Competency development in public health nutrition: Reflections of advanced level practitioners in Australia

Roger Hughes

Abstract

Objectives: To investigate the attitudes, experiences and beliefs of advanced level public health nutritionists in Australia in relation to public health nutrition competency development.

Design: Qualitative study using semi-structured interviews.

Subjects: Forty-one advanced level public health nutritionists employed in academic and senior technocratic positions in state health systems.

Setting: Australia.

Main outcome measures: Qualitative data on attitudes, experiences and beliefs of advanced level public health nutritionists.

Analysis: Audiotaped interview transcripts were content analysed by theme using a pre-determined inquiry logic.

Results: Career paths of interviewees were mostly opportunistic rather than planned and reflected individual interests and changing health sector opportunities over the last few decades. Disillusionment with clinical practice was a common motivation for career paths leading to public health nutrition. The most commonly reported landmarks for competency development were exposure to mentors, on-the-job experience and postgraduate training in public health. There was disagreement about the utility of dietetic training in public health nutrition competency development, partly the result of recognition of the post-basic nature of public health nutrition competencies. Most advanced level public health nutritionists, however, identified the existing dietetic workforce as a priority for public health workforce development because of the strong preparation in nutrition and the privileged access to work opportunities dedicated to nutrition that dietitians have. Undergraduate preparation specific to nutrition, experiential learning and post-graduate specialist training were identified as important features of public health nutrition competency development.

Conclusions: The data collected represent the views of a large proportion of the public health nutrition leadership group in Australia. Further research investigating workforce composition, competency needs, practices, continuing professional development needs and strategy effectiveness is required. Dietitians, as a professional group, appear well placed to take a leadership role in the scholarship and development of public health nutrition in Australia.

Key words: workforce development, public health nutrition, competency development
Introduction

The launch in 2001 of Eat Well Australia, the ten-year national agenda for action for public health nutrition in Australia, provided a mandate for accelerated workforce development in public health nutrition under its capacity-building priority area (1). This mandate is now starting to be implemented in state health departments as evidenced by the recent investment in a public health nutrition workforce in Queensland (2) and workforce development initiatives in Victoria (3).

Systematic workforce development requires information to guide development of strategies (4) and research is needed to generate this information. The limited scholarship relating to nutrition and dietetic workforce development published in Australia over the last few years has focussed on entry-level dietetics competencies (5,6) and the training needs associated with the developing workforce (7). Scholarship in Australia that is specific to the public health nutrition workforce has been limited to the work of the Specialty Program in Public Health and Community Nutrition in the mid-1990s funded by the Public Health Education and Research Program (8) and an unpublished community survey of the nutrition workforce conducted as part of a masters research project (9). This work, and more recent reviews of entry-level dietetic competencies (6), have identified a need for competencies and systems that are specific to public health nutrition and for continuing competency development.

Despite considerable professional debate about definitions, role delineation and exploration of workforce attitudes about workforce development in public health nutrition emanating from this work (8,10–18), there is still a lack of intelligence about the public health nutrition workforce in Australia, and the role that dietitians and associated academic preparation programs play in this field of practice. This earlier work (8) has shown there is a recognition that the public health nutrition workforce is multi-tiered, delineated by specialist and generalist tiers, and is composed to a large degree (but not exclusively) by practitioners with dietetic qualifications (particularly among the specialist tier) (6).

Information about the composition, size, practices, educational attributes and training needs required for efficient and strategic workforce development is limited. There is similarly a dearth of literature to inform strategy development to build workforce competency. These knowledge-based barriers to workforce development are consistent with those identified for the broader public health workforce (19). Given the lack of intelligence available to inform public health nutrition workforce development, consultation with existing public health nutritionists about workforce development issues, a method used internationally to assess workforce development needs, is important (20). The experiences and attitudes of this sector of the public health workforce can assist investigations about effective competency development strategies and reflect on the utility of prior competency development experiences.

To provide a context for this study, public health nutritionists were considered to be nutrition professionals involved in practice that was population-based, and those using public health approaches to nutrition problem resolution. Public health nutrition competencies then are the skills, knowledge, experiences and attitudes required by professionals in order to effectively address public health nutrition issues in the course of their work. Following this logic, competency development in public health nutrition is therefore the process of developing these competencies to enhance practice effectiveness.

This study aimed to qualitatively investigate the attitudes, experiences and beliefs of advanced level public health nutritionists in Australian health bureaucracies and academic institutions in relation to public health nutrition competency development. It was conducted as part of a interpretative case study investigating, through multiple methods, the public health nutrition workforce in Australia with the objective of developing an intelligence base to inform workforce development in this field.

Methodology

Subject recruitment

Advanced level public health nutritionists is a title adapted from workforce studies in the USA (21). Advanced level public health nutritionists in this study were identified as public health nutrition practitioners at senior levels in government departments and academic public health nutritionists from Australian universities with programs in professional nutrition practice (nutrition and dietetics, public health nutrition and community nutrition). The senior health department staff were employed in health promotion and public health sections with roles and responsibilities reflecting leadership, advisory and coordinating roles in public health nutrition. Invitations to participate in the study were directed purposively through known faculty and state-level professional networks using snowball sampling techniques.

Data collection

All but two of the interviews were conducted in person (two interviews by telephone with two senior government staff) between March and September 2001. The order of interviews was determined by convenience. Interviews were conducted using a list of open-ended questions as a basis for guiding discussion and are listed in Table 1. These questions were constructed in the context of the inquiry logic as listed in Table 1 and forwarded to interviewees prior to the interview to enable considered responses. Interviews on average lasted about 60 minutes with a range of 45 to 90 minutes. A number of preliminary questions relating to the personal, work and career attributes of the interviewees were asked to establish a context for responses and provide data to support the assumption of advanced level status (see Table 2). While the interview questions provided a structure and general sequence to the interview, the discussion was not rigidly limited to these questions, allowing for probing and clarification throughout the interview.

Persistence with interviews after new themes appeared to be exhausted (interview redundancy) was applied to ensure all opinions were canvassed and identified within the limits of this method. Interviews were audiotaped and transcribed verbatim. Demographic and educational background data of each interviewee were recorded at the beginning of the interview.
Assumptions

There were a number of assumptions underpinning the analysis and interpretation of data. The first was that advanced level public health nutritionists recruited in this study had developed public health nutrition competencies and had insights about this process from their lived experience throughout their careers. The second was that these experiences reflected a reality pertinent to this workforce in Australia and when analysed showed ways of developing workforce competency. These assumptions supported the use of a naturalistic research paradigm (22).

Analysis

Interview data were recorded by two methods. Written notes of key responses were taken by the interviewer and interviews were audiotaped. Audiotaped interviews were then transcribed verbatim. Immediately following each interview, the interviewer re-read and added to the notes to provide a backup to the audiotape transcripts. Both records of the interview data (notes and transcripts) were read and re-read numerous times in order to develop response categories for sorting the data thematically (coding), as described by Seidman (23) and consistent with the qualitative analysis referred to as editing analysis style (24). Interview transcripts were then sorted manually using the response categories to sort the discussion by themes. Narratives that reflected key themes were kept intact as much as possible and only minimally edited. They were used selectively to illustrate consistencies and differences in response themes presented in the results. Key themes were then considered in the context of the inquiry logic in Table 1.

The process of analysis involved continually reflecting on three sources of knowledge: the inquiry logic guiding the study; the evolving understanding of the issues gained over time via engagement with participants and the apparent commonalities and contradictions found as new sources of data were pursued. This interactive analytical process is consistent with that described by Miles and Huberman (25).

Results

Participant characteristics

A total of 41 advanced level public health nutritionists (26 in academic positions and 15 government positions) were interviewed representing all Australian states and territories. Staff who participated in this interview process represented all but two of the 11 universities with professional nutrition and dietetic, community and public health nutrition programs. All but one of the known government level public health nutritionists were interviewed.

The sample was dominated by practitioners with dietetic qualifications as their entry-level professional qualification (37 of 41). This sample was highly qualified in nutrition and/or dietetics, with most (33 of 41) having more than two qualifications and over half (23 of 41) completed or partially completed doctorate studies. Almost one quarter (11 of 41) had completed a combination of dietetic training followed by a Master of Public Health. This sample was also highly experienced with most (34 of 41) having greater than ten years’ experience in community and public health nutrition practice.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Inquiry logic</th>
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</thead>
<tbody>
<tr>
<td>1. What career path did you take prior to your current role in PHN? (a)</td>
<td>Reflection on individual experiences can provide insight of workforce development effectiveness and efficiency.</td>
</tr>
<tr>
<td>2. What were the events/ experiences that contributed most to your own PHN competency development? (Landmarks)</td>
<td>Reflection on individual experiences can provide assessments of the utility of dietetic training experience for PHN competency development</td>
</tr>
<tr>
<td>3. What role did dietetic training play in developing your PHN competencies? (Prompted if not mentioned in earlier question.)</td>
<td>The practical advice provided by academics to students provides insights into their attitudes about contemporary competency development pathways</td>
</tr>
<tr>
<td>4. Based on your experience, what is the most efficient way to develop the PHN workforce in Australia?</td>
<td></td>
</tr>
<tr>
<td>5. If a student asked you how best to become a competent public health nutritionist, what advice would you give? (Only asked in interviews with academics.)</td>
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</tbody>
</table>

(a) Public health nutrition (PHN).

<table>
<thead>
<tr>
<th>Interviewee sample characteristics</th>
<th>Academic (n=26)</th>
<th>Government (n=15)</th>
<th>Total (n=41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of academic qualifications</td>
<td>3.4</td>
<td>3.2</td>
<td>3.3</td>
</tr>
<tr>
<td>(range)</td>
<td>(2–5)</td>
<td>(2–4)</td>
<td>(2–5)</td>
</tr>
<tr>
<td>Mean years of experience in community and public health nutrition practice</td>
<td>16</td>
<td>13.4</td>
<td>15</td>
</tr>
<tr>
<td>Number with ten or more years’ experience in community and public health nutrition practice</td>
<td>20</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>Number with Doctorate level qualification</td>
<td>16</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Number currently undertaking Doctorate level qualification</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Number with Masters of Public Health</td>
<td>6</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Number currently undertaking Masters of Public Health</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 1. Interview questions guide and associated inquiry logic

Table 2. Interviewee sample characteristics
Interview redundancy
There was generally a high level of within group and between group (academics group and senior government staff group) consistency in responses obtained with a quick reduction in new response themes becoming apparent after about ten interviews in both groups.

Career paths
Career paths leading to public health nutrition practice tended to start as entry-level dietitians and were mostly described as being opportunistic and unplanned. Career paths and development opportunities usually followed individual interests. This was reported to be secondary to having no defined career paths into public health nutrition at that early stage of their career development.

I guess it was always the sort of work I wanted to do. I went into dietetics because I was interested in nutrition and epidemiology so it’s been a long-term interest and I was interested in preventive health. I never really actually wanted to be a clinical dietitian…but I didn’t have a choice of studying nutrition in a thorough scientific way in this country without doing dietetics.

Only two interviewees commented that their career in public health nutrition was premeditated.

I went straight into generic health promotion positions and then back to public health nutrition…I’ve never actually worked in clinical dietetics.

Disillusionment with clinical dietetics practice was a common motivation for career development into public health nutrition.

I could see solutions to problems like obesity come through public health efforts…clinical dietetics was not intellectually satisfying…

I got pretty sick of going to ICU every morning and realising that much of the problems presenting there were preventable…

A desire to be effective appeared to be a repeated theme for motivations leading to career paths in public health nutrition.

I’ve been driven, I guess, by a character trait that desires to be effective—clinical work just didn’t seem to have an impact and that frustrated me.

Career paths into public health nutrition also reflected the changing health sector environment over the period of this group’s career development.

It was difficult getting into community nutrition because there were so few jobs…if I had planned it I would have got into community earlier.

…the history of public health nutrition development in Australia has been an evolution of practice from clinical through community to public health nutrition.

Landmarks in personal competency development
When asked to reflect on their own careers and nominate landmark experiences that contributed most to their own competency development, interviewees most commonly reported exposure to mentors, on-the-job experiences (particularly overseas work experience), post-graduate training (particularly in public health) and committee work.

Having opportunities to be exposed to other people…not just mentors but even people you can’t stand…experiencing real life debates and issues…

...mainly by working with really great people…not always formally in a mentoring or line management way but by observing and copying.

Working in large clinical dietetic departments means professional socialisation is predominantly with other dietitians…in community health it is much more multi-disciplinary…you get a much wider and more challenged perspective.

Post-graduate studies in public health opened my horizons and gave me a different perspective on how to look at problems.

I don’t see any substitute for good public health training…once you learn the public health approach…collecting and using data to identify problems and determinants…it’s much less difficult.

One respondent identified that competency development was a result of a general commitment to self-improvement despite limited opportunities.

I’ve learnt a lot by having a go at getting funding and succeeding…it showed me that I could do that if I tried…a real confidence thing… I have forced myself to try and write up our work for journals…and have learnt a lot as a result.

Work experiences associated with ‘being thrown into the deep end’ were commonly reported as being a contributor to competency development.

Oh I think it was really as a result of being thrown in the deep end and struggling through…often by trial and error rather than by design.

Working with Aboriginal communities…experiencing first hand the problems in a society that is very different to mine…was a great experience.

Utility of dietetic training in public health competency development
There was considerable disagreement about the utility of dietetic training for public health nutrition competency attainment among interviewees. None identified their dietetic training experience as a landmark. Those that considered dietetic training to be an advantage tended to nominate the value of the strong grounding in nutrition sciences, communication and translation skills acquired, exposure to the work environment and experience in practical placement programs. These views tended to be based on knowledge of existing programs as well as the training experienced by interviewees.

One of the benefits of dietetic training relates to the communication and translation skills that are so important in public health…I have seen examples of undergraduate nutrition-only graduates where that skill isn’t obvious.

There are elements of dietetic training that give dietitians the edge over generalists…without the background to interpret problems you get a different result.

The benefit of current dietetics training is the field placement component…which is experiential and leads to professionalisation.

Some of the responses were ambivalent.

It’s good to have an understanding of clinical dietetics and compassion for that role…however I don’t think clinical
competencies are required at all for public health nutrition practice.

...existing training of dietitians is generalist and directed by competencies that reflect a clinical emphasis. Dietetic training has the potential to contribute significantly to public health nutrition...but programs need to change.

Dietitians were considered by many of the interviewees to be in a privileged position to take on public health nutrition roles and develop the associated competencies.

At the moment the culture limits work experience options for non-dietitians in nutrition...because dietitians have the added ability to service sick people....a lot of non-dietetic graduates have to work very hard to get opportunities in public health nutrition.

An equal number of respondents reported limited utility in dietetic training as a pathway to competency development in public health nutrition. This tended to focus on the limitations associated with a clinical emphasis and the non-specialist nature of dietetic training.

The socialisation that goes on within dietetic training is not conducive to a public health or population focus...for example the dominance of clinical placement...physiology and biochemistry dominate curriculum...and there is an over exposure to clinicians and medical model[s].

Dietetic training has been designed to produce clinical dietitians...although some programs have tinkered around the edges to increase the emphasis on other areas like community practice...so we shouldn’t expect them to be producing competent public health nutritionists.

I think there is a lot of redundancy in dietitian training for someone wanting to work as a public health nutritionist...its too reductionist and there is an emphasis on individual rather than population approaches and little on structural, policy and broader public health approaches.

A number of interviewees made comments relating to the existing professional culture and belief systems relevant to dietetic training programs that may act as barriers to early career path selection to public health nutrition.

...there is still very much an attitude in this state that dietitians need to get experience clinically...that is rubbish, it really is...I see no reason why a student wanting to work in public health needs to go into a hospital.

...students have a fear that if they don’t get experience as a clinical dietitian, they will never get that sort of job in the future...so it’s a barrier at a student level...most of my students have this attitude and it reflects in their career paths.

Students don’t seem to be getting a grounding in the frameworks of public health...the paradigm is different...community approaches have always been the poor cousin to clinical practice.

...the DAA has paid lip-service to public health nutrition as a field...and has missed the opportunity to lead the development of the public health nutrition workforce. In many ways it has resisted it by doing nothing. I actually think public health nutritionists feel DAA is irrelevant.

Workforce development efficiency

When asked to consider the most efficient way to develop the public health nutrition workforce most of the interviewees considered that up-skilling motivated dietitians. This was considered largely the result of the good grounding in nutrition science provided by dietetic training and the privileged access dietitians have in the workplace to develop and apply nutrition competencies via experiential learning.

The quickest way to public health nutrition competency is via dietetics, because it opens doors to employment in nutrition, which is crucial for real world learning.

If the question is...is it easier to take a nutritionist and train up in public health than taking a generalist public health worker and train up in nutrition?...I think you get a better product if you get a nutritionist and train up from there.

Others expressed concerns about focussing on a specific professional group such as dietitians at the expense of inclusive and multi-disciplinary approaches.

You don’t have to be a dietitian to be a competent public health nutritionist...the predominance of dietitians in PHN jobs is a historical thing...nowadays you need higher qualifications in public health.

Relying on dietetic trained graduates is an expensive way of developing a specialist public health nutrition workforce...resources should be being applied to advanced level or specialist training in public health nutrition as a distinct discipline.

Recommendations for competency development pathways

When asked to identify the advice they would give students about developing PHN competencies most academics recommended a mixed program of training and experience that included undergraduate training in nutrition and/or dietetics followed by work experience and advanced level training in public health (such as a Master of Public Health). Experience with dealing with real problems through work experience was a notable recommendation. Most agreed that a lot of competency development in public health nutrition is via experiential and ‘external to university’ learning, and specialist in nature.

Many of the competencies required for effective public health nutrition practice you develop by getting stuck in and making mistakes as you go...this isn’t something you can easily do at university.

Public health nutrition competency development can be helped along by the quality and focus of training...such as in health promotion or public health...but it can’t replace experience in the field and the maturity that goes with developing strategies to deal with population level issues.

I did an MPH after I realised that my dietetic competencies were limited...I realised I had little idea about how to think about solutions to population-wide problems. When I think about it my expectations were unrealistic...I wasn’t adequately prepared as a dietitian to deal with this area that I now know is a distinct specialty.

Only a few respondents suggested that public health nutrition competencies could be developed in undergraduate programs.

I don’t see any difference between doing a four-year undergraduate public health nutrition degree coming out as an entry-level PHN versus a dietitian who goes on to doing public health...as entry-level they would be the same...in four years you can teach a lot.

Discussion

Data obtained on participant characteristics confirmed the assumption that interviewees sampled were advanced
level practitioners. The characteristics of interviewees probably reflected recruitment criteria and career paths associated with senior level employment in health departments and academia.

The opportunistic and unplanned nature of career paths into public health nutrition practice reflects the historically limited workforce opportunities in this field in Australia. Most advanced level public health nutritionists reported career evolution from clinical dietetic to public health nutrition roles as opportunities arose, interests changed and competencies developed. It could be argued that this is a natural process of career progression, however it is likely to be inefficient, particularly if an individual has clear preferences for public health practice and does not want to participate in clinical practice.

Dietitians as a professional group are recognised as priority targets for ongoing workforce development. Underpinning this view is a consistent qualifier that workforce development targeting dietitians should not be exclusive or limited to this professional group. This view is consistent with the multi-disciplinary model of public health nutrition workforce development and practice (20). The consensus that existing entry-level preparation in dietetics was not considered adequate to ensure competency attainment without post-basic training and experience, has obvious implications for academic institutions, workforce developers and dietetics educators.

Considerable polarisation of views about the utility of dietetics training for public health nutrition workforce development was of interest. As most of the interviewees were trained initially as dietitians, but now considered themselves as public health nutritionists and expressed disillusionment with clinical practice as motivations for career development, this was not unexpected. It does raise questions however about the emphasis in training of the nutrition workforce, and particularly that among the dietetics profession. This approach to specialist public health nutrition workforce development (based on dietitians) is consistent with the trend apparent in the USA and Canada, where have a relatively developed public health nutrition workforce (29,30). This differs from the professionally inclusive approach seen in Europe which favours the development of a professional group distinct from dietetics (26-28). This differs from the professionally inclusive approach seen in Europe which favours the development of a professional group distinct from dietetics (29,30).

Reflections on landmarks influencing competency development among advanced level professionals may provide retrospective pointers to competency development strategies. Mentoring, further training and on-the-job experience (experiential learning) appear to be important facilitators of competency development that are relevant to educators and workforce developers. The reported utility of experiential learning resulting from on-the-job exposure to practices and problems is consistent with the findings of recent studies of the value of experiential learning in dietetics in the USA (31).

Creating a workforce development environment that includes experiential learning and post-dietetic training in public health nutrition at a national level will require greater interaction between the workforce, work setting and academics involved with training than currently occurs. This view is supported by recent commentaries about the desirable approaches in public health workforce education (32-35).

Implications for practice and research

The potential for bias associated with the interviewer's own views and interests, having conducted previous research in public health nutrition workforce development (8,10,14,15), having worked in public health nutrition in Australia for over ten years and with many of the interviewees, has been countered as much as possible. This includes efforts to provide a clear exposition of the methods, analyses and assumptions, attention to and reporting of narratives presenting differing views (fair dealing) and sensitivity to the ways in which the researcher and process may shape data collection (reflexivity) (36). However, readers should be aware of this potential bias when considering how the data has been interpreted.

Sample recruitment for this series of interviews did not extend beyond academics involved specifically in professional nutrition and dietetic preparation programs such as dietetics, community nutrition and public health nutrition. It is recognised that a range of academics other than those included in this limited sample have important roles and make important contributions to public health nutrition efforts, including workforce development. Academic epidemiologists, health promoters and other public health academics are such examples. Future efforts to develop public health nutrition workforce intelligence would benefit from expanding this consultation to include these professionals.

This qualitative investigation provides information that builds the intelligence base required for systematic and efficient workforce development, particularly by focusing on competency development. The data collected represent the views of a large proportion of the public health nutrition leadership group in Australia. Further research that investigates workforce composition, competency needs, practices, continuing professional development needs and strategy effectiveness is required.

The competency development pathways of the contemporary public health nutrition workforce and the variable, if not unfavourable, assessments of the utility of their dietetic training experience provides an impetus for educators to continually review undergraduate and entry-level dietitian/nutritionist preparation. This also indicates a need for strategic articulation of specialist or advanced level public health nutrition training with work experience in this field, which will require collaboration between educators and employers to be increased.

Acknowledgments

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References


