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Public health nurses' perceptions of the professional practice environment in New Zealand

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Background: The professional practice environment of hospital-based nurses has been the focus of considerable attention over the last few decades. More recently, attention has been paid to the community nursing environment, and this study considers the context of public health nursing in New Zealand. **Aim:** The purpose of the study was to identify the organizational attributes that public health nurses consider important, and those that are considered less important, for professional practice and to rate the presence of these attributes within the public health nurses' work environment. **Method:** In all, 167 public health nurses across New Zealand assessed the importance and presence of 48 organizational attributes in the nursing work environment using the Nursing Work Index-Revised (NWI-R). This instrument was developed from work with Magnet hospitals in the US and is designed to measure attributes of the professional nursing environment. Frequency distributions and difference scores were calculated using SPSS-PC. **Findings:** Results showed that there was strong agreement that most NWI-R attributes were considered important for professional practice, the most highly endorsed relating to support from the organization, education/orientation and staffing. However, agreement that these attributes were actually present in the current work environment was much less strong. Participants also generated additional ideas for attributes considered important for public health nursing practice and these were categorized under four headings concerning specialty practice, resources, networking and education/research.

Key words: New Zealand; NWI-R; professional practice environment; public health nurse

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Background

New Zealand health care system

New Zealand's health care system is currently structured around 21 District Health Boards (DHBs) established as a result of the NZ Health and Disability Sector Act (MoH, 2000). Each DHB has a population-based approach and is responsible for assessing health needs, establishing strategic and operational plans, funding primary health care and disability services and providing public health, hospital and some community services within their region (MoH, 2000). This approach has led to the establishment of Primary Health Organisations (PHOs), which are defined as not-for-profit local structures, accountable for public funds they receive through DHBs to provide primary health care services that meet the needs of their enrolled populations (MoH, 2001). All New Zealanders are now expected to enrol with a PHO that will deliver a set of essential primary health care services by a group of providers and practitioners, all of whom

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are theoretically involved in decision making. The overall goals of the NZ Health Strategy (MoH, 2000) and the Primary Health Strategy (MoH, 2001) are to improve the health status of the population and reduce inequalities (MoH, 2001). PHOs aim to promote the health status of New Zealanders by combining primary health care skills with public health practice and establishing meaningful engagement with the community. In the future it is envisaged that most primary health care nurses will become part of PHOs (MoH, 2001); therefore it is timely to begin exploring the experiences and expectations of primary health care nurses. This study focuses on one group, public health nurses, with respect to their professional practice environments and perceptions of their position within the current health care system.

Public health nurses

Until now, research into the professional practice environment of nurses in New Zealand has involved either hospital nurses (Finlayson and Gower, 2002; Budge *et al*., 2003) or district nurses (Flynn *et al*., 2005). The current study focuses on a second set of primary health care nurses, those in public health. According to Zerwekh (1991), the purpose of public health nursing is to be available to the community as a whole and to collaborate with families to foster health. Public health nurses achieve this by assisting families to take control of their own health decisions. In New Zealand, nurses are not licensed to work within a specific specialty. Therefore public health nurses are registered nurses who, due to their professional education, development, have elected to work in this specialty. It is this group of nurses who were invited to participate in the current study.

Professional practice environment and NWI-R

The term 'professional practice environment' is used internationally in nursing and is defined by Sleutel (2000) as 'a set of concrete or abstract psychological features, such as job characteristics, autonomy and promotion opportunities perceived by job incumbents who compare these perceptions against a set of standards, values or needs' (p. 55). Hoffart and Woods (1996: 354) define a professional nursing practice model as a 'system (structure, process and values) that supports registered nurse control over the delivery of nursing care and the environment in which care is delivered'. Furthermore, they suggest that a professional practice model leads to improved outcomes and can be viewed as having five interrelated strands comprising professional values, professional relationships, patient care delivery system, management approach, and compensation and rewards.

The nursing practice environment has been the focus of considerable research interest since the identification of 'Magnet hospitals', renowned for their ability to attract and retain nursing staff throughout restructuring and nursing shortages. Kramer and Hafner (1989) developed an instrument, the Nursing Work Index (NWI), to measure the organizational attributes of these successful professional practice environments. The NWI was a 65-item measure which the authors claimed to be an all-inclusive list of factors bearing on job satisfaction and on perceptions of an environment conducive to quality nursing care. When completing the NWI, nurse respondents were asked to indicate, on a four-point Likert scale, their level of agreement with the statements, 'this is important to my job satisfaction', 'this is important to my being able to give quality patient care' and 'this factor is present in my current job situation'. The NWI has since been adapted by several researchers (Aiken and Patrician, 2000; Estabrooks *et al*., 2002; Lake, 2002) with the Nursing Work Index-Revised (NWI-R; Aiken and Patrician, 2000) being particularly widely used, predominantly in the in-patient setting. Its development from the NWI included a reduction from 65 to 55 items, with one reworded and one added, and a shift in measurement emphasis, with the ward, unit or organization taking over from the nurse as the unit of analysis. Research focusing on the attributes of the Magnet hospital environment, as measured by the NWI and NWI-R, have demonstrated that they are linked to patient safety outcomes (Spence Laschinger, 2006), quality of patient care (Scott *et al*., 1999; Aiken *et al*., 2002; Friese, 2005), lower mortality rates (Aiken *et al*., 1994) and patient satisfaction (Scott *et al*., 1999).

While research has predominantly focused on the nursing practice environment within hospitals, there has been recent interest in extending this

focus to primary health care. Flynn and colleagues have reported the existence of a core set of organizational attributes valued both by hospital-based and home care nurses in the US (Flynn, 2003; Flynn and Deatrick, 2003) and by district nurses in New Zealand (Flynn *et al*., 2005), suggesting, with minor amendments, the general applicability of the NWI-R to the community setting in both countries.

The first aim of the current study was to see which items from the NWI-R have applicability to the public health (community) environment, and which ones are considered to be less important for providing quality care. A second aim was to see the extent to which these organizational attributes are actually present within the current work environment. The third aim was to generate ideas for additional organizational attributes not already covered by the NWI-R that public health nurses specifically deemed important for their own work.

Method

This study received ethical approval from the local Regional Human Ethics Committee on behalf of all 15 committees, and also from the Massey University Human Ethics Committee. As it was anticipated that some of the participants would be Māori, consultation occurred with Māori at Te Whare Rapuora (MidCentral Health Māori Health Unit) prior to commencing the study and written support was received. In addition, a Māori public health nurse and member of Te Runanaga, New Zealand Nurses Organisation (NZNO), agreed to be a contact for Māori nurses and was willing to have her name and contact details supplied on the information sheet. This meant that participants could discuss any issues they might have with a Māori nurse. Recruitment of public health nurses was achieved with the assistance of the Nursing Council of New Zealand (NZNC) who posted out study materials to all public health nurses who had a current practicing certificate and had indicated they were prepared to be surveyed. Two weeks after the initial mail out, a reminder letter was sent out and after a further two weeks a second study materials package was mailed with a cover letter thanking those who had already returned the questionnaire and inviting others to complete a questionnaire if they still wished to be included. The study materials included an information sheet, the questionnaire, a reply-paid envelope for its return and two coloured pens (red and blue).

Sample

Of the 540 public health nurses with current practising certificates, 382 had indicated that they were prepared to participate in research. As 18 of these were not currently practising as public health nurses, this left 364 potential participants. In all, 167 responses were received, making the response rate 45.9%. Nearly all participants were female (95%), and the age range was from 21 to 67 years with a mean age of 47.3 years. With respect to ethnicity, the majority of participants were New Zealand non-Māori (72.8%) followed by 11.7% European (born outside New Zealand), 4.3% Māori, 4.9% identified as being both Māori and non-Māori and 3.7% as Asian/Pacific. This distribution corresponds closely to that of NZNC national records for public health nurses. The length of time nurses had been registered ranged from 2 to 51 years with a mean of 23.6 years, and the years spent practising as a public health nurse ranged from 4 months to 34 years with a mean of 9.6 years.

Measures

The NWI-R (Aiken and Patrician, 2000) consists of 55 items representing attributes of the professional practice environment. Attributes are rated as being present in the work environment on a four-point scale where 1 represents 'strongly disagree' and 4 represents 'strongly agree'. Summing scores on subsets of items has formed subscales and these have been named: Nurse Autonomy (5 items), Control Over the Practice Environment (7 items), Relationships with Physicians (3 items), Organisational Support (10 items) (Aiken and Patrician 2000) and Teamwork (11 items) (Rafferty *et al*., 2001). These subscales have been shown to have good reliability and validity in previous studies (Flynn *et al*., 2005). In order to assess the appropriateness of the items for the current study participants, a group of public health nurses reviewed the items and recommended firstly that the word 'patient' be replaced by 'client' and secondly that seven items

Table 1 Ten attributes most strongly endorsed as being important for professional practice by public health nurses, a comparison between ideal and actual ratings

Attribute	Percentage of strong agreement	
	Ideal for professional practice (Ideal)	Present in current environment (Actual)
A good orientation programme for newly employed nurses	95.6	19.5
Registered nurses actively participate in developing their work schedules (ie, what days they work, days off, etc.)	95.5	30.6
Active inservice/continuing education programmes for nurses	94.3	26.8
A nurse manager who is a good manager and leader	93.8	25.6
Enough staff to get the work done	93.1	4.3
A supervisory staff that is supportive of nurses	93.0	19.3
A preceptor programme for newly hired RNs	91.1	25.8
Enough registered nurses on staff to provide quality client care	90.7	4.9
A satisfactory salary	90.7	5.5
An administration that listens and responds to employee concerns	90.5	10.6

be removed as they were considered too 'hospital based' and not relevant to public health nurse practice in New Zealand. This resulted in 48 items being retained[1]. In line with the aims of the current study, participants were asked to respond to the items in two different ways using the coloured pens provided in the study materials. Firstly, they were asked to indicate how strongly they agreed/disagreed that each item *should be present* in their work environment (described as ideal ratings) in that it was important to their practice as a public health nurse. Secondly, they were asked to indicate how strongly they agreed/disagreed that each *was present* in their work environment (described as actual ratings).

Results

The first research question for this study concerned the identification of those organizational attributes of the nursing practice environment that public health nurses considered important for providing quality care. Also of interest was the identification of attributes considered to be of lesser importance by public health nurses. Frequency distributions were calculated for each of the NWI-R items used, and percentages of strong agreement were used to calculate the 10 most strongly endorsed and the 10 least endorsed attributes. These appear, along with the percentage of strong agreement, in the first two columns of Tables 1 and 2, the third column relates to the second research question, which will be addressed later.

Three themes were evident in the attributes appearing in Table 1, suggesting that education/orientation, support from management/administration and staffing numbers and scheduling were considered to be most important for professional practice. The 10 attributes were strongly endorsed by at least 90% of the participants.

The attributes appearing in Table 2 are those that were the least endorsed by nurses in this sample, and it can be seen that 70% or fewer strongly agreed that these attributes were important for professional practice. The attributes are clearly more varied in content than those presented in Table 1. However, different approaches to providing nursing care, such as primary nursing, team nursing and need for nurses to be permanently assigned to one unit rather than floating between units, were all considered to be of lower importance.

In previous research considering the suitability of NWI-R items for use in community settings (Flynn *et al*., 2005), the 'strongly agree' and the 'somewhat agree' responses were combined to form a set of agreement responses. For comparative purposes, the same approach was applied to the current data with the result showing that at least 78% of the public health nurses considered that all 48 organizational attributes were important to their professional practice. Agreement

[1] Items 23, 25, 28, 41, 52, 53 and 57 were excluded from those presented in Aiken and Patrician (2000).

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Table 2 Ten attributes least endorsed as being important for professional practice by public health nurses

Attribute	Percentage of strong agreement	
	Ideal for professional practice (Ideal)	Present in current environment (Actual)
Opportunity to work on a speciality team	70.5	19.1
The nursing staff participate in selecting new supplies and equipment	67.5	16.5
The contributions that nurses make to client care are publicly acknowledged	64.1	9.3
Primary nursing as the nursing delivery system	62.5	25.0
Nurse managers consult with registered nurses on daily problems and procedures	61.5	16.9
Nurses actively participate in efforts to control costs	51.6	11.8
Regular, permanently assigned registered nurses never have to float to another team	50.7	27.5
Each nursing team, or unit, determines its own policies and procedures	50.3	22.4
Team nursing as the delivery system	47.7	12.3
Use of problem-oriented clinical record	43.0	13.2

with the importance of the attributes was so strong that only four were endorsed by fewer than 90% of the sample. These were use of a problem-orientated clinical record (78%); each nursing team, or unit, determines its own policies and procedures (83%); regular, permanently assigned registered nurses never float to another team (86%); and team nursing is the nursing delivery system (89%). For the remaining attributes, the percentage agreement ranged from 93% to 100%, with 15 receiving 100% agreement.

The second research question concerned the difference between the nurses' perceptions of the importance of organizational attributes and their actual presence in the practice environment. These ratings were labelled 'ideal' and 'actual', respectively. The 'strongly agree' response frequencies were used for this analysis and the 'actual' percentages are presented in the third column of Tables 1 and 2. A comparison of the 'ideal' and 'actual' ratings demonstrated considerable differences in scores across all 20 attributes. In Table 1, it can be seen that the range of 'ideal' ratings was from 91% to 96%, whereas the range of 'actual' ratings was from 4% to 27%. This disparity highlights the difference between what public health nurses perceive to be important and what is actually happening in their work environments. Of these top 10 attributes, the one most strongly rated as being present in the current work environment was that registered nurses could participate in organizing their work schedules. However, according to the 'actual' ratings, this appeared to be possible for less than a third of the participants. The particularly low frequencies occurred in relation to there being sufficient staff to provide good care, or even get the work done, and to salary. The difference between the 'ideal' and 'actual' ratings was also greatest for these attributes.

Table 2 reveals that the item concerning nurses being permanently assigned to one team rather than floating was most strongly endorsed as being present in the current work environment with 27.5% of respondents indicating strong agreement, even though from column 2 it can be seen that only half of the nurses strongly agreed that it was important for professional practice. The second highest was the agreement that primary nursing was the delivery system. The lowest ranked item was that nurses' contributions to client care receive public acknowledgement, something which 64% of the participants had identified as being important for professional practice. The range of 'ideal' ratings was from 43% to 71%, whereas the 'actual' ratings range was from 9% to 28%.

Additional attributes

In addition to rating the importance and presence of the NWI-R items, participants were

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asked to list any important attributes of their work setting that they felt had not been covered by the existing items, given that the instrument has only been widely used to measure organizational attributes of hospital settings. The question generated 202 suggestions, which were collated using Edwards and Talbot's (1994) framework. This involved assigning data-driven codes to the responses and then categorizing them according to descriptive patterns. Some were entered into more than one category as they contained more than one idea and this resulted in 212 responses being collated under four headings: recognition of specialty practice ($n = 95$); resources ($n = 56$); networking ($n = 32$); and education/research ($n = 29$).

The suggestions categorized under the 'recognition of specialty practice' heading included the desirability of public health nurses having input into Ministry of Health contracts and influencing the strategic development of public health nursing. This was seen as a means of enabling consistency in public health nursing practice, through, for example, establishing national standards of practice and models of care. A number of frameworks were suggested including working within the Treaty of Waitangi principles (agreement between indigenous people and settlers), the Ottawa Charter, use of a health and wellness focus, a strengths-based model, a health-promoting framework for practice and family-focused health care. Participants suggested that in the current environment community needs were not always addressed and the existing contracts were perceived as a barrier to nurses' ability to be responsive to the needs of the community. Respondents emphasized the need for public health nurses and their managers to be aware of their community resources and community development opportunities. A number of them were also concerned about their image within the health sector. These concerns included the need for hospital services to understand the role of public health nurses in the community and for their own profession, and for their employer to value public health nurses. Pay parity with other professional groups was seen as one means of acknowledging the value of the role.

With respect to 'resources', a significant range of constraints seen to impact on the work of public health nurses was identified. Examples included a lack of well-run transport services, technical support and clerical support. In addition, the need for availability of cell phones, an adequate safety policy, horizontal violence procedures and training for dealing with aggression were identified as specific resource needs. Inadequate access to health promotion and health education resources were also identified as was relief time for nurses in isolated roles, and the availability of clinical supervision.

The 'networking' category acknowledged the need for nurse managers to allow public health nurses time to network effectively with a wide range of providers, including Māori and secondary care providers, to develop improved relationships and collaboration in providing care.

The 'education and research' heading included comments stressing the value of specialist post-graduate education in public health, and acknowledging the need for financial support to attend conferences, enrol in post-graduate education and to allow for time to study. Suggestions were made regarding specific professional development in areas such as immunizations, specialized training in engaging with clients in the community and training in information technology. An emphasis was placed on the importance of research and for nurses to have the opportunity to work on collaborative research projects.

Discussion

The 'Magnet'-related research has previously determined the organizational attributes that need to be present within hospital settings to improve nurse and patient outcomes. As public health nursing is viewed as a specialty within the primary context it could be, and often is, assumed that their practice environment needs, as a professional group of nurses, will be very different from the needs of nurses who work within hospitals. This exploration of the organizational attributes public health nurses consider important (ideal) to their professional practice in NZ has shown that at least 70% of the nurses strongly agreed that 39 of the 48 NWI-R items rated were important for professional practice. This finding suggests a relatively high degree of congruence between perceptions of hospital- and community-based nurses. It is hardly surprising that one theme amongst the attributes considered important by the

highest proportion of respondents related to having sufficient numbers of nurses to get the work done and to provide quality care. It is also not surprising given the current climate of nursing shortages that less than 5% of the nurses strongly agreed that there actually were enough nurses. A lack of adequate staffing was acknowledged again in relation to extra attributes as comments were made about the need for relief time for isolated nurses and time for study.

A second group of attributes amongst those considered most important concerned education in the form of inservice/ongoing training and support for newly employed nurses in the form of preceptorship and orientation programmes. Again, the number of nurses saying that these attributes were present in their current environment was considerably lower, ranging from 20% to 26%. The relationship of education and professional development to the quality of practice is strongly endorsed in all Magnet-related literature and nurses are, of course, aware of the links between education and the quality of practice. It is disturbing that nurses in this environment report such limited access to professional development.

A third subset of attributes related to the need for support from the organization, either from other nurse managers and supervisors or from administration. When combined with the attributes characterizing the importance of orientation and preceptorship, these items suggest the importance of a collaborative nursing environment where good support is provided down through the hierarchy from managers and supervisors for nurses currently in practice and in turn from those in practice towards those who are newly employed. The importance of this form of support mirrors the hospital environment where it is acknowledged that new graduates are in particular need of support through new graduate or residency programmes (as described by Beecroft *et al*., 2001; Owens *et al*., 2001) in order to increase their confidence, clinical skills and commitment to nursing.

The attributes rated as being of lower importance were more varied although two were related to nursing delivery being either primary or team, and two concerned nurses' involvement in what could be seen as less important aspects of the nursing role, namely cutting costs and selecting new supplies and equipment. As with the more strongly rated attributes, there was a notable difference between ideal and actual ratings, although the agreement that attributes were present in the work environment was stronger for the attributes considered less important than for some of those considered to be of high importance.

When both agreement categories were combined, all but four of the items met the 80% cut-off criterion employed by Flynn *et al*. (2005). A comparison between the two studies shows that two of the four items considered least important by the public health nurses were the only two that did not reach the 80% agreement criterion amongst US home care and NZ district nurses. These were 'each nursing team, or unit, determines its own policies and procedures' (31% of home care and 51% of district nurses considered it important to their practice); and 'regular, permanently assigned registered nurses never float to another team' (74% of home care and 65% of district nurses considered it important to their practice). It was found that all 48 attributes were considered important by the current sample when a criterion of 75% agreement was used. However, for the district nurses in Flynn *et al*.'s (2005) study, the percentage of agreement was below 75% for three of the attributes. One of those attributes, namely '*nursing care plans are verbally transmitted from nurse to nurse*', was removed from this survey as it was considered to be irrelevant to public health nurses. The other two attributes '*regular, permanently assigned staff never float to another team*' and '*each nursing team or unit determines its own polices and procedures*' were two of the four least endorsed by the public health nurses (86% and 85%, respectively).

This study has provided more support for the applicability of the organizational attributes represented by the NWI-R to the NZ community setting. The findings contribute to information regarding a group of primary health care nurses' (public health nurses) perceptions of the importance of specific organizational attributes within their practice setting. These findings endorse those of Flynn *et al*. (2005) in suggesting there is a core of conditions fostering effective professional nursing practice existing irrespective of specific context. However, further research is required on other NZ primary health care nurses' perceptions of the importance of specific organizational attributes within their practice setting to determine whether the NWI-R tool is applicable to primary

health care nurses who are employed in community settings not associated with large organizations. As this tool can inform an organizational redesign initiative that seeks to improve quality of care and health outcomes (Aiken and Patrician, 2000), it could be used by a range of employers and nurse leaders in community settings to guide them in developing professional nursing practice environments.

The predominant purpose of the study was to identify which aspects of the professional nursing practice environment are desired by public health nurses in NZ, and findings suggest that there is considerable overlap both with hospital environments and also with other community-based nurses in NZ and overseas. A degree of congruence has now been reported between US home health nurses and New Zealand district nurses and New Zealand public health nurses. This lends further strength both to the usefulness of the NWI-R as a tool in community-based settings and to the recognition that there is useful similarity in what is valued by nurses in both hospital and community settings.

It is a concern that results reveal that public health nurses work in professionally impoverished practice environments. Currently, New Zealand is five years into the implementation of an ambitious primary health strategy (MoH, 2001). The strategy requires giving primacy to all areas of prevention and wellness promotion, and public health nurses are arguably at the centre of that endeavour. Following the excessive contract culture of the 1990s (Gough and Walsh, 2000), public health nurses have found their work fragmented and also dissociated from the activity and developmental work in the community-based PHOs. At the same time, they have experienced lack of leadership and marginalization as community-based nurses who remain employed by the hospital sector. The low incidence of positive attributes of a professional practice environment for public health nurses most probably reflects the current positioning of public health nurses and should be cause for concern.

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