FROM COMPETENCE TO CAPABILITY: A STUDY OF NURSE PRACTITIONERS IN CLINICAL PRACTICE

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ABSTRACT

Aims and Objectives

This research aimed to further understand the level and scope of practice of the nurse practitioner in Australia and New Zealand using a capability framework.

Background

The original study, from which the present paper was developed, sought to identify competency standards for the extended role of the nurse practitioner in Australia and New Zealand. In doing so the researchers became aware that while competencies described many of the characteristics of the nurse practitioner they did manage to tell the whole story. In a search of the literature the concept of capability appeared to provide a potentially useful construct to describe the attributes of the nurse practitioner that went beyond competence.

Design

A secondary analysis of data obtained from interviews with nurse practitioners working in Australia and New Zealand was undertaken. This data had previously been obtained in a study to identify nurse practitioner competencies. The analysis described in this paper investigated whether or not the components of capability would adequately explain the characteristics of the nurse practitioner.

Methods

Fifteen nurse practitioners were interviewed from Australia and New Zealand. A secondary (deductive) analysis of interview data using capability as a theoretical framework was conducted.

Results

The analysis showed that capability and its dimensions is a useful model for describing the advanced level attributes of nurse practitioners. Thus, nurse practitioners described elements of their practice that involved: using their competences in novel and complex situations as well as the familiar; being creative and innovative; knowing how to learn; having a high level of self-efficacy; and working well in teams.

Conclusions

This study suggests that both competence and capability need to be considered in understanding the complex role of the nurse practitioner.

Relevance to clinical practice

The dimensions of capability need to be considered in the education and evaluation of nurse practitioners.

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INTRODUCTION

Nurse practitioners (NPs) have had a presence in healthcare delivery in some countries since the 1960s. The role originated in the United States (US) to improve primary healthcare to under-serviced communities. Currently NPs exist in many countries in primary and acute healthcare settings in rural and urban settings. Broadly, NPs are registered nurses with advanced and extended clinical roles. They provide comprehensive nursing management of clients that include referral to other healthcare professionals, prescription of medications, and ordering of diagnostic investigations. A NP level of service is currently being developed in Australia and New Zealand. The title of NP is now protected by legislation in New Zealand. In Australia, authorization processes for the title are controlled by state and territory nurse registration authorities and formal processes are currently underway in most jurisdictions. Trans-Tasman mutual recognition legislation necessitates a comparable standard of practice between New Zealand and Australia. However, there have been considerable discrepancies in the requirements for registration being developed across Australian jurisdictions and none were entirely consistent with New Zealand requirements. Consequently a study was commissioned to develop a single set of Australian and New Zealand competency standards for NPs.

One of the key findings from the study was the apparent limitation of the use of a competency based assessment framework for the practice of NPs. Our thematic analysis indicated that there was an additional feature needed that adequately described the method and contexts of practice, which must be captured and defined in any approach to evaluation, education and licensing of the NP (Gardner et al, 2004; Gardner et al, 2006) Thus, we explored the literature for other frameworks and identified the concept of *capability* as a useful construct. There is an emergent body of literature exploring capability that has had very limited empirical testing. In the original project we reported our inductive findings as consistent with the existing capability literature. The Nurse Practitioner Standards Project (hereafter referred to as the Project) provided an exciting opportunity to further test the capability framework deductively. Here we report a secondary analysis of NP interview data using capability as the theoretical framework.

BACKGROUND

Nurse Practitioner Standards Project

In 2003, the then Australian Nursing Council and the New Zealand Nursing Council jointly sponsored a research project to develop NP competency standards (the Project). The aims were to describe the core role of the NP; to develop core competency standards for NPs in Australia and New Zealand and to develop standards for education and program accreditation for NP preparation leading to registration/authorisation. The primary source of data was in-depth interviews with

NPs who were authorised and practising in either Australia or New Zealand. Each interview included a report of a NP case study. Further data were derived from NP education program materials obtained with permission from tertiary institutions and interviews conducted with the academics coordinating these programs. An extensive literature review relating to NP authorisation, legislation and roles was undertaken. Data were analysed according to the requirements of each data set and then triangulated. Based on the research findings, a competency assessment framework was developed which outlined the knowledge, skills and attitudes required of NPs (Gardner et al, 2004;Gardner et al., 2006).

Nurse practitioners described a scope of practice that is located at the extended level of nursing service. There was strong evidence that the role of the NP was qualitatively different from other roles and levels of nursing in Australia and New Zealand. Nurse practitioners were accommodated in a range of practice environments, dealt with complexity and used non-linear reasoning in healthcare, and drew upon innovative and non-standard solutions to achieve optimal outcomes for clients. This finding has a number of implications for how we construe and, hence, evaluate the NP in clinical practice.

The constraints of competencies

Whilst some suggest that competency standards are a necessary balance against an over intellectual approach to education and practice in nursing (Eraut, 1998), we argue, as have others, that there are limitations in the use of competencies to assess clinical skills. In a systematic review of clinical competency assessment in nursing, Watson and others

claim that competence is a nebulous concept that is defined in different ways by different people (Watson et al, 2002). Moreover, they conclude that while there is almost universal acceptance of the need for assessment of clinical nursing competence, evidence of the reliability and validity of assessment methods is absent in the published literature.

Distinguishing between different levels of competence has been identified as a particular problem when it comes to assessment of clinical skills (Girot, 2000). Perhaps because of this, there is also a reported move away from a total reliance on competencies as a way of benchmarking practice standards (Storey, 1998) in postgraduate nursing. With a history based in manual occupations competency assessment in nursing practice primarily focuses on the technical and procedural elements. Implicit in this form of assessment is an opposition to the relevance of academic or intellectual abilities and, as such, has been argued as being a double-edged sword (Goldsmith, 1999). Competency-based practice is also inherently reductionist, providing a limited view of professional practice and impeding professional development (Goldsmith, 1999, McAllister, 1998).

Recent vocational education and training literature acknowledges that competencies may be just the beginning of our understanding about requirements for developing an effective workforce (Hase & Saenger, 2005). Furthermore, reductionism may in fact provide inappropriately simple solutions to highly complex phenomena. For example, when evaluating ability to function in a complex clinical situation the interaction of several competencies may be much more important than a series of separate assessments of task specific competencies (Watson et al, 2002). All this evidence

points to an unavoidable tension in the use of competencies to measure the performance of a Masters prepared nurse. Nonetheless, without a superior alternative, regulatory authorities must seek to demonstrate safe standards for NP practice by use of competency standards.

Our conclusion from the Project was that, in addition to a competency framework, NP standards should be informed by an evaluation approach that accommodates additional characteristics. We identified the notion of *capability* as a useful model to achieve this orientation (e.g., Cairns, 1996, Stephenson, 1992, Stephenson, 1996, Hase & Kenyon, 2000). We have recently extended the research to conduct a secondary (deductive) analysis (Szazbo & Strang, 1997) using capability as a theoretical framework.

THEORETICAL FRAMEWORK

There is a nascent literature and limited but growing empirical evidence for the concept of capability. It has been used largely in the context of understanding teaching and learning and to inform evaluation methodologies for practice in range of professional occupations Graves, 1993, Hase & Davis, 2002, Phelps, Hase & Ellis, 2005). Capability has been described as a holistic attribute with capable people more likely to deal effectively with the turbulent environment in which they live (or work) by possessing an all-round capacity to manage continual change (Hase & Kenyon, 2000). Cairns (2000, p. 1) has defined capability as: 'Having justified confidence in

your ability to take appropriate and effective action to formulate and solve problems in both familiar and unfamiliar and changing settings'.

Capable people have high levels of self-efficacy, they know how to learn, they work well with others, they are creative and, most importantly, they are able to use their competencies in novel as well as familiar circumstances (Davis & Hase, 1999). Thus, demonstration of competence is an important attribute of capability but is not sufficient to enable people to take effective and appropriate action. Capable people are more likely to be able to manage complex and non-linear challenges (Phelps & Hase, 2002, Phelps, Hase & Ellis, 2005)

We thought that applying the concept of capability might orientate NP competencies towards the dynamic clinical environments in which NPs are likely to practice (Gardner et al, 2004). To confirm this notion we undertook a secondary (deductive) analysis of the data informing the core role of the NP.

This secondary analysis sought to answer the question:

Does the concept of capability provide a relevant and useful theoretical framework to explain the characteristics of nurse practitioner practice?

METHODS

Population and sample

The population of authorised and practising NPs was used for the primary study. All NPs in New Zealand and each state in Australia where NPs were both legitimised and practising were invited to participate in the study. Through the nursing regulatory authority in each jurisdiction, these NPs were sent a letter, an information sheet, a

consent form and contact details. They were invited to contact the investigator in their area if they were interested in participating in the interviews.

A purposeful sample of NPs was used for an interpretive approach. There were 64 NPs registered in Australia and 11 in New Zealand at the time the research was conducted. Of those authorized, an unknown percentage were actually practicising because many were still in the process of obtaining approval for clinical protocols including prescribing rights. At the time of initial contact only those who were both authorized and practicing were recruited into the study. The sample size was determined by theoretical sampling. After fifteen interviews sampling was ceased as data saturation through identification of themes was achieved.

Fifteen NPs employed in acute services, primary health care, mental health and primary health care were interviewed. There were 11 women and four men ranging in age from 29 to 56 years. Participants had been registered as NPs for a period ranging from three years to three months.

Ethical issues

As the number of NPs in Australia and New Zealand is small, a breakdown of demographic data was not reported. Very little information with regard to respondent characteristics was collected to preserve anonymity. This method was designed so that no individual or institution could be identifiable through the data.

Data collection and analysis

Interviews with consenting NPs lasted for between one and two hours. The structure of the interviews included two distinct components. A semi-structured format was used to collect data relating to the NPs' employment, education, and authorisation

experiences. An additional in-depth component elicited information on the experiential dimensions of NP work. This latter part included a report of a de-identified case study that represented for that participant an exemplar of NP service. These interviews were audio recorded and transcribed.

All four investigators were involved in the collection and analysis of the data from nurse practitioner interviews. Two investigators conducted initial analysis and themes were discussed and reconciled with the other two researchers in face to face meetings.

The secondary data analysis was structured by the defining characteristics of capability. That is, an analytical framework was established from the five attributes of capable people as defined by Davis and Hase (1999) and data were deductively coded according to this framework (see Table 1).

Table 1 Analytical framework

Attributes of capability				
Knows how to learn	Works well with others	Is creative	Has a high degree of self-efficacy	Applies competencies to both novel and familiar situations

FINDINGS

The following section describes how the data obtained from NPs supported the attributes of capability in Table 1 above.

Knows how to learn

Knowing how to learn has been shown to be a more powerful indicator of capability than simple technical knowledge (Phelps, Hase & Ellis, 2005). Acquisition of a technical skill arises through repetition but with ongoing learning the capacity to discover and to deduce from experience is a higher order activity. Competency concerns acquiring a certain level of skill and then being assessed on what is essentially past knowledge and ability. However, the ongoing development and progressing of that skill into more refined and sophisticated practice is a function of knowing how to learn and is largely self-determined (Hase & Kenyon, 2000).

As we analysed the data for competency indicators we consistently noted NP narratives which suggested that these clinicians were not only ready to utilize the knowledge they had accumulated through education and experience but were also committed to a process of building their practice knowledge. That is, NPs identified what they did and did not know, and from this were able to identify what they needed to know. As one NP asserted:

 (I ask) what are my weaknesses, what are my strengths? So I can focus. Well, if I'm a bit weak in these areas, and this is what is really expected of me as a nurse practitioner, I can identify those and do something about it.

In addition to identifying the practice environment as the trigger for learning, NPs identified the need to know where to find information. They emphasized that

information was accessed from a range of sources both formal and informal including the ability to search the literature effectively. When asked about types of knowledge needed one NP responded:

… being able to research the vast amount of knowledge that is available to us. It is probably critical … because there is so much out there. I think having the ability to be able to effectively search through things to find what you need to find.

Another responded to the same question by claiming that NPs required the skills and confidence to select what is good evidence:

(being) able to critique (the literature) appropriately, that what you are using isn't rubbish.

These excerpts illustrate commitment to continuous reflection and ongoing learning. These behaviours are consistent with the characteristics of life long learning as described by and, significantly, for the objectives of this study, conform to the capability attribute of knowing how to learn. Hase, Cairns & Malloch, 1998) proposed that capable people self-manage their learning potential. They understand the processes and strategies needed to implement self-managed learning.

Works well with others

While capability includes elements of independent action, capable people have, as a core value, recognition of the importance of working with others to achieve outcomes.

Nurses of all levels work in teams. However, the nature of teamwork that the NPs described was both precise and qualitatively different from many previously published accounts of nurses as team members. The interview data indicated that these clinicians viewed teamwork and collaboration as central to their practice.

The NPs regarded teamwork in all its forms as best practice. Working in multidisciplinary teams was the best way to work, the most efficient for both staff and patients. A remote area NP illustrated this:

We are more autonomous …but we're doing teamwork to get the best possible outcomes for the patient. That obviously means you would still have good relationships, with their GP and the clinical nurse consultant ... even though we're we're not working in isolation.

Furthermore, the NP tended to express a sophisticated and inclusive notion of team configuration. Membership of the team was related to the clinical problem or situation at any given time. For example:

And they (the baby's family) asked me whether I thought a decision needed to be made. So we talked about withdrawing treatment, about what happens when treatment is withdrawn, about how we make those decisions about how we walk with the families and its not actually a family decision it's a decision with the entire health care team of which they are part of, and that we really listen to what they say so if that's what they wanted to happen in this situation that we would talk about that.

The NP used the notion of teamwork as a therapeutic intervention. Responsibility for a difficult decision is ameliorated when the NP positions the parents as part of the total team.

Communication was a concept that came up repeatedly in the context of teamwork. Nurse practitioners talked about communication across and within levels of healthcare demonstrating another dimension to the capacity to work with others. As another NP emphasised:

> You have got to be able to liaise and talk across all care boundaries and to everybody from the care assistants particularly in rest homes up to consultant level. We have got to be able to communicate across all those pathways.

As stated earlier, working with others was an essential part of NP practice. In the following excerpt, the role of education and information sharing is one dimension of teamwork.

> Having the ability to teach others, being willing to teach others, to impart your knowledge and skills and not keep it to yourself. That's really important, that building capacity in the work force, being willing to do that is important. Not feeling that you own anything necessarily, that you're just a cog in the wheel and you're meant to work as part of a team.

The facility to work well with others was probably the most strongly supported aspect of capability in this study. These excerpts from the data clearly articulate both the

complex nature of the teams in which NPs functioned and their own views of the

intersection of themselves and others in health service.

Is creative

According to the notion of capability, creative people are not afraid to take risks; feel

free to pursue new ideas and new lines of thought; use their imagination; have the

courage to experiment; are deeply immersed in what they are doing and use

methodical and logical thinking. Creativity appears to be a mix of metacognitive and

personal attributes (Phelps, Hase & Ellis, 2005).

Creativity was identified in the case studies that the NPs used to illustrate their

extended practice levels. The notion of creativity primarily related to NPs' reports of

the generation and use of clinical data in a form that was not confined to the

biomedical standard. In the following excerpt one NP describes her approach to

assessment of the neonate.

> You can also listen to neonates, even though they don't talk. You know they tell you
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> all sorts of things by the way they are, by the way they lie, by their vital signs, they
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> are communicating in lots of different ways. You need to listen in all the ways that
>
> you can.

Creativity in NP practice also included creative and non-standard approaches to

clinical care. A NP working in a rural community described her approach to

supporting a person in her community whose health was compromised by illiteracy.

She recognized that health service is not limited to biomedical care but also incorporates broader aspects of support.

An elderly man approached me in the street and asked if I would help him fill out forms so he could go into hospital and have a knee joint replacement. While we were filling in the forms I asked him a question about whether he had a problem with reading and writing, and the man started crying. I then told him about adult literacy services that were available and that after he was back on track, I'd be more than happy to take him.

He had the surgery was sent home from hospital… *(the nurse then related details of standard clinical care she delivered to this patient in his home to support his recovery from surgery)* … Eventually he was mobilising very well. It was at that point that I reminded him that I'd made him a promise about adult literacy and he was really keen. So, I negotiated that I'd meet him on the side of the road at half past eight one morning and I'd lined it up with the adult literacy people… *(the nurse describes her activities in helping the man access literacy classes).* This Christmas I went out to see him and he asked me if I would post two Christmas cards for him which he had written. And I asked him if he had been doing some fishing lately and he told me that he hadn't had time to go fishing because he had five books to read.

Has a high level of self-efficacy

Self-efficacy (Bandura, 1986) has consistently predicted successful completion of target behaviour in a wide range of settings. People who have a high degree of self-efficacy have a strong belief that they will be successful in undertaking a particular behaviour. As Cairns has noted, this is a personality attribute central to the idea of capability since it underpins motivation to act (Cairs, 2000).

NPs demonstrated a belief in their personal effectiveness consistent with self-efficacy. They welcomed the way that they were now responsible for their clinical practice decisions in a way that they had never been before. One nurse articulated this clearly:

I've been doing all these things for many years now, you know, honing it better and better, of course, but when I thought about authorisation I thought ooh, the buck stops with me on this one.

This had the effect of streamlining the care of the patient, as she explained:

I asked for a copy of the report to come to me as well as one to the cardiologist he was now attending. Because he could see me before the cardiologist, I explained to him the results, the patient, and facilitated an earlier appointment and told him that the doctor would probably send him off to a surgeon.

In another example, a NP described her sense of confidence in her ability to diagnose in the apparent absence of signs and symptoms.

There was a fellow came into the clinic one morning, one Saturday morning - and

he said I'm Neville and I had never met him before. But anyway he wasn't grey – he

just looked unwell and I couldn't get any history, and I just knew that there was

something wrong with him. His obs were all fine, he had a slight temperature but his

chest wasn't too bad. I rang the doctor and just said I want an ambulance out here.

He also had no chest pain he just kept saying that he was tired and a bit short of wind.

I was looking at someone, knowing what the clinical signs were and they were all

fine. It was a whole series of little things. At some stage in the 3 or 4 days

beforehand he'd had a series of infarcts, that was found out at the hospital.

When reading through the interview transcripts it was evident that examples that NPs

gave about why actions were attempted and carried out, related to the way that they

used this self-efficacy in managing unfamiliar situations.

Applies competencies to both novel and familiar situations

Competency is an essential underlying component of being capable. However,

competence and competence assessment deal with predicable circumstances. As

complexity theory suggests (Lissack, 1999), systems are non-linear and open. It is

often impossible to know how systems will interact to create unexpected

consequences. Thus capable people are prepared to adapt; to be flexible in response to

changes in the environment; and to be taken by surprise.

The NPs recognised that they had to be prepared for the unexpected:

In order to be a Nurse Practitioner you need to be able to work right outside the box,

be lateral, … lead the way.

The following narrative reports on a situation where the NP described the use of standard clinical competencies related to burns treatment, in a non-clinical environment.

Now this guy was in the pit in a mechanics place and he was burnt by fire. I was at home at lunch, his wife rang me and I was there within 2 minutes. I had said to them put him in the shower. So they had put him in the shower, I wrapped him in a sheet, put him in my car and took him to the clinic. I had him in the shower while I was getting all the bandages and everything ready and then me and his wife put CSSD cream over ever part of his burns and melalin bandaging and I was on to (emergency transport) of course and I had him on Morphine.

Now I got a drip into a pretty shocked man …and he was in awful pain so he sort of shut down and I got that Morphine and loads of fluid into him, the bandages were all done and we had him in the plane 20 kms away within 3 hours and in hospital in 4 hours. Under good pain control, he didn't suffer any infection; he didn't even have to have skin grafting…

The final comment in this narrative emphasizes that, despite the novel context of healthcare delivery, the patient outcomes were optimal with pain controlled, no infection and no skin graft.

Nurse practitioners also described a real confidence in being able see beyond the obvious presenting issues:

Eric's wife rang me up one evening – and told me that he said he felt like he'd been taking opium, she then said that he'd drunk some radiator coolant. Not knowing anything about the dangers of radiator coolant I told her she'd better bring him in. I rang Poisons Information who said I had to give him alcohol. We had to get his blood alcohol up to 2 because we couldn't get a plane until the next morning.

We then ran into a problem that he was Muslim and I had to also find some booze around the community, spirits basically. And I did. We eventually got him to drink an entire bottle of scotch and a bottle of brandy overnight. The plane had to pick up some more alcohol on the way through.

Testing this last characteristic of capability takes us to the crux of our enquiry, whether the notion of capability provides a relevant and useful theoretical framework to explain the characteristics of NP practice.

DISCUSSION

Davis and Hase (1999) postulated that competency measures previous performance whereas capability focuses on the unknown future, on change and unfamiliar circumstances. These attributes are strongly represented in the description and characteristics of the core role of the NP and are in partnership with the above competency framework. Capability does not preclude the expression of competence but capability is not a higher level of competence. Rather, competence is viewed as an

essential part of being capable. Capable people are able to use competencies in novel and complex situations.

The most common use of the notion of capability since its inception has been in relation to education and training (e.g. Graves, 1993, Hase & Davis, 2002, Phelps, Hase & Ellis, 2005). Most recently, Phelps, Hase & Ellis (2005) described a study conducted by Phelps that investigated the development of capable computer users among trainee teachers using action research. That study revealed a number of characteristics of the capable computer user:

- Confidence in their own skills and abilities;

- Patience and persistence, determination and calm;

- Risk taking, courage to experiment, trying new things; not being afraid to make mistakes;

- Methodical/logical thinking;

- Enthusiasm and motivation; enjoy using computers; positive attitude, personal interest;

- Technical knowledge;

- Love of learning;

- Constancy of use, deep immersion;

- Problem solving ability, deduction.

The students in the study identified the ability to be self-directed in one's learning and the capacity to 'play around' and experiment as enhancing capability. Phelps, Hase & Ellis (2005) concluded that the learning experience, above all, must be about learning

how to learn. The attributes identified from the NP interviews resonate with the traits identified in capable computer users.

Secondary analysis of interview data confirmed that, in addition to a competency framework, NP standards should be informed by an approach to evaluation of the clinician that can accommodate characteristics that go beyond competence. Competence (knowledge and skills) is necessary but not sufficient for their advanced and extended nursing practice. Of course, this finding raises questions about how to facilitate and enhance the transition to a NP. The critical link between competency and capability, as a benchmark for NP practice, needs to be explored when educating and evaluating NPs candidates. However, it is beyond the scope of this paper to address educational issues and they are reported elsewhere (Gardner et al, 2004, Gardner et al, in press).

Limitations

There are both advantages and disadvantages to use of data that have previously been collected for other research. One advantage is that secondary analysis is an efficient and cost effective use of researcher time. It also reduces respondent burden. Nevertheless, secondary analysis is potentially problematic. The main limitations are lack of control over data collection methods and the potential for bias or other problems in initial data collection. Neither limitation is relevant to this project since the same research team undertook both the primary and secondary analysis. Finally, secondary analysis is often deductive inquiry and as such is open to the trap of the findings being made to fit the framework. Although all researchers contributed to both

analyses, different researchers took primary responsibility for each phase, thus providing greater rigor.

RECOMMENDATIONS AND CONCLUSION

Two recommendations arise from this analysis. First, capability learning approaches should be developed and incorporated into the education of NP students. Second, given the nascent character of the NP level of service in both Australian and New Zealand, this analysis needs to be confirmed with further primary research as more NPs become authorised in both countries.

Capability provides a complementary set of attributes to competency and the combination of these attributes is central to the practice of the NP. Within this approach for NP standards, we propose that NP competencies and capability are viewed as linking partners on a continuum structuring the education, evaluation and licensing framework for NPs.

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