally between those universities (Table 1).

Data collection

A structured postal questionnaire was developed from key themes identified from a detailed literature search. Each questionnaire comprised 4 sections namely demographic data, evidence-based practice, team working, and cancer

Table 1

Profession	University A (N)	University B (N)	University C (N)
Nursing		25	25
Occupational therapy	25		25
Physiotherapy	50		
Social work	25	25	

care. The cancer care section in the questionnaire comprised four general Yes/No questions related to the following areas:

- specific classroom input in working with people with cancer during initial training,
- sharing of teaching/learning with other professionals,
- experience of working with people with cancer whilst on clinical placement,
- further specialist training/education in cancer care since completion of initial education/training, and
- a likert scaled table of statements for respondents to complete (Table 4)

The questionnaire was piloted and minor refinements were made. Following this all questionnaires were sent out with a participant information sheet stating the nature and purpose of the research. A self-stamped addressed envelope was included with the mailing. Two repeat mailings were performed at 3 and 6-week intervals after the original mailing to non-respondents.

Data analysis

The data were analysed quantitatively. Responses were coded and inputted using SPSS (version 14) and subjected to descriptive statistical analysis. Data were obtained for all 4 sections, i.e. demographic data, evidence-based practice, team working, and cancer care (see Caldwell et al., 2006b). This paper will present demographic and cancer care data only.

Results

Demographic characteristics of the sample

The results were categorised according to response rates from individual professional groups, universities where the respondents qualified, length of time taken, academic levels and place of employment at the time of the present study.

Response rate from individual professional groups

Out of 200 questionnaires sent, 85 were returned yielding a response rate of 43%. Out of these responses, 29 (34%) were occupational therapists, 26 (31%) social workers, 19 (22%) nurses ($n = 19$), and 10 (12%) physiotherapists. One questionnaire was returned with missing data.

University where the respondents qualified

All respondents qualified at one of three of the participating universities in London. A higher response rate was obtained from University A (36; 42%) than from either University B (28; 33%) or University C (13; 15%) (Table 2).

Length of time qualified

Almost half of all respondents (43; 51%) had been qualified between 12 and 18 months (Table 3).

Table 2 University at which respondents qualified

	University	Frequency	Percent
Valid	University A	36	42
	University B	28	33
	University C	13	15
Total		77	91
Missing		8	9
Overall total		85	100

Table 3 Length of time qualified

	Duration	Frequency	Percent
Valid	Under 6 months	1	< 1
	6–11 months	15	18
	12–18 months	43	51
	18+months	23	27
Total		82	96
Missing		3	4
Overall total		85	100

Academic levels

Over half of the respondents (59; 69%) have had either an undergraduate (45; 53%) or postgraduate degree (14; 18%). This may be contrasted with 19 (22%) who qualified at the Diploma level.

Sector of employment at the time of the present study

Respondents were asked to state the sector they were employed. More than one third were employed in acute settings (32; 38%) and just over a quarter in local authorities (24; 28%). A small number were employed in independent or voluntary settings (5; 6%), 17 (20%) in primary care while 6 (7%) worked in other clinical settings.

Responses to general questions

Specific classroom input, experience of shared teaching/learning, exposure to cancer care in clinical placement and further specialist training/education

All respondents (85; 33%) were asked about their views relating to working with people with cancer in a separate section of the main questionnaire. In response to the 4 general questions posed, 28 (33%) respondents stated that they were currently involved in working with people with cancer. These were as follows: 5 nurses, 8 physiotherapists, 9 occupational therapists, and 6 social workers. Out of the 28 respondents, 17 (61%) reported having received specific classroom input in working with people with cancer during initial training, whereas 11 (39%) did not. Of the 17 who received classroom input, only 1 experienced shared teaching/learning with other professionals. Nineteen (68%) reported experience of working with people with cancer whilst on clinical placement, while only 3 (11%) received

further specialist training/education in cancer care since completion of initial education/training.

Perceptions of adequacy of initial educational input, confidence, communication skills, anxiety, and practice in cancer care between professional groups

Overall the data showed positive responses for all statements in the questionnaire with the exception of classroom input on working with people with cancer (Table 4). Perceptions on the adequacy of education and training in preparation for practice differed between the individual professional groups. Nineteen (68%) of the 28 respondents expressed confidence in caring for people with cancer. Fifteen (54%) felt confident as members of the cancer care team. Data from individual professional groups showed that social workers (6; 67%) and occupational therapists (6; 67%) were the groups who reported feeling confident more often compared to nurses (3; 60%) and physiotherapists (2; 25%). Fifteen (54%) of the 28 respondents perceived that their initial education/training adequately prepared them in communication skills. Out of these, within individual professional groups, 5 (83%) social workers and 4 nurses (80%) agreed that their initial training had been adequate. However, just over half of the occupational therapists (5; 56%), and 1 (12%)

physiotherapist considered their initial training had been adequate in their preparation of communication skills.

Respondents were asked whether the education and training they had received had made them less anxious about caring for people with cancer. Fourteen (50%) of the respondents felt it had made them less anxious whereas the rest were unsure or disagreed. Analysis within groups showed that nurses (5; 100%) were the group that agreed with this statement more often. In contrast, social workers and occupational therapists and physiotherapists were presented with mixed feelings.

Of the 28 respondents, only 2 (7%) stated they had received classroom input during their training although it appeared that most of them (17; 61%) felt they can apply the knowledge gained in the classroom to their professional practice. The majority of occupational therapists (8; 89%) considered that they had not received sufficient classroom input on caring for people with cancer. The views of nurses and social workers were mixed, although only 1 nurse (20%) and 2 social workers (33%) agreed that the classroom input they had received was sufficient. There was a high level of agreement amongst the professional groups that more had been learnt through practice than through classroom teaching (27; 96%). Just over half of all respondents (15; 54%) believed they possessed adequate skills to support people with cancer.

Table 4 Respondents' views on educational preparation and support across all professional groups

<i>N</i> = 28 Nurses 5; Physiotherapists 8; Occupational therapists 9; Social workers 6	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	Missing
I feel confident in caring for people with cancer	1	18	5	4	0	0
I feel confident as a member of the cancer care team	0	15	9	3	0	1
I feel that my initial education/training in relation to communication skills was adequate in preparing me for practice	5	10	3	10	0	0
I feel that my initial education/training has made me less anxious about caring for people with cancer	2	12	6	8	0	0
I feel that I received sufficient classroom input to prepare me for working with people with cancer	1	1	5	17	3	1
I can apply the knowledge gained in the classroom to my professional practice	0	17	6	4	1	0
I learnt more about caring for people with cancer through practice rather than through classroom teaching	13	14	0	0	1	0
I feel that I have adequate skills to support people with cancer	1	14	8	5	0	0
I feel supported when caring for people with cancer	2	16	7	2	0	1
I actively reflect on my practice I receive professional supervision	8	19	0	1	0	0
I receive professional supervision in my current role	9	16	1	1	1	0

Perception of support, professional supervision, and use of reflection

Respondents were asked about their perception of support when caring for people with cancer.

Eighteen (64%) felt supported. Occupational therapists (9; 100%) and the majority of social workers (4; 67%) and nurses (3; 60%) felt supported. There was a similar pattern of responses across the professions in relation to active reflection on practice with 27 (96%) respondents agreeing that they actively reflect on their own professional practice. Moreover, across all professional groups high levels of professional supervision were also reported (25; 89%).

Discussion

Response rate

The low response rate of 43% from the main study contributed to the low numbers of respondents (28; 33%) who were able to participate in the section of the main questionnaire on cancer care. This clearly has implications with regard to generalisation of the findings. Nonetheless the present paper provides a preliminary insight into the perceptions of professional groups such as occupational therapists, physiotherapists, and social workers on cancer care. The views of these groups have been to a large extent lacking in the general literature.

Engagement in cancer care

A third of the total number of respondents (33%) have been exposed to cancer care. Overall, the majority of respondents reported feeling confident in their abilities to care for cancer patients. This appeared to be consistent across the professional groups. Similarly, respondents reported feeling confident in their role as members of cancer care teams, although the results were less consistent across the different professional groups. The highest level of confidence was expressed by social workers and occupational therapists. The nursing staff were uncertain of their confidence to work as part of a cancer care team. The latter is unsurprising as role ambiguity and conflict between nurses, doctors and other health care professionals have been topical within the field of cancer care (Seymour et al., 2002). This lack of clarity have sometimes been perceived as detrimental to patient care and management of symptoms (Sasahara et al., 2003). Although shared teaching/learning have often been proposed as a means of overcoming barriers between professionals (Filkins, 1999; Curran et al., 2005) it is interesting to note only 1 respondent in the present study reported shared teaching/learning with other professionals.

Adequacy of educational input and support received

It is of concern that 39% (11) of professionals in the present study reported that they had received no educational input regarding working with cancer patients during their initial training. The majority of those who reported this were occupational therapists. Only 18% (5) of professionals

currently working in cancer care reported they had received post-qualifying specialist education in cancer care. However, it should be noted that respondents were "newly qualified", with 54% (15) qualified for less than 18 months. Therefore, it is possible that many of these professionals had not yet had the opportunity to engage in significant amounts of post-qualification training.

Overall respondents agreed that their initial training had made them feel less anxious about caring for cancer patients and that the initial training they had received in communication skills had been adequate to prepare them for practice. The drive in enhancing communication skills through education and training may have played a significant role in these professionals' initial training.

However, there was agreement across the professions (26; 93%) that they had not received sufficient classroom input to prepare them for working with cancer patients. Most respondents felt that they had learned more about caring for cancer patients through practice than through classroom teaching. This was particularly true for the occupational therapy group. Also 70% (19) of respondents across the professions had some experience of working with cancer patients whilst on placement. This finding suggests that skills and confidence may have been developed "on the job".

A high number of the respondents reported being able to actively reflect on their practice and had professional supervision. Most felt they were supported when caring for people with cancer. This finding may be indicative of the wider recent educational philosophy which introduced the use of reflective practice' in curricula of health professionals as well as clinical supervision and mentorship in clinical placements (Donaghy and Morss, 2000; Grant, 2002). These changes in educational and clinical practice may be seen as having a positive and profound impact in the way health care professionals approach their work currently.

Limitations

The study had several limitations. The survey was restricted to three London universities and therefore not representative of universities in other places. In terms of the sample, the universities' graduate databases were only as accurate as the latest information given by the graduate students. The sampling methods used may also vary between universities. Data managers at each university were asked to generate a random sample meeting the inclusion criteria. They were not instructed in the choice of method. Nonetheless, one of the strengths of using the universities' alumni databases was that it enabled responses to be captured across a broader range of professional groups than if the sample had been drawn solely from pre-determined practice areas.

The overall response rate (43%) achieved was low. This may, in part, be explained by the possibility that the student addresses contained in the graduate databases may not have been the most recent. Potential participants may not have been recruited because of addresses that were no longer valid. The low overall response rate further contributed to the low number of respondents who were able to participate in the section of the main questionnaire on cancer care. This

compromised comparisons between the 4 professional groups. Moreover, educational input, training, and working practices differ amongst professional groups. The different perceptions found between the professional groups in the survey must therefore be viewed with caution. In this paper, any comparison made between professional groups were presented merely as preliminary indications of trends that may be of interest for further study.

Conclusion

Despite the low response rate, this study has provided several areas of interest. The findings suggest a positive link between health care professionals' educational input and experience of working with people with cancer, for example, in the respondents' confidence, communication skills, decrease in anxiety and application of knowledge gained in classroom to professional practice. It was also clear that most of the respondents learnt about caring for cancer patients through practice rather than classroom teaching. A high percentage across all groups received professional supervision, actively reflected on practice and felt supported when caring for people with cancer. This survey has also presented the views of newly qualified professionals other than nurses, such as occupational therapists, physiotherapists, and social workers. The findings of this study clearly have implications for education and practice. Whilst it is clear that there is a positive trend with regard to cancer education and learning in practice for professionals, nonetheless, they highlight the gaps in our present knowledge about the effectiveness of shared teaching and learning across and between the different professional groups; in particular the perceived lack of sufficient classroom input to prepare health care professionals for working with cancer patients. Future studies will therefore need to determine the specific needs and collaborative learning activities between different health care professional groups, an area which have been largely ignored to date.

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