



The research and educational priorities of rural occupational therapists

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Abstract

The aim of this pilot research project was to identify the research and educational priorities of occupational therapists practising in rural New South Wales. Eight participants were recruited in the south-western region of the State. The Delphi technique was used to obtain the most reliable consensus of the research participants. Priorities emerged in four designated areas: (1) research that would be of value to clients; (2) research that would be of value in providing community care for clients; (3) research that would be of value in facilitating health promotion and disease prevention; and (4) research that would be of value to professional and educational needs. In the final phase of the study, 23 high priorities were identified. The findings of the study suggest directions for research and continuing education in occupational therapy which may benefit rural practitioners and their clients.

Introduction

Health and health service provision are major issues affecting rural communities. Problems with rural health services, including the need for ongoing education and training for rural practice, have been well documented (Gadiel & Ridoutt 1993). It is well known that urbanised western countries such as Australia face a shortage of medical practitioners in rural areas (Christley 1992). The shortfall of medical practitioners in rural areas in Australia occurs in a context where the number of graduates has increased over the past two decades (Silagy & Pitman 1991). Similarly, maldistribution of allied health professionals exists in New South Wales 'across geographic areas and especially between urban and rural areas' (Gadiel & Ridoutt 1993, p 4).

Allied health professionals who practise in rural areas have some concerns in common with their medical colleagues. These concerns include in the main 'professional isolation and remoteness from major facilities' (Gadiel & Ridoutt 1993, p 1). The literature shows that professional disincentives to rural allied health practice include cognitive dissonance because of the clash between practice values and standards espoused in professional education courses and those sustainable in rural and remote areas; absence or lack of professional supervision and direction; lack of and/or outdated equipment and clinical practice facilities; infrastructure issues such as line of responsibility/accountability, which is often to a non-allied health professional; lack of opportunities for continuing education; isolation from the professional mainstream; limited opportunities for career advancement and promotion; and diminished morale related to family, social and cultural issues (Gadiel & Ridoutt 1993).

There is a shortage of Australian research data which could help to identify priority areas for research and education in the allied health professions. Such intelligence could be used to support and develop allied health practice. The research project undertaken by the authors was designed to generate data on the priority research and continuing education requirements of a sample of rural occupational therapists. It was anticipated that the study findings could help to provide directions for research and educational strategies aimed at meeting the immediate and priority needs of the research participants. Intelligence of this type could provide a guiding framework for strategies designed to enhance practice in rural occupational therapy within a specific regional and local context.

Aim of the research

The aim of this pilot research project was to identify the research and educational priorities of rural occupational therapists. To achieve this major aim, the following objectives were developed:

- (a) to establish research questions in rural occupational therapy
- (b) to establish the educational priorities of occupational therapists practising in rural New South Wales
- (c) to obtain the most reliable consensus of a group of experts using the Delphi method.

Methodology

Research participants

The study used a convenience sample ($n = 8$) comprised of occupational therapists employed in regional hospitals ($n = 6$) or community health centres ($n = 2$). Participants were recruited using a written invitation to participate in the study which was circulated with the assistance of health service providers.

Design and measures

The Delphi method was the research approach used in this study. The object of this methodology is to obtain the most reliable consensus of a group of experts. The Delphi technique has been applied extensively in business and industries (Browne 1971; Hertz 1964; Longhurst 1971) and in the medical area. The Delphi approach is a method for structuring a group communication process between 'experts' to deal with and, at the same time, eliminate face to face confrontations as experienced on panels or committees. The technique employed involved the repeated individual questioning of the experts, using a series of questionnaires. This method is designed to produce group consensus and statistical summaries between rounds by which panel members communicate their judgements anonymously within the group (Anderson 1986, p 23).

This method also allows for:

- feedback of individual contributions of information and knowledge
- assessment of the group judgement or views
- an opportunity for individuals to revise views
- a degree of anonymity for individual responses.

Limitations of the method relate to the fact that little is known about the effect of feedback to research participants, and specifically whether certain types of feedback can lead to questionable group consensus (for example, false or inaccurate feedback). Also, there is no way of measuring the authenticity of group convergence with this method (Battersby 1994). Theoretically, it is accepted that through the processes of the method, convergence and consensus related to the research questions can be achieved.

In this study the research participants received three rounds of questionnaires. In round one, they were sent a semi-structured postal questionnaire containing two major sections (Questionnaire A). The first section comprised demographic questions covering experience, age and qualifications. The second section requested that the study participants develop five priority research questions about which insufficient knowledge or uncertainties about the value or outcome of a particular practice exist in four areas. Priorities were categorised in the following areas:

- (1) research that is of highest value to clients
- (2) research that would provide improved community care
- (3) research that would facilitate health promotion and disease prevention
- (4) research that would be of value to rural occupational therapists' educational and professional needs.

Following distribution of the first questionnaire, a reminder to return the item was sent to initial non-respondents by mail and a reminder telephone call was also made if necessary. In the second round, participants were sent a questionnaire which was developed using all 104 items generated in the first round (Questionnaire B). These items were edited by the researchers. This was necessary to avoid duplication and to format problems as research questions. Each participant was asked to respond to each research question, indicating whether occupational therapy should take a leadership role in answering the question (yes or no), as well as rating the importance of the research question on a seven-point scale of 1 (low) to 7 (high).

In the third round, participants received the final questionnaire (Questionnaire C) which contained 64 items. These items were those that attained a median rating of 5.5 or above in the second round (Questionnaire B). The question of whether occupational therapy should take a leadership role was eliminated since the majority of the panel had selected these items as appropriate for occupational therapy research leadership in round two. Respondents were once again asked to rate each question on a scale of 1 (low) to 7 (high). They were asked to

discriminate carefully between those questions considered to be of high priority and those of a lesser priority. In addition, they were asked to explain briefly their reason for allocating a high priority (6 or 7 on the scale of importance) to the question. There was an 80 per cent response rate for the first two rounds of the study and a 100 per cent response for the final round. With the Delphi technique, no more than three rounds of questionnaires are used as additional rounds tend to show little further changes in opinion (Duffield 1988).

Analysis

It was intended that each participant's response would carry equal weight in group rating so the median score was seen as the appropriate descriptive statistic because the scores were skewed as expected. Where participants had answered 'no' to the question of occupational therapy leadership, their rating of that item was set at zero since the focus was intended to be solely on occupational therapy research priorities. A decision was taken to use 5.5 as the cut-off point for the median score in the study.

Results

The researchers used the computer software package SPSS-PC to record and analyse survey results. The age of the participants ranged from 25 to 55 years, with a mean age of 34.75 years ($SD = 11.33$). Seven females (87.5 per cent) and one male (12.5 per cent) participated in the study. The participants had from one year and four months to 34 years experience as an occupational therapist, with a mean number of 11.8 years ($SD = 11.30$). The range for practice in the rural setting was from one year and four months to 18 years, with a mean of 6.7 years ($SD = 5.34$). Two (25 per cent) of the participants were qualified at diploma level while six (75 per cent) held a bachelors degree. Round three of the study resulted in a final list of 23 very high priority research questions with which occupational therapists should take a leadership role. These priorities are presented in the following tables.

Research that would be of highest value to clients

The panel developed 29 items in this section. The nine questions they designated to be of highest priority in the final round are shown in Table 1.

Table 1: Research that would be of highest value to clients

Research questions	Median score
1. How do we prevent the progression of transient ischaemic attacks (TIA) to cerebrovascular accident (CVA)?	5.5
2. How is a hemiplegic shoulder managed?	6.0
3. How effective is occupational therapy intervention with regard to children with learning disabilities?	5.5
4. How is hypertonicity in the upper limb best managed?	6.0
5. How effective is an educational package for CVA clients and family?	5.5
6. Does early intervention affect outcomes of stroke patients?	5.5
7. How effective is occupational therapy intervention with stroke patients?	6.5
8. How can validity and reliability of functional assessments be increased?	6.5
9. How important is evaluation of training, for example, back care and its effectiveness?	5.5

Research that would provide improved community care

Of the 29 items developed in this section, five were given high priority status. These items are shown in Table 2.

Table 2: Research that would be of value to occupational therapists in providing community care for clients

Research questions	Median score
1. What are the most significant barriers to community independence for aged and disabled clients?	6.0
2. How important is the awareness of the other agencies of the occupational therapist's role and service (relating to referral of appropriate clients)?	5.5
3. What are the effects of early discharge on clients' well-being?	6.0
4. What are the major effects of early discharge on community services and support?	5.5
5. How can falls at home be prevented?	5.5

Research that would facilitate health promotion and disease prevention

Of the 29 items developed in this section, only two were given high priority status. These items are shown in Table 3.

Table 3: Research that would be of value to occupational therapists in facilitating health promotion and disease prevention

Research questions	Median score
1. What are the most important factors contributing to cerebrovascular accident (CVA)?	6.0
2. How can the most important factors contributing to CVA be prevented?	5.5

Research that would be of value to rural occupational therapists' educational and professional needs

Twenty-five items were developed in this section, and seven were given high priority status. These priorities are shown in Table 4.

Table 4: Research that would be of value to occupational therapists' educational and professional needs

Research questions	Median score
1. How beneficial is the certificate/diploma level postgraduate course in specific clinical areas (for example, neuroscience and burns)?	6.0
2. What is the best way to manage upper limb impairment following neurological deficit?	6.0
3. How important is a driver assessment and education?	5.5
4. What type of caseloads are normally experienced with a country hospital?	6.0
5. What is the maximum caseload per occupational therapist in different areas in the hospital and community?	5.5
6. What are the effects of appropriate study leave (incentives for further distance education)?	6.0
7. What facilities are available for further studies (access to information technology)?	5.5

Discussion

This pilot study has shown that the Delphi method was an appropriate data collection tool, given its aim and objectives. Clearly, the limitations of the study must be acknowledged. The findings reported here need to be interpreted with regard to assumptions and generalisability of results. The sample size in the study was very small, limiting the degree to which one can generalise from its results.

None the less, research participants were able to generate high priority items in each of the four categories or sections used in the study. In the section, 'Research that would be of highest value to clients', participants were very much concerned with prevention and management of cerebrovascular accident. Also, questions were raised regarding the efficacy of occupational therapy in relation to specific client groups. In some instances the participants saw research as necessary to clarify different and conflicting approaches used by health professionals in managing a client problem, for example, the management of a hemiplegic shoulder.

In the section, 'Research that would provide improved community care', the participants were concerned about the impact of early discharge on clients and community infrastructure. In addition, participants perceived that other agencies and health professionals were ill-informed regarding the role of occupational therapy. This was said to lead to inappropriate or incorrect referrals. The need to promote knowledge and awareness of the role of the occupational therapist was acknowledged. The notion of prevention of health problems and hospitalisation also featured in rationales provided for items in this section. This justified the need to investigate prevention of falls at home, thus avoiding significant injury and barriers to community involvement for aged and disabled clients.

In section three, 'Research that would facilitate health promotion and disease prevention', cerebrovascular accident (again) featured prominently. Here the participants were again concerned with developing knowledge and understanding which would assist in reducing the incidence of cerebrovascular accident.

Section four, 'Research that would be of value to rural occupational therapists' educational and professional needs', contained a number of items related to postgraduate education, access to study leave and incentives to undertake further study, and access to educational facilities. These items related to disincentives to practise in rural occupational therapy. A further concern for the participants was workload. Related issues here were heavy caseloads and the need for a broad range of skills to be able to practise in many areas in hospital and community settings. Multi-skilling was seen as a requirement for practice in the rural setting, limiting options for specialisation.

Conclusion

For the participants, research was perceived as being the vehicle which could provide them with answers to the questions generated in this study. Study findings could be used to stimulate research and continuing education projects in rural occupational therapy. The findings also allow insights into the concerns and priorities of the research participants who participated in the study. A larger study which used more research participants could provide additional intelligence to build on the perspectives provided in this paper.

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References

- Anderson P 1986, 'The Delphi technique in practice', *The Australian Journal of Advanced Nursing*, vol 3, no 2, pp 22–32.
- Battersby D 1994, 'The generic skills attributes and values expected of graduates from the Faculty of Health Studies at Charles Sturt University', Occasional Papers: Issue 1, The Quality Council of the Faculty of Health Studies, Charles Sturt University.
- Browne SH 1971, 'Cost growth in military development and production programs', *cited in* HA Linstone & M Turoff 1975, *The Delphi method: Techniques and applications*, Addison-Wesley, Massachusetts.
- Christley S 1992, *Planning services for rural communities*, Conference proceedings, Rural Health Forum, 19–20 September, pp 247–58.
- Duffield C 1988, 'The Delphi technique', *The Australian Journal of Advanced Nursing*, vol 6, no 2, pp 41–5.
- Gadiel D & Ridoutt L 1993, 'Towards a rural health strategy: Workforce and economic analysis of allied health in NSW' (Summary), NSW Department of Health, Sydney.
- Hertz DB 1964, 'Risk analysis in capital investment', *Harvard Business Review*, Jan–Feb, 95.

Linstone HA & Turoff M 1975, *The Delphi method: Techniques and applications*, Addison-Wesley, Massachusetts.

Longhurst R 1971, An economic evaluation of human resources program with respect to pregnancy outcome and intellectual development, *cited in* HA Linstone & M Turoff 1975, *The Delphi method: Techniques and applications*, Addison-Wesley, Massachusetts.

Silagy CA & Pitman L 1991, 'Attitudes of senior medical students from two Australian schools towards rural training and practice', *Academic Medicine*, vol 66, no 7, pp 417–19.