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Cooperative knowledge-making with female and male rural doctors

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ABSTRACT

Introduction: It is becoming increasingly difficult to engage rural doctors in survey-based research. Rural doctors in Australia are time-poor and overworked, yet it is vital that researchers find ways to engage them because they are the holders of information that is critical to effective workforce policy and planning. Aims: To establish a cooperative research outcome with rural General Practitioners at a time when they were subject to many competing requests for contributions to various data gathering exercises. To develop and apply a knowledge-instrument for researching the practice of female doctors

Method: The research project began with the intention of locating a partially hidden voice, that of female rural GPs, and bringing it to the forefront. This grew out of 6 years' work with doctors which identified that women had their own relationship with rural practice and that this was not widely recognised in the professional and policy context. Each step of the research process was negotiated with the doctors to ensure that their solutions were the basis of the work, and their language was the vehicle of investigation. Dephi rounds were used to develop content for a national survey of rural GPs. Thirty-five female rural and remote GPs contributed to 3 Delphi rounds to construct the central section of the questionnaire. The work of the expert panel contributed the unique questions at the heart of a questionnaire that was sent to 2000 rural GPs in Rural Remote and Metropolitan Areas (RRMA) 4–7. The sample was stratified by RRMA and randomised for women, with a matching sample of men to provide a control group, test whether issues identified by women are relevant to men too, and allow a gender analysis.

Results: Sixty-three percent of the women returned usable surveys and 54% of the men. This was a comparatively high response rate, especially for a complex, 16 page questionnaire with 79 questions, administered at a time when rural doctors had become resistant to mail surveys. Fifty-six doctors commented on the questionnaire itself, most of them appreciating the topics raised.

Conclusion: It was possible to develop a cooperative relationship with rural doctors that resulted in high rates of participation in the research, particularly from women. What women do can be researched and included in knowledge about rural practice, and

men will respond to female-designed data collection instruments. Careful attention to questions of voice, presentation, communication and purpose can assist in bringing the experience of women as well as men into the research frame.

Keywords: female doctors, general practice research, participatory action research, response rates, survey research.

Introduction

'…language and power produce knowledge, not the other way around'[1]

The first national survey of Australian rural GPs, the National Rural General Practice Study (NRGPS), was conducted in 1996[2]. Since then the rural medical workforce has become a focus of research, and rural doctors say they receive a survey of some sort almost on a weekly basis. It is becoming increasingly difficult to engage rural doctors in survey-based research. This reluctance is easy to understand. Rural doctors are time-poor and overworked, yet it is vital that researchers find ways to engage them because they are the holders of information that is critical to effective workforce policy and planning.

Female rural doctors made up less than a quarter of the rural general practice workforce at the time of the NRGPS. Until recently their experience has not been systematically explored or included in workforce research, planning and policy. To address this, the Sustainable Rural Practice study, a national survey of rural GPs conducted in 2002-2003, focused on female rural GPs. It built on the experience and issues identified by women in research over the previous 2 years. The intention was to locate a partially hidden voice, that of female rural GPs, and bring it to the foreground. Men were included in the research in order to test for similarities and differences, and to explore whether men would respond to female-designed data collection instruments.

This article reports on the process of that study (which resulted in a comparatively high degree of cooperation from rural doctors, especially women), and details the steps taken to maximize the response rate. It begins with a brief outline of the survey, introduces an informing methodology, positions the researcher in relationship to the participants in the research, and discusses the process of designing the questionnaire and the conduct of the survey. Findings from the survey are available in the report titled Sustainable Rural Practice; successful strategies from male and female rural doctors[3].

Response rates

A number of researchers have reported on the question of engaging practicing clinicians in research[4-6]. This is particularly important for general practice, where the dispersed nature of practitioners and patients makes for a more complex research task than one based on hospital practice, where doctors and patients are concentrated in one site. Barriers that have been identified include lack of research leadership, time, skills, knowledge, administrative assistance, and motivation, as well as the level of personal interest in the topic[6]. The difficulty of engaging doctors in research was illustrated by the survey of GPs in Victoria in 1989 exploring the attitude of GPs to participation in research and their willingness to participate in a research network. The survey yielded a response rate of 33%[4].

Response rates to early research with rural doctors were high. For example the NRGPS had a response rate of 75%[7]. Recently, however, rural GPs in Australia have become resistant to responding. Major surveys are struggling to attract more than a third of doctors to reply. For example the Rural Doctors Association of Australia Viable Models national survey conducted in 2002 had a 35% response rate[8]. This is consistent with the 35% response to the national survey of GPs conducted by Access Economics for the Australian Medical Association in 2001[9]. General Practice Education and Training surveyed training program applicants in 2003 and 46% responded[10]. The third BEACH

survey conducted 2000-2001 by Sydney University had a sample size of 3624 GPs. 3350 GPs were contacted by phone, 37% agreed to participate and 30% actually participated[11]. The response rate for males in that survey was 30% and for females 37% (H Britt, pers. comm., 2003).

Internationally, Garimella commented about her study of physicians in the USA that:

> *a response rate of 51%, however, is not particularly low for the physician population, because physicians tend to be less responsive to survey materials than other health care providers*[12].

The exception has been recent surveys of female rural doctors. These have achieved better responses. Tolhurst et al. surveyed female rural GPs in 1999, with a response rate of 52%[13]. Barley's survey of women in the USA in 2001 had a 70% response rate[14]. In 2000 and 2001 the rural workforce agencies in the Australian States of New South Wales, Victoria, Queensland and Western Australia surveyed female rural doctors, GPs and specialists, using a survey instrument designed cooperatively with female rural doctors, with response rates varying from 52% to 68%[15-18]. The Sustainable Practice survey reported in this paper was conducted in 2002-2003, and in 2003 the Australian College of Rural and Remote Medicine (ACRRM) drew on the research listed above to survey its female members[19]. The response rates are shown in the table below.

There is, then, a wide range of variability in response to rural general practice survey research. It is the thesis of this article that the comparatively high response rates to surveys of female doctors at a time when rural doctors are resistant to surveys is a reflection of two phenomena. The first is the under-representation of women's experience and language in general research on doctors, resulting in a lack of visibility of those issues of importance to women that are different to those that are important to men. Female doctors who are conscious of this may be attracted to research that explicitly includes them. The second is that research instruments with substantial guiding input from the researched group, in this case female rural doctors, attract greater cooperation than research that does not have such input.

Importance of high response rates

Response rates are critical to survey research[20,21]. Large surveys are conducted in order to be able to generalise the findings to the whole population under study. Three critical factors determine the validity of generalisation. The first is the representativeness of the sample, the second is the response rate, and the third is the non-response bias. Response rates of 80% or higher overcome any difficulties with generalisation. The Statistical Clearing House of the Australian Bureau of Statistics makes the point that:

> *Non-response can cause problems for the researcher because the characteristics of non-respondents may differ markedly from those of respondents. ... The lower the response rate, the less representative the final sample will be of the total population*[22].

High response rates require the cooperation of the participants in the research. This is particularly difficult to achieve with time-poor and over-researched rural doctors. The following sections describe how the Sustainable Practice project established a cooperative research process with these doctors.

Methods

The study

The research was designed to explore what makes women satisfied with rural medical practice and contented with life as a rural doctor. Men were included to provide data for a gender analysis in which the influence of the sex and gender of the doctor could be explored and to test whether satisfaction and contentment for men were influenced by the factors identified by women.

Table 1: Response rates for recent surveys of female rural doctors, Australia

State	Year of data collection	Female GPs (%)	Female specialists (%)	Male GPs (%)
NSW	2000	68	48%	41
Victoria	2000	52	58%	–
Queensland	2001	53	NA	–
Western Australia	2001	50	–	–
Sustainable practice	2002/2003	63	–	54
ACRRM	2003	76	–	–

ACRRM, Australian College of Rural and Remote Medicine; NA, not applicable.

The target population was GPs working in Rural Remote Metropolitan Area (RRMA) 4 – 7 and the sample frame was provided by the Australian Medical Association publishing company, AMPCo[23]. A random sample stratified by RRMA was constructed for 1000 women, and a matching control sample of 1000 men.

The research project arose from many years of working with female rural doctors and the dawning understanding that their experience was not well represented in the research that underpins policy and programs for rural practice. This is a serious issue now that half the medical students are women and rural practice must attract these women if the shortage of rural doctors is to improve rather than worsen. Substantial resources and innovative and creative programs are being implemented by Federal and State governments, universities and medical colleges to encourage and train young doctors into rural practice[24]. It is slowly being recognised that the implicit assumption that doctors have no sex or gender, and that programs and structures that work for men will also work for women, is unsustainable. Many female doctors are both conscious and distressed[13,25-26] that their experience does not inform planning for rural practice, although there is no general agreement in the profession that this is so. The researcher was working with a question that was bothering the doctors.

Ethics approval: Ethics clearance was obtained from Monash University, and field clearance from the Statistical Clearing House.

Participatory Action Research

The methodology of participatory action research informed the process of the research. Participatory action research is based on an epistemological stance that knowledge is constructed, and the understanding that 'who creates knowledge' is a crucial variable. It focuses on locating the missing voices and ensuring that the research is relevant to the participants. The fundamental question that participatory action research has raised is the question of the political economy of knowledge, science and education[27]. It is an alternative to the 'extractive' research approach in which the researcher defines the question, collects the data and analyses the findings for their own purposes. It constitutes the participants as co-researchers and expert 'knowers'. Participatory action research requires researchers to work with the researched community to design the study and then collect the data, to acknowledge and encourage differing perspectives to emerge, and to strengthen participants' confidence to explore their own views[28]. In rural medical research the 'differing perspective' has been that of women.

Positioning the researcher

An important initial step in developing a cooperative research relationship with rural doctors was to provide support, theorising and visibility for issues of concern for them, using the resources of a well-respected university. Over the past 8 years this has involved systematic work with female rural doctors to bring forward their concerns and insights, to document them, to provide a vocabulary and theoretical framework, and to contribute to policy documents and political processes that enhance the visibility of female doctors in rural conferences and representative bodies.

Developing the survey instrument

Three key principles guided the development of the questionnaire. These were that: (i) the questions were important, relevant and valid for the doctors; (ii) the language was developed with great care to be inclusive; and (iii) there were gifts within the questionnaire in exchange for the doctor's time and attention[29]. This notion of the 'gift economy' was used to provide theoretical backing for the design of a questionnaire that contained information that the respondents might find useful, as well as asking questions the researcher wanted answers to. This approach substitutes interactivity for the notion of a disengaged 'objective' research process in which the participants are expected to provide information and the researcher gives away nothing[30].

The research was designed from the beginning to reflect how women practice rural medicine. It is unusual for men to be asked to respond to female-designed surveys. To the author's knowledge this has been done only once before in Australia, by McEwin in her survey of rural doctors in NSW in 2000[15].

Developing the questions

The survey consisted of four sections. Three of the sections explored aspects of rural practice that had been identified in previous work as important to female doctors.

Questionnaire Section 1: Section 1 built on previous research involving female rural doctors[13,15-18,25,31] that identified family work as one of the important factors influencing satisfaction with practice. The words used to ask about family relationships were carefully selected to be as inclusive as possible of various family structures, and to ask directly rather than indirectly about the topic of interest. For example, to explore the impact on clinical practice of caring for family members, doctors were asked how many hours of care they provided on their last normal working day, rather than asking about the number and age of children. This avoided the need to make assumptions about how family care relates to professional work. The gift within this section was the recognition that the work of rural doctors is more extensive than hours spent in the surgery and the hospital, and the opportunity for doctors who provide family care to name this as work.

Questionnaire Section 2: Section 2 explored two dimensions of clinical care that women had identified as problematic. Tolhurst et al. have established that rural GPs are involved in frequent management of serious medical emergencies[32]. At the same time Campbell et al. found that female rural doctors are less confident in managing a sentinel emergency scenario than are male rural doctors[33]. The survey asked whether the doctor would be more or less likely to attend emergency medicine training if it was conducted by women. The gift in this section was to transfer the feeling of some doctors, that emergency medicine training as it is currently delivered is intimidating, from a personal issue to an issue of process.

Questionnaire Section 3: Section 3 was based on 12 months work with a group of 35 female rural and remote doctors who formed an expert panel to explore the open-ended question 'What have you done to make rural practice work for you?' The Panel comprised women who were members of ACRRM and interested in the work of its Women in Rural Practice Committee. A three-round Delphi process was used to refine the responses of the panel into eight general strategies. The Delphi technique involves repeated rounds of

communication with an expert panel, starting with an open-ended question to enable a wide range of responses, and ending with consensus[34-37]. It is a well-established research method designed to use the judgment of experts to provide scientific evidence in fields that have not yet developed to the point of establishing formal scientific laws. It is a procedure for eliciting and refining group opinion with a carefully designed program of sequential interrogations. It is commonly used within health research and is particularly suited to a widely dispersed group such as rural doctors. The questions in Section 3 were all phrased in the words that were provided by members of the Delphi panel, as were many other words used throughout the survey. This ensured that they were relevant and grounded in the experience of the participants.

There were two gifts within Section 3. The first was the strategies themselves. During the pilot of the survey many of the respondents reported that they 'had not thought of doing that but it was a good idea', or words to that effect. As each respondent worked their way through the eight general and 27 specific strategies, they were learning what their colleagues were doing to make rural practice work for them. In addition, each of the specific strategies was accompanied by a brief text quoting directly from comments made by the Delphi panel. The text was reproduced exactly. For example, the specific strategy of 'balanced work with other goals outside medicine' was accompanied by the text: 'This takes careful planning. It helps avoid the god complex. It requires acceptance amongst your peer group that part time doctors have another life, & that is ok.' During the pilot phase, doctors reported that this created a feeling of conversation with their peers.

In participatory action research, validity and reliability can be re-thought as 'trustworthiness' and 'credibility'. This can be tested by providing detailed information and precise quotations to validate statements on which findings are based[28]. Comments were included among the questions to establish credibility, to prevent boredom, and to give the doctors some insight into the thinking of their peers.

Designing the questionnaire

A graphic artist was employed to ensure the layout was visually attractive and flowed smoothly. The survey had the logos of Monash University, ACRRM, and the Royal Australian College of General Practitioners (RACGP), as well as the tick of approval from the Statistical Clearing House[22]. The questionnaire was accompanied by a letter of support from the Australian Divisions of General Practice and the Australian Rural and Remote Workforce Agency as well as the two medical colleges. The RACGP and ACRRM awarded continuing professional development points for completing and returning the survey. This was another gift to the participants.

Two questionnaires were developed, one for women and one for men. This was part of paying attention to the importance of inclusive language. The one for men was titled 'Sustainable Practice for Rural and Remote Doctors' and based on the assumption that men will automatically and unconsciously feel included by the word 'doctor'. The one for women was titled 'Sustainable Practice for Female Rural and Remote Doctors' to alert the women that this was designed to include them. In the covering letter, doctors were told that it was being sent to both men and women. The questionnaires were identical except for three components that were sex-specific.

The first question, about the work involved in family responsibilities, was deliberately chosen to be one that is highly salient to women. As one researcher put it, theorising about rural social structures is flawed by 'an arbitrary privileging of the public aspect of social existence' and 'This has the effect of making the public domain falsely appear as self-sustaining'[38]. This is highly pertinent to medical women, who quickly discover that professional life is not self-sustaining, and that they are required to perform at least two jobs, one paid and acknowledged, the other unpaid and invisible.

The questionnaire was designed so that after completing it the respondents would know more about strategies for

sustainable practice used by their colleagues, have some new language with which to speak about the effect of family responsibilities on their professional work, and see the range of professional work they did counted as part of being 'a real rural doctor'. This was a reward for taking the time to complete the questionnaire.

Conducting the survey

The survey was in the field from November to December 2002 with a final opportunity to participate in March 2003. The conduct of the survey was based on the method devised by Dilman[20]. He describes systematic and repeated communications with the sample population, supported by pre-planned management of incoming data.

The doctors were contacted by mail seven times. As each questionnaire was received, a postcard with a large 'Thank you' on the front, and text on the back saying they were the *n*th doctor to return the survey, was sent back to them. December is not a good month to ask doctors to undertake an additional voluntary task, so a letter was sent in February 2003 to all non-respondents saying that if they wished to take part to please contact the researcher. Approximately 60 doctors responded and were sent a third copy of the survey, including one from a female doctor who said:

> *Sorry this wasn't sent back last year. Just finding the time for the written answers was the problem – it kept getting shuffled to the bottom of the paperwork. When I did get round to it the closing date for the returns had gone but I kept it in the draw because I found the survey interesting.*

The final communication with doctors in the sample was a letter of thanks outlining key findings from the research, and a certificate certifying they had taken part in an authorised continuing professional development activity for their medical college.

Each of these communications was structured to make it as easy as possible for doctors to return the survey, with a mixture of reminders and thanks, flexible return dates, and an understanding of the time pressures on rural doctors. The intention was to be respectful and helpful at all times.

Results

Sixty three percent of women and 54% of men returned usable surveys, a total of 1125 doctors. It is not possible from this research to determine exactly what led to the comparatively high response. However the use of participatory research methods, questions of interest to the participants and working with women's language and women-identified issues is likely to have encouraged the higher response from women than men.

The final question in the survey provided the doctors with the opportunity to make any other comments. Five percent of doctors ($n = 56$) commented on the survey itself. Twenty-five of these comments were positive, such as:

> *Thank you, this has indeed been an enlarging experience.*

> *Thanks. This has helped me crystallise a few thoughts. I'd be very interested to see the results of your survey which was thought provoking and much better planned than the 'usual' surveys.*

A few doctors commented that they found the survey difficult to understand, or that it took longer than they were warned about.

Conclusion

It was an hypothesis of the present research that women would be likely to respond to the Sustainable Rural Practice survey if the survey was deliberately and systematically modeled on language and content generated by women. This hypothesis was supported by the outcome. Nine percent more women than men returned the survey. Many steps were

taken to enhance the response rate and it is not possible to define how each of them contributed to the process. Rather, the findings suggest that taking a systematic approach to collaborative and gender-competent research may lead to improved response rates.

Influences on the sex ratio of responses among doctors is an under-theorised area and the present study adds to the evidence from previous work[3,13,15-18,25] with female doctors that suggests women are more likely to respond if the survey is pertinent to them, and couched in language and with concepts that reflect their ways of thinking. Many men also returned the survey and this encouraging result suggests that it is possible to create women-defined knowledge without causing schisms between the sexes. Doing so will create a more realistic understanding of the work and experiences of rural doctors. Future work to systematically explore the gendered nature of the creation of medical knowledge could help confirm the usefulness of this approach in generating reliable data.

Rural doctors can be engaged in research if they are involved in developing the questions to be explored, if there is a two-way exchange of gifts so that taking part in the survey is of benefit to both parties, and if careful attention is paid to gender-competent communication strategies and language. Foregrounding questions of voice, presentation, communication and purpose enabled both doctors and researcher to enter into a collaborative relationship.

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