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EDITORIAL

Jill Iliffe
AJAN Editor

Welcome to the third issue of AJAN online. This issue brings together nursing research from both within and outside Australia, adding to the body of nursing knowledge and aimed at improving nursing care. The papers cover a broad range of interests that capture the diversity of nursing and the breadth of curiosity of nurse researchers as they strive to question, challenge and put forward propositions to enhance nursing and nursing care.

How do newly graduated nurses develop their knowledge and skill once they leave the university environment and enter the workforce? The study by McKenna and Newton explores this issue and raises important questions about the graduate year and how it is structured and its impact on the knowledge and skill development and socialisation of newly graduated nurses into the workplace; essential reading for nurse managers and hospital administrators.

The transition experience of newly graduated nurses from the university environment to the workplace can make the difference between whether the graduate remains long term in the nursing workforce and whether they leave. Transition support programs have been put forward as one way of improving the experience of the newly graduated nurse. In the study by Evans et al, the strengths and weaknesses of transition support programs are investigated. In an era of nurse shortage and a focus on nurse retention,

the study findings make an important contribution to this field of study, particularly for nurse educators, nurse managers and health facilities.

Challenging current practice and seeking an evidence base for care is the underlying theme of the paper by Webster et al who conducted a randomised controlled trial to compare the rate of humidifier acquired pneumonia between patients in whom humidifier circuitry as changed every three days or every seven days. This study is a good example of the potential impact nursing research can have on health care and health care costs.

Webster and Harrison's study makes an important contribution to mental health care for young people. Their study explored how young people experience the onset of mental health problems and investigated their initial interaction with the health system, using their findings to construct a model of care that nurses and other health professionals can use to provide appropriate interventions.

Socially desirable responding can confound research results by creating false relationships or obscuring relationships between variables. Van de Mortel conducted a review to report on the influence of socially desirable responding on study outcomes and the proportion that used statistical methods to control for social desirability response bias. This paper has an important message for nurse researchers.

Fisher and Brumley report on the use of the Spiritual Health and Life Orientation Measure (SHALOM) scale when investigating the spiritual wellbeing of nurses and carers providing palliative care and come up with some interesting results. Too often, the impact of providing nursing care on the wellbeing of those providing the care is overlooked.

Communication skills have a significant impact on the effectiveness of nursing care. As part of a larger Language in the Workplace project based in New Zealand, Major and Holmes examined the communication strategies used by nurses in describing health care procedures to patients in order to identify the characteristics of effective nurse to patient communication in real life interaction using discourse analysis within a sociolinguistic framework. Their results indicate there is much more to be discovered about the ways in which nurses and patients communicate, illustrated by the way in which they negotiate the description of health care procedures.

Continuing the communication theme, Ozer and Akyil examined the effect the provision of information about the physical and technical environment of the intensive care unit had on the level of discomfort patients felt during their stay in the ICU. Their results are a useful indicator for nurses about the value of providing information to patients to improve their experience of health care.

In another study based in the intensive care unit, Yang looked at what families in Korea need to assist them to cope with the traumatic event of having a family member admitted to the ICU. Yang's results suggest that the needs of Korean families are similar to those of families in Australia.

Diabetes is fast becoming one of the most prevalent lifestyle diseases worldwide. In the study by Akca

and Cinar, the role nurses can play in preventing one chronic complication of diabetes, diabetes foot ulcer, is highlighted. The study demonstrates that people without diabetic foot ulcer have a better psychological adjustment to their disease than people with diabetic foot ulcer and suggests that nurses can make a difference in the outcome of this disease.

The introduction of community nursing care is a new phenomenon in Turkey. In an interesting study, Kisa explored the attitude of nurses to the provision of home health care and found some unexpected differences between nurses educated at a Bachelor degree level and those educated at certificate level, and between nurses with different years of experience.

In a new section for AJAN, 'Point of View', Nazareth et al discuss the advantages of using a nurse practitioner model of care in increasing access to treatment for people with chronic hepatitis while Ward and Verinder use the Ottawa Charter for Health Promotion to demonstrate how nurses can address alcohol misuse among young people.

Here at AJAN we are interested in your feedback on the papers presented. There is now a section on the AJAN website for your feedback or any comments you would like forwarded to the authors. There is also a discussion question each month based on some of the papers in the current issue. Responses to the discussion question are published on the website.

Reflections on nursing



GUEST EDITORIAL

Karen Francis, RN, PhD, M.Hlth. Sc (PHC), M.Ed, GradCert(Teach/Learn), B.HlthSc(Nsg), DipHlthSc(Nsg)

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As a child my dream was to study at university and contribute meaningfully to society. I chose nursing as a career and was fortunate to witness and participate in the transfer of nursing education from the hospital apprenticeship system to the tertiary sector. I had long held the view that nursing was an academic discipline and that education of professionals such as nurses should be undertaken in institutes of higher learning. As I traversed my pre-service education in NSW, offered at that time in Colleges of Advanced Education, my understanding of nursing practice and the contribution nurses make to health outcomes increased. I was inspired to continue studying after my initial registration at the bachelor, and higher degree levels. My thirst for knowledge was also driven by a desire for my work and that of nurses in general to be recognised and valued by both global peers and the broader community.

In the current era of political, social and economic upheaval, the profession of nursing in Australia is challenged to consider carefully nursing's role and future. Nursing is a dynamic profession that continues to evolve. The global nursing shortage; ever increasing reliance on complex health and communication technologies; expanding research; and the changing health care needs of populations, are triggers for change.

Nursing education in Australia has been the focus of much attention in the past couple of decades

(Crowley 2002; Heath 2002; Reid 1994). Innovative undergraduate nursing curricular that are inclusive of licensure in two discrete professions such as nursing and paramedic studies, nursing and early childhood teaching, or programs that allow for general nursing registration and studies in a nursing specialism such as nursing and rural health practice are gaining popularity, as universities attempt to predict the nature of the future health workforce while accommodating the demands of the 'Y generation' who are said to want broader career choices on completion of initial studies (MacGregor 2004).

Nursing workforce shortages have necessitated that industry explore variations to the traditional nursing staff skills mix and the models of care used. The number of enrolled nurses and non-regulated health workers such as nursing assistants is increasing in all health services including the acute care sector (Lumby 2007). Regulatory authorities are grappling with the implications of nursing workforce shortfalls and meeting their prime mandate to maintain the safety of the public (QNC 2008; NBV 2008; NSW NMB 2008). Expanded roles for enrolled nurses, is one strategy that all jurisdictions in Australia have embraced to address the immediate impact of registered nurse workforce shortage. Enrolled nurses who have completed a recognised program of study are able to administer a range of drugs and poisons including, in some jurisdictions, intravenous drugs (QNC 2005).

Registered nurses in attempting to retain a scope of practice that differentiates their credentialing are increasingly focussing on specialist roles. In many jurisdictions, specialisations are endorsed by the regulatory authorities following completion of postgraduate programs. As the registered nurse workforce is predominantly part time, the challenge

for operating in a fiscally constrained economic climate is justifying support for nurses to undertake specialist education and training (Banks 2005). In some jurisdictions, new health worker roles are being trialled to meet needs which have the potential to undermine advanced specialised nursing practice (Jolly 2008). Developing pathways for advanced specialised practice is necessary for the ongoing sustainability of the registered nurse workforce however the challenge is to ensure that credentialing can be completed in a realistic timeframe and the associated scope of practice is protected.

Nurses in Australia are celebrating the introduction of a national regulatory framework, which will provide a vehicle for the advancement of the profession in conjunction with the appointment of a Chief Nursing Officer for Australia (Professional Regulation 2007). A national approach to nursing regulation may facilitate a collaborative effort to chart the way forward for nursing that provides for professional growth while protecting the public. The elimination of state and territory borders for health care professionals will facilitate better articulation between the states and territories on nursing education and accreditation, ensuring greater flexibility for the nursing workforce.

My work history is similar to other nurses in that I have witnessed many changes including the expansion of practice opportunities and the growth of nursing research. I have always been intrigued by issues and or problems that seem complex or insurmountable. Clinical practice provides nurses of today with a myriad of opportunities to question beliefs and practice. All nurses' practice should be evidence based and all nurses should contribute to the expansion of the body of nursing knowledge. Research is fundamental to the future development of the nursing profession. As the practice environment changes, nurses must preempt implications for their practice and develop strategies that accommodate new knowledge and practices. Expanding nursing scope of practice and accommodating modifications to the health workforce such as the introduction of physician's assistants and allied health workers

assistants are contemporary challenges that our research should be informing.

I have lived the majority of my life in rural Australia and regard myself as a rural woman and a 'rural nurse'. It is this connection that has directed my career and informed my own research agenda. I consider that rural Australians are disadvantaged and have poorer life chances compared with their urban counterparts. The discourse of disadvantage that I and many others have sustained however may not be the most advantageous method for advocating rural nursing as a deliberate career choice (Dalton. 2008). Geographic distance and access to services is more difficult for rural people than it is for urban people and there are additional financial and social burdens for rural people when they must travel to access services particularly specialist health services (Francis et al 2002 in Heath 2002). However the sense of belonging and the potential to be innovative in practice, proactive and recognised are definite advantages of working in a rural environment.

The future of nursing will need to be thoughtfully considered and crafted if the profession in Australia is to prosper and progress. Research that explores the potential of advanced specialist practice is fundamental if the scope of practice of registered nurses is to be consolidated and accepted. Dynamic undergraduates programs that are considerate of the needs of young Australians will ensure the sustainability of nursing as a profession.

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After the graduate year: a phenomenological exploration of how new nurses develop their knowledge and skill over the first 18 months following graduation

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KEY WORDS

nursing education, graduate, transition, professional role, socialisation

ABSTRACT

Aim

This study sought to explore how new nurses develop their knowledge and skill over the first 18 months following graduation, as well as factors promoting or inhibiting their development.

Background and Purpose

The graduate year requires the new nurse to make the transition from student in an academic setting to nurse employed within the health workforce. To facilitate the transition, many public and private hospitals in Australia offer formalised twelve-month duration graduate nurse programs that provide graduates with rotations through a number of clinical areas; preceptor support; and study days. Initially twenty five participants were followed for a period of eighteen months, incorporating the graduate year as well as the next six months when they no longer had support from a structured program. Findings from the focus groups after completion of the final six months are reported in this study at which time nine participants from three hospitals continued in the study.

Method

A qualitative approach using focus groups was adopted to allow for rich data to emerge. Four different hospitals in Victoria, Australia allowed graduates to be recruited into the research project. These included public and private hospitals, as well as metropolitan and rural hospitals. For the phase of the study being reported here, focus group interviews were conducted between 16 and 18 months following commencement of the graduate program. Data from all focus groups were analysed using Colaizzi's (1978) framework.

Findings

Three main themes emerged from these focus groups: 'sense of belonging', 'knowing' and 'moving on'. It is only after the completion of a graduate year that new nurses gain a sense of belonging and are able to complete their socialisation into the clinical workplace.

Conclusions

The development of nurses beyond the graduate year does not end with the completion of their transition program. They may still be working to develop a sense of belonging, independence in their practice and exploring their future development. Further work is needed to explore the period beyond the graduate year in the development of the registered nurse.

INTRODUCTION

To prepare as a registered nurse in Australia, an individual must successfully undertake a three-year university degree program. On completion of their course, most new nurse graduates apply for employment within a structured, one-year graduate nurse program offered by health care facilities. The programs provide clinical support for new graduates, structured study days, and rotations through different clinical areas to facilitate the nurses' transition into professional practice. While much has been written about the experiences of new nursing graduates, little is known about their experiences once the support of transition programs is no longer present.

This paper presents the findings from the final phase of a qualitative study designed to follow the experiences of graduate nurses for the first 18 months of their professional practice. Findings from the first twelve months have been previously published (Newton and McKenna 2007; McKenna and Green 2004). This paper discusses the period from completion of the graduate year until 18 months after initial registration; a period that has received only scant attention in the literature to the present time.

LITERATURE REVIEW

The graduate year in nursing has been the focus of much research attention with a range of socialisation and practice issues being highlighted. It has been described as a period in which the new graduate nurse must deal with translating classroom learning into patient care while learning how to work within a health care facility (Oermann and Garvin 2002) and confront new organisational and bureaucratic work structures (Maben et al 2006; Hamilton 2005). Values embraced in academic contexts may be challenged by those encountered in practice settings (Duchsher and Cowin 2006). In a context that may lack clear role definition (Chang and Hancock 2003) graduates are often fearful of making mistakes; lack confidence; feel incompetent; and fearful of facing new situations (Oermann and Garvin 2002) and dealing with doctors (Duchsher 2001). Resulting

stresses and difficulties may lead to dissatisfaction, burnout and high turnover rates among this group (Altier and Krsek 2006).

Various studies have explored specific phases in the development of nursing graduates identified as occurring in the first year of professional practice. Ellerton and Gregor (2003) reported on a small group of new nurses at three months after graduation, while Duchsher (2001) followed a similar group of graduates through the first six months. In the first phase of the current study, Newton and McKenna (2007) found that graduates in their first six months of clinical practice were grappling with the realities of practice and their own survival; understanding hospital processes and procedures; and their place in the clinical setting. Graduate nurses used the formal graduate year program as an umbrella to take shelter under. In the second six months, graduates were beginning to know how to manage situations and acknowledged an understanding of their practice. In an earlier study, McKenna and Green (2004) found that graduates largely focused on themselves in the first six months but by twelve months were able to focus on the bigger picture of patient care.

Despite the number of studies into the graduate year, few authors have explored what happens to graduates following the completion of this initial year of professional practice. One recent study conducted by Halfer and Graf (2006) suggested that graduates undergo a grieving process as they move away from their academic environment and enter a work environment. These authors found that graduates are dissatisfied with their work environment in the first 12 months but that this is resolved by the 18 month time frame.

THE STUDY

Aim

The overall study, of which this reported research is a part, sought to explore the ways registered nurses develop their knowledge and skill during and immediately after their first year of graduate practice. Specifically, the aim of this phase of the study was to examine how these nurses developed knowledge

and skill in the six months following completion of their graduate year; that is, when support from a structured support program no longer existed.

Design

Drawing upon a qualitative paradigm, informed by the tenets of phenomenology (Holstein and Gubrium 2005), the study used focus group methodology. Focus groups interviews were conducted with new nurses in the first 18 months following graduation across four health care facilities at six monthly intervals. Key questions developed from findings of the earlier focus groups guided this final focus group. Focus groups were considered by the researchers to provide opportunities for exploring an area around which little previous work existed, hence uncovering new and unanticipated issues and moving the focus from the researchers and promoting natural talk to emerge (Kamberelis and Dimitriadis 2005). The use of focus groups facilitates group interaction which allows richer data to be sourced than by individual interview (Morrison-Beady et al 2001).

The interviews focussed around participants' perceptions of the most influential impact on their knowledge and skill development and the development of themselves as registered nurses. Key questions (table 1) were developed from the analysis of focus groups at six and twelve months. Focus groups interviews were audio taped and transcribed verbatim. This paper reports the findings emerging from the final focus groups undertaken after the completion of the graduate year; that is, between 12 and 18 months as registered nurses.

Table 1: Final focus group key questions

1. What do you perceive to have had the most influential impact in the development of your knowledge and skill as a registered nurse?
2. Does one need to establish one's self as a registered nurse before one can focus on the patient or their family?
3. From where we met six months ago, what are your perceptions of yourself as a registered nurse?

Ethical considerations

Ethical approval was sought and obtained from the Standing Committee for Ethical Research on Humans

at Monash University. In addition, ethical approval was obtained from each of the health care facilities whose graduates were participating in the study. One of the researchers provided information sessions for graduates at each facility during the early weeks of their graduate nurse program and invited them to participate. An explanatory statement outlining the research was provided for interested nurses and signed informed consent was obtained prior to commencing the first focus group six months into the graduate program. Pseudonyms were ascribed to each participant to assure anonymity.

The participants

Initially twenty five nurses from graduate year programs across the four health care facilities participated in the focus groups. Eight participants were located at a large regional hospital; 13 from public metropolitan hospitals; and four from a private outer metropolitan hospital. There were 21 female and four male participants with ages ranging from 21 to 45 years. One participant had completed their university program at an institution outside Australia and the remaining participants had undertaken their degree programs in universities within the state of Victoria. When the final focus groups were conducted, nine participants across three of the hospitals were still actively participating in the study.

Data collection

Focus group interviews were conducted in quiet settings, usually seminar rooms, within hospitals at which the participants were working. The interviews lasted from 30 to 40 minutes and were moderated by one of the researchers. Every effort was made to ensure no unequal power relationships existed between moderator and participants. Although a few participants were known to the researchers from their undergraduate studies, the majority had undertaken their studies at different universities. All participants had been members of the focus groups conducted between four and six months and between 11 and 12 months into their graduate year. Key questions for the final focus group interview were developed from analysis of the transcripts of the earlier interviews.

Analysis

Data from all focus groups were analysed using Colaizzi's (1978) framework. This provided a structure through which transcripts could be coded and themes describing the participants' experiences could be developed. Furthermore, findings could be presented to participants for validation at stages throughout the study. Three themes from the final focus group interviews have been identified and are discussed below.

FINDINGS

Analysis of the data revealed the emergence of three main themes: sense of belonging, independence, and moving on.

Sense of Belonging

Developing a sense of belonging became achievable after completion of the graduate year. During their graduate programs, participants rotated through a number of clinical practice settings. Hence it was not until completion of these programs that participants were able to feel they belonged to a particular setting. The theme of *sense of belonging* was demonstrated by participants in a variety of ways. After rotating around their hospitals during their graduate programs, participants voiced contentment at being able to settle and belong in one ward. Fleur highlighted how this was different to her graduate year:

There is no sense of belonging [as a graduate] as you are moving around so much and now I feel like I belong where I am...

These sentiments were echoed by Cathy:

I am in the one ward now so it is really nice to have that feeling of belonging.

It was not only having a stable clinical practice setting that contributed to participants' sense of belonging. Participants recognised feeling part of the practice setting through being treated differently by nursing and other staff following their graduate year. Again, Fleur described this aspect.

... you are given so much more respect and treated as an equal.

... most doctors listen to you more now that they know you've been floating around for a while (Casey).

You know what's going on. You're aware of it. You're not afraid to jump in, you just do it (Louise).

This sense of belonging would seem to be a critical aspect of workplace socialisation and in particular enables workplace learning to occur (Billett 2006; Eraut 2004). Being engaged within a workplace fosters confidence and in the case of this group of graduates, a growing independence as practitioners.

Independence

From completion of the graduate year to eighteen months following graduation, it also emerged that participants were showing signs of being more independent in their practice. *Independence* was demonstrated through levels of knowledge attained; confidence developed; and increased responsibility by this stage. The support of the graduate program was long gone and the ability to shelter had disappeared so participants expressed a realisation of the need to be more independent. Louise stated:

... we have to stand on our own two feet now; rather than saying, I'm a grad and acting dumb. You just have to stand on your own two feet so it makes you do it better.

Participants indicated that the graduate program did provide a buffer between being a student and a registered nurse that had a protective function. When the graduate year was complete, the protection was gone and the nurse became an independent registered nurse.

I have a lot of respect for other nurses and I think that even though the graduate program does give you a lot of experience, it is not until you are actually working as a registered nurse and you have that responsibility that you realise what a big responsibility it is... (Cathy).

For Gabby, the level of her confidence was linked to the way she was now able to handle situations that arose to a point where she was now able to support more junior staff members:

I can tell by talking to one of the [new] graduates that I have come a long way and I think my confidence in my ability to handle situations too has probably increased a fair bit. I know recently, a new graduate came to me and asked me to go and talk to a family that she wasn't feeling comfortable talking to because they were a bit agitated.

Independence was also perceived as assuming more responsibility for the delivery of patient care. This included more autonomous decision making and less need for seeking clarification with a greater level of confidence than had been previously experienced.

You are more confident in yourself and therefore you are taking the responsibility of patient care yourself. You are not needing to clarify every little thing...you are more confident in yourself and in what you are doing (Fleur).

The graduate program was identified as being a major factor in Bob's development of confidence in himself:

... the experience I think equipped me and I suppose facilitated me to go to that next step...you've got to feel confident to embark on I suppose any endeavour...

Certainly, a wealth of knowledge is attained during the course of the graduate program. This is a different type of knowledge than what is learned in the classroom. Rather than being theoretical, the knowledge is more practical and institutionally relevant as the following quotes illustrate:

I feel like I've come a fair way. When you talk to any of the new graduates and they ask you a question you think, I know that (Marie).

My knowledge base has increased. Like before you don't know what to think about anything; it's just done... Just opening up a bit more and looking at it in a more holistic sort of view I think (Louise).

You do see a difference, not that far along but between us and the new graduates you see huge differences (Casey).

In discussing informal learning in the workplace Eraut (2004) distinguishes between individual and social

perspectives on knowledge and learning. Cultural knowledge is acquired through work-based practices and activities and it would appear this acquisition of cultural knowledge enables the graduate to gain independence and move on in the role of a registered nurse.

Moving On

By this stage many of the participants had reached a position of *moving on*. They were reflecting on their experiences of being graduates and now saw themselves providing education and support for others.

I feel communicating with staff and patients and I just see my role as being one where I take on that responsibility so much more than what I would have as a graduate (Cathy).

I take all the students. I am one of the preceptors down there. So the roles are reversed and now I actually think what I was like back then (Fleur).

For other nurses, moving on brought further career progression and a number of the nurses had already begun postgraduate studies to move their careers into the next phase.

I'm doing pre-enrolment in emergency so I'm not a graduate anymore but I'm still under a program of sorts (Casey).

I've started postgraduate studies now (Marg).

I am back into the student role again as a student midwife (Cathy).

Other participants sought out mentors, since moving on from the graduate program meant that preceptor support no longer existed.

Identifying with someone you perceive to have the necessary attributes and skill...then you develop the rapport and learn from that and challenge yourself; you've got to challenge yourself so you can learn a lot more (Bob).

The experience [graduate program] equipped and facilitated me to go the next step; you've got to feel confident to embark on any endeavour (Bob).

From the analysis, participants' perceptions of themselves as registered nurses had clearly undertaken a significant development from the graduate year.

DISCUSSION

This phase of the study has uncovered new knowledge about the experiences and learning of nurses in the six months following completion of their graduate year and allows for further understanding of the graduate year. It is recognised that the numbers of participants was small. The subjective exploration of individual realities does not allow generalisations from the type of data accessed in the study. However this final phase of the study raises issues of particular importance that have not previously been identified and which warrant larger, more specific studies.

It was only after completion of the graduate year that nurses in the study felt a sense of belonging and were able to complete their socialisation into a clinical practice area. Participants only started to feel accepted by their peers and be treated as equal colleagues during this time. This finding raises questions about the value of multiple rotations through a graduate year. Clare and van Loon (2003) suggest that the length of rotations is a controversial issue. Whilst the philosophy behind multiple rotations is to offer range of clinical experiences it would appear that it impacts on graduates' socialisation. Graduates may not be as well socialised into clinical settings during their rotations as might be expected as the notion of being different to other registered nurses is reinforced.

Billett (2006) draws our attention to the complex issue of workplace learning and the influences that may impact on the novice. The cliques and affiliations within the workplace and the factions that seek to regulate the "distributions of activities, interactions and judgments about other" (Billett 2006 p.41). 'Being different' would assume to have some impact on the acceptance of graduates and may account for why other nurses in the unit do not fully include graduates into their social grouping, coupled with

the knowledge that these graduates will rotate into another unit in the near future.

The graduate year has been identified as one that is stressful for many reasons. While issues such as fear of errors; feelings of incompetence; and new situations have been identified as contributing (Oermann and Garvin 2002), stress may be exacerbated by regular changing of workplace settings and working with new groups of peers with whom the graduates are not well socialised. As novice professionals, while it is important for a significant amount of their work to be new and challenging, it is important to ensure workload and stress does not reduce novices' confidence (Eraut 2004). It would seem pertinent then, for further studies to be undertaken to investigate the impact for new graduates of rotations into different units on their assimilation into the workplace. This recommendation emerged from the earlier stages of this study (Newton and McKenna 2007) and is further reinforced from findings in this phase.

Participants in the current study identified feeling more independent about their nursing work. They recognised a need for this independence as the graduate program was no longer there to support them. This supports the findings from earlier phases in the study that the graduate program acts as an umbrella under which graduates can take shelter. Interestingly, graduates in this study did not see themselves as fully fledged registered nurses during the graduate program, rather they were 'graduates' somewhere between student and registered nurse. At the end of the graduate program, additional support for the new nurse ceases and she/he is left to function on their own. From this study, processes by which the sense of independence develops and is fostered could not be elicited but would be worthy of further exploration.

Finally, the study revealed that as early as 12 to 18 months after their initial registration, participants were seeking to move on in their thinking, as well as for some, into specialty areas of nursing. Promisingly, they identified that it was part of their role to provide

support and education for others as they disengaged from being a 'graduate'. However the need to move to specialty areas for career progression is of some concern. If nurses are not content to stay in general medical and surgical areas to consolidate their clinical practice, these clinical areas may be left to very junior nurses to staff. This leads to questions about overall continuity and quality of care in general wards and the mentoring of new graduates in these areas. It would seem imperative therefore, for the profile of generalist acute care nursing, such as general medical and surgical, to be raised ensuring that experienced registered nurses can be retained in these areas.

LIMITATIONS

This study was an exploration of how graduate nurses across four health facilities within one state of Australia develop their knowledge and skills in the first 18 months of graduation so may not be reflective of graduates' experiences elsewhere. Four of the participants were known to the researchers although this did not appear to impact on the dynamics of the group they were in. The difficulty in sustaining participation in a longitudinal study resulted in a notable reduction of participants by the third focus group interview and the experiences shared by the nine nurses may not provide a representative account of the other 16 graduates who participated in the first twelve months of the study.

CONCLUSION

Experiences of new nursing graduates have been widely examined in the nursing literature. However what happens to the graduate after this time has received little attention. The development of nurses beyond the graduate year does not end with the completion of a transition program. During this time, nurses may be working to develop a sense of belonging, independence in their practice and exploring their future development. Further work is needed to investigate this period and beyond in the ongoing development of the registered nurse in the workplace.

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The strengths and weaknesses of transitional support programs for newly registered nurses

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KEY WORDS

nurse education, new graduate nurses, transition support programs, socialisation, evaluation

ABSTRACT

Objective

The transition experiences of new graduate nurses from university to the workplace have not changed since the transfer of nurse education to the tertiary sector despite the implementation of transition support programs. This study aimed to determine the strengths and weaknesses of transition support programs for newly registered nurses.

Design

A qualitative descriptive design using face to face interviews was chosen. Theme extraction was used to analyse the data and quotes from the interviews were chosen to illustrate and support the themes.

Setting

The study was carried out in seven hospitals in area health services in and around Sydney, representing both small and large facilities with bed numbers ranging from 195 to 530.

Subjects

Nine newly graduated registered nurses and 13 experienced registered nurses participated in the study.

Main outcome measures

This was an evaluative study designed to gather data about established transition support programs for newly graduated nurses working in New South Wales.

Results

Three themes arose from the analysis; *Programs operate in a clinical environment which results in unsupportive behaviour toward new graduate nurses; Nurse unit managers influence the experiences of new graduate nurses in their workplace; and, Transition support programs are provided to redress the perceived inadequacy of university preparation for registered nurses.*

Conclusions

The support afforded and the experience gained by the new graduates was an obvious strength of the programs. Weaknesses of the programs included the times when new graduates worked without support and the unrealistically high expectation of what can reasonably be expected of newly registered nurses.

INTRODUCTION

The transition process from one phase of life to another has been clearly identified in the literature by Schumacher and Meleis (1994) and this paper seeks to describe the process of transition from student to registered nurse. The experiences that await the new graduate nurse on commencement of work in the health care system have been reported by Casey et al (2004) and Gerrish (2000) and identified by Reid (1994) as the enormous clinical workload; the toll of shift work; and the disparity between the delivery of optimal and realistic nursing care.

One of the mechanisms designed and implemented to support new graduate nurses in the workplace is transition support programs which are offered by most hospitals in various formats. The support comes from a range of sources depending on the resources of the hospital offering the program and may include preceptors, clinical nurse educators, study days, and peer support groups. Although a variety of programs have been implemented, there is currently little valid and reliable evidence to support them (Jordan 2000; Clare et al 1996). The transition experiences of new graduate nurses from university to the workplace have not changed since the implementation of transition support programs (Casey et al 2004).

This study aimed to determine the strengths and weaknesses of transition support programs for newly registered nurses.

METHOD

A descriptive design using face-to-face semi-structured interviews was chosen to provide a rich source of contextual data. The plan for this project linked a number of information sources with a model of impact evaluation (Owen 1999) and was divided into three phases. Phase one analysed data from documents published by the sample hospitals, the national competency standards for registered nurses (Australian Nursing Council Incorporated 1993 which is now the Australian Nursing and Midwifery Council 2006) and the published literature. Phase two represented the data collected by interview and

phase three, the results of impact evaluation. This paper reports the findings from the interviews.

An interview schedule was developed to explore the perceived strengths and weaknesses of the transition support programs provided in the workplace. The interview schedule was pilot tested for credibility with a number of registered nurses at one hospital. Following the pilot test the interview schedule was modified slightly to allow the participants to respond more fully to the interview questions.

Participants were registered nurses in New South Wales and were either a new graduate nurse ($n = 9$) who had completed a transition support program within the past 12 months or an experienced nurse ($n = 13$) who worked with new graduate nurses during their transition support program.

The study was carried out in seven hospitals in and around Sydney, representing both small and large and public and private facilities with a variety of clinical specialty areas. Each hospital conducted a specific transition support program that aimed to meet the needs of the employing institution, however a common pattern for all 12 month programs involved three to four rotations to different clinical areas; a number of programmed study days; and varying staff support mechanisms. During the transition support program it was usual for the newly registered nurses to be assessed in clinical competencies appropriate to the ward and have regular performance appraisals.

The interviews lasted approximately one hour and were audio taped and then transcribed verbatim as soon as possible after they were conducted. Theme extraction was used to analyse the data using the 'pile on the kitchen table' method as described by Roberts and Taylor (2002 p.430). This method called for the researcher to cut any section of text that had a connection with a theme and arrange them in piles. When there are several piles the researcher tries to reduce them into fewer piles while keeping the meaning intact. When the piles of text represent a group that cannot be subsumed into any of the other categories a word should be found that captures the

key idea in each pile. These separate piles of text become the themes. Examples from the verbatim transcripts were selected to support the identified themes.

Ethics approval was gained through the appropriate committees prior to the commencement of participant recruitment. Consent was gained from each participant prior to interview and a pseudonym chosen to maintain anonymity of the data. Confidentiality was maintained through accepted methods of securing the data.

FINDINGS

The analysis from both the new graduate and experienced nurses was found to be similar and data have been combined for this report. Three themes emerged and quotes from the study participants are presented to illustrate each one. Quotes are followed by either EXN (experienced nurse), or NGN (new graduate nurse) to identify the source of the quote.

Theme One: Programs operate in a clinical environment which results in unsupportive behaviour toward new graduate nurses.

The first theme arose from the participant's beliefs that the hospital environment presented many challenges and difficulties that were described as the presence of bullying, inequitable staff rosters, the failure by the hospital to provide an adequate number of nursing staff and the way in which support was provided to new graduate nurses. The participants believed their sense of identity and self esteem were influenced by the way they were viewed and subsequently treated in the workplace, and that the negative impact of the working environment could have far reaching effects on their professional and personal lives.

Most of the nurses interviewed spoke of bullying or horizontal violence among their peers and knew of the wards in each of the hospitals where bullying was known to regularly occur. One new graduate nurse reported they were not the only nurses to experience bullying in the workplace with trainee enrolled nurses and agency staff also frequent

recipients. It seemed that anyone seen as having a lower status in the hierarchy, or more commonly, someone not permanently rostered to the ward was somehow 'not up to scratch' in the eyes of the bully and thus became a likely target.

The consequences of bullying resulted in two of the interviewees not working in their chosen specialty due directly to the bullying of the staff already working in that area. Both nurses had been rostered to their area of choice as part of their transition support program, but when considering permanent work, chose to work in other areas. One new graduate nurse reported that when the feelings of disaffection were too great it could prompt them to leave the profession altogether.

Neither experienced nurses nor the new graduate nurses themselves viewed the new graduate nurses as permanent staff members on any ward due to the rotating nature of the transition support program. This led to feelings of not belonging or being accepted as part of the team. The sense of belonging was raised by another new graduate nurse who felt the transition support programs did offer a feeling of belonging; however belonging to the program rather than the ward where the new graduate nurse was rostered. This reinforced the identity of the new graduate nurse as undertaking a program rather than a new graduate nurse working as a member of the ward staff.

Shift work was a new experience for many new graduate nurses however they were less concerned about working shift work than they were about the inequity of the shift work roster. They considered they were unfairly treated with the rosters in that they worked more weekends and 'unpopular' shifts (afternoons and night shifts) than other registered nurses on the ward which is illustrated by the comment:

Invariably you end up doing all of the weekends. Invariably. I think everybody would say that (Marianne NGN).

There was usually provision for nursing staff to request days they would like to have off prior to the roster being written and also to swap shifts on

the roster that had already commenced. Although this sounds a fair system the new graduate nurses explained they could only swap with another new graduate nurse and since there may be only one other new graduate nurse rostered to the ward, there was usually little chance of that occurring.

One of the new graduate nurses had an unofficial way of coping with inadequate rosters explained to her by her peers.

Don't ask for the day off, just be sick! (Marianne NGN).

There was widespread agreement from both groups of registered nurses that a major reason for offering transition support programs was to provide the hospital with nursing staff. The staffing requirements of the hospital seemed to dictate the number of positions available in transition support programs which could increase each year to meet the demands of the hospital. One of the experienced nurses referred to the new graduate nurses as:

fodder... and there is never enough. It's like if you have a bucket with a hole in the bottom, no matter how many or how much you put in the top, the bucket never gets full (Penny EXN).

Wards often had to rely on large numbers of junior nurses to staff the shifts and although the number of staff rostered may have been adequate, there was a lack of experienced nurses which reduced the opportunity for new graduate nurses to seek advice from more experienced nurses. Sometimes when a more experienced nurse was rostered to work with large numbers of less experienced nurses, they became the sounding board for all the new graduates and found it difficult to get their own work completed.

The support available to new graduate nurses differed from ward to ward. One ward in the study chose not to provide preceptors for new graduate nurses because the nurse unit manager did not consider it was in the best interest of the ward. It was considered that some of the problems in the development of the preceptor-new graduate nurse relationship were caused by lack

of appropriate staff to act as a preceptor or the new graduate nurse being rostered on different shifts. The effect this had on new graduate nurses was that they were expected to work without adequate support, particularly evening and weekend shifts. Although other registered nurses sometimes offered to help them, the registered nurses' heavy workloads frequently prevented them from assisting the new nurse as much as they would have liked.

Theme Two: Nurse unit managers influence the experiences of new graduate nurses in their workplace.

The nurse unit manager was depicted as being a very powerful character in the ward setting by nurses in this study. The nursing unit manager had responsibility for the budget, rosters, creating and maintaining the general feeling or character of the ward and for staff appraisal. While it was acknowledged that the role of the nurse unit manager was multifaceted, the impact they had on the ward is worth further mention. One new graduate nurse said that each ward had its own particular milieu and it was the responsibility of the nurse unit manager to influence the milieu. She said:

The NUM (nurse unit manager) sets the tone [of the ward]. So it is very important that they set a nice tone (Marianne NGN).

For the most part it seemed that new graduate nurses were not really acknowledged by the nurse unit manager as a team member. New graduate nurses were very sensitive to this, possibly because they were unsure where they wanted to work on completing the program and so were keen to make a good impression with all of the managers. A common complaint from new graduate nurses was that some of the nurse unit managers did not even say good morning to them.

It was also noted that most nurse unit managers did not get to know the new graduate nurses and when appraisal time came around they had to rely on others to inform them about the nurse they were to appraise. This was most disconcerting to the new graduate nurse who was having an appraisal written

about them by someone who had little if any first hand knowledge of their clinical and professional practice.

Theme Three: Transition support programs are provided to redress the perceived inadequacy of university preparation for registered nurses.

Both new graduate and experienced nurses expressed dissatisfaction with the preparation of nurses by universities in several different ways. Concern was expressed about the relevance of some aspects of the course material and also the degree to which new graduate nurses were able to function as a registered nurse on graduation. Some of the course content of the undergraduate nursing degree was seen as irrelevant, being too theoretical for the practical skills required of a nurse.

Only one of the new graduate nurses in this study felt confident to work as a registered nurse on graduation from university. More commonly nurses expressed feelings of being vulnerable in the workplace:

The first four months was pretty bad, feeling unsafe and you just didn't like going to work. I think most nurses are like that (Kathy NGN).

One response from the hospitals to this perception of inadequate preparation or lack of confidence by the new graduate nurses was to provide various education packages for the new graduate nurse to complete. When asked whether more education was required, one new graduate nurse said:

I don't think they do [need more education]. I think, I think we need to understand what we are doing (Lyn NGN).

This illustrates the difficulty the new graduate nurses had in applying their knowledge to everyday situations. It seemed that the nurse must make a major effort to advance from knowing how to do tasks to understanding why they were doing them for the patient now in their care. At other times it was not just the application of knowledge that needed to be nurtured but there were clear shortfalls in the knowledge that had been acquired. Although the transition support program had not been designed

to assist or address these problems, it became the hospitals' problem once the nurse was employed. The following quote describes this lack of knowledge:

We can't fix up all of the problems that people come out of university with. For example we had people with huge knowledge deficits, absolutely huge. They have got through the exam at university in first year and they have never revisited that [content or concept] (Cathy EXN).

Once a knowledge deficit had been identified, the nurses were usually given extra materials and learning contracts to address their learning needs, working in a mutual arrangement with a nurse educator to redress the problems.

DISCUSSION / CONCLUSIONS

Strengths of the Programs

When support was available and provided to the new graduate nurses it was an obvious strength of the programs. This was beneficial for the new graduate nurse embarking on a career who needed to feel accepted and be able to work as a valued member of the team. When the nurses felt accepted and valued, the workplace stood to benefit by having more satisfied workers who were less likely to leave their place of work. However new graduate nurses described many occasions where they felt isolated from other members of the nursing team and were left to work alone. This was particularly the case when they were rostered to work weekends and evening shifts as the usual support staff of preceptors and clinical educators did not often work these shifts.

It was important for the new graduate nurse to feel part of the ward team and to have a sense of belonging to enable the development of the confidence and competence required of a registered nurse. One method of providing support for new graduate nurses that has been widely used and cited in the literature is the use of preceptors (Makepeace 1999; Oermann and Moffit-Wolf 1997).

When implemented in the intended manner, the role of the preceptor was considered to be a strength of the programs. Preceptors were valued by the new

graduate nurses when they were rostered to the same shifts and able to work side by side; when the preceptor had a choice about accepting the role; and when the personalities of the preceptor and the new graduate nurse were compatible. Unfortunately, it was not uncommon for the new graduate nurse's preceptor to be rostered to work different shifts or for one not to be allocated at all and many new graduates had only one or two days of preceptorship at the beginning of a new clinical rotation. While all programs advertised preceptorship as a supporting mechanism, in reality, it was a rare occurrence. Unfortunately the preceptors gained little recognition or reduction of workload in exchange for assisting the new graduate nurses in this way which did not encourage them to undertake this role.

The 12 months duration of the transition support programs was considered another strength as this time gave the new graduate nurse a chance to adapt to the role of the registered nurse and develop the necessary confidence to perform in that role. Student nurses are protected in various ways from the full responsibilities of the registered nurse even in their final year of university so it is not surprising that when new graduate nurses suddenly find themselves in a position of authority, they require a period of time to adapt.

Weaknesses of the programs

The times that new graduate nurses spent working without support remained a weakness of the programs. As a result of nursing staff shortages it was often necessary for new graduate nurses to be in-charge of a ward before they felt comfortable with the responsibility of the role and it often occurred when there was little clinical support available. The feelings of anxiety and apprehension that this role engendered added to the vulnerability the new graduate nurses.

Another weakness of the program was the bullying and horizontal violence directed at the less experienced or casual nurses in the wards which served to undermine the new graduates' confidence and make the transition period stressful and

unpleasant. The literature reports behaviours such as excessive abuse or criticism, threats, ridicule and humiliation, making excessive demands on any one person, inequitable rostering or a misuse of power to encourage other people to exclude the victim as indicative of bullying (Farrell 1997; Patterson et al 1997). However bullying seems so common and ingrained in nursing culture that Dunn (2003) considered that it has become an accepted part of behaviour for many nurses and as such, is unnoticeable to them.

The unrealistically high expectation of what could reasonably be expected of a new graduate nurse may also be considered a weakness of the program. Although new graduate nurses are beginning practitioners, they were frequently rotated to clinical areas during the transition support program that required highly specialised nursing skills where they were expected to be able to work as competent registered nurses. The programs were designed to assist new graduate nurses to adjust to the role of registered nurse, however in reality these nurses were expected to function in the role immediately and with as little support as possible. In lieu of adequate clinical support, learning packages and additional educational materials were provided in an attempt to redress the perception of inadequate preparation of registered nurses by universities. The new graduate nurses themselves identified that they needed the opportunity to practise their skills and apply their knowledge in practice, but this was difficult to facilitate in a busy environment where suitable role models were not available.

Although the new graduate nurses indicated they enjoyed the rotational aspect of the programs, it was also seen as a weakness as the new graduate nurses required a period of time to develop confidence in their clinical practice. As they developed this confidence they were rotated to a new area and had to relearn how to work in this new specialty area. This undermined the confidence of the new graduate nurse and reinforced the notion that they were unable to cope with the work on the wards.

RECOMMENDATIONS

As a result of this study a number of recommendations are made for future research:

- Support mechanisms need to be found and individually tailored to each new graduate nurse in an effort to meet their needs. New graduate nurses work in a variety of highly specialised nursing areas as part of their transition support programs and it is unrealistic to expect them to be able to work independently immediately.
- Schools and faculties of nursing need to provide student nurses with more clinical experience in real work situations where they have some responsibility for patient care to gain a realistic understanding of the role of the registered nurse.
- A process for providing a channel of communication between hospitals and schools and faculties of nursing regarding the perceptions of undergraduate university courses needs to be identified.
- Hospitals need to develop and implement realistic and practical ways to eradicate bullying in the workplace. Nurse unit managers were shown to play a key role in condoning the behaviour of nurses in their wards.

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Three versus seven day circuit changes of humidified oxygen circuitry: a feasibility study

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KEY WORDS

Oxygen inhalation therapy, humidity, pneumonia, humidifier circuitry

ABSTRACT

Objective

The study compared the rate of humidifier acquired pneumonia between patients in whom humidifier circuitry is changed every three days with patients in whom circuitry is changed every 7 days in order to assess the feasibility of conducting a large scale randomised controlled trial to test the safety of extending the period between humidified circuit changes from three to seven days.

Design

The study was a randomised controlled trial.

Setting

The setting for the study was a 942 bed general teaching hospital in Queensland, Australia.

Subjects

The subjects of the study were patients receiving humidified oxygen in surgical, medical and infectious diseases units of the hospital.

Interventions

Consenting subjects were randomly allocated to either 3-day (control) or 7-day (intervention) circuit changes.

Main outcome measures

The primary outcome measure was nosocomial pneumonia and the secondary outcome measures were death and length of humidification therapy.

Results

Of the 51 eligible patients, 32 were included in the study (17 patients were randomised to the control group and 15 patients to the intervention group; recruitment rate 63%). During the study, four cases of nosocomial pneumonia occurred; two in the intervention group (13.3%) and two in the control group (11.8%) ($\chi^2 = 0.018$, $p = 0.894$). No patients died during the study period.

Conclusion

No high quality evidence exists to assist nurses to make a decision about how frequently to change humidifier circuitry. Potential cost savings involved in extending the time frame between humidifier circuitry changes indicate that a large scale randomised controlled trial is both feasible and important.

INTRODUCTION

Modern health care demands both cost effectiveness and positive patient outcomes. In pursuit of these goals, many hospitals have focused on evaluating high volume practices, such as routine equipment changes, as these present significant recurrent costs. In the hospital where this research took place, humidified oxygen circuits are changed every three days to prevent nosocomial pneumonia however the policy is based on traditional practices, not on evidence. Consequently, a systematic review of the literature was conducted to identify the optimal length of time for humidifier circuitry changes. No research studies were found that answered this question. The Guidelines for the Prevention of Nosocomial Pneumonia recommend following the manufacturers' instructions for use (Tablan et al 2004) however manufacturers' information leaflets that accompany humidification equipment have instructions on how to set up the equipment but not on how often equipment should be changed.

Pneumonia remains an important cause of hospital mortality (Bowton 1999) and increases a patient's length of stay by an average of 5.9 days (Mehta et al 2007). Although no information could be found to guide a decision about how often to change humidifier circuitry, frequency of changes to circuitry used for mechanical ventilation has been studied and, as the two systems are related, this literature was reviewed.

LITERATURE REVIEW

In the 1960's ventilator circuits were changed at short intervals to prevent ventilator associated pneumonia (VAP) (Phillips and Spencer 1965) which is generally defined as 'nosocomial pneumonia in a patient on mechanical ventilatory support for >48 hours after intubation' (Mayhall 2001). In 1983 the Centres for Disease Control and Prevention recommended changing ventilator circuits every 24 hours (Simmonds and Wong 1983). This was amended in 1994 to >48 hours (Tablan et al 1994) and more recently to "do not change routinely on the basis of duration of use" (Tablan et al 2004

p.3). It was also thought that the cause of ventilator associated pneumonia (VAP) primarily originated from exogenous contamination of the ventilatory circuitry. Studies now suggest that contamination of the circuit may be from the patient rather than vice versa; that is, respiratory tract infection is often the result of aspiration of pharyngeal secretions rather than aerosolisation from the ventilator circuit (Heyland and Mandell 1992).

Increased frequency of circuitry changes may itself contribute to an increased incidence of VAP. For example, Craven et al identified a two fold increase in the rate of pneumonia among patients who underwent 24 hourly circuit changes when compared with those in whom circuitry was changed less frequently. They hypothesised this was a result of increased manipulation which may have led to inadvertent flushing of contaminated condensate into the patients airway (Craven et al 1986). Patient factors such as age, underlying diseases, medications, number of intubations, use of positive end expiratory pressure, presence of a nasogastric tube, neutropenia, nasal intubations and sinusitis are also important issues.

Several recent reports have compared outcomes between short and longer term circuitry changes. The first group of studies used a 'before/after' design (comparing extended time between circuitry changes with historical controls). None of these studies identified a greater risk of VAP when extending ventilator circuit change intervals beyond 2 days (Han et al 2001; Lien et al 2001; Fink et al 1998; Kotilainen and Keroak 1997; Hess et al 1995). One of the problems with before/after studies is the difficulty in replicating exact conditions between the two time frames, introducing the potential for bias. However results in this case are strengthened by the consistency of findings between studies. A randomised controlled design is more appropriate when testing an intervention and four investigations have been reported using this approach. The first was published in 1991 and compared ventilator circuit changes every 48 hours with no changes at all. Levels of tubing colonisation, types of organisms

recovered, and the incidence of VAP were similar in the two groups (Dreyfuss et al 1991). This was a small study with results from only 35 subjects in the '2 day' group and 28 subjects in the 'no change' group analysed. The mean length of ventilator days in the 'no change' group was also unclear. In a separate study which compared one versus three circuit changes per week in patients ventilated for no more than seven days, the 'one change per week' group had a VAP rate of 5.9 per 1,000 ventilator days compared with 9.0 for the 'three per week' group. However in patients ventilated for longer than seven days the 'one change per week' group had a VAP rate of 13.2 per 1,000 ventilator days compared with 9.6 for the 'three per week' group. The results were not statistically significant (Long et al 1996). In an Australian study, '2 day' changes were compared with '4 day' changes and again the rate of VAP remained unaffected (Boots et al 1997).

The final investigation in this group was a multi-site randomised controlled trial comparing 'seven day' circuit changes with 'no changes'. The mean length of ventilator days in the 'no change' group was 14.9 days. Even over this longer timeframe, length of time between changes was not associated with VAP (24.5% in the 'no change' group and 28.8% in the 'seven day' circuit change group) and the length of hospital stay was not affected (Kollef et al 1995).

There are also significant cost savings associated with extending the time between ventilator circuit changes (table 1); presumably similar savings may be realised if the humidifiers were changed less frequently. In the financial year ending 30 June 2007, the hospital where the research took place used approximately 4,000 humidifier circuits in non ICU wards at a cost of \$152,400. Assuming a policy change to seven day circuit changes, a recurrent annual cost saving of \$87,086 could be made in equipment alone.

Table 1: Savings associated with extending the time between circuit changes

Intervention	Time between changes	Cost savings
Hess et al 1995	2-day versus 7-day intervals	76.6% reduction in cost (\$111,530/year)
Kollef et al 1995	7-day versus no change	\$30.00 per circuit change
Kotilainen et al 1996	3-day versus 7-day intervals	\$26.46 per circuit change
Fink et al 1998	2-day versus 7-day and 30 day intervals	\$4231/year for each ventilator
Lien et al 2001	2-day versus 7-day intervals	\$80,000/year

In summary, the literature shows that in intensive care settings, although the optimal schedule for the frequency of ventilator circuit changes remains unknown, the first change may be safely delayed until the end of one week of mechanical ventilation. However it may be inappropriate to base humidified oxygen protocols on research pertaining to ventilator circuitry because the configuration, purpose and patient population of humidified oxygen circuits are inherently different from mechanical ventilation circuits. Humidified oxygen circuits are open circuits, usually ending in a tracheostomy mask or a face mask. Patients are often disconnected from the circuit, for example, to attend an x-ray, and the circuit is left open and uncovered for periods of time.

In light of the differences between humidifier and ventilator circuits and the lack of supporting research for humidifier circuit changes, the purpose of the current study was to compare rates of nosocomial pneumonia between patients whose humidified oxygen circuitry was changed every three days with those changed every seven days.

METHODS

Design

A randomised controlled trial was used. The study was approved by the study hospitals' Human Research Ethics Committee.

Setting and sample

All patients receiving humidification in the surgical,

medical and infectious diseases units of a 942 bed general tertiary referral teaching hospital in Queensland, Australia were assessed for eligibility. Exclusion criteria were age <18 years; an inability to give consent, (for example, the patient was mentally incompetent and relatives were either unknown or unable to be contacted); or cessation of humidification prior to 48 hours after admission to the ward. Patients entered the trial only after 48 hours had elapsed since arriving in the ward. This 'window period' was allowed so that pre-existing but undiagnosed infections could be detected prior to commencement in the trial.

PROCEDURE

Randomisation process

The randomisation schedule was generated by a researcher otherwise uninvolved with the implementation of the trial. A project officer was responsible for enrolling participants, gaining consent, and collecting data. An a priori research hypothesis was proposed that participants from intensive care would be more likely to develop nosocomial pneumonia so groups were stratified according to whether or not patients had been admitted to the ward from the intensive care unit.

Intervention

Participants allocated to the intervention group had their circuitry changed every seven days. In all other respects they received usual routine care.

For all study patients, the following characteristics were prospectively collected: age, sex, smoking history, prior location before admission to the ward (eg intensive care unit, home), diagnosis at hospital admission, ward in which the patient was being treated, indication for humidification therapy, presence of chronic obstructive airways disease, number of circuitry changes done and reasons for the changes, duration of humidification therapy prior to pneumonia, total duration of humidification therapy (until death or weaning), and peak temperature.

Changing the humidifiers after patients were enrolled in the trial remained the responsibility of the registered nurses employed in the clinical area.

Stickers were placed on the patients' humidifiers and in the patients' bedside charts to alert the nurses that the patients they were caring for were part of the study group and advising the date on which the humidifier circuit should be changed. Both nurses and participants were aware of the participant's allocation. The nurses changed circuits at any time if visible soiling appeared, irrespective of the patients' study group.

The treating physician was not blinded to the patients' study group but was also not part of the research team. The treating physician diagnosed pneumonia using the following criteria: a new localised chest radiographic infiltrate; fever; white cell count of $<4 \times 10^9/L$ or $>11 \times 10^9/L$; isolation of a pathogenic organism $>3+$ on semi-quantitative culture of a tracheal aspirate or sputum sample and clinical signs such as changes in sputum (increased production, changed appearance or increased quantity); and increased respiratory rate. The diagnosis of pneumonia was extracted from the patients' medical records by the project officer. Any ambiguity about the patients' diagnoses was clarified with the patients' treating physician.

Sample size calculation

The sample size for the study was based on the reported nosocomial pneumonia rate of 18% for patients in the intensive care unit of the hospital where this investigation took place. It was assumed that the pneumonia rate would be less among patients receiving humidification therapy rather than mechanical ventilation, so an arbitrary rate of 10% was applied. Using an $\alpha = 0.05$, $\beta = 0.02$ (ie power = 0.8) and a change in pneumonia rate from 10% to 5% as clinically significant, an estimated sample size of 430 patients in each group would be required for a full study. To test the feasibility of conducting such a study, the researchers aimed to recruit a 5% sample of approximately 43 patients.

Outcome measures

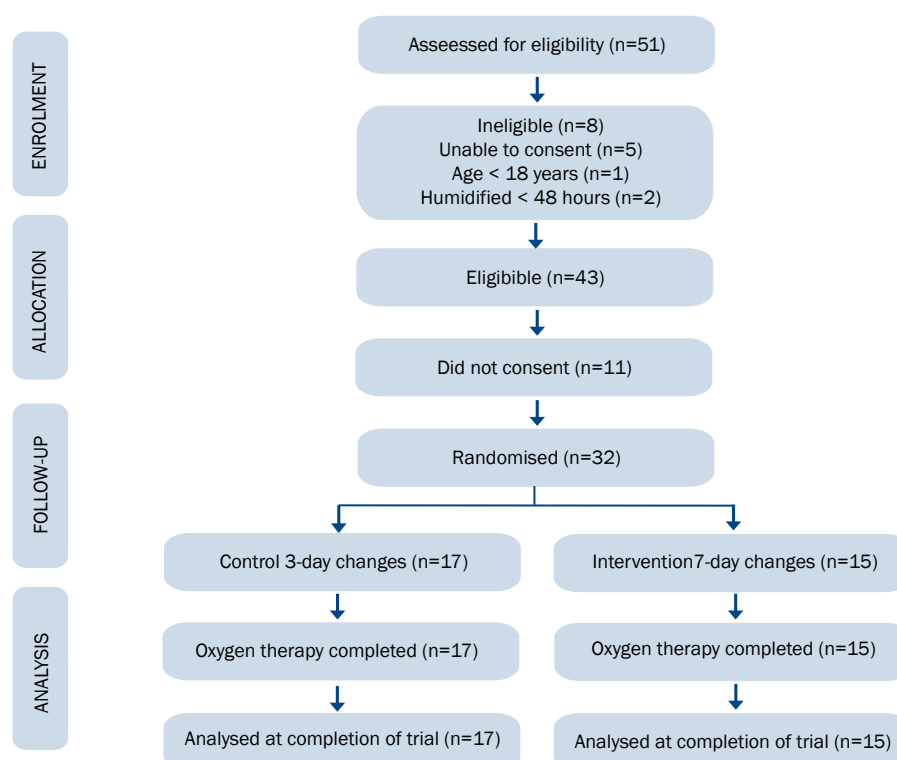
The primary outcome measure was nosocomial pneumonia and the secondary outcome measures were death and length of humidification therapy.

Analysis

Patients were monitored until 48 hours after the cessation of humidification therapy. Outcome analysis was by original allocation and is expressed as the number of patients with the outcome of interest in each group (%). Baseline characteristics

such as age and weight were not normally distributed and were compared using the Mann-Whitney test and were summarised using the median (range). Categorical variables were compared using the chi-square statistic with Yate's correction and were summarised as proportions (%).

Figure 1: Flow of participants through each stage of the study



RESULTS

During the study period, 51 patients were approached to participate in the study. Of these, sixteen patients were ineligible for inclusion (the reasons for exclusion are shown in figure 1). This left 43 eligible patients, eleven of whom did not consent; a recruitment rate of 63%. Of the 32 patients recruited into the study, seventeen patients were randomised to the '3 day' change group and fifteen patients were randomised to the '7 day' change group. Baseline characteristics for patients in the two groups were comparable at randomisation (table 2).

Primary outcomes

During the study, four cases of nosocomial

pneumonia occurred; two in the intervention group (13.3%) and two in the control group (11.8%) ($\chi^2 = 0.018$, $p = 0.894$).

Other outcomes

Both groups were similar in terms of the mean number of humidified days per patient: Intervention 13.7 days (SD 23.5 days), Control 12.9 days (SD 12.3 days), $p = 0.89$. There was a non-statistical difference in the mean number of circuits used per patient: Intervention 2.1 (SD 3.5), Control 3.1 (SD 3.9), $p = 0.2$. No patients died during the study period. Due to insufficient numbers of participants the effect of previous ICU admission on the primary and secondary outcomes was not able to be investigated.

Table 2: Demographics of patients in a pilot randomised controlled trial of 7-day versus 3-day changes of humidified oxygen circuitry

	7-day change (n=15)	3-day change (n=17)
Age in years	63.3 [31 to 78]	67.2 [23 to 90]
Number of males	13 (86.7%)	14 (82.4%)
Weight in kilograms	70.3 [42 to 122]	75.5 [50 to 120]
Admitted from ICU	10 (66.7%)	10 (58.8%)
Patient type:		
Medical	7 (46.7%)	5 (29.4%)
Surgical	6 (40.0%)	8 (47.1%)
Infectious diseases	2 (13.3%)	4 (23.5%)
Smoking history: current or within last 12 months	4 (26.7%)	5 (29.4%)
Presence of COAD	6 (40.0%)	7 (41.2%)
History of pneumonia	6 (40.0%)	11 (64.7%)
Presence of tracheostomy	9 (60.0%)	15 (88.2%)
Antibiotics on admission	10 (31.3%)	15 (46.9%)

NB: The data are median [range] or proportions (%)

DISCUSSION

The purpose of the current study was to compare rates of nosocomial pneumonia between patients whose humidified oxygen circuitry was changed every three days with those changed every seven days in order to assess the feasibility of conducting a large scale randomised controlled trial to test the safety of extending the period between humidified circuit changes from three to seven days. While the study recruited 63% of eligible patients, only 32 patients were recruited over a seven month recruitment period. A number of issues prevented a larger sample being obtained: for example funding was only received to employ a project officer for one day each week for a period of 12 months. It was originally planned that the project officer would manage data and that nurses on the study wards would recruit participants. This plan was based on an understanding that two

nurses from each of the six study wards who had expressed an interest in the research would act as resource persons for the study and would assist other nurses on the ward with recruiting patients. Although the recruitment process was explained to the resource nurses and a resource folder for the study was left on the ward, it soon became clear that nurses on the study wards were unable to recruit patients into the study because of work pressures. As a result, recruitment was left to the project officer and occurred on only one day each week; hence many potential participants were missed. Although these problems meant the study was under powered to show real differences, the high recruitment rate indicates that recruitment would not be an issue in an adequately funded study.

Four patients (12.5%) developed nosocomial pneumonia while enrolled in the study. This was lower than the 18.8% rate reported in a recent large epidemiological study of pneumonia which included a classification of 'hospital acquired pneumonia' (Kollef et al 2005). All patients diagnosed with pneumonia in this study were admitted to their respective wards from the intensive care unit (ICU), all had received enteral feeding and all remained in hospital for extended periods; all factors associated with increased risk of nosocomial pneumonia (Tablan et al 1994). One of the participants was an elderly victim of a motor vehicle accident and later died after re-admission to the intensive care unit. After an extended stay of more than 98 humidified days, another participant was later transferred to another hospital for a double lung transplant. The third patient to have developed nosocomial pneumonia attended the speech pathology department for the ongoing management of swallowing difficulties, hence this patients' pneumonia was most likely due to aspiration. The fourth patient, although now well, was also an elderly victim of a motor vehicle accident and was fully nursing care dependent and immobile when enrolled in the study. Therefore all of the patients who developed nosocomial pneumonia had in common a number of factors known to be associated with a higher incidence of pneumonia such as: critical

illness and endotracheal intubation; enteral feeding; extended length of stay and immobility (Brooks 2001) and were more likely to have developed the pneumonia as a result of these factors rather than from contaminated humidified oxygen tubing.

While not statistically significant, an important clinical finding of the study was the difference between groups in the number of circuits used per patient. Patients in the control group used almost twice the number of circuits per patient when compared with the experimental group. This difference between groups seems more important when converted into cost savings. The hospital where this investigation took place spends \$98,733 on 3,098 humidifier circuits per year for non-ICU wards. A practice change to 7-day humidifier circuit changes could reduce current expenditure by almost one half, for a potential cost saving of approximately \$45,000 per annum. During the study the usage of humidified circuits for 15 patients during the data collection period was halved, resulting in an actual cost saving of \$930.

Although the study was unable to recruit sufficient participants to meet the sample size required to show a difference in the primary outcome between the two groups, it has shown that further study comparing 7-day and 3-day changes of humidified oxygen circuits would be feasible. Recruitment processes are now quite lengthy and involve specialised knowledge particularly of consent procedures. Expecting clinical nurses to undertake this role is no longer an option in busy clinical settings.

CONCLUSION

Potential cost savings involved in extending the time frame between humidifier circuitry changes indicate that a large scale randomised controlled trial is both feasible and important.

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Constructing a research based pre-care model to improve mental health interventions for young people

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KEY WORDS

Accessing care, first episode, grounded theory, mental health nursing, adolescent, young people, models

ABSTRACT

Objective

This study had two aims. Firstly, to explore how young people experienced the onset of mental health problems and to investigate their initial interactions with the health system; and secondly, to use these findings to construct a pre-care model that can be used by nurses and other health care professionals to design appropriate interventions.

Design

Grounded theory method was used to develop a theory of young people's experience of the pathway to mental health care. Data were obtained through in-depth semi-structured interviews.

Setting

Participants were recruited through two community health centres in a Sydney metropolitan area health service.

Subjects

The purposive sample consisted of eight males and twelve females between the ages of eighteen and twenty five (mean age was 21).

Main outcome measures - Findings

The categories identified from analysis of the interviews were (a) first sign - often involved denial or fear in the early stages and self medication with alcohol or other drugs; (b) recognition - of the symptoms as a sign of mental illness; (c) understanding - discovering information about the illness; and (d) resolution - when care is successfully accessed. Barriers and facilitating factors either delay or assist movement from one stage to the next. The "maze to care" model is suggested as a guide to action for health professionals. It can direct attention to broader social and systems interventions or, at the individual level, assist assessment.

Conclusions

The study offers insights into the experiences of a small group of individuals and hence has limitations however the development of a model which can be tested in practice demonstrates that grounded theory can be a useful research approach when used to develop frameworks for action in nursing and mental health care.

INTRODUCTION

Mental health is recognised as a major public health issue. Recently emphasis has been placed on programs focusing on early intervention such as suicide prevention training outside the mental health service system (Emmerson et al 2006; Owen and Burgess 2004). This is particularly important for young people. Neglecting the mental health needs of young people has high social and economic cost implications. Some of these costs, such as distress, are intangible, whereas others are only too easily measured - increased suicide, increased drug and alcohol misuse, homelessness, and interruption to psychological, educational and social development (Farmer et al 2003).

The last Australian National Survey of Mental Health and Wellbeing, currently being updated, showed that the prevalence of mental health disorder among those aged 18 to 24 years was 27% (AIHW 2007). It is particularly important therefore that primary care health professionals such as nurses are aware of the experiences of young people and especially of the barriers which prevent them accessing appropriate care in a timely way (Rickwood et al 2005).

This paper reports the findings of a grounded theory study which investigated the experiences of young people, from their perspective, as they attempted to make sense of what was happening to them. The intention was to focus on the pre-care environment and to construct from the findings a 'guide to action' model which could alert health professionals to the factors which impede or facilitate young people accessing care and which could also assist health professionals in assessing individuals and/or designing appropriate interventions.

Literature Review

A literature search was conducted through the databases Austhealth, Cinahl, Medline, and PsycINFO covering the years 1998-2008. Search strategies covered the following terms: mental disorders and young people (aged 15-25), pre-treatment, patients' acceptance of health care, health services accessibility, help seeking behaviour, young people's

journey through the health system, health care utilisation, self referral and mental health service utilisation. Literature was also covered pertaining to grounded theory and qualitative studies of consumers' experiences of mental disorders, accessing care, health care seeking behaviours, help seeking behaviours, commitment to treatment (psychiatric), health care utilisation, hospital admission, and mental health services.

There are many studies which look at help seeking behaviour (see Wilson et al 2005; Fallon and Bowles 2001). However as Rickwood et al (2005) point out, these studies tend to focus more on what happens after people have come into contact with health professionals in the health care system, that is, on diagnosis and treatment aspects. The studies focus more on quality and outcomes, with an increasing interest in clinical practice guidelines, benchmarking of services and development, and evaluation of models of practice (Wilson et al 2005). The present study was concerned with what happens to young people as they begin to experience symptoms of a mental disorder, how they make sense of their symptoms, where they go for help, and what delays them or assists them in finding help.

The help seeking pathway metaphor presents a picture of a visible, organised and defined route to providers who have the mandate to treat, care for and be responsible for the people seeking help, however pathways to effective care are often unclear and difficult to negotiate, especially for young people and their families (Pescosolido et al 1998). The study by Pescosolido et al showed that, in practice, the route is rarely simple. A young person may experience the distressing circumstances of an initial episode well outside the health care system. The symptoms may be unrecognised, or recognised by others from a wide range of backgrounds, such as friends, teachers, parents or police. Thus the symptoms and how they are dealt with are a challenge not only for the individual, but for the health care system as well.

Although there is limited literature addressing the consumer's perspective, it does provide some useful insights involving the personal accounts of

consumers (Rose et al 2002) and insights into the impact of family and friends on an individual's personal interpretation of mental illness and their help seeking behaviours. More importantly, qualitative self report data seem useful for exploring the feelings and experiences of the younger age group. Research has shown that adolescents' social networks are important influences on their help seeking processes (Dean et al 2001). Dean et al found that most of adolescents' help seeking knowledge was gained by observing others, by word of mouth, and by help seeking carried out on their behalf.

Scholars suggest there are multiple contributors to mental health disorders and their outcomes in each individual. Steel et al (2006) contend that the pathways to initial care are highly individualised and vary from person to person and for different populations. Thus a 'life context' model is more complete in describing the stages of the illness in order to address the gaps between research and practice. There is diversity in the mental illness process and there are different help seeking pathways to initial care, each with different critical points and this could discourage health service providers from engaging in individualised interventions.

The literature search revealed that most of the available models are statistical 'risk predicting' models. It is rare in the mental health field to find a model of care that involves family members and consumers in accessing care and care planning (Furman and Jackson 2002). Models have been used to explain behaviours that signify mental health problems and to identify frameworks for effective management in an effort to minimise the ill health of individuals (Donovan et al 2006; Hall and Torres 2002). The analytical difficulty lies not only in ascertaining the incidence of risk among those who develop mental health problems, but also in determining the likely significance of the problem in the decision making processes of the individual accessing care. Social, emotional and adaptive difficulties are generally complex and the processes of interaction are complex and non-linear (Pescosolido et al 1998).

Although appropriate help seeking is considered protective, it has been reported consistently that few adolescents who experience distress, particularly suicidal thoughts, seek appropriate help (Wilson and Dean 2001). In this population, as suicidal ideation increases, willingness to seek help decreases, particularly help seeking from a source such as a mental health professional (Dean et al 2001; Calton and Dean 2000).

Evaluation studies of mental health care programs have suggested a number of barriers as key areas of intervention, including stigmatising attitudes toward mental illness (Wilson and Deane 2001); personal factors such as grief issues (Tennant 2002); social factors such as substance abuse (Cornelius et al 2001); cultural factors (Cauce et al 2002); as well as service issues such as service inefficiency and health service professionals' lack of mental health knowledge (Emmerson et al 2006). Despite the obvious potential of mental health care programs, there is little empirical evidence to suggest they offer effective protection against suicidal risk (Calton and Dean 2000).

METHODOLOGY

A grounded theory design was chosen for this study because the aim was to make sense of the situation without imposing pre-existing expectations. Grounded theory is an approach based on theory development. The researcher seeks to gather data to add to and enhance an existing body of information with the aim of explaining what is happening. A key aspect of grounded theory is the interrelationship between the collection, coding and analysis of data which are carried out concurrently.

Participants

The study involved the participation of 20 young people, eight males and 12 females, aged between 18 and 25 years, who were experiencing mental health problems for the first time. Criteria for inclusion were: first time referral to community mental health centres; able to describe 'reality' as well as give written informed consent; able to articulate in English; and able to consent to tape recorded interviews and

follow-ups. The potential impact of being interviewed (eg that it may or may not trigger psychological distress) was explained.

Potential participants were given information about the study by health professionals who were aware of the inclusion criteria. Participants then contacted the researcher and signed a consent form. They were interviewed privately, either in their homes or at a community health centre. Each interview took between 30 to 60 minutes. All interviews were tape recorded with the permission of the participant and were transcribed verbatim. Debriefing was offered at each interview and the participants were supplied with a resources list. Additionally, participants were provided with a summary of the results of the research at a community meeting after the completion of the study.

Ethics

The study was approved by the Human Research Ethics Committees of the University of Wollongong and the area health service from which the participants were drawn. Participants were given pseudonyms to ensure privacy when reporting on data.

Data collection and analysis

The open ended questions allowed participants to talk about their experiences from their perspective. For example: what made you realise that something was wrong; could you describe what the experience was like for you, etc. Consistent with the procedures of constant comparative analysis (Strauss and Corbin 1990; Glaser and Strauss 1967), the questions became more focused as the analysis continued and the findings emerged. This process continued until theoretical saturation was reached, which means that no new data were found that added to the analysis (Strauss and Corbin 1998; Glaser 1978).

Strauss and Corbin's (1990) method was used in the analysis process. Data were coded and each piece of data compared so that similarities and difference in phenomena were distinguished. This method was applied at three different levels of analysis (called open, axial and selective coding) and resulted in

increasing levels of interpretation and abstraction. Concepts were grouped into categories according to their characteristics or properties and relationships between categories were identified. The aim was to achieve a dense but parsimonious explanatory theory accounting for as much variation in the young's people experiences as possible. The data were managed with the use of the computer software program NVivo (Richards 1999).

Rigor

In this study, the researcher has produced a theory building study which is rigorous, useful, relevant and current (Strauss and Corbin 1998). The criteria for rigor includes strict adherence to the method as well as validation of the results - through the participants for accuracy and with clinicians for clinical application. To help ensure the credibility of data, eight of the twenty participants reviewed the exhaustive description of 'finding a way' to validate that it accurately captured the essence of their lived experience. A written summary of the study and descriptions of the 'maze to care' (including the figure) were given to the participants to critique for accuracy and truthfulness. Inter-subjective agreement between the researcher and an independent judge (a nurse with experience in grounded theory analysis) was reached at each phase of data analysis.

FINDINGS

The findings showed that the concept of a 'pathway to care', a term used frequently in the literature to refer to what happens once the consumer has accessed care, is a misnomer when applied to what happens at the outset. The term suggests a smooth transition to care along a defined and known route, but the participants did not experience such a pathway. Some of the participants used the metaphor of a maze in their accounts and this more accurately reflects the experience of all.

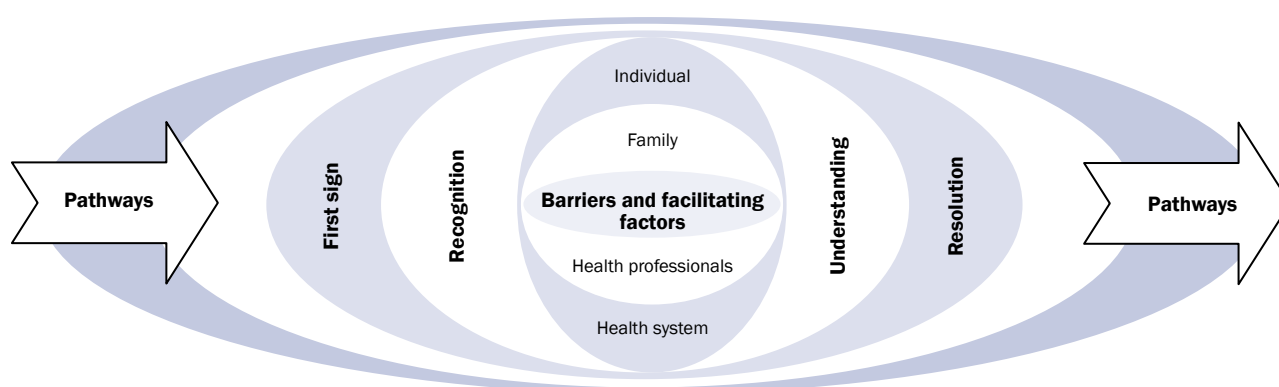
'Finding a way' through this 'maze to care' is the core category which emerged from the participants' accounts. It involved the active accomplishment of a number of complex and interconnected tasks. The participants had to learn about their illness and

about themselves, deal with changes in personal relationships, and seek suitable professional help in an often hostile social environment. These are all difficult propositions for young people experiencing mental health problems.

The participants attempted to cope with this problem of finding a way to care through a four-stage process. The stages which emerged from the data

were (a) **first sign** in the early stages of the illness, often involving denial or fear, self medication with alcohol or other drugs, and characterised by not knowing; (b) **recognition** of the symptoms as a sign of mental illness, indicating that help was needed; (c) **understanding** by discovering information about the illness and its impact on self and others; and (d) **resolution**, when appropriate care is successfully accessed (figure 1).

Figure 1: The 'maze to care' model



The journey to resolution may be short-circuited for some at earlier stages through involuntary commitment after a particular incident or exacerbation of the illness. These participants were less likely to enter the stage of understanding in their pathway to care. Finding a way for them required the active interventions of others. At each stage, barriers and facilitating factors are the phenomena which either delay or assist movement from one stage to the next. They are found in the personal, social and health care environments.

The 'maze to care' model

The 'maze to care' model (see figure 1), which is based on the findings briefly outlined above, has two dimensions. The horizontal dimension represents the time taken by young people from the onset of symptoms, through the stages, to the successful accessing of care. The vertical dimension represents barriers and facilitating factors which impede or assist progress through the process. These may be encountered at any stage and are therefore placed

in the centre of the model. They can be seen as guides to possible interventions which may speed up the process of accessing care for young people with mental illness.

The complexity of young people's experiences with mental illness is indicated in the model by the oval lines and concentric circles that surround and delineate the different stages, rather than arrows that would imply a more unproblematic progression than actually occurs. As presented, the model directs the focus to broader social and systems interventions which would enhance the capacity of young people and their families to recognise the symptoms of mental illness and to access appropriate and timely support. It also illustrates that failure to access effective care is not the result of personal or social factors alone, but may be compounded by shortcomings in the health care system. Although the model can be used as a guide with individuals, careful assessment is required to understand which of the variety of possible factors are influencing

each individual's personal journey. In this research, the participants identified a number of factors that speeded or impeded their progress.

Given that most participants had difficulty recognising initially they were experiencing symptoms of mental illness, their progress to recognition, understanding and resolution was influenced by their immediate family and peer environments and by the general community environment in which they were embedded. Ideas about 'normal' adolescent behaviour, unhelpful family dynamics, the desire not to seem different, and the stigma attached to mental illness, meant that the onset of symptoms and what they might mean was a time of fear and isolation for some of the participants.

'I knew there was something wrong, but I couldn't put my finger on it. I was pretty ignorant about the whole thing. My parents thought I was being difficult' (John).

McGraw et al (2008) has pointed out that families influence beliefs and values about mental illness. Again, this could be a positive or negative factor for the participants.

'In our family ... just like everything else, you just cope, that's how I've learned to live with it, it's always been that way' (Jess).

'My family believed in churches, not doctors ... and I thought I was just nuts, and I didn't think there was anything you could do about it' (Joe).

Other negative impacts included experiences of sexual abuse, the use of alcohol and illicit drugs, and traumatic life events such as relationship breakdown and death within the family or peer group. McGraw et al (2008) has argued that separation from parents following divorce may increase adolescent vulnerability. At the same time, for many participants the ability to communicate their distress effectively was compromised by their illness and by their fear of acknowledging it. However where symptoms were recognised for what they were by supportive family or friends, the process of persuading the young person that something was wrong and that they needed help, could begin.

'My friend tricked me into the car and took me to the hospital ... things got ugly and I was committed. I was having a good time [in a manic phase], I thought' (Joss).

'The only way I would go anywhere was if my mother took me, since my mother was the only person I trusted. If she suggested something, I would say OK' (John).

Some participants also had more resilience than others and were able to more actively seek care; to find out what was wrong with them; and to see a future for them. Of course, the type of mental illness they experienced affected these behaviours.

This is only my first breakdown...I hope to have full recovery from it' (Peter).

'I've learned to live with it, this is me' (Jane).

The perspectives of the participants and their families may differ with regard to understanding symptoms and accessing care strategies. Strategies may be independent or linked in a variety of ways and related to the degree of understanding or misunderstanding of mental illness and health care. For example, three participants reported they enjoyed having the symptoms and that seeking help deprived them of this enjoyment. Such misunderstanding constitutes a problem, resulting in postponing access to initial care and creating a barrier to health care. Similar phenomena were reported by Williams and Healey (2001) and Pescosolido and Boyer (1999). In other words, there is no clear and direct relationship between the young person with a mental illness, understanding of symptoms and accessing care. As the 'maze to care' model suggests, a variety of mediating factors is involved in a complex process of interpretation.

The 'maze to care' model might be used to optimise assessment, education and management in this group of young people and when assessing and designing services for young people who are experiencing a mental health problem for the first time. It also acknowledges why the perceptions and experiences of young people underpin their decision for help seeking.

Health care factors

The health care system can appear complex and decidedly user unfriendly to the outsider. It involves a range of practitioners, agencies and institutions which operate more or less independently. Donovan et al (2006) suggested that some professionals are reluctant to refer their clients to the psychiatric system as they do not perceive it as preventive or effective in nature. Delay in contacting services until a crisis arises is particularly common, at times leading to emergency admission.

Service quality is experienced as variable, with the skilful professionalism of some contrasting with lack of care and attention by others. Using this complex health care system made the participants anxious and at times they were unable to manage themselves.

'My mother had to navigate the system for me. She is my gateway' (John).

This underlines the importance of supportive family and the problems in accessing care which can arise when support is not available.

'I kept going back and phoning my mum to say something was wrong, but she wouldn't believe me...[later] I rang her again to say my thoughts were jumbled ...and I was scared. She told me to go to the hospital, but I couldn't get myself there' (Cath).

The health system is a human web, a community of people whose job it is to help those in distress. Participants recognised that some did this to great effect, but they were also very clear in their identification of professionals who were unhelpful, hurtful or ineffectual. Many participants saw their general practitioners (GPs) as having a key role in the initial pathway to care. Most of them had visited a GP as a first port of call, but found that the encounter did not lead to action or an adequate response; further delays still occurred, extending the access process.

'There was a major turning point and a change in my life when I saw this GP, [... saw a few of them in 2 years], she told me I'd got depression and it can be treated, she actually put a label on me ... I felt

relief that I'm not just being lazy and felt drained all the time. It was a relief. I felt like it was something I could live with' (Jane).

Another point made by the participants was that health care professionals tended to lack specialist mental health expertise. Such individuals could minimise or downplay the significance of the problem or fail to carry out proper follow-up and referral, as Garralda (2001) also reported.

'You expected me to raise my hand and walk across the playground to see a counsellor, that I had these bad thoughts ...what do you think [would happen] when I returned to the class' (Mark).

This statement highlighted how young people could minimise or downplay the significance of the problem.

Removing an important health system barrier

System barriers, such as those briefly referred to above, confronted many of the participants in this study, but one of the most important was the difficulty participants experiencing mental health and substance misuse problems had in accessing an appropriate service. Evidence given to an enquiry into the care of the mentally ill in the community (Wilson et al 2005) regarding the high prevalence of substance abuse in persons with mental disorders highlighted a pronounced lack of communication between mental health and drug and alcohol services. As a result and it was apparent in this study, young people with drug and alcohol problems tend to 'fall through the gaps' in the health care system. It has been suggested that mental health services are unwilling to treat people with concomitant drug and alcohol problems due to their addiction, and conversely, detoxification centres and other health organisations dealing with substance abuse are unable or unwilling to treat people with signs of mental health problems.

Different philosophies and approaches underpin treatment in drug and alcohol services (New South Wales Health Department 2004). Whereas mental health workers generally adhere to an assertive follow-up model, drug and alcohol workers put greater reliance on self motivation in helping clients abstain

from substance use as a primary goal. This dichotomy can create difficulties and delays in treatment, particularly if young people with substance use disorder have unstable mental health symptoms and poor cognition and judgment in accessing appropriate services themselves. All too often they are refused access to many services because they do not meet strict entry criteria.

The barriers to combined mental health and drug and alcohol treatment are seen in terms of organisations that have become more specialised and exclusive when these services were once part of an integrated service framework. Primary care providers have stated that they need to access a greater level of skill and knowledge (New South Wales Health Department 2004), expertise and prompt back-up referrals. In contrast, despite shortages or perhaps because of them, clinicians in remote areas tend to be more accustomed to and accepting of the need to provide comprehensive and inclusive health care.

CONCLUSION

One of the intentions of this research was to construct a model which was simple but which reflected the experiences and perceptions of the participants as they moved through the pathway to care. Existing models tend to focus on the post-care environment and are oriented toward the perspective of the health professional, or they are behaviour change models used to predict behavioural choices. The use of a model to explain the context within which utilisation occurs - the role of the environment, life experience factors, and provider related factors - has been largely neglected.

The help seeking pathway metaphor conjures up a picture of a visible, organised and defined route to providers who have the mandate to treat, care for and be responsible for people with mental health problems, but pathways to effective care are often unclear and difficult to negotiate, especially for young people and their families, as Pescosolido et al (1998) have previously demonstrated. In this study, the pathway and the model are called the 'maze to care' because, although it ends with the consumer

entering the system and receiving treatment, it involves many complexities along the way, including abortive attempts to access care from various health professionals and others.

Ideally, adolescents and young adults live in supportive family environments where the symptoms of mental illness are quickly picked up and dealt with appropriately; where friends stayed loyal; and the health service is always responsive to their needs. The reality for many in this study was quite different. Families may mistake the early signs of mental illness for 'normal' behaviour because they expect people of this age to be moody or difficult, but consider that eventually they would come through it. As a result, and because the young people themselves often do not realise they need help, nothing is done until symptoms worsen and cannot be ignored. Lack of knowledge about the symptoms of mental illness remains widespread in the general community, of which the participants and their families are a part.

Undoubtedly, and the literature supports this, young people whose family or friends realise that help is required, achieve access to care more quickly than their less supported counterparts. However alcohol and other drug use can complicate matters, as can sexual and other abuse within the family. Even where families are generally supportive, they may fear a diagnosis of mental illness, perhaps because of previous experience within the family or, more generally, because of stigma. The young people themselves may express these views. Even when a problem is identified as serious, knowing what to do and how to obtain help may constitute significant barriers (Emmerson et al 2004).

The 'maze to care' model is based on the findings of a grounded theory research study investigating young people's experiences in accessing care. The study offers insights into the experiences of a small group of individuals and hence has limitations, but the development of a model which can be tested in practice demonstrates that grounded theory can be a useful research approach when used to develop frameworks for action in nursing and mental health care.

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Faking it: social desirability response bias in self-report research

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KEY WORDS

socially desirable responding, validity, bias,
questionnaire

ABSTRACT

Objective

The tendency for people to present a favourable image of themselves on questionnaires is called socially desirable responding (SDR). SDR confounds research results by creating false relationships or obscuring relationships between variables. Social desirability (SD) scales can be used to detect, minimise, and correct for SDR in order to improve the validity of questionnaire-based research. The aim of this review was to determine the proportion of health-related studies that used questionnaires and used SD scales and estimate the proportion that were potentially affected by SDR.

Methods

Questionnaire-based research studies listed on CINAHL in 2004-2005 were reviewed. The proportion of studies that used an SD scale was calculated. The influence of SDR on study outcomes and the proportion of studies that used statistical methods to control for social desirability response bias are reported.

Results

Fourteen thousand two hundred and seventy-five eligible studies were identified. Only 0.2% (31) used an SD scale. Of these, 43% found SDR influenced their results. A further 10% controlled for SDR bias when analysing the data. The outcomes in 45% of studies that used an SD scale were not influenced by SDR.

Conclusions

While few studies used an SD scale to detect or control for SD bias, almost half of those that used an SD scale found SDR influenced their results.

Recommendations

Researchers using questionnaires containing socially sensitive items should consider the impact of SDR on the validity of their research and use an SD scale to detect and control for SD bias.

INTRODUCTION

Researchers using questionnaires and interviews rely on truthful responses from participants to draw meaningful conclusions. Socially desirable responding is the tendency for participants to present a favourable image of themselves (Johnson and Fendrich 2005). The participant may believe the information they report (self-deception), or may 'fake good' to conform to socially acceptable values, avoid criticism, or gain social approval (King and Brunner 2000 p.81; Huang et al 1998). Socially desirable responding is most likely to occur in responses to socially sensitive questions (King and Brunner 2000). For example, Adams et al (2005) used labelled water measurements, self-report, and activity monitors to determine physical activity levels and found participants with a high SD score were significantly more likely to over-estimate their physical activity levels. Similarly, SDR bias has been detected in research on many topics including dietary intake (Tooze et al 2004; Scagliusi et al 2003), domestic violence (Babcock et al 2004), and sexual practices (DiFranceis et al 1998).

Social desirability response bias affects the validity of a questionnaire (Huang et al 1998). An instrument is valid if it accurately measures what it aims to measure (Beanland et al 1999). According to Nederhof (1985) between 10% and 75% of the variance in participants' responses can be explained by SDR which can confound relationships among the variables of interest by suppressing or obscuring relationships among variables or producing artificial relationships between variables (King and Brunner 2000 p.81). Health related research often covers socially sensitive topics, therefore researchers must "identify situations in which data may be systematically biased toward respondents' perceptions of what is socially acceptable, to determine the extent to which this represents contamination of the data, and to implement the most appropriate methods of control" (King and Brunner 2000 p.80).

Psychologists have developed and validated scales to detect SDR. The most widely used example is the

33-item Marlowe-Crowne Social Desirability Scale (MCSDS) in which the participant answers true or false to a set of socially desirable but improbable statements (King and Brunner 2000; Crown and Marlowe 1960). For example, "I have never deliberately said something that hurt someone's feelings" (Crown and Marlowe 1960 p.351). Short forms of the scale with acceptable reliability ($r = 0.74-0.82$) that correlate ($r = 0.88-0.91$) with the original scale have also been developed (Loo and Thorpe 2000; Fischer and Fick 1993; Ballard 1992; Zook and Sipps 1985; Silverstein 1983; Reynolds 1982; Strahan and Gerbasi 1972). People who score high on an SD scale have a high need for social approval and are more likely to portray themselves positively; the converse is true of low scorers (King and Brunner 2000). According to Edens et al (2001 p.249) there is no "categorical standard for differentiating between socially desirable and non-socially desirable responding", however they designated a high scorer on the standard MCSDS as someone who scored 1.5 standard deviations or more above the mean for the sample (which in their data was a score above 24). Andrews and Meyer (2003) suggest that the mean score on the 33 item MCSDS for someone 'faking good' was 24, whereas it was 15 when participants were being honest.

The aim of this review was to examine how widely SD scales are used in nursing or health related questionnaire based research and to determine the impact of SDR on research outcomes.

METHOD

The CINAHL database was searched using the search terms questionnaire/s, socially desirable responding, social desirability scale, and Marlowe-Crowne. The search was limited to research studies published in English during 2004 and 2005. The number of research studies that used a questionnaire in 2004 and 2005 and the number and percentage of those studies that reported using an SD scale was determined. Each of the studies that used an SD scale was examined to determine what effect, if any, SDR had on the study outcomes.

FINDINGS

During 2004 and 2005, 14,275 questionnaire-based research studies were listed on CINAHL. Of these, 31 (0.2%) used an SD scale to examine the effect of SDR on research outcomes (table 1).

Of the 31 studies that used an SD scale, 14 (45%) found SDR did not significantly influence their results. Thirteen studies (43%) found that SDR influenced their results (Adams et al 2005; Black et al 2005; Blair and Coyle 2005; Cossette et al 2005; Henning et al 2005; Mahalik et al 2005; Matthews et al 2005; Todaro et al 2005; Bell et al 2004b; McGilloway and Connelly 2004; Straus 2004; Tooze et al 2004;

Yazbeck et al 2004). Three of those 13 studies (10% of the 31 studies using an SD scale) controlled for the influence of SDR in their statistical analyses (Blair and Coyle 2005; Todaro et al 2005; Straus 2004). A further two studies (6.5%) did not report the influence of SDR on their data, but stated they had controlled for SDR using statistical tests during data analysis (Friedman et al 2004; Tejeda 2004). One study used the MCSDS to test for defensiveness rather than SDR (Consedine et al 2004) and one study reported insufficient information to draw any meaningful conclusions about SDR (Bell et al 2004a).

Table 1: Research studies reported on CINAHL in 2004 and 2005 that used questionnaires and an SD scale

Author (year)	Research Topic	Method	Effect of SDR on outcomes
1. Puhl et al (2005)	Reducing bias against obese people	Participants reported attitudes toward obese people prior to and after exposure to false (manufactured) positive and negative feedback on the attitudes of others toward obese people. Completed MCSDS.	SDR did not influence variables.
2. Reynolds and Magnan (2005)	Nursing attitudes and beliefs toward human sexuality	The instrument was piloted with nurses working in oncology and HIV/AIDS wards. 10-item MCSDS completed.	SDR did not influence variables.
3. Black et al (2005)	Incarceration and veterans of the first Gulf War	Personnel were interviewed by phone about their history of incarceration, and medical/psychiatric conditions. The X1 short form of MCSDS completed.	Authors reported SDR may have been an issue, but did not report scores on the SD scale.
4. Cossette et al (2005)	Development and testing of the Caring Nurse-Patient Interactions Scale	Student nurses rated the importance of each attitude on the scale, how competent they felt to adopt attitude and how they felt about applying attitudes in clinical practice. MCSDS Form C was completed.	SD scores significantly influenced scores on the competence and application aspects of the questionnaire.
5. Matthews et al (2005)	Accuracy and certainty of self report for colorectal cancer screening among ambulatory patients	Participants were interviewed to assess the accuracy of screening recall compared to medical data. 10-item MCSDS was completed.	SDR was more common in some ethnic groups, but overall participants' reports were reasonably accurate.
6. Hurley et al (2005)	Psychosocial influences on dietary patterns during pregnancy	The dietary intake of pregnant women was assessed using self report. Participants completed MCSDS and instruments measuring psychosocial state.	SDR did not have a significant influence on reporting of food choices.

Table 1: Research studies reported on CINAHL in 2004 and 2005 that used questionnaires and an SD scale continued...

7. Blair and Coyle (2005)	Factors influencing the multicultural competence of entry level certified therapeutic recreation specialists	Cross-sectional survey research. Instruments included the Multicultural Counselling Inventory (MCI) and MCSDS short form B.	There were significant correlations between MCSDS score and participants' ratings of their multicultural competency on the subscales of the MCI. SDR was controlled for during statistical analysis.
8. Adams et al (2005)	The effect of social desirability and social approval on self report of physical activity	Participants completed doubly labelled water measurements (which is a physiological measurement technique that can provide an estimate of activity) and wore an activity monitor. They completed an SD scale and multiple activity recalls (self administered and interviewer administered).	High SD scores were associated with over reporting of physical activity.
9. Henning et al (2005)	Factors influencing minimisation, blame and denial among domestic violence offenders	Participants convicted of partner abuse completed scales assessing attributions of blame, denial and minimisation and an SD scale.	Domestic violence offenders when being evaluated tended to be influenced by SDR.
10. Todaro et al (2005)	The influence of knowledge about organ scarcity and transplant waiting periods on psychological distress	Participants were randomly assigned to two groups: mention or no mention of organ scarcity and transplant demand and acted out a scenario. Subjects filled out questionnaires pre and post experiment and completed anxiety and depression scales and the MCSDS.	SD scores significantly influenced scores on anxiety and depression scales. Statistical analyses used to control for SDR; subsequently some outcomes were no longer statistically significant.
11. Harrison et al (2005)	Religiosity and pain in patients with sickle cell disease	Subjects with sickle cell disease completed the Longitudinal Exploration of Psychosocial Factors in Sickle Cell Disease. Pain, religiosity, and psychological distress were measured. MCSDS XX form completed.	SDR did not significantly influence the results.
12. Taubman – Ben-Ari and Findler (2005)	Effects of mortality salience on willingness to engage in health promoting behaviour	Participants completed a self-esteem scale, the MCSDS, and a scale that examined their willingness to engage in health-promoting behaviour.	SDR did not influence the results.
13. Mahalik et al (2005)	Variables predicting controlling behaviour in men who batter	Men attending a batterers' program completed various instruments on behaviour, and the MCSDS.	SD scores were significantly inversely related to self reported controlling behaviour.
14. Tejeda (2004)	Correlates of hate ideation against gay men and lesbians	Participants completed the Sex-Role Egalitarianism Scale, the Rosenberg Self-Esteem Scale and the MCSDS.	Author controlled for response bias using stepwise hierarchical regression before examining relationships between variables of interest, so SDR scores were not reported.

Table 1: Research studies reported on CINAHL in 2004 and 2005 that used questionnaires and an SD scale continued...

15. Friedman et al (2004)	The influence of substance abuse and dependence on depression, self image and suicide attempts	Participants were interviewed regarding frequency of alcohol and illicit drug use and completed instruments measuring depression, and a 15-item subset of the MCSDS.	Scores on the SD scale were used to control for SDR when carrying out statistical analyses.
16. Taylor et al (2004)	Validation of the Detroit Area Study Discrimination Scale (DAS-DQ) in African Americans	African American adults were surveyed using the DAS-DQ. Daily experiences of psychological demand were measured using ecological momentary assessment. MCSDS completed.	SDR did not have a significant influence on scores on research scales.
17. Straus (2004)	Prevalence of violence toward dating partners by university students	Students were surveyed on self-reported violence against dating partners. Completed 13-item MCSDS.	SDR had a substantial effect on reported violence toward dating partners. The authors used the scale to control for SDR when analysing data.
18. McParland et al (2004)	The effectiveness of problem based learning compared to traditional teaching in undergraduate psychiatry	Cohorts taught using traditional and problem-based learning were compared. Students completed the Study Process Questionnaire and Attitudes to Psychiatry scale, various assessment items and MCSDS Form C.	SDR did not influence research outcomes.
19. Ojala and Nesdale (2004)	The effects of group norms on attitudes toward bullying	Children read a story about the behaviour of an in-group and an out-group. Variables were manipulated in various versions of the story. Participants completed MCSDS Form C and a questionnaire on their attitudes towards the groups.	SDR did not significantly influence the results.
20. Bornstein et al (2004)	Vocabulary competence in first and second born siblings of the same chronological age	Vocabulary competence was compared in first and second-born children using maternal report, child speech and experimenter assessment. MCSDS completed.	SDR did not significantly influence outcomes.
21. Campbell et al (2004)	Relationship of ethnicity, gender, and ambulatory blood pressure to pain sensitivity	Participants underwent arterial blood pressure monitoring. Pain sensitivity was assessed using a verbal rating scale. Personality dimensions were assessed via various scales. MCSDS completed.	SDR did not significantly influence outcomes.
22. Yazbeck et al (2004)	Factors that influence attitudes toward people with an intellectual disability	A questionnaire pertaining to attitudes to mentally retarded persons, and 10-item MCSDS were administered to disability workers, university students and the general population.	Participants with high SD scores had less positive attitudes toward people with disabilities.
23. Knauper et al (2004)	Development and testing of a scale to examine compensatory health beliefs	Participants completed MCSDS and Compensatory Health Beliefs scale in order to test the reliability and validity of the latter.	SDR did not influence responses.

Table 1: Research studies reported on CINAHL in 2004 and 2005 that used questionnaires and an SD scale continued...

24. Cox et al (2004)	Patterns of anger diversion in women	Participants completed various instruments on anger expression and MCSDS.	SDR did not influence responses.
25. McGilloway and Connelly (2004)	A police liaison scheme for mentally disordered offenders	Mental health status, drug and alcohol abuse and risk-related behaviour were assessed using various mental health instruments. MCSDS Form C completed.	Weak statistically significant negative correlations between SD scores and scores on self report scales indicated under reporting of alcohol and/or drug use and psychiatric morbidity.
26. Tooze et al (2004)	Psychosocial predictors of energy under-reporting	Participants completed questionnaires on diet, exercise, body image, the Fear of Negative Evaluation scale and MCSDS. Participants' activity levels were checked using doubly labelled water.	Higher SD scores were significantly associated with underreporting of dietary intake. Under reporting more marked when data collected by interview compared to questionnaire.
27. Bell et al (2004a)	The effects of homeopathic and placebo treatment on fibromyalgia	Double-blinded homeopathic versus placebo treatment followed by crossover phase. Participants completed a set of scales and MCSDS Form C.	The authors reported SD scores but did not interpret the effect on outcomes.
28. Lewandowski (2004)	The influence of guided imagery on chronic pain	Participants with chronic pain were randomised to experimental and control groups. Intervention included guided imagery. Measures of pain and power were obtained at baseline and various times. MCSDS completed.	SDR did not significantly influence responses.
29. Bell et al (2004b)	Associations between homeopaths' ratings of patients' 'vital force' and patients' self rating on bio-psycho-social-spiritual wellbeing scales	Homeopaths rated patients' vital force'; homeopaths and medical doctors rated severity of patient's illness. Patients completed scales on bio-psycho-social-spiritual wellbeing and MCSDS Form C.	SD scores correlated weakly with homeopaths' ratings of vital force, but not with homeopaths' or medical doctors' ratings of severity of illness.
30. Consedine et al (2004)	The contribution of emotional characteristics to breast cancer screening	Women were interviewed regarding breast cancer screening and completed various scales that measured defensiveness, anxiety, cancer worry and embarrassment.	MCSDS was used to measure defensiveness rather than SDR.
31. Strike et al (2004)	Measuring self awareness, perceived knowledge and skills in relation to mental health professionals' disability competence	Health professionals working with clients with a disability completed the Counselling Clients with Disabilities Survey and an SD scale.	SDR did not influence the results.

DISCUSSION

Only a small proportion of studies using questionnaires during 2004-2005 used a scale to detect SDR. The review demonstrates that almost half the studies that used an SD scale found that SDR influenced their outcomes. Only five studies (16%) used currently available statistical methods to correct for SDR.

These data suggest that a proportion of nursing and allied health research papers may report data that are influenced by SDR which in turn could influence the validity of their conclusions.

The likelihood of SDR occurring with a particular questionnaire depends on the social value placed on the scale items. For example, scale items that

examine nursing practices such as hand washing frequency or attitudes toward patients may be quite susceptible to SDR because there are community and professional expectations about behaviour that participants may want to conform to, even when their responses are anonymous. This review demonstrated that participants' responses were more likely to be influenced by SDR when they were being asked to self report on their competence (Blair and Coyle 2005; Cossette et al 2005), and when they were being asked to self report on socially sensitive topics such as: admissions of domestic violence (Henning et al 2005); history of incarceration and psychiatric conditions (Black et al 2005); physical activity levels (Adams et al 2005); levels of psychological distress (Todaro et al 2005); controlling behaviour (Mahalik et al 2005); violence toward dating partners (Straus 2004); levels of drug and alcohol use (McGilloway and Connelly 2004); and dietary intake (Tooze et al 2004). Studies on topics such as reporting of pain and religiosity; the effects of group norms on participants' attitudes toward particular groups; experiences of discrimination; the effectiveness of problem based learning; and compensatory health beliefs did not elicit statistically significant SDR (table 1).

Social desirability scales can be used when tools are being developed to highlight problems with the wording of items in the scale which would enable the items with a high social desirability value to be modified (King and Brunner 2000; Nederhof 1985). Where possible, statements with a neutral SD value should be used because they are less likely to elicit biased responses (Nederhof 1985). However the scale can also be incorporated into the final questionnaire to help identify and control for SDR.

The strategies used to deal with SDR identified during data analysis include:

- rejecting the data of subjects with high SD scores;
- registering the impact of SDR but not controlling for it; and
- correcting the data of subjects with high SD scale scores (Nederhof 1985 p.268).

The final option is the most rigorous method of dealing with SDR identified during data analysis (Nederhof 1985) and can involve using partial correlations or hierarchical stepwise regression analysis (King and Brunner 2000). For example, the SPSS statistical software package enables researchers to explore the relationship between two variables of interest while statistically controlling for SDR using partial correlations (Pallant 2005).

LIMITATIONS

This review was limited to two years of published research. Using a wider time frame may have resulted in different outcomes. The search terms may not have been sufficiently wide to capture all relevant studies. This review only examined the use of SD scales in research using questionnaires. A wider review should also examine the use of SD scales in interview based research as there is an even stronger tendency for participants to modify their responses when they are not anonymous (Huang et al 1998).

CONCLUSION

While few questionnaire based studies examined in the current review used an SD scale to detect SD bias, almost half those that did found SDR influenced the results. This finding suggests that a proportion of conclusions reported in nursing and allied health journals obtained using questionnaires could be flawed.

RECOMMENDATIONS

Researchers using questionnaires should consider the impact of SD bias on the validity of their results and consider using an SD scale when they develop the instrument to minimise items that encourage SDR, or when administering questionnaires and conducting interviews to detect and control for SD bias during data analysis.

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Nurses' and carers' spiritual wellbeing in the workplace

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KEY WORDS

Assessing spiritual well-being; SHALOM; spiritual dissonance

ABSTRACT

Objective

The aim of the study was to investigate nurses' and pastoral carers' spiritual wellbeing (SWB) and how it relates to their workplace.

Design

The study design was a survey of total populations in selected health care services.

Setting

The setting was a public and a private hospital in a regional setting, and three hospices in major cities which had a religious affiliation.

Subjects

Responses were obtained from 154 (11%) nurses and 8 (6%) carers in the public hospital, 40 (7%) nurses in the private hospital and 16 nurses and 7 carers (17%) in the three hospices.

Main outcome measure

The Spiritual Health and Life Orientation Measure (SHALOM) was used to provide insights into staff ideals for spiritual wellbeing, as well as their lived experiences in relating with self, others, the environment and/or God. The nurses' and carers' perceptions about how well clients are supported in these four domains of spiritual wellbeing in their workplace were also explored.

Results

The beliefs and worldview of health care staff influence their ideals for spiritual wellbeing (SWB) to a greater extent than age, gender, or workplace setting. These ideals markedly impact on their lived experiences which reflect their SWB. Ten percent of these staff showed spiritual dissonance in more than one of the four domains of SWB.

The major finding of this study is the influence that nurses' and carers' personal experience has on the level of help they thought clients received from the services offered in their workplace. Those who are more fulfilled in relationships, with themselves, others, the environment and/or God, believe that clients receive greater help in these areas from the services provided in their workplace.

Conclusion

SHALOM is a useful indicator of four domains of SWB of health care staff who project their own lived experience onto the way they see clients having their spiritual wellbeing nurtured. This has implications for health care staff in the workplace.

INTRODUCTION

There are many claims in the literature that 'spirituality' and 'wellbeing' are both multifaceted constructs that are elusive in nature (Sessanna et al 2007; Buck 2006; Swinton 2006; de Chavez 2005; McSherry et al 2004). An extensive review of the literature reveals common themes mentioned when discussing a combination of these two concepts in the form of spiritual wellbeing (SWB) (Como 2007; Sinclair et al 2006; Ross 2006; Delgado 2005; Chiu et al 2004; Moberg 2002; Govier 2000; Martsolf and Mickley 1998; Dyson et al 1997; Burkhardt 1989; Ellison 1983). Four main themes appeared in the framework definition proposed by the National Interfaith Coalition on Ageing, in Washington DC, USA, that SWB is 'the affirmation of life in a relationship with God, self, community and environment that nurtures and celebrates wholeness' (NICA 1975).

These themes and their components are included in the model of spiritual health (SH) developed by Fisher, where he describes spiritual health as a, if not *the*, fundamental dimension of people's overall health (ie physical, mental, emotional, social and vocational). Spiritual health is a dynamic state of being, shown by the extent to which people live in harmony within relationships in the following domains of spiritual well-being:

Personal domain - wherein one intra-relates with oneself with regards to meaning, purpose and values in life. The human spirit employs self awareness in its search for self worth and identity.

Communal domain - as expressed in the quality and depth of interpersonal relationships between self and others relating to morality, culture and religion. These are expressed in love, forgiveness, trust, hope and faith in humanity.

Environmental domain - moving beyond care and nurture for the physical and biological to a sense of awe and wonder; for some people it is the notion of unity with the environment.

Transcendental domain - the relationship of self with something or some-One beyond the human level (ie ultimate concern, cosmic force, transcendent reality

or God). This involves faith toward, adoration and worship of, the source of mystery of the universe (Fisher 1998).

In this model, spiritual wellbeing is reflected in the quality of relationships that people have in one or more of the four domains of spiritual health.

Measuring spiritual well-being

Many available religiosity/spirituality measures ask people for a single response about 'lived experience' on a series of questions (Ross 2006). In the best instruments, these questions are built on theoretical frameworks of relationships between spirituality and health that are considered important by the developers of the scales. The 'scores' thus obtained are arbitrary indicators of spiritual health or wellbeing, especially if they have only a small number items (Boero et al 2005). A questionnaire can never reveal the true nature of spirituality or wellbeing; it can only provide indicators that reflect or are 'consequences of spiritual health, not the phenomenon itself' (Moberg 2002).

The power of a questionnaire depends on its theoretical base and the rigour with which it is developed and tested (Gray 2006). Fisher developed SHALOM (1999) in the belief that an instrument based on input from 850 secondary school students with diverse cultural and religious backgrounds should have appropriate language and conceptual clarity for studies of SWB within general populations and individuals across all age groups. An initial selection of 60 items from Fisher's model of SH was reduced to the 20 item SHALOM using exploratory factor analysis - 5 items in each of the 4 domains.

Confirmatory factor analyses on SHALOM using data from 4462 people, including nurses and carers, showed good reliability as well as validity (Gomez and Fisher 2003). The acronym SHALOM reveals its two components - **S**piritual **H**ealth measure **A**nd **L**ife-**O**rientation **M**easure. The 'life orientation measure' elicits the 'ideals' people have for 'spiritual health' in the four domains of relationships with self, others, environment and/or God. The spiritual health measure asks people to reflect on 'lived

experience; how they feel each item reflects their personal experience most of the time.'

With only 20 items, SHALOM cannot be considered an exhaustive measure of SWB. If the researcher/carer and respondents/clients had time, it would be possible to use suitable qualitative procedures to mine the depths of people's SWB. However rather than taking hours, in 5-10 minutes, plus 5 minutes scoring time, SHALOM provides an effective means of indicating key aspects of four domains of SWB.

Fisher (1998) proposed that each person's beliefs and world-view impact on their understanding and commitment to the importance of each of these four domains. Therefore it is important to gain some idea of a person's world-view before attempting to 'measure' their SWB. In SHALOM, each person is compared with themselves as their standard. No arbitrary group norms are employed to compare or rank people. The difference between their 'ideals' and how they feel ('lived experience') gives an indication of their SWB in each of the four domains. For example, if people do not think relating with the environment, or God, is important for SWB, when they score 'low' on the 'lived experience' category, it is in harmony with their 'ideals' in these domains of SWB.

Some people believe all that is necessary for SWB is a wholesome relationship with oneself (MacLaren 2004). Other people believe that you can only truly be yourself in relation with others (Thatcher 1993). With an impending global warming crises; people are beginning to see the importance of relating with the environment for sustenance and the wellbeing of humanity. Relating with a transcendent other/God is not restricted to religious practice. Some studies have

introduced terms such as 'higher power' to replace 'God' in attempts to be more 'politically correct' and/or less offensive to non-theists (Hungelmann et al 1985). In the development of SHALOM, terms such as 'godlike force' and 'supernatural power' were trialled but found wanting as they were not meaningful to young people and therefore possibly a range of adults also. Whether theistic, or not, people have a concept of 'God.' As they compare their ideal of whatever, with their lived experience, it is up to each person to define their own meaning for each notion. For example, there are many different religions and denominations or branches of religions because of people's different views. A brief question about religion is asked in the demographic section of this survey, along with gender and age, but religion *per se* is not included in SHALOM.

The aim of this study was to investigate nurses' and pastoral carers' spiritual wellbeing and how it relates to their workplace.

METHOD

Following approval from ethics committees, staff in selected health services were invited to complete SHALOM. A Plain Language Statement and the survey in an envelope were attached to pay-slips of all staff in a public hospital (1365 nurses, 132 carers) and a private hospital (570 nurses) in a regional centre, as well as in three hospices (95 nurses, 40 carers) in separate states of Australia. The survey comprised demographic data and SHALOM.

SHALOM has 20 items, five for each of four domains of spiritual wellbeing, reflecting quality of relationships with self, others, the environment, and/or with God.

Table 1: Items in the four domains of SWB in SHALOM

Personal	Communal	Environmental	Transcendental
sense of identity	love of other people	connection with nature	personal relationship with the Divine/God
self-awareness	forgiveness toward others	awe at a breathtaking view	worship of the Creator
joy in life	trust between individuals	oneness with nature	oneness with God
inner peace	respect for others	harmony with the environment	peace with God
meaning in life	kindness toward other people	sense of 'magic' in the environment	prayer life

The respondents were asked to rate each of the 20 items using a 5-point Likert scale:

1 = very low 2 = low 3 = moderate
4 = high 5 = very high

to show:

- how important each area is for an *ideal* state of spiritual wellbeing, and
- how they felt each item reflects their personal *experience* most of the time, and
- how much *help* they think clients gain from their health care service to develop these aspects of life.

All statistical analyses (ie correlations (power=0.95), cross-tabulations (power=0.95), t-tests (power=0.94), ANOVA (power=0.89), multiple regression analyses (power=0.99)) were performed using SPSS for Windows Version 15.0. G*Power3 was used to compute the statistical power for tests (Faul et al 2007).

RESULTS

Participants

Responses were obtained from 154 nurses (11% response rate) and 8 carers (6% response rate) in the public hospital, 40 nurses (7% response rate) in the private hospital, and 16 nurses and 7 carers (17%) in the three hospices. The rate of responses reported here is commensurate with other recent surveys in the public hospital (personal communication, HR Department, February 2008). The results are therefore not necessarily representative of the institutions surveyed.

There were more female nurses (87%) than males and all but one of the carers was female. Nurses in the hospices were older (average 49.4 years) than nurses in the hospitals (39.1 years) ($t(199)=4.48$, $p<0.001$). Pastoral carers were even older: public hospital (51.3 years) and hospices (55.7 years).

The religious beliefs of staff responding to this study was similar in each of the health care settings, even though the private hospital and the hospices had

a religious affiliation, $X^2(8, n=225=14.3, p=0.075, \phi=0.252)$.

Spiritual wellbeing

Statistical tests showed very good results for the twelve factors relating to SHALOM (Personal, Communal, Environmental, Transcendental measures of 'ideal,' 'lived experience,' and 'help'). They had alpha values ranging from 0.81 to 0.91, accounting for between 60 and 88% of the variance in each factor. The correlation values for all five items in each factor were greater than 0.68, well above the minimum acceptable value of 0.4.

ANOVA showed that setting was not significant for any of the SWB factors studied here (t-values ranged from 1.17 to 0.19, with p ranging from 0.24 to 0.85).

To check the relative impact on SWB, age, gender, position and religion were entered as predictor variables in linear regression analyses. The R^2 -values (which give approximate percentages) and β -values (which indicate the size of effect of each predictor variable) are recorded in table 2.

Ideals for SWB

There are obviously factors other than gender, age and religion which contribute to the ideals or world view that nurses and carers hold and that impact on their relationships with self, others, the environment and God. However these are outside the scope of this study. Females often score higher than males on the ideals for Personal and Communal SWB (Gomez and Fisher 2005) but the Environmental impact here could relate to the older females working in the hospices who are also more religious. Staff who identified as 'Christian' scored higher than the other religions on the Transcendental (God) factor, with religions being higher than no religion.

Lived experiences of SWB

These results read (with apologies to Descartes), 'What I think, I am,' in keeping with the idea expressed in Proverbs 23:7, 'As a man thinks in his heart, so is he.' It is clear that people's 'ideals' are the greatest single factor contributing to 'lived experience' in each of the four domains of SWB studied here. In other

words, what people are in their heads and their hearts is worked out in their lives. There is a small influence of gender, with 40 year olds scoring lower than others

on how well they relate to other people. Religious beliefs discriminated in staff's lived experience of relating with God, as they did for ideals.

Table 2: β -values and R^2 values for regression analyses of influences on SWB

Categories of SWB	Predictor variables	Domains of SWB			
		Personal	Communal	Environmental	Transcendental
Ideal	R ²	0.04	0.06	0.07	0.26
	gender	*0.19	**0.20	*0.16	
	religion		*0.14		***0.42
	age			**0.22	***0.22
Lived experience	R ²	0.28	0.39	0.59	0.69
	ideal	***0.50	***0.56	***0.75	***0.59
	gender		*0.12		
	age		*-0.12		
	religion				***0.36
Help	R ²	0.29	0.30	0.33	0.30
	lived experience	***0.51	***0.62	***0.55	***0.45
	age				*0.15
	position			*0.12	

*p<0.05; **p<0.01; ***p<0.001

Perceived help for SWB

The carers were slightly more concerned with their clients' environmental wellbeing than were the nurses. Older staff have a slighter higher perception of how well they nurture clients' relations with God. However the greatest impact is shown by these nurses' and carers' own lived experiences influencing the perceptions they have of the help provided in their workplace for nurturing the four domains of clients' SWB. These results support the theoretical views expressed by MacLaren (2004) that nurses' spirituality 'can become the unspoken element which underpins and may improve the quality of their care' and Pesut and Thorne (2007) that 'the identities which nurses bring to spiritual care encounters have far-reaching implications for patient experiences.' An exploratory study with 60 graduate nurses found a 'relationship of nurse's involvement and beliefs in spirituality and their attitudes toward providing spiritual care' (Willis 2000).

DISCUSSION

Spiritual dissonance

Numerical values of 'scores' on each scale of a SWB measure do not mean much unless they relate to something substantial. A key outcome of health service provision is holistic care for clients (McBrien 2006). In this study we were concerned with the health staff's perceptions of their own SWB as well as their perceptions of the help provided to clients in this area in their workplace.

Lived experience impacts markedly on perceived help for clients, but how? As most people admit they are not perfect, so it is not surprising to note some decline from 'ideals' to 'lived experiences.' Some variation is expected, but how much is unhealthy?

It has previously been proposed by Fisher (2006) that spiritual dissonance is indicated by a difference in mean value of greater than 1.0 between the 'ideal' and 'lived experience' in any domain of SWB,

measured using SHALOM. For example, if a person's ideal rated as 'high' (mean value = 4.0 across the 5 items), a 'lived experience' score below 3.0 (less than 'moderate') would indicate spiritual dissonance. Table 3 shows correlation values between the differences (d values) and help categories (c values) in the four domains of SWB (Personal, Communal, Environmental and Transcendental).

The differences (d-scores) correlate moderately with each other indicating a pattern across domains. These d-scores would be expected to show a relation to ideals and lived experiences (because they are the difference between these two factors), and they do.

Table 3: Pearson Correlation values of 'differences' with 'help' in domains of SWB

	d-COM	d-ENV	d-TRA	PER-c	COM-c	ENV-c	TRA-c
d-personal	***0.587	***0.550	***0.310	***-0.322	***-0.351	***-0.241	**-.0201
d-communal		***0.497	***0.300	***-0.316	***-0.364	**-.0193	ns -0.058
d-environmental			***0.406	***-0.266	**-.0211	*-.0133	ns -0.114
d-transcendental				*-0.162	*-0.161	ns -0.123	ns -0.089

*p<0.05; **p<0.01; ***p<0.001; ns=not significant

Personal = PER; Communal = COM; Environmental = ENV; Transcendental = TRA

The interesting finding is the extent to which differences relate to perceived help (c values), especially in the Personal and Communal domains, to a lesser extent in the Environmental and almost non-existent in the Transcendental domains.

Using Fisher's definition above, spiritual dissonance was shown in the Personal domain (n=26, 11.6%), Communal domain (n=17, 7.6%), Environmental domain (n=15, 6.7%) and Transcendental domain (n=38, 16.9%). Greater dissonance was shown in the Transcendental domain by people who identified as non-religious, $\chi^2(1, n=225=12.0, p=.001, \phi=-.23)$. This could perhaps indicate a remnant of religious influence lingering in the minds of non-religious people, positing a requirement of a god as an ideal for their own spiritual wellbeing ($M=2.74, SD 1.25$), which they are rejecting in practice ($M=2.06, SD=.91$), in contrast to the religious ($M_{ideal}=3.85, SD=1.15$; $M_{expc}=3.60, SD=1.09$).

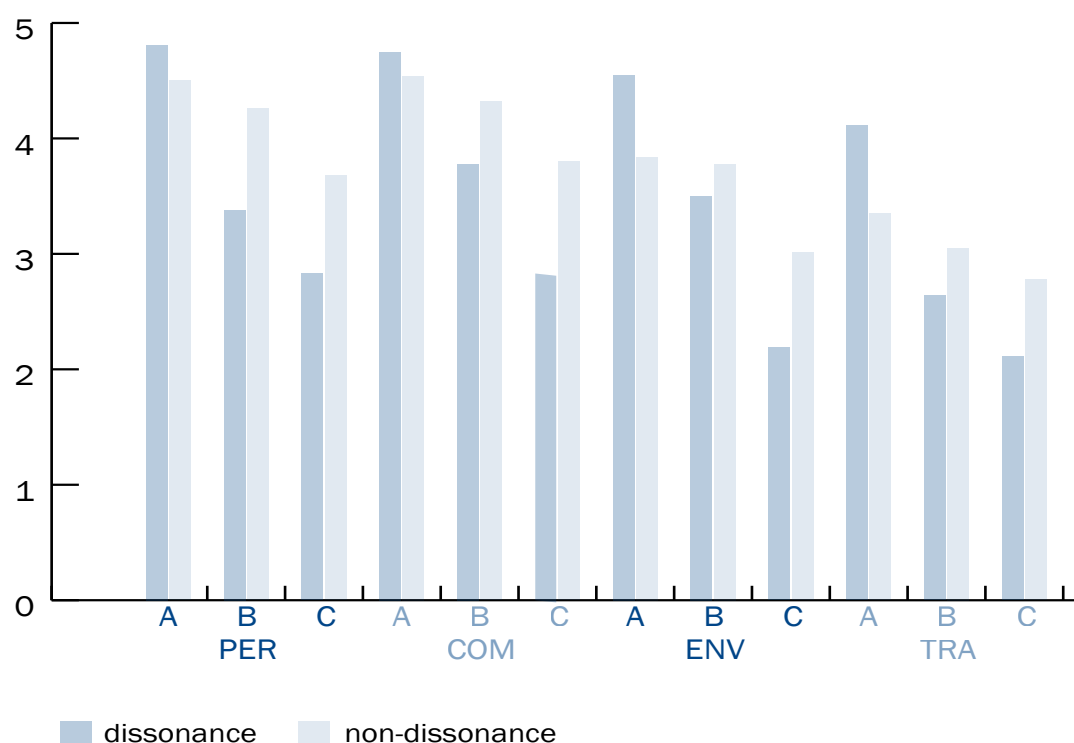
Only two staff (0.9%) showed dissonance in all four domains, another 6 (2.7%) in three domains, a further 15 (6.7%) in two domains, with 40 (17.8%) showing dissonance in only one domain of SWB.

The health care staff who showed dissonance in more than one domain (ie in 4, 3 or 2 = 10.3%) (hereafter called dissonants), were significantly different from the rest of the staff when it came to investigating the impact of dissonance on perceived help for clients' SWB. However these spiritual dissonants were not easily identifiable, being spread over a variety of work areas, with no distinct pattern by age, gender, setting, position or religion (See table 4 for cross-tabulation results).

Table 4: Cross-tabulations between spiritual dissonants and non-dissonants

Variable	df	N	X ² value	p ^{sig}	Phi
Age	4	216	3.070	ns0.546	0.12
Gender	1	219	0.012	ns0.912	-0.01
Setting	2	225	0.589	ns0.745	0.05
Position	2	225	1.050	ns0.591	0.07
Religion	4	225	3.580	ns0.466	0.13

The following graph shows mean values for each of the three factors: (A) ideal, (B) lived experience and (C) help, for each of the four domains of SWB (Personal, Communal, Environmental and Transcendental) compared by dissonance.



A=ideals B= lived experience C=help
 Personal = PER; Communal = COM; Environmental = ENV; Transcendental = TRA

The spiritual dissonants were more idealistic (higher As) however their lived experiences did not match their idealism (much lower Bs). As a consequence, in keeping with the above finding of the influence of lived experience on perceptions of help, dissonants thought less help was provided by the workplace for clients in nurturing these aspects of their care (low Cs).

It would be valuable to follow up this study with one on personality to see how strong a relationship personality has on ideals compared with lived experiences of SWB. A study on burnout would also reveal whether dissonance in the domains of SWB, measured by SHALOM, related to emotional exhaustion and/or depersonalisation (Maslach et al 1996) in comparison with a study using another SWB scale (Marsh 1998).

It would also be desirable to observe people who tested high on dissonance in these SWB domains to see if they actually provided lower quality of care to clients, in line with their perceptions of the workplace.

If it was found that the dissonants did provide lower care for the SWB of clients, the questions would need to be raised as to whether these people refer clients to others, or if professional support would be warranted to improve their skills in this area. Issues of competence and cost would need to be weighed against quality of client care in line with the stated mission and vision statements of the health care services. Recent research concluded that 'prevailing health care systems ... do not always lend themselves to holistic (including spiritual) approaches to care. This study identifies a need for nurse education to redress the clearly inadequate preparation nurses are given for this aspect of their role' (Lea 2005).

There is not space here to discuss the issue of whose responsibility it is to provide spiritual care for clients (Pesut 2006; Narayanasamy 2004; Kellehear 2002; Govier 2000). However this study has shown that SHALOM can be used to identify the potential of staff to provide such care. Identifying these people may go some way to helping overcome barriers to spiritual care (as expressed in Vance 2001).

CONCLUSION

SWB is a complex construct however this study has shown that SHALOM is a useful indicator for four domains of spiritual health and wellbeing of health care staff, reflected in the quality of relationships they have with self, others, the environment and/or God. The beliefs and worldview of health care staff influence their ideals for SWB to a greater extent than age, gender, or workplace setting. These ideals markedly impact their lived experiences which reflect their SWB. In turn, their lived experiences have a major influence on their perceptions of help provided to clients in these areas in their workplaces.

Spiritual dissonance, resulting from distinct differences between ideals and lived experiences in four domains of SH, was identified in a particular group (comprising ten percent) of these health care staff. They held high ideals they were not able to realise, resulting in lower perceptions of the workplace.

Using SHALOM to indicate levels of SWB of health care staff has implications for care of clients in the workplace.

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How do nurses describe health care procedures? Analysing nurse-patient interaction in a hospital ward

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KEY WORDS

Nurse-patient communication, describing medical procedures, discourse analysis, authentic data, sociolinguistics

ABSTRACT

Objective

Nurses' communication skills have a significant impact on their professional effectiveness. This study examines the communication strategies used by nurses on the ward in one aspect of the job, namely the ways that they describe health procedures to patients.

Design and setting

The data used in this project was collected by nurses on a busy hospital ward as part of Victoria University's Language in the Workplace Project. Three nurses carried minidisc recorders as they went about their normal working day, recording their conversations with patients, visitors, and other staff. Relevant sections of this talk (totalling 300 minutes) were transcribed and analysed using a discourse analysis approach, thus providing a sound basis for analysing the communicative act of describing a health procedure and for identifying a range of relevant sociolinguistic components of the interaction.

Subjects

The data was collected in a women's hospital ward. All patients, nurses, cleaners and ward clerks were female; two doctors were female and two were male.

Results

Twenty three instances where nurses described procedures to patients were identified in the data set. The analysis identified several typical components; indicated there was no fixed order of components; and demonstrated that all except the core component of describing the procedure were optional rather than obligatory elements.

Conclusions

This is qualitative and exploratory research. Our findings demonstrate the benefit of discourse analysis within a sociolinguistic framework for the analysis of nurse-patient interaction. The results indicate that health discourse is not one-sided, nor is it as straightforward as many nursing textbooks suggest.

INTRODUCTION

"[A] nurse with the gift of making her patients feel at home and free from fear, inspires confidence and provides an atmosphere of peace, serenity and security which is so important an adjunct to the relaxation of mind and body necessary for recovery from disease" (Pearce 1941 p.2).

As this quotation from the 1940s indicates, good communication has long been recognised in nursing as a skill essential for achieving immediate work goals and for contributing to patients' wellbeing and accelerating their recovery. While many textbooks stress the importance of communication skills, surprisingly few indicate how they may be acquired and developed. Recent sociolinguistic research has begun to address this gap by examining features of nurse-patient communication in context, illustrating how effective nurses actually communicate with patients in hospital wards.

The analysis in this paper is part of a larger sociolinguistic study of communication between staff and patients in a busy New Zealand hospital ward. In this study the focus is on how nurses impart information about health care procedures to patients. We use the term 'health care procedures' to include the preparatory procedures relating to an up-coming operation, as well as more routine procedures such as taking the patient's temperature or giving an injection.

Drawing on recorded data, the various components of the descriptions which nurses provide to patients of the procedures they are undergoing, or are about to undergo, are identified. According to Tuckett et al (1985 p.214) "...teaching about the tasks of explaining to and sharing understanding with patients have (sic) been virtually absent in medical education and they still have a very low priority." Although this was written more than twenty years ago with a focus on doctor-patient communication, the need to teach health care practitioners how to communicate effectively with patients remains an area of concern. As Hulsman et al (1999 p.655) note, "...interest in the teaching of communication skills in medical schools has increased since the early

seventies but despite this growing interest, relatively limited curricular time is spent on the teaching of communication skills".

Some nursing textbooks do address this issue (eg Potter and Perry 2005) but it is rare to find models or discussion based on direct interactions between nurses and patients. There is reliable evidence that providing information to patients and describing what is happening to them has a positive impact on patient wellbeing (Henderson and Chien 2004). Hence there is undoubted value in focussing on the detail of what makes for effective nurse-patient communication around the issue of necessary health care procedures.

The term, 'describing procedures', is used for this essential component of the nurse's role. There is currently little material based on real life communication available to guide nurses on how to impart information to patients about procedural (current or upcoming) events. The approach taken in this research was to use authentic data as a basis for illustrating and identifying the components of the communicative act of describing a health care procedure and using a discourse analysis approach to examine features of talk beyond the sentence level (such as turn taking and interaction) and to describe the way talk functions in the health care context (Schiffrin 1994 p.14).

A sociolinguistic approach to health care communication

The ability to communicate is now widely regarded as an essential skill in nursing and much has been written about communication skills in academic journals and more recently in introductory texts on communication for nursing students. These studies can be divided into those relatively few that are based on natural or 'authentic' language data and the much larger group which use reported or intuitive data of some kind. There are many questionnaire based studies on nurse-patient communication. Breemhaar et al (1996), Leinonen et al (1996) and Henderson and Chien (2004) used questionnaires to collect information about patient perspectives on quality of care. Similarly many textbooks emphasise

the importance of communication however few provide examples of what constitutes effective communication.

This research aimed to identify characteristics of effective nurse-patient communication in real life interactions. People do not always recall the detail of interaction accurately; often editing out hedges (such as 'perhaps' and 'you know') and the social talk which is so important to establishing empathy. The importance of these apparently trivial features of talk, typically omitted from responses provided in interviews and questionnaires, is frequently underestimated. These aspects of interaction are crucial for establishing rapport; a foundation of the nurse-patient relationship.

The literature review examines studies of the discourse of health care interactions, as opposed to 'praxis' or linguistically a-theoretical literature (see Ainsworth-Vaughn 2001). The focus is on research which analyses talk and which "takes into account the medical and social functions of the consultation in order to consider the nature of language use within its functional context" (Ainsworth-Vaughn 2001 p.266). The majority of studies which are referred to in this research, focus on doctor-patient consultations, reflecting the fact that comparatively few discourse studies have focused on the nature of nurse-patient communication on the ward. While there are obvious differences between doctor-patient consultations and nurse-patient ward interactions, this research identified enough similarities to consider them useful background for the research. Both types of interactions involve a (potentially anxious) patient and a health care professional and both rely on effective communication to achieve long term goals such as patient recall, compliance and ultimately, patient wellbeing.

According to Maclean (1989 p.264), little attention has been paid to the actual language used in health care. Given how important communication is considered to be in the health care setting and in nursing in particular (Candlin and Candlin 2003), it seems surprising that so few sociolinguistic studies have been conducted in this area.

Participant roles in health care discourse

This research discusses the relative roles of the health care professional and patient in interaction with the goal of identifying useful indicators of effective communication to assist with discourse analysis. The hierarchical nature of the professional-patient relationship has traditionally meant that patients tend to be viewed as having little to contribute to the interaction (Tuckett et al 1985 p.14). Studies of doctor-patient consultations frequently report that interactions are predominantly one-sided, with doctors doing little to encourage patients to express their opinions (eg West 1990; Davis 1988; Tuckett et al 1985 pp.204-205). This is clearly counter-productive in terms of effective communication. Maguire et al (1986 cited in Silverman et al 1998 p.91) reported that the doctors they surveyed were weakest in many of the precise techniques which had been found to increase patient satisfaction and compliance with advice and treatment.

It has been suggested that the roles of 'expert' and 'non-expert' in health care discourse are often based not only on traditional hierarchical views but also on the way participants present themselves in the interaction (Gulich 2003). Patients themselves often limit their contributions, allowing the doctor to dominate the interaction. Again this is unhelpful in terms of effective communication and desirable outcomes. Both Gulich (2003) and Tuckett et al (1985 p.79) point out that patients have in some respects greater expertise than doctors in the consultation; they are the only ones who can describe how they are feeling, which is an important basis for diagnosis and treatment plans. Such an imbalance in contributions to the interaction has obvious communicative consequences; the health care professional cannot be sure that the patient has understood them and the patient can not be sure they have been understood or that their understanding of the professional is correct (Tuckett et al 1985 p.205). Effective communication is thus more likely when health care professionals seek contributions from patients and check understanding.

Research which emphasises the importance of the patients' contributions to the interaction also highlights the importance of analysing extended discourse in context rather than isolated de-contextualised utterances. Barton (2000 p.262) examined 32 referral sequences and 19 account sequences between specialised medical physicians and families with disabled children (ie families that are often required to see a number of specialists). She examined in particular the way in which a family's lay expertise (or lack of it) and compliance behaviour affected the direction of the discourse and the decisions made by the health care professional. Barton's analysis demonstrates that such interactions cannot be accurately researched or represented by taking the health care professional's utterances in isolation; the situation is inherently more complicated. The interpretation of any utterance depends on examining what it means within that particular discourse context (Vine 2004).

In recent years the emphasis has moved from a focus on the contributions of the health care professional to an examination of the whole interaction. The relevance of the patient's expertise has been increasingly recognised and health care professionals have been encouraged to view and interact with patients as equals, seeking their views and checking their understanding (Gulich 2003; Silverman et al 1998). At the same time, patients have become more educated about health care to the point of sometimes questioning recommended procedures or treatments. Consequently, there is now more consideration of the patient's point of view and thus greater interest in patterns of communication within health care relationships (Maclean 1989 p.270).

Effective communication in health care interactions

In 1988, the New Zealand Department of Health conducted a survey of 1,249 nurses. One of the major findings was the importance that nurses placed on effective communication, listing 'communication with patients' and 'communication with other health professionals' among the top four characteristics of a good hospital (Ng et al 1992 p.15). More

recently, MacDonald (2002 p.15) suggests that in some situations, good communication *constitutes* good nursing practice. Two components of effective communication between health care professionals and patients, empathy and the descriptions of procedures, are relevant for our subsequent analysis.

Empathy

The ability to respond flexibly and with empathy to patient anxieties has been highlighted as one key skill for health care professionals in general and for nurses in particular. Street (1991) suggests that professionals accommodate by adopting different roles according to the patient's anxiety levels. A number of researchers suggest that empathy encourages open communication between nurses and patients (eg McCabe 2004; Barton 2000; Sheppard 1993) allowing nurses to collect the information they need in order to make accurate assessments. Morse et al (1992) claim "...the essence of the nurse-patient relationship is engagement, the identification of the nurse with the patient" (1992 p.819) and they note that empathetic responsiveness is a way to achieve this engagement. This further supports the value of a discourse analysis approach to practitioner-patient interaction; a study of the practitioner's language in isolation cannot identify evidence of understanding or empathetic responsiveness.

Describing procedures

The ability to clearly describe procedures to patients is another crucial skill for the health care professional, since patient understanding is likely to encourage compliance and, assuming the advice is sound, patient wellbeing. Patients typically require different types of information at different stages of their treatment (Henderson and Chien 2004 p.961). These often require rather different communication strategies varying in the amount of detail provided. In a textbook on communicating with patients, Silverman et al (1998) recommend a range of strategies for describing procedures to patients including achieving a shared understanding by incorporating the patient's perspective, using

shared decision making, discussing options with patients, as well as “gauging the correct amount and type of information to give each patient” (1998 p.92). While the word ‘correct’ seems prescriptive, given the range of individual and contextual variation involved in dealing with patients, health practitioners must work hard to ascertain exactly what kind of and how much information will benefit the patient. A study of the attitudes of neurologists and their epileptic patients toward disclosure of information found that practitioners gave less information about rare side effects of medication than patients wanted believing this would increase patient compliance (Faden et al 1981). The patients however wanted detailed information about even very rare side effects and reported this would improve their compliance.

A questionnaire based study of information sought by Hong Kong Chinese patients in hospital for surgery indicated the patients wanted a great deal of information, delivered at appropriate times and in a culturally appropriate manner (Henderson and Chien 2004). In the Netherlands, a study of two hospitals, using observations as well as interviews with staff and patients, found that even though providing information to patients is considered important, it was not always done consistently or thoroughly (Breemhaar et al 1996). The researchers found that patients wanted more procedural details: “...many patients were not aware of the things that were to happen in the first days after the operation and were unpleasantly surprised by drains, the need to mobilise quickly...” (Breemhaar et al 1996 p.38). Clearly, communication about exactly what to expect at different stages of hospitalisation is essential for patient comfort.

Using a combination of discourse and ethnographic analysis over a one year period, Johnson (1993) conducted a study aimed to identify whether communication strategies used by nurse practitioners differed from those described in the literature on doctor-patient interaction. She identified a clear difference in approach: “the focus of patient care by physicians is disease, whereas the ‘whole person’ orientation of the (nurse practitioner) places

emphasis on prevention and continuity of care” (Johnson 1993 p.156). The nurse practitioners described to patients what they might expect to happen and discussed follow-up choices, giving patients a sense of control and demonstrating an awareness of the patient’s subjective experience (1993 p.152). The nurses in this study were clearly skilled in developing empathy and rapport with patients and responding to the needs of each patient. This study is one of the very few which used recordings of direct interaction to examine how nurses interact with patients.

More research which focuses specifically on the ways in which nurses communicate with patients is needed. Previous research by Holmes and Major (2002) has looked at social aspects of nurse-patient interactions, demonstrating that effective nurses use humour and small talk in skilful ways which are well-integrated with the more clinical aspects of patient care, as well as the ways in which nurses respond to patient’s complaints and the ways in which they obtain compliance from patients using a diverse range of strategies for giving directives, which again pay attention to the interpersonal needs of patients in their care (Holmes and Major 2003).

Methodology

Data for this study was collected in 2001 by members of the Wellington Language in the Workplace Project, as part of a larger study of communication in Ward X, (Holmes 2000). Ward X is a women’s ward and at the time of data collection, all patients, nurses, cleaners and ward clerks were female; two doctors were female and two were male. A co-operative methodology with the team on the ward was developed. At separate times, three nurses (who had been identified by their colleagues as being skilled communicators) carried minidisc recorders as they went about their normal working day, recording their conversations with patients, visitors, and other staff. This provided a wealth of natural discourse data in a hospital setting (around 300 minutes of transcribable talk).

While recording was in progress, one of the researchers (George Major) remained onsite to make observations. She positioned herself in the nurses’

station to limit interference with the communication process and to protect patient privacy. This observation period (together with a debriefing with each nurse following each recording session) provided a significant amount of contextual information which proved crucial in helping to understand the socio-pragmatic meanings of communication in this workplace (Holmes and Stubbe 2003). All those involved in the study provided informed consent for the recordings and use of the material collected for research purposes. Ethics approval for the research was provided both by the hospital and by Victoria University's Human Ethics Committee. A complete account of our methodological and ethical considerations can be found in Major and Holmes (2001).

Analysis of instances of 'Describing Procedures' (DPs)

All instances in the data set where nurses described procedures to patients were identified. There were twenty-three such instances in total, with considerable variability in length. The instances could be further separated into those preparing the patient for a future procedure such as an operation, or the removal of a drain or a dressing (15 instances), and those describing a concurrent procedure such as taking blood pressure or temperature (8 instances). The former were usually longer and considerably more complex than the latter. The shorter DPs focussing on concurrent procedures were typically accompanied by (constructively distracting) social talk. The following discussion focusses mainly on the longer more complex DPs which were concerned with preparing patients for an anticipated procedure.

A discourse analysis of the DPs was then undertaken to identify the various components of their structure in order to discover how much variability there was between different DPs, as well as which components appeared to be core or obligatory components, and which were optional.

Analysis of DPs

The analysis established that only the core component of a DP is obligatory; all other components are optional, though some occur more frequently

than others. The analysis also indicated that the components do not occur in any fixed order within the DP. This paper focusses primarily on the nurses' utterances which were carefully analysed in their wider interactional discourse context in order to identify the socio-pragmatic functions of utterances.

Components of DP

- Describe procedure: core component of DP,
- Provide reason for the procedure,
- Provide reassurance,
- Provide options,
- Provide information on likely reactions,
- Provide supplementary written or visual information,
- Check if patient has any questions.

Each of these components, using examples from the dataset, are described and exemplified. The examples are transcribed as accurately as possible from the recorded material with as much relevant information as is considered helpful to assist understanding.

Nurses had constant access to patients and they would often 'do the DP' and then return later to follow up with supplementary information, or to repeat and reinforce the information they had given. Hence the absence of any specific component in a particular instance of a DP should not be interpreted as an indication that it did not occur at all in the nurse-patient interaction; it could well have been a component of a later follow-up interaction.

Describe the procedure: core component of DP

The core speech act of 'describing the procedure' occurred in each instance of a DP, but the way it was expressed varied greatly. Instances ranged from a relatively succinct statement, such as *"okay I'm just gonna pop this wee injection into your tummy again"*, to an extensive interactive dialogue between nurse and patient which might extend over several turns.

Example 1 illustrates a relatively succinct DP in which there is little questioning or verbal feedback from the patient. It occurs within a longer interaction,

where Tara (the nurse) is helping Casey (the patient) prepare for surgery the following morning. The talk is predominantly transactional or task-oriented; Tara is going through a pre-operation checklist, as well as making sure Casey understands the upcoming procedure. The core component, describing the procedure (of what will happen in the morning) is in bold. All names used in examples are pseudonyms.

Transcription conventions

[laughs] :	Paralinguistic features in square brackets, colons indicate start/finish
+	Pause of up to one second
(3)	Pause of specified number of seconds
... /.....\ \ ...	Simultaneous speech
... //.....\	Simultaneous speech
...	
(hello)	Transcriber's best guess at an unclear utterance
-	Incomplete or cut-off utterance
[place]	An identifying feature has been removed

Example 1

Tara: okay + [drawls]: um: have you had any broken bones that have been repaired with metal pins or plates + no and have you got any um nail polish on

Casey: no

Tara: no great + okay well that's wonderful ++ you've signed your consent form here for an examination under anaesthetic and a [procedure] + [drawls]: and: we're second on the list in the morning to go so that's that'll usually be about nine o'clock perhaps yeah **about nine o'clock you'll leave the ward** so **the night nurses** will make sure if by chance you're still asleep **they'll wake you you can have time for a shower and put one of our gowns on** and all those sorts of things

This example is one of the few with very little audible feedback from the patient. Typically patients provide a good deal more verbal evidence that they are following the nurse's talk. It is likely that the patient conveys this non-verbally in this example. Examples 2 - 8

illustrate that while the core component is crucial, other strategies are also used by the nurses within the DP interactions.

Provide reason for the procedure

Many DPs include some explanation to the patient about what is required of them. In example 2, for instance, the nurse (Holly) describes why the patient (Isla) needs to have someone with her when she gets out of bed.

Example 2

Holly: okay when you do need to get up to the toilet just give me a buzz and let me know or um you can get your partner to help you I mean it's //up to you + it's just as long as\ someone's there

Isla: /yeah + yeah\ \

Holly: **cos sometimes you can feel a bit light headed getting up for the first time**

Isla: yeah yeah no Dave will help me

Holly's reason for the DP warns Isla what the consequences of not following the instructions might be. Isla's feedback shows she is attending and she further indicates her understanding of Holly's message by stating that her partner will help.

Provide reassurance

Providing reassurance was another very frequent component of DPs. In example 3, reassurance (in bold) is spread throughout the DP with repeated reassurances at different points. This excerpt occurs immediately after the nurse (Holly) has described the patient Naomi's upcoming surgery. Naomi's parents Riley and Gail, who are also in the room, have been taking an active role in the conversation, including expressing their anxieties about their daughter's upcoming operation.

Example 3

Naomi: can you ask can you have a certain hand I want it put it in my right hand //+ not my left\

Holly: /you do you - you just\ \ tell them that and that's fine they'll put it in wherever

- well it providing that you've got all right // veins there\
- Naomi: /yeah yeah //that's\ easier\
- Riley: /mm\
- Holly: and they'll um put that in **but it's all it's all very quick** + you'll find that and you'll probably feel have you been - have you had a lot of pain prior to this
- Naomi: no
- Holly: no I was gonna say **if you had you'd find that you feel a lot better afterwards I mean most patients just have a bit of panadol** and um sometimes something a little bit stronger if they need it
- Gail: mm
- Naomi: okay
- Holly: **but you'll be fine**

In this excerpt, the nurse Holly directs her reassurance to Naomi, while simultaneously skillfully addressing the parents' concerns. In the dataset for this research, reassurance typically takes the form of telling the patient that everything is *fine*. Moreover, while it appears to occur unsolicited in the DPs relating to a complex future procedure (such as an operation), it occurs less frequently in routine DPs (such as taking a patient's blood pressure) except in response to patient anxiety.

Provide options

Nurses frequently presented the patients with options within DPs, suggesting that they recognised and respected patients' autonomy and wished to provide them with as much room to exercise this as possible. In example 4, the nurse (Tara) is describing to the patient (Sophie) what she can do if she has problems once she has returned home. She gives Sophie several options (in bold).

Example 4

- Tara: yeah and the you know r- sutures can come out in four to five days
- Sophie: yep

- Tara: um + just + be careful of heavy lifting + just steer clear of that um + and if you've got any problems // **either\ ring the ward**
- Sophie: /yep\ \ yep
- Tara: **um or come back in level Y**
- Tara: which is women's //h-\ women's health assessment unit
- Sophie: /yep cool\ \
- Tara: **or um go to your GP**
- Sophie: sweet

Much of the nurses' talk throughout the DPs in the dataset serves to minimise patient (or parent) anxiety. It seems here that Tara is working to minimise Sophie's anxiety before it occurs by letting her know that problems at home are nothing to worry about because there are many possible solutions or steps she can take to address them. The interactive nature of a typical patient-nurse exchange is again well illustrated here with the patient providing abundant albeit brief verbal evidence that she is attending to the nurse's guidance (eg *yep cool, sweet*).

Provide information on likely reactions

In example 5, the nurse (Tara) describes to the patient (Sophie) what she might experience as she undergoes the procedure which is being described to her (the removal of a drain from the body).

Example 5

- Tara: now when I take this out
- Sophie: yep
- Tara: people don't usually say it's really painful more they explai- er they describe it as like a a bit of a burning //sensation +\ which sounds painful
- Sophie: /(okay)\ \
- Tara: but um but i- it's more that the effect of the little um drainage holes coming through +
- Sophie: yep
- Tara: past your flesh

Sophie: yep

It is interesting to note that the nurse in this example explicitly attributes her information to other patients who have told her what they have experienced, rather than presenting it as if she personally 'knows' what the patient will feel. This has the effect of emphasising the integrity or sincerity of the nurse's communication. This example also illustrates the way that Tara talks to Sophie in an open, fully informative manner, without brushing over or omitting unpleasant details.

Provide supplementary written or visual information

Nurses sometimes provided additional information for patients in written or visual form. Example 6 occurs immediately after the nurse (Holly) has outlined an upcoming clinical procedure for a patient (Naomi).

Example 6

Holly: I'll get you some information on the operation
did you get given some //information\

Naomi: /I got\ some on the [name of technical
procedure] yeah //about\ what they what
they do

Holly: /yep\

Naomi: so

Holly: yep

Naomi: kind of [softly]: (yep yeah //):\

Holly: /a- and I'll give\ you a little bit on [another
component of the procedure] I'll give
you //some information on that you can
have\ a read

Naomi: /[softly]: (oh yeah okay):\

Holly: just so you feel a bit more aware I'll bring
it down shortly

Naomi: yeah that'd be good

Here Holly offers to provide more information for Naomi to supplement the information she has already been provided with, and has read. Note that Holly explicitly states that she is concerned that Naomi is fully informed about what to expect: *just so you feel a bit more aware*. Moreover, Naomi is clearly appreciative of the offer: *that'd be good*.

Check if patient has any questions

At the end of describing the procedure, the nurse would sometimes explicitly ask the patients if they had any questions, as in example 7. This exchange occurs shortly after the excerpt we used in example 1: the nurse (Tara) has just finished explaining to the patient (Casey) what will happen before her operation the following morning.

Example 7

Tara: that's about it that I need to do tonight
you've got everything else + so have you
got any questions about +

Casey: no I've sort of asked everything and //I'm\
waiting really for tomorrow

Tara: /yeah\

Casey: //till I can\ get results

Tara: /yeah\ yeah yeah

Casey: to see where I go from there yeah

In response to Tara's very open -ended checking question (*have you got any questions about*), Casey explicitly indicates that all her current concerns have been addressed: (*no I've sort of asked everything*). She goes on to indicate that her concerns are rather with the results, and Tara's repeated feedback (*yeah yeah*) signals her understanding. This empathetic exchange with its abundance of positive minimal feedback (*yeah yeah*) clearly suggests that the nurse and patient are on the same wave-length. The overlapping talk is a reliable discourse indicator of good rapport between the two women (Coates 1996).

Examples 1-7 have illustrated the main characteristics that we observed in the DP dataset. The core DP is typically accompanied by a number of other components which are oriented not simply to describing what will happen or is happening in the relevant procedure, but rather to satisfying the patient's need for reassurance and anticipating the additional information which they may need to feel comfortable.

The scope of the data collection did not include interviews with the participants after the data collection had been completed. This would have been a valuable way of learning whether or not the DPs were considered effective from the patients' point of view. The internal evidence from the recordings, including patients' questions, requests for clarification and feedback, suggest that the nurses' DPs were generally very effective, but post-data collection interviews would clearly be a useful addition to the methodology of a future DP study.

Socio-pragmatic features of nurse-patient interaction

Establishing rapport and expressing empathy were undoubtedly regarded as important by nurses when engaged in preparing patients for procedures. This was evident in a variety of ways such as: the occurrence of social talk; the extensive use of socio-pragmatic particles; patient-oriented repetition; and paraphrasing. This finding highlights the value of discourse analysis of authentic interaction in its context of occurrence compared to interviews and questionnaires. Neither questionnaires nor interviews can capture the rich and practical uses of these crucial interactive social and socio-pragmatic components of talk which tend to be overlooked or edited out of recollections of what went on in an interaction.

Previous analyses of the dataset (Holmes and Major 2002) found that social talk plays an important role and serves a range of crucial functions in interaction on the ward. These range from establishing rapport between the nurse and the patient to distracting the patient's attention from an unpleasant procedure such as an injection. While the nurse was engaged in doing a routine procedure, such as taking a temperature, blood pressure, or even during a more intrusive procedure such as removing a drain or a dressing, social talk referring to the weather, the patient's family, or even the nurse's social activities was a frequent component of the interaction. The social talk was often introduced by the nurse, but when a patient introduced social talk, the nurse would typically respond by supporting and extending it as is

illustrated in example 8 where the nurse (Rebecca) is chatting with the patient (Violet) about her family while at the same time giving her panadol and taking her temperature.

Example 8

Violet: but er + I thought of that with Jane it only seemed she would it- it would //(work up at [name of place]) + you know\

Rebecca: /yeah at [name of place] cos she's\

Violet: (and I'm better) I was quite cold I had to get put this on for a start ...

Rebecca: /[inhales] now this is a\ couple more panadol ++ okay and I'll go and- I'll- take your temp ++ there you are (3) I'll just take this temperature + gosh it's a lovely day out there isn't it

Violet: yes he said he had a terrible migraine and he

Rebecca: oh did he

Violet: me son before he came up yeah

Rebecca: has it gone

Violet: I don't know they've- th- they've gone away to get their lunch

This excerpt also illustrates the nurse's use of social talk to respond to the particular needs of the patient. Violet especially likes to talk about her family and rarely responds to talk about health care procedures. Rebecca encourages this and responds positively to Violet's talk, indicating that she is listening to Violet with feedback and encouraging questions (eg *oh did he, has it gone*). In terms of the DP, Rebecca accommodates to Violet's preferences and provides the minimum amount of necessary information (the core DP) as this information is clearly not a priority from the patient's perspective.

As illustrated in most of the examples above, social talk was almost non-existent during the more complex DPs which prepared patients for future more extensive procedures. These DPs were very information focussed and any personal comments

were directed to reassuring the patient about the anticipated procedure.

Nurses typically make extensive use of hedges while doing a DP (ie words such as *just, if, yeah, sort of*). They use interactive pragmatic particles (such as *you know, you see*); and they use softening devices, including minimisers such as *little* and *just* (for example, *little dressing, little stitch, just pull through*). They also use colloquial words and expressions such as *a little bit of bleeding, a bit oozy, a little banda-aid*, with a similar softening effect (Holmes and Major 2002 p.15). Nurses also repeat and paraphrase their message to ensure patient understanding.

All these features indicate that the nurses were paying attention to the need for establishing empathy as well as ensuring their message was being understood. Hence while the core DP contained the nucleus of the information to be conveyed, the analysis indicates that nurses went well beyond this core component to add a range of additional components and socio-pragmatic features which were oriented to patient comfort and understanding.

DISCUSSION AND CONCLUSION

This paper has identified and illustrated a range of components which constitute the discursive behaviour 'Describing Procedures' in recordings of nurse-patient interactions. This information-oriented type of talk forms a central component of the nurses' daily responsibility to each patient and deserves careful attention.

The analysis of DP patterns was less straightforward than had originally been anticipated: while a core DP component could be identified, exactly which additional components would occur in any particular interaction could not be predicted (based on the type of procedure for example), nor could any preferred order of components be established. Elements occurred in a wide diversity of orders depending on micro-level aspects of the interaction and reflecting the nurses' responsiveness to the particular situation and the specific needs and concerns of their patients. If a positive patient-nurse relationship achieved through patient-centred communication is regarded

as "essential for quality nursing care" (McCabe 2002 p.47), then this analysis provides evidence of one means by which this can be achieved.

In addition to the core component 'describe the procedure', there are a number of additional components which occur relatively frequently in DPs, namely, provide reason for the procedure, provide reassurance, and provide options. Reasons for the procedure included explaining the consequences to the patient if instructions are not followed. Nurses frequently provided reassurance, usually by telling patients that everything will be *fine*, especially in relation to future complex procedures and other instances where patients appeared to be anxious. By providing options to patients, nurses are clearly working to minimise patient anxiety as well as encourage an empathetic relationship between them and their patients by showing respect for patients' autonomy. Throughout the DP examples, there is usually a great deal of feedback from patients and overlapping talk between nurses and patients, further illustrating the good rapport between nurses and patients on the ward.

Less frequent components in DPs are: provide information on likely reactions, provide supplementary written or visual information, and check if the patient has any questions. In terms of providing information on likely reactions, even unpleasant reactions, this was usually attributed to what other patients have said, showing a sincerity on the nurses part, by not pretending she knows how it might feel. Nurses sometimes provided extra written information or asked explicitly if the patients had any questions. However, as mentioned earlier, the nurses had constant access to the patients, and would often come back later in the day to follow up on and ensure patient understanding. So the absence of these components in any particular recorded interaction was not evidence that they did not happen. It will require further research with a larger database to ascertain whether these patterns are idiosyncratic to this data set. However it is striking that these additional components address different aspects of patient comfort and the need for reassurance, crucial aspects of quality nurse-patient communication.

The analysis also revealed that social talk, which constitutes a high proportion of patient-nurse interaction in general (Holmes and Major 2002), did not occur at all during the process of preparing patients for (often serious) future procedures, although it did occur within DPs which were concurrent with the administration of a (usually routine) procedure. Some particularly striking socio-pragmatic features relating to the way DPs were expressed by the nurses in our data, namely hedging strategies and repetition or paraphrase, were also identified.

Clearly, there is much more to be discovered about the ways in which nurses and patients negotiate the description of health care procedures. It seems evident that nurse's choices are often influenced by the contributions of patients, but precisely how this operates is an area where more detailed analysis is required. The negotiation and the complex inter-meshing of the exact level of each patient's need for information with the nurse's assessment and provision of this information merits considerable further examination.

While still exploratory, our findings nevertheless illustrate the benefit of discourse analysis within a sociolinguistic framework for the analysis of nurse-patient interaction. These interactions are not one-sided, and nor are they as straightforward as some textbooks might suggest. The very fact that it is not possible to establish a definitive set of obligatory components of a DP, or a consistent pattern for the order of components in a DP, illustrates the value of collecting and analysing authentic data. The analysis in this paper suggests that nursing textbooks using fabricated, over-simplified examples are unlikely to prepare nursing students for the complexity of real-life communication on the ward. In the future we hope to use this type of analysis to develop more effective nurse-education resources. The use of authentic data provides a more realistic basis for introducing student nurses to the complexities of health care communication on the ward.

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The effect of providing information to patients on their perception of the intensive care unit

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KEY WORDS

ICU, patients' experiences, information, nursing, technological instruments

ABSTRACT

Objective

The objective of this study was to examine the effect the provision of information about the physical and technological environment of the intensive care unit (ICU) had on whether patients felt discomfort during their ICU experience.

Design and Setting

The study used a quasi-experimental design. Patients were selected through convenience sampling at a university hospital in Erzurum, Turkey.

Subjects

There were 80 patients in the study; 40 in the study group (SG) and another 40 in the control group (CG). Five patients in the study group left the study during the study period.

Main outcome measures

The effect of the provision of information on a patient's perception of their level of discomfort during their stay in an ICU was assessed using the Situational Form of Technological Atmosphere in ICU (SFTA-ICU) which is a 24 item instrument designed to measure the level of disturbance felt by patients exposed to different environmental situations in an ICU.

Results

8.6% of the SG and 45% of the CG felt discomfort about their inability to move; 2.9% of the SG and 45% of the CG about their inability to see their relatives; 14.3% of the SG and 40% of the CG about the closed environment of the ICU; 22.5 % of the SG and 40% of the CG about loneliness; 17.1% of the SG and 65% of the CG about nakedness; 11.4% of the SG and 37.5% of the CG about the instruments used on fellow patients; 20% of the SG and 50% of the CG about their inability to express their needs; and 14.3% of the SG and 42.5% of the CG about not being informed before procedures. The difference among the groups was found to be statistically significant.

Conclusions

Well planned information provided to patients preoperatively about the ICU may reduce the rate of discomfort to patients postoperatively caused by the ICU environment, procedures and treatments, and staff responses.

INTRODUCTION

The ICU can be a disturbing environment for patients (Sekmen and Hatipoğlu 1999). In Russell's study (1999 pp.786) many patients described recollections of the ICU using descriptive adjectives and phrases such as 'very noisy', 'all wired up', 'people everywhere', 'patients screaming', 'too scared to sleep', 'unable to move' and 'alarms ringing'.

Such factors as: a closed and unfamiliar environment; restricted movement; dependence on medical equipment; use of complicated instruments; often repeated painful procedures; the sounds made by numerous pieces of technology; the inability to see family members and relatives; and lack of information about treatment and practices can cause psychological distress to patients during and after being discharged from the ICU (Kaçmaz 2002; Novaes et al 1997). It has been established in some studies that restricted movement and posture and social isolation in the ICU, lead to sensorial deprivation, and an absolute reduction in the quality and quantity of sensorial inputs (Hunt 1999; Shih 1997; Jones 1994). Sensorial deprivation may result in a reduced capacity for learning, an inability to solve a problem, temporary perception disorders, and disrupted motor coordination, orientation and sleep patterns (Kutlu et al 2001).

Compton (1990) identified the recovery period after a stay in an intensive care unit as a psychologically stressful time. Patients find factors such as physical discomfort, lack of control, sensory over-stimulation (eg noise and light) and difficulty in maintaining independence in activities of daily living, disturbing (Wong and Arthur 2000; Hunt 1999; Jones 1994; Pennock et al 1994; Shih 1997; Turner et al 1990). Additionally, studies also reveal that some patients are depressed following their discharge from hospital as a result of their ICU stay (Székely et al 2001; Daffurn et al 1994). Some studies have emphasised the need for patient information programs to prepare people for the ICU environment and the physical and psychological problems which may be experienced; and provide strategies for dealing with those problems (Russell 1999; Shih 1997; Watts and Brooks 1997;

Soehren 1995; Jones and O'Donnell 1994; Rowe and Weinert 1987). The ICU holds many uncertainties for patients and although there are some descriptive studies examining the effect of the ICU environment on patients (Sarıcaoğlu et al 2005; Rattray et al 2004; So and Chan 2004; Székely et al 2001; Sekmen and Hatipoğlu 1999; Russell 1999; Simini 1999; Hunt 1999; Cornock 1998; Novaes et al 1997; Shih 1997; Watts 1997; Jones et al 1994), no experimental studies were identified.

The research into patients admitted to ICUs in Turkey covers a limited number of specific subjects such as pain (Güneş Ören et al 2005; Vatansever and Eti Aslan 2005), loneliness and depression (Tel et al 2002), anxiety (İncekara and Pinar 2003; Özer 2002;), noise (Akansel 2004), sleep problems (Uğraş and Öztekin 2007; İncekara and Pinar 2003) and communication with mechanic ventilation (Yava and Koyuncu 2006), which lead to physical and psychological problems such as stress, depression and sensorial deprivation (Székely et al 2001; Kaçmaz 2002; Compton 1990). It is important to know which situational factors in the ICU environment disturb patients in order to prevent or to reduce their effect (Sekmen and Hatipoğlu 1999). There is no descriptive study on how the Turkish patients perceive the ICU apart from that of Sekmen and Hatipoğlu, which was carried out in 1999, which found the factors which most disturbed patients were: inability to move, nakedness, inability to see relatives, loneliness and the closed environment. At the end of the study it was suggested that ICU patients be provided with information about factors which they may find disturbing.

The objective of this study was to examine the effect the provision of information about the physical and technological environment of the ICU had on whether patients felt discomfort during their ICU experience.

METHODOLOGY

Design and Setting

The study used a quasi-experimental design. The study was carried out in the Cardiovascular Surgery Clinic and ICU, Aziziye Research Hospital, Süleyman

Demirel Medical Centre at Atatürk University, Erzurum, eastern Turkey. Criteria for inclusion in the convenience sample were: age 18 years or over; ability to speak and read in Turkish; no previous open heart surgery; no known neurological problems; and no other known complication. Patients with former ICU experience were included in the study. In Özer's (2002) study titled: The impact of planned education on patients' transfer from cardiovascular intensive care unit to clinic, the difference between the anxiety score averages of patients with and without ICU experience before, during and after transfer was not found to be statistically significant. Therefore including patients with ICU experience in the current study during data collecting was not considered to introduce bias. Although patients with ICU experience were included in the study, reaching the sample size who met the study criteria took approximately 19 months (March 2003 to September 2004). An additional criterion, supported by the literature, was that patients had to have spent at least 24 hours in the ICU (Rattray et al 2004; Novaes et al 1997; Jones et al 1994; Rowe and Weinert 1987). Spending at least 24 hours in ICU was considered necessary for patients to be able to evaluate the different parts of the day (morning, noon and evening) and the experiences gained during this time (applications, behaviour, communication).

The sample size for this study was 80 subjects: 40 in the study group (SG) and forty in the control group (CG). At the time this study was conducted, the study site was the only hospital where cardiac surgery was performed. Every patient who met the research criteria and who consented to participation in the study was included in the research, however it took over a period of almost 19 months to recruit 80 patients who were literate and able to speak Turkish. Sümbüloğlu and Sümbüloğlu 1997 considered that at least 30 subjects for each group are sufficient for experimental studies and parametric tests. Additionally, the number of participants in the SG and CG was comparable to previous studies in which the influence of education on the anxiety of open cardiac surgery patients was compared (range 27-

50 subjects) (Asilioglu and Senol Celik 2004; Ku et al 2002; Parent and Fortin 2000). Since there are hardly any experimental studies assessing patients' disturbance about ICU atmosphere, this comparison has been made through varying anxiety studies.

Five patients in the SG subsequently withdrew from the study after transfer from the ICU to the clinic. Consequently, the study group included only 35 subjects and the study was conducted with a sample size of 75 patients.

Data Collection Questionnaire

As there was no scale available to evaluate the stressors of the ICU environment, the validity and reliability of which had been tested and adapted into Turkish society, the Situational Form of Technological Atmosphere in ICU (SFTA-ICU) developed by Sekmen and Hatipoğlu (1999) was used.

The SFTA-ICU consists of 24 items covering areas such as: the inability to move, inability to see relatives, closed environment, noise produced by the instruments, no explanation before procedures, not speaking with the patient, or not calling the patient by name. Each item has three potential responses: 'no disturbance', 'disturbed a little', 'disturbed a lot'. The study and control group responses to the SFTA-ICU were analysed using a percentage distribution of the answers.

Procedures

The patients in the CG followed the routine hospital protocol in which no planned preoperative and postoperative information related to the ICU was provided. The researcher provided information to the patients in the SG about the environment of the ICU using face-to-face interviews, explanations and question and answer at a private room in the Cardiovascular Surgery Clinic one day before the patient's scheduled operation.

A standard form was used for informing patients about the items covered in the SFTA-ICU such as: the period of stay in the ICU; ICU staff; the way patients could contact their relatives; possible emergencies; ICU traffic issues; cardiac monitors; different catheters; chest tubes; ventilators; limited

mobility; ICU equipment; noise, especially from technological equipment; and the physical layout of the ICU. Additionally, respiratory exercises, leg exercises, shoulder exercises, cough exercises were explained and practised with the patient. Patients questions were then answered. At the end of the 45 minute preoperative session, patients were provided with a booklet: What you need to know about the intensive care unit (prepared by the researchers in accordance with current literature).

Each patient in the SG was visited by the researcher for approximately one hour in the ICU on the 1st day of their postoperative period and their questions, if any, broadly covering the items in SFTA- ICU (eg inability to move, closed environment, touch of the instruments, inability to see relatives) were answered.

In descriptive studies carried out to determine patients' recollections of their ICU experience, (Green 2000; Shih 1997; Turner et al 1990) data were collected within 48 hours after transfer from the ICU to the clinic. Accordingly in this study, the SFTA-ICU was applied to CG and SG patients one day after transfer from the ICU to the Cardiovascular Surgery Clinic. Data collection took about 15-20 minutes for each patient.

The Cardiovascular Surgery ICU is a six bed unit, designed in such a way that patients could see one another. Data were collected first from the control group and secondly from the study group. The doctors and nurses in the ICU were informed about the content of the study in the process of collecting data from the SG. After data collection, the SFTA-ICU and booklet were left for the ICU personnel to use.

Ethics

An information form stating the scope and purpose of the study was provided to the Head of the Cardiovascular Surgery Department, from whom written approval for the study was received. The aim of the research was explained to the patients and they were advised that if they did not want to continue they could withdraw from the study at any time. Patients were not told whether they were part of the study group or the control group to avoid bias.

Data analysis

Data were analysed using SPSS software, version 11.5. Descriptive statistics were used to describe the sample. Chi-square test was used to compare the defining qualities of the patients in the CG and SG and the extent to which factors in the ICU environment influenced them. The statistical significance level was 0.05 for the study.

Table 1: Characteristics of the sample

Variable	Control n=40 (53.3%)	Study n=35 (46.6%)	p-value
Gender			
Female	16 (40)	11(31.4)	0.440
Male	24 (60)	24(68.6)	
Marital status			
Married	33 (82.5)	31(88.6)	0.458
Single	7 (7.5)	4(11.4)	
Work status			
Housewife	16 (40)	11(31.4)	0.712
Public official	13 (32.5)	12(34.3)	
Unemployed	11 (27.5)	12(34.3)	
Education			
Literate	5 (12.5)	7(20.0)	0.731
Primary school	20 (50.0)	15(42.9)	
Secondary school	12 (30.0)	9(25.7)	
University	3 (7.5)	4(11.4)	
Former ICU experience			
Yes	16 (40.0)	12(34.3)	0.610
No	24 (60.0)	23(65.7)	
Type of operation			
CABG	30 (75.0)	30(85.7)	0.247
Valve	10 (25.0)	5(14.3)	
Age	X± SS=51.67 ± 13.13	X± SS=53.60 ± 11.98	0.569
Period of stay in ICU	X± SS=2.80 ± 1.24	X± SS=2.51 ± .74	0.240

Study limitations

The findings are from a sample in a university hospital, Erzurum, Turkey, and thus cannot be generalised to all ICU patients in Turkey. There was no Intensive Care Unit Environmental Stressor Scale available in Turkey, the validity and reliability of which had been tested and adapted to Turkish society, hence the researcher was limited to using the Situational Form of Technological Atmosphere in ICU (SFTA-ICU) developed by Sekmen and Hatipoğlu (1999).

The researchers faced some difficulties in that the total population of patients to be admitted to ICU who met the study requirements was not known. Thus, a power analysis was not conducted, nor a

sample of the total population analysed. Statistical interpretation of the results was difficult due to the small sample. Therefore the results of the study cannot be generalised beyond this group.

RESULTS

There were no statistically significant differences between two groups in relation to their demographic characteristics (table 1).

Table2: Comparison of the state of disturbance among the groups caused by ICU related factors

ICU related situational factors	Groups	State of Disturbance						p-value
		No disturbance		Little Disturbance		Very much disturbance		
		N	%	n	%	n	%	
1: Inability to move	C*	11	27.5	11	27.5	18	45	0.002
	S**	18	51.4	14	40	3	8.6	
2: Inability to see the relatives	C	8	20.0	14	35	18	45	0.000
	S	16	45.7	18	51.4	1	2.9	
3: Existence in a closed environment	C	10	25.0	14	35	16	40	0.005
	S	21	60.0	9	25.7	5	14.3	
4: To witness the procedures applied to the patient lying nearby	C	16	40.0	10	25	14	35	0.000
	S	16	45.7	19	54.3	0	-	
5: Loneliness	C	14	35.0	10	25	16	40	0.018
	S	20	57.1	11	31.4	4	11.4	
6: Touch of the instruments	C	16	40.0	15	37.5	9	22.5	0.655
	S	15	42.9	15	42.9	5	14.3	
7: Nakedness	C	4	10.0	10	25	26	65	0.000
	S	13	37.1	16	45.7	6	17.1	
8: Inability to speak with instruments applied	C	13	32.5	9	22.5	18	45	0.471
	S	15	42.9	9	25.7	11	31.4	
9: Use of medical words	C	18	45.0	14	35	8	20	0.161
	S	23	65.7	9	25.7	3	8.6	
10: To witness the instruments applied to the patient lying nearby	C	13	32.5	12	30	15	37.5	0.034
	S	15	42.9	16	45.7	4	11.4	
11: Sounds produced by the instruments in ICU	C	23	57.5	12	30	5	12.5	0.014
	S	30	85.7	5	14.3	0	-	
12: Smell in the atmosphere	C	21	52.5	6	5	13	32.5	0.149
	S	14	40.0	12	34.3	9	25.7	
13: Inability to express the needs	C	3	7.5	17	42.5	20	50	0.008
	S	10	28.6	18	51.4	7	20	
14: Light	C	25	62.5	7	17.5	8	20	0.263
	S	22	62.9	10	28.6	3	8.6	
15: No explanation before the procedures	C	18	45.0	5	12.5	17	42.5	0.025
	S	25	71.4	5	14.3	5	14.3	
16: Presence of many unknown materials	C	20	50.0	12	30	8	20	0.597
	S	19	54.3	12	34.3	4	11.4	
17: Treatment of patients as if a machine	C	22	55.0	8	20	10	25	0.663
	S	18	51.4	10	28.6	7	20	
18: No speaking with the patient himself	C	15	37.5	14	35	11	27.5	0.232
	S	20	57.1	8	22.9	7	20	
19: Inability to hear well due to the noise from the instruments	C	28	27.2	7	7.5	5	5.3	0.924
	S	23	65.7	7	20	5	14.3	
20: The great number of instruments	C	20	50.0	9	22.5	11	27.5	0.218
	S	22	62.9	9	25.7	4	11.4	
21: Other sounds (music, personnel)	C	26	65.0	4	10	10	25	0.149
	S	21	60.0	9	25.7	5	14.3	
22: Dealing much with the machines	C	22	55.0	13	32.5	5	12.5	0.338
	S	25	71.4	7	20	3	8.6	
23: No calling patients by name	C	24	60.0	9	22.5	7	17.5	0.141
	S	28	80.0	5	14.3	2	5.7	
24: Unawareness of where they are	C	22	55.0	11	27.5	7	17.5	0.121
	S	22	62.9	12	34.3	1	2.9	

*Control group, **Study group

The comparison of the effects of the ICU environment on the study and control groups is given in table 2. Of the items in the SFTA-ICU: lying naked (p=0.018); inability to move (p=0.002); presence in a closed

environment (p=0.005); being alone (p=0.018); inability to see relatives (p<0.001); experience of witnessing procedures on patients lying nearby (p<0.001); experience of witnessing the instruments

used on the patient lying nearby ($p=0.034$); the sound produced by the instruments in ICU ($p<0.001$); lack of instruction and explanation before procedures ($p=0.025$); and inability to express one's needs ($p=0.008$); demonstrated a statistically significant difference between the groups.

DISCUSSION

Ten of the 24 items showed statistically significant differences between the study and control groups. The higher rate of disturbance resulting from restricted physical mobility in the control group is an example. Cornock (1998) and Novaes et al (1997) found that 'being restricted by tubes and lines' was one of five items that seriously disturbed patients. The patients in the study group knew they would have restricted mobility in the ICU and were informed they would only be able to do physical exercises like sitting, arm, leg and shoulder movements. This may have resulted in their rate of disturbance caused by restricted mobility being reduced.

The rate of disturbance caused by factors such as the inability to see relatives, staying indoors and feeling lonely was found to be higher in the control group and the difference with the study group was statistically significant. According to Ballard (1981, reported in So and Chan 2004) existence in a closed environment is an significant stressor for patients in surgical ICUs. Other studies support this finding (Rowe and Weinert 1987; Sekmen and Hatipoğlu 1999; Soehren 1995). In Cornock's study (1998) and So and Chan's study (2004) the item of 'missing their spouse' ranked among the first ten items as a cause of disturbance.

Witnessing procedures and instruments applied to the patient lying nearby in the ICU also showed a statistically significant difference between the control and study groups. In the ICU where the present study was carried out, folding screens are normally used to separate patients from one another however in an emergency there may be a delay in using the folding screens.

A statistically significant difference was also found between the two groups in relation to nakedness.

In eastern culture where this study was carried out, being naked is not socially or religiously accepted behaviour. In Sekmen and Hatipoğlu's study (1999), nakedness is the leading factor that disturbed patients. The study group were provided with information about what to expect postoperatively and could mentally prepare themselves. On the other hand, the control group were unprepared and found the experience more disturbing.

It has been reported in the literature that noise pollution due to the ICU environment puts patients under stress. In Hweidi's study (2007) noise from buzzers and alarms from various pieces of technology and machines is one of the three most important stressors in ICU. Patients are generally not informed that most of the sounds from the equipment in the ICU are normal and that the required intervention will be made if there are any variations from normal. In this study, there was a statistically significant difference between the disturbance experienced by the control group and the study group to noise.

In a study by Rowe and Weinert (1987), patients reported they were distressed when they were ignorant of the procedures in the ICU and when they failed to get responses to their questions or could not understand the words used in the answers. Following a serious illness, they reported lack of knowledge as an important stressor. Diminished quality in interpersonal communication is often the primary reason for the dissatisfaction of ICU patients and their families. It is thought that interpersonal communication is a significant means of transferring knowledge, providing psychological support and preventing conflict from occurring in the presence of incomprehensible knowledge (Mazzon et al 2001; Shih 1997). Since the patients in the study group were informed about the procedures carried out in the ICU, they demonstrated significantly less disturbance compared to patients in the control group in response to lack of information.

In this study, 50% of the patients in the control group and 20% of those in the study group felt a lot disturbed if they could not express their needs. The difference was statistically significant. Baker and Melby (1996)

reported that patients did not complain about the limited time devoted to them by ICU staff however they also reported that the communication with them in the ICU was concerned with the process of treatment and care rather than with improvements in their health. Llenore and Ogle (1999) suggested that some of the reasons for weak communication in the ICU is nurses with high levels of stress dealing mostly with the physical care of patients and being busy with technological equipment. This finding is supported by Ben-Ami-Lozover and Benbassat (1996). In this study, the study group's patients in the ICU were informed the ICU staff worked hard since, in a six bed unit, there were only two nurses rostered during the day and one nurse rostered at night to care for the ICU patients. The control group's patients were not informed about this situation and consequently may have had difficulty expressing their needs and having their needs met.

CONCLUSION

Well planned information related to the ICU and provided to patients preoperatively reduces the rate of disturbance for patients caused by the ICU environment. The results of this study may assist health professionals to prepare planned education programs for patients being admitted to the ICU postoperatively to reduce their discomfort.

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A mixed methods study on the needs of Korean families in the intensive care unit

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KEY WORDS

Mixed methods study, intensive care unit, Korean families

ABSTRACT

Objectives

The aim of this study was to achieve an understanding of the needs and experiences of Korean families in the intensive care unit (ICU).

Design

The study adopted a triangulation mixed methods design. A survey using Critical Care Family Needs Inventory was conducted to measure the needs of ICU family members. In-depth individual interviews were also carried out focusing on the difficulties experienced by families and their need to cope with critical situations. Statistical results and qualitative themes were compared and integrated for data analysis.

Participants

Participants comprised 85 family members who were identified as the main caregivers of ICU patients.

Results

The quantitative result indicated that ICU Korean families needed assurance most, followed by information, proximity, comfort, and support. The main themes derived from the qualitative analysis demonstrated in what ways these needs were met or not met by hospital and family systems.

Conclusions and implications

Findings indicate that open communication with health care professionals and close contact with patients are crucial for meeting the priority needs of ICU families. Family functions also affect the experiences of family caregivers. The results suggest that an educational program for nurses and a family support group program for ICU families would be beneficial.

INTRODUCTION

The admission of a family member into the intensive care unit (ICU) is one of the most stressful events in any family. The existing literature on the needs of ICU families is generally divided into quantitative and qualitative studies in terms of methodology. Quantitative studies have extensively used the Critical Care Family Needs Inventory (CCFNI), an instrument developed by Molter and Leske to measure the needs of ICU families (Molter and Leske 2001; Leske 1991; Leske 1984; Molter 1979). This 46 item, 4 point Likert type questionnaire is subdivided into five general needs categories: assurance, information, proximity, support, and comfort. A series of quantitative studies using the CCFNI (Azoulay et al 2001; Mendonca and Warren 1998; Price et al 1991; Norris and Grove 1986; Daley 1984) have consistently reported that assurance, information, and proximity needs rank above comfort and support needs.

Despite the usefulness of the CCFNI, the instrument has been criticised because its prescriptive nature inhibits families from expressing needs not included in the list. In addition, the CCFNI is constructed from the perspective of nurses which necessarily differs from the perspective of families regarding the impact of the crisis event (Forrester et al 1990) and the intensity of emotional responses (Titler et al 1991). Concerns about using a structured instrument suggested that qualitative approaches to families' experiences were needed.

Qualitative studies of ICU families have been attempted by a few researchers within the last two decades. Walters (1995) explored the experiences of 15 ICU family members with a hermeneutic approach, identifying two themes: the need of the families to 'be with' the patient in a physical and emotional sense and the need for actually 'seeing' the patient. Carr and Fogarty (1999) used an ethnographic method in an attempt to understand the vigilance of families at the bedside. They revealed several themes including: commitment to care, resilience, emotional upheaval, dynamic nexus, and transition. Lam and Beaulieu (2004) focused on 13 family members of ICU patients through observation and interviews. They explained

'bedside phenomenon', which offered insight into families' desire to ensure their loved ones were receiving the best care possible and to maintain a connection with the patient. Hughes et al (2005) in a grounded theory study interviewed eight relatives to investigate their overall experiences of the ICU environment. The main themes that emerged were concerned with information and communication.

These qualitative studies demonstrated the texture and complexity of the ICU families' experiences. However the studies did not explore how the needs of ICU families were met or unmet while interacting with health professionals and other family members. In addition, their sample included only a small number of participants from diverse backgrounds. Although the sample size is of secondary importance in qualitative in-depth analysis, caution is required in interpreting these results based on the small number of heterogeneous participants. Taken together, the existing studies of ICU families used either superficial quantitative data from surveys or narrow qualitative analyses of a few participants which resulted in limitations in a comprehensive understanding of ICU families.

A mixed methods study is an approach that collects, analyses, and integrates quantitative and qualitative data in a single study in order to resolve research problems based on the epistemology of pragmatism (Morse 2005; Creswell et al 2004). When used in combination, both quantitative and qualitative data yield a more complete analysis and complement each other. Such a design strengthens the reliability and validity of the research through corroboration and mutual assurance (Green 1994).

Burr (1998), for example, used a mixed methods study to triangulated quantitative and qualitative methods for exploring the needs of Australian ICU families. In Burr's study, a sample of 105 family members completed the CCFNI while 26 other family members participated in an interview. The results supported findings from other studies using the CCFNI on the priority needs of information about and access to the patient. Personal needs were accorded low priority, being displaced by strong patient related

needs. It is important to note that the qualitative interview brought out the elements the quantitative inventory missed.

The present study, using a mixed method design, aimed to achieve an understanding of the needs and experiences of Korean ICU families. The main characteristic of 'Koreanness' can be described as familism (Yang 2002), which is defined as a unique social characteristic that highly emphasises family cohesion, interdependence, and kinship. Koreans are expected to sacrifice their individual needs for the sake of family interests (Jung and You 2001). Little is known about how Korean values of family affect the needs of Korean ICU families. Moreover, no mixed method study has examined Korean ICU families. Therefore it was timely and appropriate to investigate Korean ICU families using a mixed method design which would contribute to nursing knowledge and cultural competence.

METHODS

Research Setting

The study was conducted in nine medical ICUs at nine general hospitals in Korea during the autumn and winter of 2005. One hospital had 2,064 beds; the others had between 400 and 650 beds. One ICU had 100 beds, three ICUs had 50 to 70 beds and the remainder had between 30 and 50 beds. All the ICUs in the study had strict visitation regulations that followed a three visitor policy, twice a day, from 30 to 60 minutes on each occasion.

Triangulation Mixed Methods Design

The study adopted a triangulation mixed methods design with more emphasis on the qualitative research process (see Creswell 2003; Tashakkori and Teddie 1998 for types of mixed methods design). Triangulation mixed methods design is one of the mixed methods designs in which quantitative and qualitative procedures are conducted separately from each other in order to maintain the independence of data analysis. Both quantitative and qualitative findings are subsequently integrated into the final results. The qualitative research process was dominant in the current study in order to give voice

to Korean ICU families who have had no voice in the existing literature and to explore cultural uniqueness in the Korean ICU context.

Quantitative procedure

A survey using the CCFNI was conducted to measure the needs of ICU family members. The content validity, construct validity, and reliability of the CCFNI have previously been established (Leske 1991; Macey and Bouman 1991). Construct validity was addressed through factor loading; reliability was reported as 0.96 (Leske 1991). The CCFNI was translated from English to Korean. A back translation method was used to verify translation validity.

The researcher recruited 85 participants to complete the CCFNI. The criteria for recruitment stated that participants should 1) be a family member who was recognised as the main caregiver and 2) be a person staying in the ICU family waiting room in order to visit their family member more than once a day. The appropriate ethical aspects of the study were addressed to ensure participants' rights were acknowledged and respected. The Korea Research Foundation granted ethics approval. Descriptive statistics such as means, standard deviations and reliability coefficients were used to examine the relative importance of ICU family needs.

Qualitative procedure

In-depth individual interviews were conducted with 25 of the 85 ICU family members. The researcher asked all 85 participants if they would consent to an interview; 25 participants voluntarily agreed to the interview. The interview questions included, but were not limited to, the needs of ICU families. The semi-structured interview focused on the process of hospitalisation in the ICU, the difficulties experienced by the families, and the needs for coping with the critical situation. Each interview averaged approximately 60 minutes. The interviews were recorded on audiocassettes and transcribed verbatim.

Qualitative data were examined through two stages: a within-case analysis and a cross-case analysis, according to the theme analysis method. A typical

format was to first provide a detailed description of each case and themes within the case, called a within-case analysis, followed by a thematic analysis across the cases, called a cross-case analysis (Creswell 1998 p.63). To achieve veracity, transferability, dependability, and confirmability of the qualitative procedure, negative case analysis was used which involves searching for elements of the data that do not support or appear to contradict the emerging themes from the data analysis. The researcher revised the initial hypotheses in light of disconfirming evidence when conducting negative case analysis (Creswell 1998 p.202). Colleague researchers were asked to provide academic feedback about the analysis. Some of the participants were also asked to review part of the analysis results for checking.

Integration

The triangulation mixed methods design integrates the results from the quantitative and qualitative procedure. A comparative analysis was conducted to identify the similarities and differences between main themes from qualitative data and the descriptive statistics from quantitative data. The researcher,

using the constructs of the CCFNI to position and interpret the qualitative interviews, pinpointed the needs of ICU families among various themes that emerged from the qualitative data. At the same time, discrepant or additional needs beyond the CCFNI were also examined to avoid being confined to the predetermined categories.

Participants

Participants comprised 85 family members (55 women and 30 men) of ICU patients in Korean hospitals (see table 1). They varied in age between 21 and 70 years old, with more than 60 percent being between 31 and 50 years old. Fifty participants were children of the patient, 21 were spouses, five were siblings, four were parents, and five were other relatives. Of the patients, 61 were conscious, 22 were unconscious, and two were unidentified.

Of the 85 participants, 25 family members (15 women and 10 men) also participated in qualitative interviews; four of these participants were in their 20s, five were in their 30s, 10 were in their 40s, and six were in their 50s or older. Twelve were children of the patient, six were spouses, four were parents, two were siblings, and one was an aunt.

Table 1: Characteristics of participant family members and patients (n = 85)

Characteristics			n (%)
Participant	Gender	Male	30(35.3)
		Female	55(64.7)
	Age Range	21-30	19(22.4)
		31-40	22(25.9)
		41-50	29(34.1)
		More than 51	15(17.6)
	Education	Less than high school	15(17.6)
		High school graduate	40(47.1)
		College graduate	29(34.1)
		No answer	1(1.2)
	Relationships with the Patient	Children of the patient	50(58.8)
		Spouse	21(24.7)
		Other members (parents, siblings, relatives)	14(16.5)
Patient	Gender	Male	60(70.6)
		Female	25(29.4)
	Age Range	Less than 50	24(28.2)
		51-60	17(20.0)
		61-70	24(28.2)
		More than 71	20(23.5)
	Consciousness	Conscious	61(71.8)
		Unconscious	22(25.9)
		No answer	2(2.4)

FINDINGS

The present study used a triangulation mixed method design to explore what needs were important to Korean ICU families and how these needs were met or unmet. The quantitative result showed the highest need of the participants was assurance ($M=3.67$, $SD=0.41$). The other priority needs were: the need for information ($M=3.49$, $SD=0.40$), proximity ($M=3.23$, $SD=0.50$), comfort ($M=2.93$, $SD=0.60$), and support ($M=2.63$, $SD=0.55$). Reliability of the scale was measured using Cronbach's $\alpha = 0.95$ as a whole and from 0.75 to 0.88 for the five subcategories. The quantitative result was complemented and verified by the main themes derived from the qualitative data.

Need for assurance: "Never get hopeful words"

Need for assurance is defined as a family's need to hope for a desired outcome, part of which is based on their confidence and trust in the health care system (Leske 1991). Assurance was ranked first in the needs categories and repeated most in the qualitative data. The ICU families expressed a desperate need to grasp a thread of hope while trusting the judgments and actions of health care professionals. However the qualitative interviews demonstrated that participants felt frustrated by health professionals' abstract and indirect explanations of patients' conditions. In particular, they were anxious in response to doctors' overly cautious prognoses. They regarded doctors as defensive or self-protective.

Doctors are very defensive. They never say hopeful words. They say only 'fifty-fifty.' Who can't say that? ... In Korea, doctors have wielded power from their gown for a long time. Now more and more patients and their families are calling them to account. That's why doctors don't say promising words. They keep saying 'It is always possible to take a bad turn.' I gave up expecting good news from doctors (husband).

Participants felt doctors asserted their authority with their exclusive knowledge about the patients' disease.

Doctors do not give us any clear answer. They keep saying, 'Let's just wait and see'... They use medical

language. What do we know about those difficult words? Maybe it is about doctors' authority. It is everything (son).

Need for information: "Too busy to answer"

The need for information ranked second in families' needs and reflected information and knowledge seeking through involvement (Leske 1991). The participants expressed their need to have sufficient and realistic information about their ill family member. They hoped to obtain this information from doctors and nurses, but found it difficult to access these professionals. The families usually waited at the ICU front door for doctors and nurses on their rounds, hoping to have a chance to ask questions about their ill family member. However the health care professionals seemed too busy to explain the condition of the patient to the families or seemed reluctant to do so. One mother claimed:

Although I have a question, the doctor in charge is not around. The ICU nurses don't give me clear answers... I feel so anxious because they do not explain in detail. I want to know specifically how my son is treated and what effects are expected in what way. I want to know how to cope with it. I am the caregiver! I know they are busy. But it is almost impossible to communicate with them. What I need most is for them to explain to me precisely how my son is doing and tell me frequently how his condition is changing. What else do I need (mother)?

Need for proximity: "Just cannot leave"

Families' need for proximity, ranked third; they needed to be near or close to the ill person physically and emotionally (Leske 1991). All the ICUs in the study had rigid visiting regulations. The participants missed work, school and family duties to spend most of their time in the ICU family waiting room in order to see the patient at each visiting time. They could not leave for fear that something would happen to the patient. One son confessed:

We are not the only family. All other families of ICU patients are sleeping curled up on the couch in this waiting room. I know we are not supposed to spend the night here. It is the hospital policy. But, you know,

family just cannot leave the sick person alone in ICU. We are eager to be here. It is very uncomfortable, but we want to be close to the patient (son).

Need for comfort and need for support: “Doesn’t matter”

The ICU families deferred their own personal needs such as comfort and support. Comfort is related to the hospital environments including convenient bathrooms, comfortable furniture, nearby telephone and good food (Leske 1991). The low ranking of the need for comfort meant either that it was unimportant or that the hospital was comfortable enough. According to the qualitative data, the participants did not expect much from the hospital in terms of convenience facilities for ICU families. They accepted that ICU families would have to endure inconveniences and discomforts. One wife explained:

Inconvenience doesn’t matter. I came here because my husband is critically ill. There is nothing I can do except wait. I am just waiting although my husband is hovering between life and death! My inconvenience is nothing compared to the pain of the sick person. It is the patient on the bed who is suffering most (wife).

Family members need support to express feelings and emotions, handle financial and family problems, and feel concern for themselves (Leske 1991). Need for personal support however, was their lowest priority in this study. Similar to the need for comfort, the qualitative interviews revealed that the participants felt it inappropriate to demand support for themselves instead of for their family member. Although the participants did not express their need for support, they often mentioned how helpful the consolation of their relatives and friends was.

Needs to be met or unmet by the family: “Family is the best support”

A mixed methods research design adds scope and breadth to a study (Johnstone 2004). Obtaining complementary information is advantageous which can be easily missed or overlooked when only one method is used. The current study focused on how the needs of participants were met through family

interactions using a qualitative interview, which cannot be captured by a quantitative survey.

While taking care of their critically ill family members, participants expected other family members to help them emotionally and practically. When these expectations were met, it resulted in increased communication, closeness and trust in the family.

Above all, family is the best support. We have talked a lot about how my father has lived. We come to know how each one feels about him. It seems all the family members are joining to hold up my father...My brother-in-law was a stranger to me. Going through this hardship together, I feel he is one of my family members. It is quite a fresh feeling. I was troubled in paying the medical bill for father. My brother-in-law supported a lot. Now I feel thankful to him and, at the same time, sorry for placing a financial burden on him (son).

On the other hand, if appropriate family support was not provided to the caregiver, the participants blamed other family members. They expressed their disappointment with, resentment toward and conflict with other family members.

My family-in-law rebukes me for my husbands’ sickness. They say I should have stopped him from drinking...They say they feel pity for me, but it is nothing but lip service! I am staying in the family waiting room all day. But what do they really do? It is all talk! He is their own brother. How great it would be if they take care of him even just once (wife)?

DISCUSSION

Korean ICU families have rarely been the subjects of international nursing research. This study highlighted the value of a mixed method research design by examining the priority of needs for Korean ICU families and by exploring the ways these needs were met or unmet by hospital and family systems. The quantitative results of this study, by ranking assurance, information, and proximity as the highest priority above family members own needs, such as comfort and support, are consistent with the findings from other studies using the CCFNI (Azoulay

et al 2001; Freichels 1991; Price et al 1991; Norris and Grove 1986; Daley 1984). More importantly, integrating qualitative analysis with the quantitative results brought out other needs of Korean ICU families.

Korean ICU families expressed a strong wish to be assured and informed by doctors and nurses. However it was difficult for families to access doctors and nurses and to understand the medical and nursing language they used and their ambiguous, diffident explanations about patients' conditions. The ICU families felt frustrated, helpless, and anxious, which might bring out a trust issue with health professionals. The families did not unrealistically expect doctors and nurses to bring a dying person back to life; the families just wanted to be informed and assured that the patient was being treated properly. The results suggest that one of the health care professionals' obligations was "to meet the informational needs of patients and their families by disclosing all available information in a frank, direct, and empathetic way" (Azoulay et al 2001 p.138).

The ICU families wanted to be close to their family member and to maintain contact. They seemed to accept discomfort as a part of taking care of their ill member. Personal need for support was their lowest priority and was regarded as inappropriate for Korean ICU families. This is not to say that ICU families did not need comfort or support, simply that they believed the patient's needs should take precedence over their personal needs.

Using a mixed methods design, the current study uncovered need-related family dynamics not reflected by quantitative inventory. The participants expected other family members to join 'the ICU family' by visiting the patient, supporting caregivers and offering practical help. It is assumed that Korean familism plays a role in the expectations of the participants. If these expectations were fulfilled, the cohesion of the family system was strengthened; if not, it resulted in argument, blame, or avoidance within the family. The existing literature commonly focused on the interactions between ICU families and nurses while overlooking the dynamics among family members.

However the present study demonstrated how family function was a key to meeting the needs of Korean ICU families. Future studies should investigate how the role of family affects the experiences of ICU hospitalisation in different cultures.

The study used only descriptive statistics to analyse quantitative data from ICU families. A larger sample is suggested for inferential statistical analysis which would be more helpful to confirm results from the mixed methods study. The study reflects the socio-cultural system of Korea, but the results need not be limited to Korea. The design can also be used in other contexts where the voices of ICU families have not yet been heard.

IMPLICATIONS AND RECOMMENDATIONS

Nurses need to be prepared through continuing education programs to build and sustain collaborative partnerships with family members (Cioffi 2006). The current study's results suggest developing an educational program for ICU nurses would be beneficial. The program should highlight the priority needs of ICU families, include communication skills to effectively interact with the families and improve cultural competence levels in the nursing profession. In addition, considering the impact of the ICU experience on families (Yang 2007), it is recommended that hospitals offer family support group programs. The programs can be developed cooperatively with various professionals such as nurses, family therapists, social workers and others, such as ministers of religion. The program could be both informative, where families can learn what to expect, and supportive, where families can be empowered. Undoubtedly, ICU hospitalisation is a stressful event for the whole family; however, the experience could have positive meanings through the efforts of the nursing profession.

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Comparison of psychosocial adjustment in people with diabetes with and without diabetic foot ulceration

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KEY WORDS

Type 1 diabetes mellitus, type 2 diabetes mellitus,
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ABSTRACT

Objective

To determine whether psychosocial adjustment to illness differs in people with diabetes between those who have or do not have diabetic foot ulceration.

Design

The study employed as a cross-sectional sample survey design.

Setting

The setting for the study was a training hospital, a marine and undersea medicine outpatient clinic and an endocrinology outpatient clinic.

Subjects

Two hundred participants with a diagnosis, according to World Health Organization criteria, of type 1 or type 2 diabetes for at least one year were enrolled in the study. 100 participants receiving hyperbaric oxygen therapy had diabetic foot ulceration (DFU) and 100 participants had diabetes without DFU.

Outcome measures

Data were collected using a demographic data sheet and analysed using the Psychosocial Adjustment to Illness Scale-Self Report (PAIS-SR).

Results

Advanced age, low education levels, long diabetes duration, poor metabolic control and not exercising may be risk factors for DFU. Total PAIS-SR score was 61.01 ± 21.42 (poor adjustment) in participants with DFU, and 43 ± 17.13 (moderate adjustment) in participants without DFU. Participants without DFU had fewer problems in the domain of health care orientation, vocational environment, sexual relationships, social environment and psychological distress than participants with DFU. In participants with DFU; poorer psychosocial adjustment was associated with poorer metabolic control, lower education status, not exercising and retirement. In participants without DFU, women had better psychosocial adjustment than men. Also, participants exercising had better psychosocial adjustment than participants not exercising.

Conclusion

The participants without DFU had adjusted better to their illness than participants with DFU. The nurse should evaluate and support the patient for psychosocial adjustment to diabetes to prevent chronic complication such as DFU.

INTRODUCTION

Diabetes is chronic disease; it has been estimated that the world wide prevalence of diabetes will double between 1990 and 2010 (Scott 2005 p.4). In 2003 the total world population with diabetes was estimated at 194 million. Type 2 diabetes constitutes about 85% to 95% of all diabetes cases in developed countries and accounts for an even higher percentage in developing countries (International Diabetes Federation 2007). The result of the Turkish Diabetes Epidemiology Study (TURDEP) indicated the crude prevalence of diabetes was 7.2% (previously undiagnosed = 2.3%) (Satman et al 2002).

People with type 2 diabetes often have established complications at time of diagnosis. In the United Kingdom Prospective Diabetes Study (UKPDS) for example, 36% of newly diagnosed patients had retinopathy, 12% neuropathy and 2% proteinuria at recruitment (Scott 2005 p.4). The late sequelae of diabetic peripheral neuropathy (cumulative lifetime incidence around 15%) are recognised to be foot ulceration and Charcot's neuropathy (Malik 2005 pp.105-107). Strict metabolic control has been shown to significantly reduce rates of diabetic complications (Diabetes Control and Complications Trial Research Group 1993). Metabolic control has been shown to be related to the level of psychosocial adjustment of the individual (Pollock et al 1990). A review of the literature suggests that demographic variables, duration of illness and lifestyle habits influence adjustment to a chronic illness such as diabetes. However because these studies are limited, new research is needed to investigate whether psychosocial adjustment to illness differs between patients with and without diabetic foot ulceration. The purpose of this study was to determine whether the psychosocial adjustment to illness differed between patients with and without diabetic foot ulceration.

THEORETICAL FRAMEWORK

In the UKPDS the risk of each of the microvascular and macrovascular complications of type 2 diabetes was strongly associated with hyperglycaemia, as measured by glycosylated haemoglobin (HbA1c).

There was no evidence of a threshold and there was a threefold increase over the range of <6% to ≥10%. HbA1c reflects recent glycaemic control (Scott 2005 p.18). For every percentage point decrease in HbA1c (ie from 9% to 8%) there was a 40% reduction in the risk of complications (UKPDS 1998). Diabetes management guidelines based on the UKPDS (1998) stress the need to achieve good blood glucose, lipid and blood pressure control with treatments linked targets. That is, achieving evidence based metabolic, blood pressure and weight targets. The development of new classes of blood glucose lowering medications to supplement the older therapies, such as lifestyle directed interventions, insulin, sulfonylureas, and metformin, has increased the treatment options for type 2 diabetes (Inzucchi 2002).

Good care, includes long term self care to control blood glucose levels, reduce the risk of complications and adverse medication related events, and early screening for end organ damage, can prevent severe complications in diabetes (Dunning and Manias 2005; UKPDS 1998). Glucose levels must be measured at home and treated with a combination of diet, exercise, and medication. Retinal screening, foot examination, and coordination of care with specialists are necessary, as are checking for early signs of renal, vascular, and neuropathic disease. In addition, screening and treatment for other cardiovascular risk factors such as hypertension, hyperlipidaemia, and tobacco use are important in patients with diabetes. Information and education for the patient is essential and care provided by a multidisciplinary team including physician, nurse, pharmacist, dietician, and health educator (Miller 1994). The diagnosis of chronic illness such as diabetes initiates a process of continuous appraisal and reappraisal through which the individual adjusts to the requirements and limitations imposed by the illness. Successful adjustment allows the individual to deal with illness related changes in ways that facilitate health (Michael 1996). Because research has shown a relationship between the individual's adjustment to diabetes and improved metabolic control, it is important to explore factors that may

affect adjustment to diabetes (Pollock et al 1990). For people with diabetes, better adjustment is associated with better metabolic control (Pollock et al 1990).

There is evidence that the Psychosocial Adjustment to Illness Scale score is significantly elevated relative to a normative diabetic sample. Sample populations with proliferative diabetic retinopathy report the most difficulty in the domain of health care orientation. No significant differences have been observed in adjustment scores between those with recent partial visual loss and those with more stable vision (Wulsin et al 1993). Stable psychosocial resources (ie education, being married, and a positive coping style) have been associated with better chronic glycaemic control, while stress and regimen non-adherence have been associated with reduced transient glycaemic control (Peyrot et al 1999). In relation to psychosocial adaptation, better marital satisfaction is related to higher levels of diabetes related satisfaction and a reduced impact of the disease, as well as less diabetes related distress (Trief et al 2001).

The most consistent predictor of metabolic control, dietary self management and diabetes related distress has been support and confidence in living with diabetes (Whittemore et al 2005). After adjustment for age, gender and diabetes type the best predictors for insulin dependent diabetics have been found to be hardiness and psychosocial adjustment, and for non-insulin dependent diabetics, psychosocial adjustment alone. Self efficacy and coping skills have not been found to predictors for metabolic control (Rapley 1990).

Up to 15% people with diabetes mellitus will develop foot ulceration at some time in their lives (Steed 1998). Four risk factors for foot ulcers have been identified: retinopathy, poor psychosocial status, hyperkeratosis, and diabetes duration (Leymarie et al 2005). Certain foot deformities, reduced skin oxygenation and foot perfusion, poor vision, greater body mass, and sensory and autonomic neuropathy independently influence foot ulcer risk (Boyko et al 1999). 100% oxygen for 90 minutes each day is

used as a treatment for patients with ischaemic, non-healing lower extremity ulcers and some patients will eventually require an amputation (Malik 2005 pp.105-107). This suffering might be reduced or prevented with good, consistent foot care, strict metabolic control and improved adjustment to illness. Mobility and hospitalisation are related to problems of coping with diabetic foot ulcer and psychosocial problems (eg job, partnership, and social support). Therefore, disease management programs for patients with type 1 and 2 diabetes should include psychosomatic and psychotherapeutic diagnostics (Lange et al 2003).

Metabolic control has been predicted by adaptation with monitoring of diabetes as the only significant aspect of the adaptation. In turn, adaptation has been predicted by symptoms of depression and metabolic control. In support of this observation, depressed and non-depressed groups have showed significant differences in metabolic control, adaptation and self esteem (Lernmark et al 1999). Randomised controlled intervention trials have shown that treatment with either cognitive behaviour therapy or antidepressant medication (nortriptyline or fluoxetine) can improve both regimen adherence and glycaemic control (Lutman et al 1998; Lutman et al 1999). A recent meta-analytic review of diabetes self management interventions indicated significant improvements in glycaemic control, as well as reductions in diabetes related hospitalisations and health care costs, particularly when interventions incorporated individually tailored strategies to change behaviour (Clement 1995). Interventions that increase patients' sense of empowerment and self management skills have resulted in improvements in self efficacy, self care behaviours, glycaemic control, patient satisfaction, and quality of life (Anderson et al 1995).

AIM OF THE STUDY

The purpose of this study was to determine whether psychosocial adjustment to illness differs for people with diabetes between those with or those without diabetic foot ulceration.

The three research questions were as follows: does psychosocial adjustment to illness differ between people with diabetes who have or have not diabetic foot ulceration? What are the relationships between psychosocial adjustment to illness and demographic factors, diabetes duration and habits? What is the relationship between psychosocial adjustment to illness and metabolic control?

METHODS

This study used a cross-sectional sample survey design. A purposive sampling technique was used to recruit people with diabetic foot ulceration from a marine undersea medicine unit and people with diabetes from an endocrinology outpatient clinic from a large metropolitan area in Turkey, between September 2005 and May 2006.

Sample and data collection procedures

Each day, approximately 20 people with diabetes attend the endocrinology outpatient clinic and 18 people with diabetic foot ulceration attend the marine undersea medicine unit. The researchers visited each clinic twice a week. 100 people with diabetes and 100 people receiving hyperbaric oxygen therapy for diabetic foot ulceration met the criteria and agreed to participate.

The participants were selected according to the following criteria:

- diagnosed with type 2 diabetes mellitus according to WHO criteria for at least one year and using insulin;
- over 18 years and below 65 years of age;
- free of any psychiatric disorders or cancer;
- able to read and write Turkish; and
- willing to participate.

This study protocol was approved by Marmara University Ethics Committee. Participants were informed about the aim and nature of the study. Data were collected through face to face interviews by the researchers in a private room of the outpatient clinic. Each interview took approximately 40 minutes. The response rate was 100%.

The questionnaire

Data were collected using a demographic data sheet and the Psychosocial Adjustment to Illness Scale-Self Report (PAIS-SR). The demographic data sheet consisted of information about participant's age, gender, education, marital and employment status, diabetes duration, HbA1c and lifestyle habits (monitoring blood glucose, exercising, smoking cigarettes and drinking alcohol).

The PAIS-SR was developed by Derogatis and Lopez (Derogatis and Derogatis 1990) and the validity and reliability of the Turkish version was tested by Adaylar (1995). PAIS-SR is used to gather information on patients' opinions about their own adjustment. PAIS-SR's 46 items consists of a multiple choice questionnaire which measures the impact of chronic illness in seven domains, including health care orientation, vocational environment, domestic environment, sexual relationships, extended family relationships, social environment, and psychological distress. All items were used from the original version PAIS-SR questionnaire. When summed over the individual domains, the total score reflects the individual's overall adjustment to illness. Each item is comprised of four statements given on a 4-point scale and scored from 0='no disturbance', to 3='marked disturbance'. PAIS-SR total score ranges from 0 to 138. Thus, lower scores indicate better adjustment while higher scores indicate worse adjustment. Reliability coefficients for the total PAIS-SR scale have been found to be 0.95, with subscale reliabilities ranging from 0.67 to 0.90 when reported among women with diabetes (Willoughby et al 2000). In the present study, the coefficient alpha for the total PAIS-SR scale was 0.92, with subscale reliabilities ranging from 0.80 to 0.95.

Data Analysis

Chi-square, Wilcoxon sum-rank, variance analysis and t-tests were used to determine differences between the two groups. Spearman's correlation analysis was used to examine relationships. Probability values less than 0.05 were considered statistically significant.

RESULTS

The study participants were 100 people with diabetic foot ulceration and 100 people without diabetic foot ulceration.

Demographic data and differences between two groups

The demographic characteristics of the studied population are summarised in table 1. There were no significant differences between the two groups for gender and marital status ($p>0.05$). Significant differences were found between the two groups

for age ($p=0.000$), education levels ($p=0.001$), employment status ($p=0.004$) and durations of diabetes ($p=0.000$). That is, participants with diabetic foot ulceration were older, had lower education levels, had diabetes for less than 10 years and were more likely to be retired than participants without diabetic foot ulceration. All participants were living with their family (partner, child or parents) and had social insurance. Thirty five percent of participants with diabetic foot ulceration had previous finger amputation.

Table 1: Demographic data, and differences between the two groups

Variables	DFU		Non-DFU		Total		p values
	n	%	n	%	N	%	
Gender							
Female	39	39.0	50	50.0	89	44.5	$\chi^2= 2.450$
Male	61	61.0	50	50.0	111	55.5	$p= 0.155$
Marital status							
Married	84	84.0	80	80.0	164	82.0	$\chi^2= 0.542$
Single	16	16.0	20	20.0	36	18.0	$p= 0.581$
Education							
Elementary school	73	73.0	58	58.0	131	65.5	$\chi^2= 17.443$ $**p= 0.001$
High school	24	24.0	22	22.0	46	23.0	
University	3	3.0	20	20.0	23	11.5	
Employment status							
Housewife	35	35.0	35	35.0	70	35.0	$\chi^2= 13.333$ $**p= 0.004$
Retired	56	56.0	40	40.0	96	48.0	
Worker	4	4.0	20	20.0	24	12.0	
Employer	5	5.0	5	5.0	10	5.0	
Smoking cigarettes							
Yes	13	13.0	26	26.0	39	19.5	$\chi^2= 5.383$
No	87	87.0	74	74.0	161	80.5	$*p= 0.031$
Drinking alcohol							
Yes	3	3.0	8	8.0	11	5.5	$\chi^2= 2.405$
No	97	97.0	92	92.0	189	94.5	$p= 0.213$
Monitoring blood glucose							
Yes	65	65.0	62	62.0	127	63.5	$\chi^2= 0.456$ $p= 0.796$
No	31	31.0	35	35.0	66	33.0	
Don't know	4	4.0	3	3.0	7	3.5	
Exercising							
Yes	17	17.0	34	34.0	51	25.5	$\chi^2= 7.606$
No	83	83.0	66	66.0	149	74.5	$**p= 0.009$
Duration of diabetes							
1-10 years	35	35.0	74	74.0	109	109.0	$\chi^2=31.003$ $***p=0.000$
11-20 years	43	43.0	19	19.0	62	62.0	
21+ years	22	22.0	7	7.0	29	29.0	
Age (year)	Mean $\pm$ SD		Mean $\pm$ SD		200 100.0		$t= 3.978$ $**p= 0.003$
	61.84 $\pm$ 9.34		55.22 $\pm$ 3.77				
HbA1c (%)	8.65 $\pm$ 1.98		8.18 $\pm$ 1.57		200 100.0		$T=51.928$ $***p=0.000$

Note: DFU=patients with diabetic foot ulceration, Non-DFU= patients without diabetic foot ulceration, $*p< 0.05$, $**p< 0.01$ and $***p<0.001$

Findings with regard to lifestyle habits are reported in table 1. A significant difference was found between the two groups in relation to smoking ($p < 0.05$), indicating there were more people who smoked without diabetic foot ulceration than there were people who smoked with diabetic foot ulceration. No significant differences were observed in relation

to drinking alcohol and monitoring blood glucose ($p > 0.05$). A significant difference was observed between the two groups in relation to exercising ($p = 0.009$) and HbA1c levels ($p = 0.000$). That is, fewer participants with diabetic foot ulceration exercised and had poorer metabolic control than the participants without diabetic foot ulceration.

Table 2: Psychosocial Adjustment to Illness Scale-Self Report (PAIS-SR) scores and differences between the two groups

PAIS-SR	DFU Mean $\pm$ SD	Non-DFU Mean $\pm$ SD	p values
Total PAIS-SR	61.01 $\pm$ 21.42	43.12 $\pm$ 17.13	t=6.012 ***p= 0.000
Health care orientation	8.64 $\pm$ 4.58	5.43 $\pm$ 4.14	t=5.076 ***p= 0.000
Vocational environment	9.81 $\pm$ 4.03	6.14 $\pm$ 3.98	t= 6.567 ***p= 0.000
Domestic environment	9.58 $\pm$ 4.71	8.66 $\pm$ 4.83	t= 1.282 p= 0.203
Sexual relationships	11.64 $\pm$ 4.88	8.37 $\pm$ 6.22	t= 3.915 ***p= 0.000
Extended family relationships	3.31 $\pm$ 2.96	3.09 $\pm$ 3.42	t= 0.495 p= 0.622
Social environment	10.52 $\pm$ 4.57	5.73 $\pm$ 2.99	t= 8.263 *p= 0.000
Psychological distress	7.34 $\pm$ 4.17	5.73 $\pm$ 3.00	t= 3.066 **p= 0.003

Note: DFU=patients with diabetic foot ulceration, Non-DFU= patients without diabetic foot ulceration, **p< 0.01 and ***p< 0.001

Research question

Question 1: Does psychosocial adjustment to illness differ between people with diabetes who have or who do not have diabetic foot ulceration?

A significant difference was observed in total PAIS-SR scores (lower scores denote better adjustment) between the two groups ($p = 0.000$) indicating that participants without diabetic foot ulceration had better psychosocial adjustment to their illness than participants with diabetic foot ulceration. Psychosocial adjustment to illness domains namely domestic environment and extended family relationships were no different between the two groups ($p > 0.05$), but health care orientation ($p = 0.000$), vocational environment ($p = 0.000$), sexual relationships ($p = 0.000$), social environment ($p = 0.000$) and psychological distress ($p = 0.003$) showed differences between the two groups. That is, participants without diabetic foot ulceration had

fewer problems in these five domains than participants with diabetic foot ulceration (table 2).

Question 2: What are the relationships between psychosocial adjustment to illness and demographic data, diabetes duration and habits?

In participants with diabetic foot ulceration, no significant relationships were observed between total PAIS-SR score and age ($r = 0.185$, $p = 0.065$), gender ($Z = 0.688$, $p = 0.491$), marital status ($Z = 1.199$, $p = 0.231$), diabetes duration ($F = 4.758$, $p = 0.093$) monitoring blood glucose ($F = 3.060$, $p = 0.217$), smoking cigarettes ($Z = 1.528$, $p = 0.127$) and drinking alcohol ($Z = 0.758$, $p = 0.449$), but significant relationships were observed between total PAIS-SR score and education levels ($F = 15.975$, $p = 0.001$), employment status ($F = 15.473$, $p = 0.001$) and exercising ($Z = 2.882$, $p = 0.004$). That is, psychosocial adjustment to illness was not affected by age, gender,

marital status, diabetes duration, monitoring blood glucose, smoking cigarettes and drinking alcohol, but it was affected by education levels, employment status and exercising. Lower education status and retirement were associated with more problems in psychosocial adjustment to illness. On the other hand, participants who exercised had better psychosocial adjustment than participants who did not exercise.

For participants without diabetic foot ulceration, no significant relationships were observed between total PAIS-SR score and age ($r=0.128$, $p=0.206$), marital status ($Z=1.155$, $p=0.248$), education levels ($F=5.491$, $p=0.139$), employment status ($F=5.470$, $p=0.140$), diabetes duration ($F=0.772$, $p=0.680$), monitoring blood glucose ($F=1.813$, $p=0.404$), smoking cigarettes ($Z=1.879$, $p=0.060$) and drinking alcohol ($Z=0.159$, $p=0.874$), but significant relationships were found between total PAIS-SR score and gender ($Z=2.232$, $p=0.026$) and exercising ($Z=2.770$, $p=0.006$). That is, women had better psychosocial adjustment than men. Also, participants who exercised had better psychosocial adjustment than participants who did not exercise.

Question 3: What is the relationship between psychosocial adjustment to illness and metabolic control?

A significant positive correlation was found between total PAIS-SR scores and HbA1c levels in participants with diabetic foot ulceration ($r=0.208$, $p=0.038$) indicating that poorer psychosocial adjustment to illness was associated with poorer metabolic control in participants with diabetic foot ulceration. Adversely, there was no significant correlation between total PAIS-SR scores and HbA1c levels in participants without diabetic foot ulceration ($r=0.048$, $p=0.635$). According to this finding, the psychosocial adjustment to illness did not affect the metabolic control of participants without diabetic foot ulceration.

LIMITATIONS

The results of this study may not be generalised outside the study participants because of the small sample size.

DISCUSSION

The demographic characteristics of the sample were similar to other studies undertaken in similar sampling populations (Willoughby et al 2000, Trief et al 2001).

Compared to participants without diabetic foot ulceration, participants with diabetic foot ulceration had poorer metabolic control, advanced age, lower education levels and longer diabetes duration. Additionally, many were retired and did not exercise. According to these data, poor metabolic control, advanced age, low education levels, long diabetes duration and not exercising may be risk factors for diabetic foot ulceration. Leymarie et al (2005) observed that diabetes duration was a risk factor for foot ulceration. Boyko et al (1999) found that unrelated to foot ulcer risk in multivariate models were diabetes duration, smoking status, and joint mobility. Research supports the concept that physical activity increases insulin sensitivity, improves glycogen storage, and allows for more efficient use of glucose in muscles (Duncan et al 2003). This research concluded that diabetic foot ulceration may force people with diabetes to quit their job and stop smoking cigarettes. Smoking is an independent risk factor for macrovascular disease and in the MRFIT study increased the 10-year risk of dying from coronary heart disease by 1.6 times in non-diabetics and by 2.4 times in those with diabetes. Analysis of the MRFIT data suggests that stopping smoking was one of the most effective interventions in reducing mortality from macrovascular disease (Scott 2005 pp.13-22).

When a diagnosis of chronic illness is first made, a period of adjustment is initiated (Pollock 1993). Successful adjustment allows individuals to deal with a chronic illness in ways which enhance health. This research found that participants with diabetic foot ulceration had poorer adjustment to their illness, whereas participants without diabetic foot ulceration had moderate adjustment to their illness. That is, participants without diabetic foot ulceration had better adjustment to their illness than participants with diabetic foot ulceration. Willoughby et al (2000)

found that women with diabetes were well adjusted to their illness (mean total PAIS-SR was 30 ± 21). Wulsin et al (1993) found that the PAIS-SR scores of a sample of people with proliferative diabetic retinopathy were significantly elevated relative to a normative diabetic sample.

Moderate psychosocial adjustment was found in patients with acute myocardial infarction (Drory et al 1999) and moderate (Courts 2000; Zimmermann et al 2001) and fairly well psychosocial adjustment (Tanyi and Werner 2003) in patients on haemodialysis. The total PAIS-SR score was 51.46 ± 9.97 in patients with breast cancer (Swain et al 1996). According to these findings, patients with diabetic foot ulceration have poorer psychosocial adjustment than patients with other chronic illnesses.

In this study we found that participants with diabetic foot ulceration had most adjustment problems with respect to sexual relationships, social environment, vocational environment, domestic environment and health care orientation; while participants without diabetic foot ulceration had most adjustment problems with respect to domestic environment and sexual relationships. When the two groups were compared, participants without diabetic foot ulceration had fewer problems in the domain of health care orientation, vocational environment, sexual relationships, social environment and psychological distress than participants with diabetic foot ulceration. Willoughby et al (2000) found that women with diabetes had most adjustment problems with respect to psychological distress, social domains and health care domain. Domains with the least problems were the extended family, sexual relationships and vocational environment (Willoughby et al 2000). These findings are not supported by the present study.

This study observed that participants with diabetic foot ulceration who have poorer metabolic control, lower education status and are retired had the most problems in psychosocial adjustment to illness. Also, all participants who were exercising had better psychosocial adjustment than participants not exercising. On the other hand, women with diabetes

had better psychosocial adjustment to illness than men with diabetes. Pollock et al (1990) reported that for people with diabetes, better adjustment is associated with better metabolic control. Whittemore et al (2005) showed that support and confidence in living with diabetes was the most consistent factor associated with metabolic control, dietary self management and psychosocial adjustment. There is a lack of research addressing the relationship between diabetic foot ulcers and psychosocial adjustment to illness, but four risk factors for foot ulcers have been identified: retinopathy, poor psychosocial status, hyperkeratosis, and diabetes duration (Leymarie et al 2005). In this study, the patients with diabetic foot ulceration had longer diabetes duration, older age, lower education status, worse metabolic control and lower psychosocial adjustment than the patients without diabetic foot ulceration. Lower psychosocial adjustment to illness is associated worse metabolic control in patients with diabetic foot ulceration; but this result does not indicate whether lower psychosocial adjustment comes before the development of the diabetic foot ulceration or is a reaction to the development of the diabetic foot ulceration. This study design was a cross-sectional design, therefore causality could not be determined. Finally, this study showed a relationship between psychosocial adjustment to diabetes and metabolic control in patients with diabetic foot ulceration.

CONCLUSIONS AND IMPLICATIONS FOR NURSING PRACTICE

This study showed that advanced age, low education levels, long diabetes duration, poor metabolic control and not exercising are associated with diabetic foot ulceration. This study suggests that participants without diabetic foot ulceration are better adjusted to their illness than participants with diabetic foot ulceration. The nurse should evaluate and support the patient for psychosocial adjustment to diabetes to prevent chronic complication such as DFU.

Research is needed to identify ways to increase psychosocial adjustment and understand how

psychosocial adjustment to diabetes effects metabolic control. The findings of this study suggest that further research is needed to understand the differences in psychosocial adjustment between people with and without diabetic foot ulceration.

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Turkish nurses' concerns about home health care in Turkey

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KEY WORDS

Home health care, nurses, Turkish health system

ABSTRACT

Objective

The purpose of this study was to explore nurses' concerns regarding the introduction of home health care in Turkey.

Design

The study was a descriptive research design using a self administered questionnaire.

Setting

The setting was a 400 bed general public hospital in Ankara, Turkey.

Subjects

243 staff nurses were invited to participate in the study with 187 nurses returning the self administered questionnaire (response rate 76.95%).

Main outcome measure: The main outcome measure was the level of support by participating nurses for the delivery of home care in the Turkish health system as a way of cost effective health service provision.

Results

The results show that about 60% of the participating nurses supported the introduction of home health services in Turkey.

Conclusions

The results of the study can be used to support the introduction by health policy makers and health professionals of home care as an alternative delivery system in the Turkish health sector.

INTRODUCTION

During the last two decades, health care systems around the world have undergone profound change, driven by a complexity of economic and political factors. One of the outcomes of these changes has been the shift of consumers from traditional inpatient facilities to a range of community-based treatment options (Kim et al 2006; Kisa and Ersoy 2005; Celik et al 2001). Individuals with chronic and acute illnesses are receiving treatment in these alternative settings which may include outpatient surgery facilities, local nursing programs, home health care programs and other facilities that are being developed to meet the health care needs of people in cost-effective ways (Pare et al 2006; Jester and Hicks 2003).

Four trends have been reported as influencing factors for health care provision in general and home health care in particular. These trends are (a) the driving force of economics and the resultant pressure to reduce the enormous cost of health care systems, (b) the movement of health care delivery away from acute care into the community, (c) the rapid growth of 'managed care' systems that manage the provision of health care with the aim of controlling costs, and (d) the increasing share of older people in populations (Kim et al 2006; Hartung 2005; Berkhout et al 2004; Huston and Fox 1998; Cochran and Brennan 1998;).

Home health care is a labour intensive industry that relies on nursing personnel as a major resource in the provision of services. Assuring access to quality home health care services depends on an organisation's ability to retain qualified nursing staff. Predicted severe nursing shortages and an increasing demand for home health care have made the retention of experienced, qualified nursing staff a priority for health care organisations (Ellenbecker 2004).

Home health care and community health nursing are rapidly developing career alternatives for nurses who are moving out of hospital-based roles which have a traditional focus on acute, episodic care (Berkhout et al 2004). As a specialty, home care nursing is defined as a component of comprehensive

health care where health services are provided to individuals and families in their places of residence for the purpose of promoting, maintaining, or restoring health (Kisa and Ersoy 2005; Ellenbecker 2004). Home health care nursing presents a challenge to nurses who must incorporate new technology, increasing patient acuity, and complex, multidimensional patient needs into their practice.

Patient-oriented care models are increasingly seen as effective in improving the quality of nurses' work (Kim et al 2006; Cho 2005; Kisa and Ersoy 2005; Ellenbecker 2004). Patient oriented care is defined as care that takes the individual patient as the focus by means of systematic and comprehensive nursing care, coordinated by a continuously responsible nursing caregiver.

In the last few years health policymakers in many countries, including Turkey, have passed a number of health care reform plans which aim to increase efficiency, effectiveness, transparency and quality in health care services in order to reduce the costs of health care provision (Teke et al 2004; Tengilimoglu et al 2004; Kisa et al 2002; Kisa 2001). The general strategy includes a shift of focus from hospital to home. Studies indicate that home care can benefit from developments in health care (Boling 2005; Bradley 2003; Estaugh 2001; Congdon and Magilvy 1998; Freeman and Chambers 1997; Dahlberg and Koloroutis 1994). Moreover, home care can take a central role in the process of change in health care systems, particularly in the area of coordination and cooperation within multidisciplinary teams (Branick et al 2002). Home health care is a labour intensive industry that relies on nursing personnel as a major resource in the production of services. Thus, in countries like Turkey, it is important to understand how nurses view home health care. The purpose of this study was to explore nurses' concerns regarding the introduction and suitability of home health care in Turkey.

Home health care

Home care is an important player in the health care arena because of its potential for cost savings. Home care is a combination of several different kinds of

services (for example, catheter care, administration of injections, medication reminders, oxygen therapy, nutritional evaluation and other health and lifestyle information, advice and support) that can be vital to patients (Cho 2005; Hoyer et al 1997; Freeman and Chambers 1997). Since the 1990s, home based health care has been one of the most rapidly growing areas in the health care sector in the United States of America and other western countries (Kisa and Ersoy 2005; Madigan 1997). Market forces and the development of government policies to control cost increases in the health sector have driven this development.

In Turkey, home health care services cover a broad range and can include pharmacy services, skilled professional and paraprofessional services, custodial care, and medical equipment delivered to and maintained in the home (Kisa and Ersoy 2005). In order to be covered by health insurance, most services must be ordered by a physician and must be medically necessary to maintain or improve the person's health.

Home care serves a number of functions for acute, continuing, preventive and palliative care; each of these functions necessitates a different provider mix, level of care and need for health management in the home (Kisa and Ersoy 2005; Bradley 2003; Congdon and Magilvy 1998). For example:

- Acute care: facilitates early discharge or prevents admission to hospital or other costly facilities.
- Continuing care or long term care: allows individuals to remain in their current environment in the community as long as possible.
- Preventive care: prevents occurrence of injuries, illnesses, chronic conditions and their resulting disabilities.
- Palliative care: offers total care to a person and supports caregiver(s) to improve the person's quality of life.

Home care services are generally defined in terms of two broad categories: health services and home support services. Health services are those ordered on the patient's behalf by a physician and comprise

medical, nursing and rehabilitation services. These can include infusion therapy, monitored chemotherapy, physical therapy, occupational therapy, social work and counselling. Home support services are designed to complement health services and include personal care, meal preparation, housekeeping, transportation, and other assistance with activities of daily living (Kisa and Ersoy 2005; Bradley 2003).

Health services delivery in Turkey

The Turkish health care system is financed by taxes, insurance premiums and out-of-pocket payments which are a combination of national health insurance and private health insurance. The health insurance cover provided by social security is comprehensive. The private sector is small but growing rapidly and complements rather than competes with the state system. The country has three main social security organisations which are public institutions: the Government Employees Retirement Fund (GERF) which provides pensions for civil servants, the Social Insurance Organisation (SIO) for blue-collar workers and Bag-Kur for people who are self-employed. These are also the public providers of the health care system (Kisa and Ersoy 2005).

Health services in Turkey are for the most part nationally funded and are delivered mainly at public facilities. These include hospitals and clinics run by the Ministry of Health (MoH), by other government agencies, or by the universities. There are also private hospitals and clinics, but as these are expensive, only people who are wealthy generally access them. The present fragmented landscape of providers is a difficult setting in which to coordinate and deliver health services (Kisa et al 2002; Kisa 2001).

The nationalised health care system in Turkey does not provide extensive care for older people or people who have a disability or who are terminally ill. Family caregivers usually meet these needs. Home care services are provided by private companies, but are limited in terms of quantity, are expensive, and are not covered by government health insurance. The government health care system has no home health care program or hospice program. For example,

many of the pain-relieving drugs used for terminally ill patients require special prescriptions and this limits their use in home care. Additionally, health professionals are not organised or trained to provide home health care (Kisa and Ersoy 2005).

Consequently, home health care services are limited to small private enterprises and are financed by private insurance and out-of-pocket payments. These services often amount to home visits by physicians and nurses through agreements with private hospitals. Home health services are generally limited to the larger cities like Istanbul and Ankara. Services mostly focus on maternal and child health or basic issues such as medications, injections and blood pressure measurement.

METHODOLOGY

To gain insight into the concerns of nurses about the provision of home health care in Turkey, a self-administered questionnaire was distributed to 243 staff nurses at a public hospital in Turkey. The total number of respondents was 187 (response rate = 76.95%). Questions regarding home health care were taken from Hoyer et al (1997). Questions were translated into Turkish and were pilot tested for clarity with a group of 15 nurses. Modifications that were felt to be necessary were incorporated in the final version of the questionnaire. The questionnaire had a total of 28 questions and was divided into two parts. The first eight questions addressed the demographic characteristics of the respondents and the remaining 20 questions were related to the provision of home health care.

A five-point Likert scale was used in the design of the questions; and the multiple choice responses for each question ranged from 'completely disagree' (1 point) to 'completely agree' (5 points). Results were evaluated statistically using SPSS for Windows, Version 12. A limitation of the study is that generalisability of the results may be affected by the fact that all participants worked at the same hospital.

RESULTS

As can be seen in table 1, over half the respondents (56.6 %) were less than 35 years old; 67.9 % (n=127); were married (mean age = 34.13 years, SD = $\pm$ 8.69); and 60.4 % (n=113) had been working as a nurse less than twelve years (mean = 11.94 years, SD = $\pm$ 8.63 years). The majority of respondents worked in inpatient clinics (74.3 %, n=139) and were vocational school graduates (38.5%, n=72); 52.9% worked in surgical medicine nursing areas (n=99); with 47.1 % (n=88) working in internal medicine nursing.

Summary of findings

Tables 2 and 3 show the participants' concerns about home care overall, by type of specialty, type of education, and years of work experience. Only significant results are given below.

Table 1: Demographic characteristics of participating nurses

	n	%
Age		
20-24 years old	15	8.0
25-29 years old	58	31.0
30-34 years old	33	17.6
35-39 years old	36	19.3
40-44 years old	14	7.5
45 + years old or more	31	16.6
Marital Status		
Married	127	67.9
Single	46	24.6
Divorced	11	5.9
Separated	3	1.6
Type of specialty		
Internal Medicine Nursing	88	47.1
Surgical Medicine Nursing	99	52.9
Years worked as a nurse		
1-5 years	57	30.5
6-10 years	42	22.5
11-15 years	37	19.8
16-20 years	20	10.7
21+ years or more	31	16.6
Education		
Associate BS Degree	46	24.6
BS Degree	69	36.9
Vocational School	72	38.5
Type of facility		
Outpatient	48	25.7
Inpatient	139	74.3

The participants' completed questionnaires were gathered into two groups. Internal medicine nurses formed the first group, with surgical medicine nurses comprising the second group. The two groups' questionnaire responses were compared and the following results were obtained:

- *'Home care serves to keep the elderly independent'*: internal medicine nurses agreed more strongly with this statement (mean = 3.78, SD = ± 0.88) than did surgical medicine nurses (mean = 3.53, SD = ± 1.09). This difference was significant ($t = 1.74$, $p < 0.10$).
- *'Home care allows a maximum amount of freedom for the individual'*: internal medicine nurses agreed more strongly with this statement (mean = 3.87, SD = ± 0.90) than did surgical medicine nurses (mean = 3.61, SD = ± 1.03). This difference was significant ($t = 1.86$, $p < 0.10$).
- *'There is little fraud and abuse associated with home care'*: surgical medicine nurses (mean = 3.48, SD = ± 1.28) agreed more strongly with this statement than did internal medicine nurses (mean = 3.48, SD = ± 1.28). This difference was significant ($t = -1.91$, $p < 0.10$).
- *'Home care is less expensive than other forms of care'*: surgical medicine nurses (mean = 3.78, SD = ± 1.03) agreed more strongly with this statement than did internal medicine nurses (mean = 3.78, SD = ± 1.03). This difference was significant ($t = -2.15$, $p < 0.05$).
- *'Home care is the preferred form of care even for individuals who are terminally ill'*: internal medicine nurses agreed more strongly with this statement (mean = 4.09, SD = ± 0.69) than did surgical medicine nurses (mean = 3.84, SD = ± 0.98). This difference was significant ($t = 2.04$, $p < 0.05$).

The education levels of participants were separated into two groups. The first group comprised college graduates (Bachelor of Science and Associate Bachelor of Science degrees) and the second group comprised vocational school graduates. The two

groups' questionnaire responses were compared and the following results were obtained.

- *'Medical care can be safely delivered at home'*: college graduate nurses agreed more strongly with this statement (mean = 3.16, SD = ± 0.85) than did vocational school graduate nurses (mean = 2.78, SD = ± 1.02). This difference was significant ($t = 2.75$, $p < 0.05$).
- *'Home care represents the best traditions in Turkish health care'*: college graduate nurses agreed more strongly with this statement (mean = 3.42, SD = ± 1.04) than did vocational school graduate nurses (mean = 2.75, SD = ± 1.11). This difference was significant ($t = 4.18$, $p < 0.05$).
- *'Home care keeps families together'*: college graduate nurses agreed more strongly with this statement (mean = 3.70, SD = ± 0.94) than did vocational school graduate nurses (mean = 3.29, SD = ± 0.95). This difference was significant ($t = 2.85$, $p < 0.05$).
- *'Home care serves to keep the elderly independent'*: college graduate nurses agreed more strongly with this statement (mean = 3.83, SD = ± 0.91) than did vocational school graduate nurses (mean = 3.35, SD = ± 1.08). This difference was significant ($t = 3.24$, $p < 0.05$).
- *'Home care prevents or postpones institutionalisation'*: college graduate nurses agreed more strongly with this statement (mean = 3.87, SD = ± 0.90) than did vocational school graduate nurses (mean = 3.19, SD = ± 1.12). This difference was significant ($t = 4.52$, $p < 0.05$).
- *'Home care is safe'*: college graduate nurses agreed more strongly with this statement (mean = 3.62, SD = ± 1.03) than did vocational school graduate nurses (mean = 3.29, SD = ± 1.12). This difference was significant ($t = 2.07$, $p < 0.05$).
- *'Home care allows a maximum amount of freedom for the individual'*: college graduate nurses agreed more strongly with this statement (mean = 3.83, SD = ± 0.88) than did vocational

school graduate nurses (mean = 3.57, SD = $\pm$ 1.09). This difference was significant ($t = 1.78$, $p < 0.10$).

- *'Home care is personalised care'*: college graduate nurses agreed more strongly with this statement (mean = 4.06, SD = $\pm$ 0.77) than did vocational school graduate nurses (mean = 3.58, SD = $\pm$ 1.03). This difference was significant ($t = 3.61$, $p < 0.05$).
- *'Home care involves the individual and family in the care that is delivered'*: college graduate nurses agreed more strongly with this statement (mean = 3.91, SD = $\pm$ 0.92) than did vocational school graduate nurses (mean = 3.56, SD = $\pm$

1.01). This difference was significant ($t = 2.42$, $p < 0.05$).

- *'Home care reduces stress'*: college graduate nurses agreed more strongly with this statement (mean = 3.82, SD = $\pm$ 0.94) than did vocational school graduate nurses (mean = 3.17, SD = $\pm$ 1.13). This difference was significant ($t = 4.25$, $p < 0.05$).
- *'Home care is the most effective form of health care'*: college graduate nurses agreed more strongly with this statement (mean = 3.72, SD = $\pm$ 0.91) than did vocational school graduate nurses (mean = 3.28, SD = $\pm$ 1.14). This difference was significant ($t = 2.92$, $p < 0.05$).

Table 2: Nurses' concerns about home care and its applicability

	Completely disagree		Disagree		Not sure		Agree		Completely agree		Overall	
	n	%	n	%	n	%	n	%	n	%	Mean	SD
Medical care can be safely delivered at home	13	7	33	17.7	87	46.8	45	24.2	8	4.3	3.01	0.94
Home care represents the best traditions in Turkish health care	15	8.1	43	23.1	39	21	75	40.3	14	7.5	3.16	1.11
Home care keeps families together	5	2.7	23	12.6	44	24	88	48.1	23	12.6	3.55	0.96
Home care serves to keep the elderly independent	8	4.3	19	10.3	31	16.8	98	53.3	28	15.2	3.65	1
Home care prevents or postpones institutionalisation	8	4.3	25	13.4	28	15.1	96	51.6	29	15.6	3.61	1.04
Home care promotes healing	13	7	19	10.2	48	25.8	71	38.2	35	18.8	3.52	1.12
Home care is safe	10	5.4	23	12.4	48	25.8	75	40.3	30	16.1	3.49	1.07
Home care allows a maximum amount of freedom for the individual	2	1.1	24	13	34	18.5	85	46.2	39	21.2	3.73	0.97
Home care is personalised care	3	1.6	12	6.5	35	18.8	91	48.9	45	24.2	3.88	0.91
Home care involves the individual and family in the care that is delivered	7	3.8	12	6.5	34	18.3	95	51.1	38	20.4	3.78	0.97
Home care reduces stress	10	5.4	22	11.8	36	19.4	89	47.8	29	15.6	3.56	1.06
Home care is the most effective form of health care	8	4.3	20	10.8	50	26.9	78	41.9	30	16.1	3.55	1.02
Home care is the most efficient form of health care	13	7	32	17.2	36	19.4	79	42.5	26	14	3.39	1.14
Home care is given by special people	13	7	14	7.5	24	12.9	92	49.5	43	23.1	3.74	1.11
Home care is the only way to reach some people	4	2.2	19	10.2	46	24.7	85	45.7	32	17.2	3.66	0.95
There is little fraud and abuse associated with home care	14	7.5	47	25.1	28	15	61	32.6	37	19.8	3.32	1.25
Home care improves the quality of life	3	1.6	22	12.1	35	19.2	91	50	31	17	3.69	0.95
Home care is less expensive than other forms of care	6	3.3	22	12	49	26.6	66	35.9	41	22.3	3.62	1.06
Home care extends life	18	9.7	22	11.8	42	22.6	80	43	24	12.9	3.38	1.15
Home care is the preferred form of care even for individuals who are terminally ill	0	0	15	8.2	27	14.7	93	50.5	49	26.6	3.96	0.86

Table 3: Nurses' concerns about home care and its applicability, by type of speciality and position

	1		2		3		4		5		6	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Medical care can be safely delivered at home	3.02	0.95	3	0.93	2.78	1.02	3.16	0.85	3.08	0.88	2.91	1.01
Home care represents the best traditions in Turkish health care	3.08	1.07	3.23	1.15	2.75	1.11	3.42	1.04	3.28	1.06	2.99	1.18
Home care keeps families together	3.65	0.92	3.46	0.98	3.29	0.95	3.7	0.94	3.58	0.93	3.51	1
Home care serves to keep the elderly independent	3.78	0.88	3.53	1.09	3.35	1.08	3.83	0.91	3.7	0.99	3.57	1.02
Home care prevents or postpones institutionalisation	3.69	1.03	3.54	1.05	3.19	1.12	3.87	0.9	3.58	1.1	3.65	0.94
Home care promotes healing	3.41	1.22	3.61	1.03	3.36	1.21	3.61	1.05	3.5	1.1	3.54	1.16
Home care is safe	3.45	1.13	3.54	1.02	3.29	1.12	3.62	1.03	3.54	1.06	3.42	1.09
Home care allows a maximum amount of freedom for the individual	3.87	0.9	3.61	1.03	3.57	1.1	3.83	0.88	3.69	0.96	3.8	0.99
Home care is personalised care	3.9	0.9	3.86	0.91	3.58	1.03	4.06	0.77	3.94	0.89	3.78	0.93
Home care involves the individual and family in the care that is delivered	3.82	0.82	3.74	1.09	3.56	1.01	3.91	0.92	3.79	0.89	3.77	1.08
Home care reduces stress	3.6	1.07	3.54	1.05	3.17	1.13	3.82	0.94	3.65	0.97	3.43	1.17
Home care is the most effective form of health care	3.59	0.93	3.52	1.1	3.28	1.14	3.72	0.91	3.54	0.96	3.55	1.12
Home care is the most efficient form of health care	3.46	1.08	3.33	1.19	3.06	1.24	3.61	1.01	3.51	1.06	3.22	1.23
Home care is given by special people	3.72	1.09	3.76	1.13	3.47	1.28	3.91	0.96	3.86	0.96	3.57	1.29
Home care is the only way to reach some people	3.63	0.88	3.68	1.02	3.44	1.11	3.79	0.81	3.68	0.98	3.62	0.92
There is little fraud and abuse associated with home care	3.14	1.21	3.48	1.28	3.01	1.28	3.51	1.2	3.22	1.26	3.47	1.24
Home care improves the quality of life	3.65	0.92	3.72	0.98	3.33	1.1	3.91	0.77	3.74	0.9	3.6	1.02
Home care is less expensive than other forms of care	3.44	1.07	3.78	1.03	3.37	1.02	3.78	1.06	3.58	1.05	3.68	1.09
Home care extends life	3.45	1.12	3.31	1.17	3.18	1.14	3.5	1.14	3.4	1.15	3.34	1.15
Home care is the preferred form of care, even for individuals who are terminally ill	4.09	0.69	3.84	0.98	3.77	0.93	4.07	0.8	3.99	0.8	3.9	0.95

1 = Internal Medicine Nursing Specialities; 2=Surgical Medicine Nursing Specialities; 3 = Vocational School Graduates; 4 = College Graduates; 5=Work Experience ≤ 12 years; 6=Work Experience > 12 years

- '*Home care is the most efficient form of health care*': college graduate nurses agreed more strongly with this statement (mean = 3.61, SD = ± 1.01) than did vocational school graduate nurses (mean = 3.06, SD = ± 1.24). This difference was significant (t = 3.30, p < 0.05).
- '*Home care is given by special people*': college graduate nurses agreed more strongly with this statement (mean = 3.91, SD = ± 0.96) than did vocational school graduate nurses (mean = 3.47, SD = ± 1.28). This difference was significant (t = 2.68, p < 0.05).
- '*Home care is the only way to reach some people*': college graduate nurses agreed more strongly with this statement (mean = 3.79, SD = ± 0.81) than did vocational school graduate nurses (mean = 3.44, SD = ± 1.11). This difference was significant (t = 2.44, p < 0.05).
- '*There is little fraud and abuse associated with home care*': college graduate nurses agreed

more strongly with this statement (mean = 3.51, SD = $\pm$ 1.20) than did vocational school graduate nurses (mean = 3.01, SD = $\pm$ 1.28). This difference was significant ($t = 2.69$, $p < 0.05$).

- *'Home care improves the quality of life'*: college graduate nurses agreed more strongly with this statement (mean = 3.91, SD = $\pm$ 0.77) than did vocational school graduate nurses (mean = 3.33, SD = $\pm$ 1.10). This difference was significant ($t = 4.21$, $p < 0.05$).
- *'Home care is less expensive than other forms of care'*: college graduate nurses agreed more strongly with this statement (mean = 3.78, SD = $\pm$ 1.06) than did vocational school graduate nurses (mean = 3.37, SD = $\pm$ 1.02). This difference was significant ($t = 2.61$, $p < 0.05$).
- *'Home care extends life'*: college graduate nurses agreed more strongly with this statement (mean = 3.50, SD = $\pm$ 1.14) than did vocational school graduate nurses (mean = 3.18, SD = $\pm$ 1.14). This difference was significant ($t = 1.86$, $p < 0.10$).
- *'Home care is the preferred form of care even for individuals who are terminally ill'*: college graduate nurses agreed more strongly with this statement (mean = 4.07, SD = $\pm$ 0.80) than did vocational school graduate nurses (mean = 3.77, SD = $\pm$ 0.93). This difference was significant ($t = 2.30$, $p < 0.05$).

The mean working years of the participants as a nurse were 11.94 years (SD = $\pm$ 8.63 years). The participants were divided into two groups. The first group comprised nurses who had worked 12 years or less and the second group comprised nurses who had worked more than twelve years as nurse. The two groups' questionnaire responses were compared and the following results were obtained.

- *'Home care represents the best traditions in Turkish health care'*: nurses who had worked twelve years or less agreed more strongly with this statement (mean = 3.28, SD = $\pm$ 1.06) than did nurses who had worked more than twelve

years (mean = 2.99, SD = $\pm$ 1.18). This difference was significant ($t = 1.75$, $p < 0.10$).

- *'Home care is the most efficient form of health care'*: nurses who had worked twelve years or less agreed more strongly with this statement (mean = 3.51, SD = $\pm$ 1.06) than did nurses who had worked more than twelve years (mean = 3.22, SD = $\pm$ 1.23). This difference was significant ($t = 1.73$, $p < 0.10$).
- *'Home care is given by special people'*: nurses who had worked twelve years or less agreed more strongly with this statement (mean = 3.86, SD = $\pm$ 0.96) than did nurses who had worked more than twelve years (mean = 3.57, SD = $\pm$ 1.29). This difference was significant ($t = 1.75$, $p < 0.10$).

DISCUSSION

Treating patients with acute medical conditions in their homes is an increasingly common model for the delivery of health care in the developed world. The availability of home care has been portrayed as a desirable option. Such a choice has been made possible by the rapid development of scientific knowledge, the enhanced safety and portability of new high-technology equipment and by the improved housing conditions of much of the developed world.

Nurses play a pivotal role in the provision of acute home health care programs and, like their medical colleagues, many have recognised the potential for a new area of specialist practice. The purpose of this study was to explore nurses' concerns regarding the introduction and suitability of home health care in Turkey. Many developed countries deliver home health care for their citizens. Some types of home health care have been provided for the past few years in the larger cities of Turkey by private institutions but these services are not reimbursed by the public insurance schemes. One main reason for this is the traditional feeling by some physicians that patients must be treated at hospitals (Kisa and Ersoy 2005).

As a group, the participating nurses in the study identified the following benefits of home health services; keeping families together; keeping older people independent; preventing institutionalisation; promoting healing; allowing a maximum amount of freedom for the individual; involving the individual and family in the care that is delivered; reducing stress; improving quality of life; and extending life.

Although the participating nurses agreed on the benefits of home health services in general, they were divided on whether these services are suitable for integration into the health system. This is shown by the diversity of responses to questions about home care's safety, effectiveness and expense. Vocational school graduate nurses were generally less supportive of home health care, while college graduate nurses as a group were more supportive. Nurses in surgical medicine areas were more supportive of home health services compared to nurses in internal medicine specialties.

One of the main outcomes of the study was the difference in responses between nurses with a higher level of education and those who were vocational school graduates. Vocational school graduates were generally less supportive of home health care compared to college level nurses. This may be due to a lack of education and understanding about alternative patient care delivery models and their effective use. It is possible that, compared to vocational level nursing education, university level education yields registered nurses who are more informed and understand cost-benefit analysis as well as progressive, alternative patient care delivery models that benefit the community and society, not only in Turkey, but also in other countries.

CONCLUSION

Comprehensive home health care provides a complex array of services and nurse involvement is important in identifying and meeting the needs of patients. Knowledgeable nurses can influence the evolution of home care services to assure that patients receive appropriate acute and long term home care services. Changing demographics, the emphasis on health

promotion, health care costs, movement toward community-based care, and expanding technology are factors that will shape the health care system of the future and the educational preparation of nurses. Only highly educated nurses will be adequately prepared to understand and play a central role in addressing the need for patient-sensitive, cost-effective, and outcome-oriented health care.

The nursing education system in Turkey has responsibilities regarding the rapid implementation of home health care to educate nurses and nursing students for this field of practice. As nursing educators strive to prepare new graduates for the future, they are likely to include home health care as an important component of the clinical practicum experience. With careful planning of curricula and activities designed to provide students with not only technological skills but also the ability to think critically, act independently, and apply theoretical frameworks creatively, nursing educators can greatly facilitate effective care to clients in home care and other alternative settings. In addition, nursing educators can educate nurses in the field regarding the introduction and suitability of the home health care system in Turkey.

It is in the best interest of patients that nurses become more proactive as policy advocates for nurse involvement in home care. In the context of integrated health care delivery, the goal is to develop a seamless system within which patients can receive care as they move from hospital to home. Home care offers challenges to current patterns of nursing practice, and meeting those challenges will require nurses who are committed to the home care paradigm. Toward this goal, nurses will need to examine their attitudes and beliefs toward home care and educational institutions will need to question the traditional idea that patients must be treated at hospitals.

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Innovative practice in the management of chronic Hepatitis C: introducing the nurse practitioner model

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KEY WORDS

nurse practitioner, hepatitis, advanced nursing practice

ABSTRACT

Chronic hepatitis C is a major health burden world wide. Only 1% of people with hepatitis C in Australia have access to treatment. This paper addresses the issue of motivating people with hepatitis C to seek treatment and the strategy of introducing the nurse practitioner role to effect this change.

Objective

To demonstrate that the introduction of a nurse practitioner service model is an effective and safe way of increasing access to treatment for people with chronic hepatitis C.

Setting

A multidisciplinary liver service at Royal Perth Hospital, a tertiary referral centre in Perth, Western Australia.

Subjects

People with chronic hepatitis C managed in a state wide chronic hepatitis C service.

Primary Argument

To make any impact on controlling the hepatitis C epidemic in Australia, the number of people in treatment will have to triple annually. Improved access to treatment includes the removal of mandatory liver biopsy as a requirement to treatment and an increase in the accessibility and availability of effective medicines. Nurse practitioners can function independently within clinical protocols approved by the designated service and the Director General of Health. The scope of practice of nurse practitioners includes the legislated right to prescribe specific medications and initiate diagnostic investigations as specified in clinical protocols. The hepatology nurse practitioner works in collaboration with medical practitioners, co-ordinates the treatment of patients with chronic hepatitis C, and helps to facilitate interdisciplinary referrals within the multidisciplinary team.

Conclusion

The introduction of the nurse practitioner model with the ability to prescribe specific medicines and initiate diagnostic investigations within approved clinical protocols can facilitate improved access to hepatitis C treatment programs. It is expected that the nurse practitioner's expert knowledge and skill and the application of evidence based practice in the hepatitis specialty will assist in the provision of a safe, competent and high quality standard of care to patients.

INTRODUCTION

It is estimated that 130 million people worldwide are affected by hepatitis C (HCV), resulting in 1.4 million deaths annually (Alter 2006; Marcellin et al 2002; Lauer and Walker 2001). Hepatitis C has become the single most important cause of liver disease in many countries, including the United States, Europe and Australia and is the most frequent reason for liver transplantation in these countries. About 75-80% of people infected with hepatitis C will develop chronic infection and about 10-15% will develop cirrhosis over 15-20 years (Poynard et al 2003; Alter 2002; Gane 2002; Poynard et al 1997). In an effort to increase access to treatment for people with hepatitis C, the role of the nurse practitioner has been introduced in the Liver Service at Royal Perth hospital. This paper discusses the role of the hepatology nurse practitioner can improve access to treatment for people with chronic hepatitis C.

Hepatitis C in Australia

Hepatitis C is a significant public health issue for Australia with around 1% of the community affected. Hepatitis C is one of the most commonly reported notifiable infectious diseases in Australia and the most common reason for Australians to need liver transplants (Australian Government 2005). In 2006, the prevalence of chronic hepatitis C in Australia was estimated to be 271,000 (NCHECR 2007). Of these:

- 68,500 had been exposed to the hepatitis C virus but not chronically infected,
- 157,000 had chronic hepatitis C with stage F0/1 liver disease,
- 40,000 had chronic hepatitis C with stage F2/3 liver disease,
- 5,400 had hepatitis C related cirrhosis,
- 216 had hepatitis C related liver failure, and
- 108 had hepatitis C related hepatocellular carcinoma (NCHECR 2007).

By 2020, projections of the number of people living with hepatitis C are likely to be between 321,000 and 836,000 (Australian Government 2005). In order to decrease the burden of this disease, the number of

people receiving treatment for hepatitis C needs to triple (NCHECR 2006).

Effective treatments for hepatitis C are available and early implementation of therapy can prevent the complications of cirrhosis. Effective treatment with combination therapy of pegylated interferon and ribavirin can lead to a sustained virological response (SVR) of 50-80% depending on viral genotype and stage of fibrosis (Hadziyannis et al 2004; Fried et al 2002; McHutchison et al 2002; Manns et al 2001; Fried et al 2001). Despite the availability of treatment, it is estimated that only 1% of people with chronic hepatitis C in Australia are receiving treatment (Australian Government 2005). In Australia, liver biopsy had been a barrier to the uptake of treatment for hepatitis C due to its invasive nature and associated morbidity and rarely mortality. With the removal of mandatory liver biopsy as a prerequisite to treatment for hepatitis C, it is anticipated the number of people treated will increase.

It has been predicted that chronic hepatitis C will become a major burden on the health care system in Australia over the next 10-20 years (Laws et al 2003). In 2004-2005 the estimated prevalence cost of hepatitis C in Australia was \$156 million. This was based on an estimated 211,105 persons living with hepatitis C. The estimated lifetime treatment cost per incident case was \$13,845 undiscounted and \$5,797 discounted at 5% per annum (Australian Government 2006).

Chronic Hepatitis C in Western Australia

In Western Australia (WA) there are about 20,000 people affected by HCV, with 1,200 new notifications of hepatitis C each year. The Sexual Health and Blood Borne Virus Program, in consultation with key stakeholders, developed a Hepatitis C Action Plan 2006-2008 (Western Australian Department of Health 2006). This plan details a state wide, comprehensive public health approach to the prevention of and improved access to treatment for hepatitis C. A state wide hepatitis C model of care that incorporates the nurse practitioner role is also being developed as part of the health reform process in WA.

Increase access to treatment

To reduce the impact on health costs in the future, access to treatment for people with chronic hepatitis C needs to be improved, and awareness increased to prevent new infections. Western Australia is the largest state in Australia with many small populations scattered across a vast geographical area. It will require a focussed strategy if access to treatment for patients in rural and remote areas is to be increased.

To date several strategies have been used to improve access to treatment. These include:

- An increased in the number of liver/hepatitis clinics in tertiary hospitals,
- The introduction of shared care programs between general practitioners (GP) and tertiary hospitals,
- The establishment of hepatitis C clinics in secondary hospitals, regional centres, private clinics and prisons, and
- A hepatitis C GP training program and accreditation for prescribing.

Although these strategies have met with some success, other issues such as: technological advances; the complexities in treatment programs (McHutchison et al 2002); and the significant rise in the number of hepatitis patients in Western Australia, prompted the Liver Service team at Royal Perth Hospital to review its practice in the management of client care. As part of this review, it was decided that the clinical nurse consultant (CNC) role needed to be expanded to that of nurse practitioner (NP). The nurse practitioner scope of practice has a legislative base which authorises the NP to order diagnostic tests, prescribe appropriate medicines and refer clients on to other health professionals.

Nurse practitioners

It was envisaged that the introduction of an NP model of care would provide increased opportunities to improve the disease treatment processes, target lifestyle factors associated with hepatitis C and increase the range of health settings for treatment and prevention of the disease.

To ensure the success of the hepatology nurse practitioner (HNP) role in the Liver Service at Royal Perth Hospital (RPH), the incumbent was expected to have postgraduate education and demonstrate competence to practice at a level commensurate with a nurse practitioner. In 2003, a postgraduate degree in Clinical Specialisation commenced at the School of Nursing and Midwifery, Curtin University of Technology, Perth, WA. This course was approved by the Nurses Board of Western Australia for authorisation as a NP. The NP course includes a clinical internship developed by the Liver Service specifically for the HNP. In 2004, the current HNP was awarded this degree in the clinical specialisation of hepatology and was registered by the NBWA as a nurse practitioner. The new title of HNP was the first of its kind in Australia.

Following amendments to various acts and regulations by the Western Australian Parliament and Department of Health, a legislative framework and a code of practice were produced which provided the foundation for the HNP's scope of practice. This scope of practice was subsequently approved by the Director of Nursing and Head of Liver Service at RPH. A key part of the legal framework is that the HNP must work within the approved clinical protocols that guide the HNP's scope of practice in the designated area of the Liver Service.

The expanded scope of practice for nurse practitioner includes:

- prescription of Schedule 1 and 4 medications (as defined in the clinical protocols);
- Performance of advanced physical assessment;
- Initiation of routine pathology and diagnostic tests; and
- Referrals to other members of the multidisciplinary team.

This expanded scope of nursing practice was recognised as an excellent way of enhancing the RPH Liver Service. HNP activities would include critical analysis, assessment, diagnosis, intervention, evaluation, rehabilitation care, counselling, education, clinical and professional leadership and health promotion. The role is seen as a combination

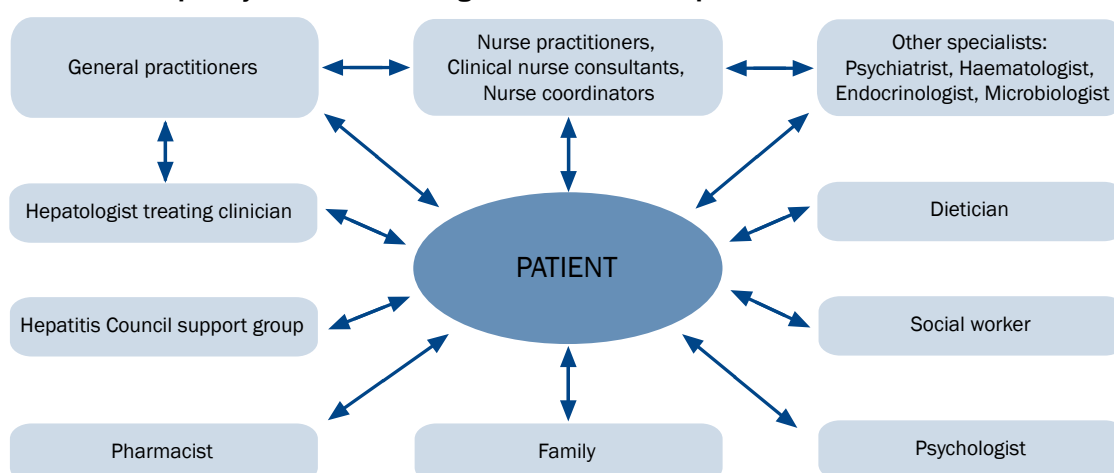
of expert clinical, managerial, educational, leadership and teamwork skills that focuses on the health care consumer (Australian Nursing and Midwifery Council 2006).

Client compliance to therapy has been shown to significantly improve the sustained response to antiviral therapy (McHutchison et al 1998), however side effects from the medicines often cause clients to discontinue therapy. The HNP's assessment skills and pharmacotherapeutic knowledge are of great value in identifying and providing early treatment for the side effects of the complex medicine regimes. Thus the HNP can potentially reduce a large number of visits to the medical practitioner for the assessment of these side effects.

Role of NP in multi-disciplinary team

Optimising the management of patients with chronic hepatitis C involves combining the most cost-effective drug treatment with the management of psychosocial aspects to achieve the best clinical outcome. A multidisciplinary team approach ensures maximal benefit to the patient with minimal disruption to their lives. The Liver Service multidisciplinary team consists of medical, nursing, paramedical and support staff. An effective team approach continues to develop and be maintained through open communication, mutual respect and a clear understanding of each member's role and responsibilities (figure 1).

Figure 1: Multi-disciplinary team in the management of chronic hepatitis C



Collaboration between health professionals focuses on the interactions of individuals working together using their skills and knowledge to achieve a common goal. Collaboration between medical and nursing staff provides a more comprehensive and flexible service for patients than that provided by physicians alone (Flanagan 1998). It also increases access and positive outcomes through more frequent patient contact (Kearnes 1994). Medical practitioner and nurse practitioner collaboration necessitates professional, open communication and personal maturity. It involves mutual respect and recognition of individual skills, knowledge and scope of practice (Almost and Spence-Laschinger 2002; Smithson 1999). If trust and respect form part of the health

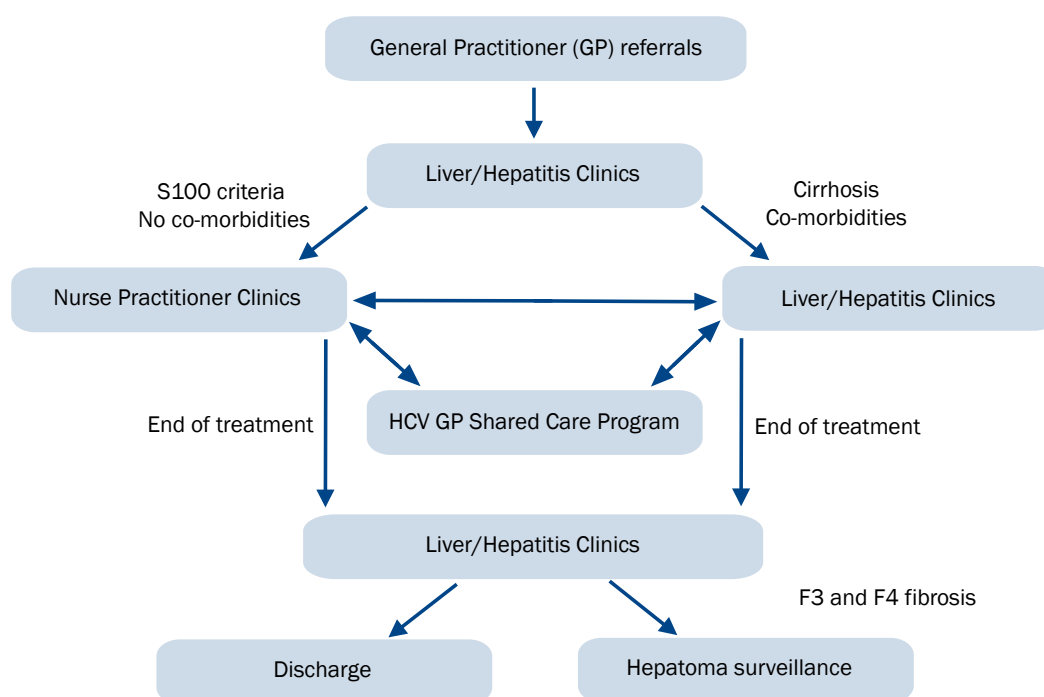
professionals' working relationships then there will be open communication and shared decision making. Working collaboratively will ultimately translate to improved quality of patient care, quality of life and cost effectiveness of health care delivery (Neale 1999).

The HNP works within established clinical protocols and in collaboration with other members of the multidisciplinary team as part of service delivery. The HNP also facilitates the hepatitis C shared care program which was established to improve access to treatment for patients with hepatitis C, particularly those in rural and remote areas (figure 2). The hepatitis C shared care program is a collaborative

management plan between GPs and tertiary hospitals to ensure effective and safe management of patients undergoing combination therapy of pegylated interferon and ribavirin. The role of the HNP complements that of other health care professionals and is an integral part of the multidisciplinary health care provision. In a multidisciplinary approach to health care, each profession contributes a different variety of professional competencies and provides a continuation of care that the health care consumer

expects (Almost and Spence-Laschinger 2002). The HNP is central to the coordination of members of the multidisciplinary team in facilitating the care and management of patients with chronic hepatitis C and ensuring compliance. This is possible as the HNP is able to order diagnostic tests, initiate direct referrals and treat people with hepatitis C sufferers to strict clinical protocols which have been formulated by the multidisciplinary team.

Figure 2: Nurse Practitioners' role in treatment of patients with chronic HCV



As the HNP has referral rights, it is expected that the improved referral process to other members of the multidisciplinary team will also improve collaboration, appropriateness and efficiency of care (Rolfe and Phillips 1997). The HNP provides a service that is timely and effective. Part of this service is the continuity of patient care, which means the HNP works collaboratively with other health professionals to achieve an optimum health care environment.

Role of NP in the community

Traditionally, hepatitis C treatment has been conducted 'behind closed doors' because of the stigma the community attaches to the disease. This

has affected patient compliance and attendance at clinics in public places (Australian Government Department of Health and Ageing 2005). To address this issue, the Liver Service at Royal Perth Hospital improved its consultation and care by expanding services into the community.

With the expansion into the community, the HNP has become a specialist referral resource and a central point for information and support. This role assists in reducing the number of clients seeking treatment in the acute health care system. It is also an expectation that nurse-client relationships will improve, as the nurse practitioner can have more contact through a

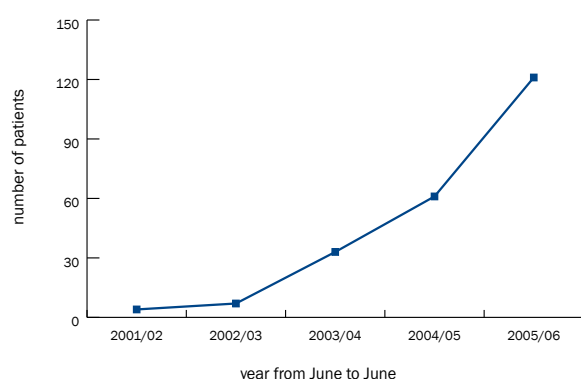
one-on-one relationship with the patient. Trust is a key factor in patient compliance and improved rapport between practitioner and patient could substantially improve treatment outcomes (Smith 1995).

As the HNP has expert knowledge and skills in hepatology, she provides leadership and mentoring to other nurses and health professionals in the community. The health service benefits from the education provided by the HNP to many professional fields, such as the general practitioner shared care program and remote area health care worker training.

Impact of nurse practitioner on management of Hepatitis C

The HNP position in the Liver Service at RPH was established in May 2005. This was the first nurse practitioner position at RPH and the first such position in hepatology in Australia. Autonomously conducted HNP clinics have increased the number of new patients accessing treatment from 60 to 120 per year since the designation of the HNP in the service, without change in the number of medical or nursing staffing levels (figure 3). A patient satisfaction survey conducted 13 months after the implementation of the HNP role was positive. More than 98% of the patients surveyed were satisfied with the quality of service provided by the HNP.

Figure 3: New hepatitis C cases in NP Clinics



Timely access for patients has led to a reduction in complications and in the number of visits to medical practitioners. Medical practitioners now have more time to concentrate on the more complex

and complicated cases. The successful HNP model in Western Australia can be adopted in other states in Australia to facilitate the management of chronic hepatitis C.

CONCLUSION

The large number of people with existing chronic hepatitis who are not seeking treatment, compounded by the increasing number of new infections each year, means that hepatitis C will be a major public issue for the health care system in Australia.

The introduction of the HNP, with the ability to prescribe specific medicines and initiate investigations within approved clinical protocols can facilitate improved access to hepatitis C treatment programs. It is expected the HNP's expert knowledge and skill and the application of evidence based practice in the hepatitis specialty will assist in the provision of a safe, competent and high quality standard of care to patients.

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Young people and alcohol misuse: how can nurses use the Ottawa Charter for Health Promotion?

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ABSTRACT

Alcohol misuse in Australia society is a community issue that can be addressed successfully within a health promotion framework. It is important that strategies are not perceived as 'quick fixes' but work toward addressing some of the underlying structural factors that contribute to the problem.

Objective

The objective of this article is to demonstrate how nurses can use the Ottawa Charter for Health Promotion framework in addressing alcohol misuse among young people.

Primary argument

The Ottawa Charter for Health Promotion (1986) provides a useful framework from which to view the health of whole populations over their life course and in doing so work toward strengthening peoples' health potential (World Health Organization 2005). The relevance of the Charter lies not only in the influence it has on establishing health promotion practice, but also the influence it has on health policy development and health research (World Health Organization 2005).

Conclusion

Parents and community members have an important role to play in addressing alcohol misuse among adolescents but they need to be supported by nurses who can provide care within a health promotion framework.

INTRODUCTION

The Ottawa Charter for Health Promotion (WHO 1986) has been 'phenomenally influential in guiding the development of the concept of health promotion and shaping public health practice' (Nutbeam 2005). The Charter is now more than 30 years old and, as a landmark document, outlines a clear statement of action that continues to have resonance for nurses around the world. The Charter was re-endorsed in Bangkok at the 2005, 6th Global Conference on Health Promotion as it had been in Mexico-City (2000), Jakarta (1997), Sundsvall (1991) and Adelaide (1988). The principles and action areas have stood the test of time in nursing, health policy development and health research.

It is now known there are many factors which influence health and illness. There is generally no single cause or single contributing factor which determines the likelihood of health or illness; rather there tends to be a variety of causes. Factors that determine physical and mental health status include income, employment, poverty, education, and access to community resources. These social factors generate people's life experiences and opportunities which in turn make it easier or more difficult for people to make positive decisions about their health. While there are many actions that a person can take to protect their own or their families' health, very often the social context of their lives makes it impossible to take those actions (Talbot and Verrinder 2005). Health promotion and disease prevention strategies at the societal level are now part of the repertoire of nursing interventions.

The Ottawa Charter highlights the importance of building healthy public policy, creating supportive environments, strengthening community action, developing personal skills and reorienting health services. Used collectively in any population setting, the action areas have a better chance of promoting health than when they are used in isolation. The Charter also highlights the potential role of organisations, systems and communities, as well as individual behaviours and capacities (Talbot and Verrinder 2005).

Health promotion strategies have been used effectively to address health issues that are identified as problems by the community. In Australia and throughout other western countries, the misuse of alcohol by young people has been highlighted as a problem (Toumbourou et al 2003).

Alcohol misuse amongst adolescents

For many Australians, alcohol consumption is a pleasurable part of everyday life (Parliament of Victoria 2004). However in recent years there have been several reports highlighting that the proportion of adolescents consuming alcohol and the amount of alcohol they are drinking is at record levels (AIHW 2008; White and Hayman 2006; Shanahan and Hewitt 1999). The long and short term sequelae associated with risky or high risk alcohol consumption include negative physical, emotional and social consequences (NHMRC 2001). Immediate harms include accidents, injuries, decreased scholastic and sporting performance, aggression, violence, assault, disrupted family relationships, high risk sexual activity, driving while under the influence of alcohol and delinquent behaviour (Jones and Donovan 2001). Among young people aged 16 to 24 years, alcohol related harm is one of the leading causes of disease and injury burden (AIHW 2006). These findings are consistent with population based research in Europe, United States and Canada (Jernigan 2001).

Community concern has been reflected in Australian media reports about 'teenage binge drinking' and the associated harms and generated debate in the Australian media about raising the legal age of alcohol consumption from 18 to 21 years (Editor 2008; Toumbourou et al 2008). In countries outside Australia, studies have demonstrated that raising the legal age for alcohol consumption reduces adolescents' access to alcohol and the subsequent associated harms (Ludbrook et al 2002; Grube 1997). While there are lessons to be learned from these settings, perceptions of health and how to address the determinants of illness have changed due to a combination of well informed 'top-down' and well anchored 'bottom-up' approaches to policy making (WHO 2005). Previous reports in Australia

have suggested there is little community support for any proposed changes to the current age for alcohol consumption and instead focus is more on the enforcement of current legislation (Loxley et al 2004).

Australian parents have a critical role in influencing the attitudes and beliefs of young people toward alcohol consumption. However parents have indicated they are looking for information, skills and community support to assist them in guiding their adolescents' safe use of alcohol (Shanahan and Hewitt 1999). The five action areas of the Ottawa Charter provides strategies from which nurses can support parents to promote health and encourage safe alcohol consumption patterns among adolescents.

By using the framework of the Ottawa Charter, nurses have a strong evidence base and useful framework from which to support families and the broader community in addressing the issue of alcohol misuse among young Australians. Reflecting on their own professional setting, nurses can use the Ottawa Charter framework to guide and inform interventions aimed at reducing alcohol related harm among young people.

Using the Ottawa Charter as a framework to address the determinants of illness associated with alcohol misuse

1. Action area 1: Build healthy public policy

Building healthy public policy is one of the solutions to improving health. All public policy should be examined for its impact on health and, where policies have a negative impact on health, strategies implemented to change them. Healthy public policy is needed to ensure that people are safe. In recent years, initiatives to reduce alcohol related harm have increasingly been focused on high risk individuals (Parliament of Victoria 2004). While these strategies may be appropriate for individuals, they do little to reduce the burden of disease at the community level (Midford 2004). There are risks attached to focusing on individual behaviours and victim blaming instead of addressing the structural

causes of ill health. Community action strategies are an important way of addressing alcohol related harm (Parliament of Victoria 2004). Regulation and restriction of sales, increased server liability, increased alcohol taxes and lowered blood alcohol limits are some of the policy areas which have been shown to be effective in reducing alcohol related harm (Parliament of Victoria 2004). Healthy public policy affects the entire population directly or indirectly. Nurses have a key role in informing and advocating on behalf of clients, families and the broader community and in promoting effective public policy.

2. Action area 2: Create supportive environments

Healthy public policy assists in creating supportive environments that are important in ensuring that everyone lives in a place that is safe and enjoyable. Alcohol misuse is not just something that pertains to young people; it is a problem that impacts on all members of the community. In a society where alcohol is often seen as an integral part of life (Australian Government 2006) and alcohol misuse is implicated in one third of all road accidents (Australian Government 2001) what is defined as safe needs to be re-considered. Parents commonly supply alcohol to their adolescents (Graham et al 2006; Ward et al 2006; Shanahan and Hewitt 1999) and in Australia enforcement of current legislation to restrict underage access to alcohol is 'patchy' (Loxley et al 2004). As a result, many adolescents find access to alcohol easy. In addition, alcohol advertising that is targeted to youth is often linked with social and sexual success and hence contravenes the Alcoholic Beverages Advertising Code (Jones et al 2001).

Public policy designed to create supportive environments has resulted in the 'settings' approach to health promotion, where working for change occurs through partnerships at the community level (Talbot and Verrinder 2005). Nurses, for example, have a role in

facilitating interaction between teachers and parents and between local government and school communities so they can exchange information, ideas, clarify values (McMurray 2003) and identify strategies that will focus on reducing alcohol related harm among young people. Nurses can encourage and establish primary care partnerships to develop alcohol action plans designed to improve the health and wellbeing of adolescents.

3. Action area 3: Strengthen community action

Strengthening community action is important and so there needs to be mechanisms by which the community can participate in decision making as a community and not just as an individual. Communities can determine what their needs are and how they can best be met. Thus greater power and control remains with the people themselves, rather than totally with the 'experts'. Community development strategies are one means by which this can be achieved. To date in Australia there have not been any formal consultations with youth about raising the legal age of alcohol consumption. Central to the success of the Ottawa Charter is increasing people's control over their own health and issues that impact on it. The participation of youth groups is critical to the principles of equity and participation. In countries outside Australia, some community mobilisation programs have been effective in changing community factors (e.g. under age access to alcohol) that influence alcohol use amongst young people (Holder et al 1997).

There are a number of successful community mobilisation approaches that have focused on reducing alcohol related harm among young people (Hingson and Sleet 2007; Hanson et al 2000). The role for nurses is to draw on these examples to successfully mobilise young people to be involved in the decision making process about issues that impact on their health and wellbeing.

4. Action area 4: Develop personal skills

Developing personal skills is important if people are to feel more in control of their lives and have more power in decisions that affect them. Helping people develop their skills ensures that people have the information and knowledge necessary to make informed choices. In Australia, many parents find it hard to communicate with their adolescents about alcohol (Shanahan and Hewitt 1999). It is also clear that many parents find themselves isolated and powerless to do anything about their adolescents' alcohol misuse (Shanahan and Hewitt 1999). Systematic reviews of alcohol and other drug education programs in schools indicate that effective school based programs should begin before initiation to alcohol and other drugs and that content should include social skills and resistance training. In addition, community values, societal contexts and information about drug related harm need to be included (Midford et al 2002).

Alcohol education programs that provide information alone have limited success (Foxcroft et al 2003). Without an understanding of alcohol related harms and interventions to address those harms, parents and community members cannot support initiatives for changes (Howat et al 2007). Nurses can work with parents, teachers and students to provide formal and informal education (WHO 2005) which informs alcohol related harm reduction policies.

5. Action area 5: Reorient health services

Reorienting health care is important in ensuring that health promotion is everybody's business. Re-orientating health services means that nurses have a pivotal role in fostering intersectoral collaboration between the health sector, police, education, adolescents and parents. There is some evidence to suggest that brief interventions can have some effect in reducing alcohol related harm among young people (Loxley et al 2004). However recent

overseas evidence suggests that in settings that are most commonly used by adolescents, many health practitioners are not comfortable and adequately skilled when working with young people (McPherson 2005).

Working in partnership with other health care providers, nurses can encourage positive health practices where brief interventions that focus on harm reduction, can be provided from places where young people congregate (McMurray, 2003).

CONCLUSION

The development of evidence informed practice in nursing includes using robust health promotion models and methods to address complex issues such as alcohol misuse. The five action areas of the Ottawa Charter integrate the various perspectives on health promotion. Used collectively, they still serve a useful function in directing the practice of nurses who work with young people, their families, and the community.

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