University and industry partnerships: Lessons from collaborative research

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Abstract
Collaborative research between educational institutions and health agencies is being increasingly used as a method of achieving joint outcomes and bringing together theory and practice. This paper reports on the experiences of collaboration that arose out of just such a project carried out in a residential aged care setting. The research team included university academics, two nurses in management positions in the aged care facility and a senior research assistant. In this paper, we explore some of the unexpected issues that emerged during implementation of the research project. The major challenges to successful collaboration arose not from within the collaborative research team, but from the responses of the broader staff who generally had little, if any, experience of research. Despite efforts to inform and involve staff, deep suspicions about the 'real' motives of the project proved difficult to shift. Trust and commitment are vital dimensions of successful collaborative research, yet gaining these from some staff proved elusive. Collaborative relationships between educational and practice settings need to be viewed as long-term endeavours driven by a common unifying goal to enhance client care. This has implications for costs and timelines which might be difficult to manage.

INTRODUCTION

Collaboration is increasingly being recognized as an essential strategy for promoting high quality research and health care.1 Within nursing, collaboration in research and the implementation of research findings is seen as an effective way of reducing the divisions between education, research and practice.27 A significant proportion of the literature describes the collaborative processes used and highlights common pitfalls and benefits. In general, these reports are positive. Some authors report what sounds like an almost perfect experience in terms of collaboration:

The group was composed of strong individuals who could articulate their concerns and state their positions with logical arguments, often supporting them with references to current literature or clinical experience. From the onset, members welcomed discussion on issues of concern . . . The group offered a positive climate for the acceptance of other members' views. As a result, no major conflicts arose in the group . . . When differences were expressed, they were usually discussed until a decision was reached. All members of the group participated in the discussion; therefore, all conflict was resolved.3

However, the reality in many collaborative ventures is likely to be much more challenging and fraught with adversity.8 Bringing two distinct institutional groups together with a common research purpose is sometimes tantamount to mixing water with oil. In truth, successful research collaboration is difficult to achieve and requires considerable investment of resources and commitment from all involved. This is, perhaps, increasingly difficult to achieve in many work settings because of opposing demands such as financial considerations, different priorities and time constraints.

LITERATURE REVIEW

A notable trend in the literature addressing collaborative nursing research fails to identify or explore, in any depth, the individual, institutional and political realities of collaborative research.9 Few articles report in any detail on the 'complex, problematic issues involved in these undertakings'.10 Authors generally outline achievements, present models for collaboration, discuss the benefits and, although they might identify issues, often gloss over the complexity of the negotiations required for successful collaboration.3,4,11,12 This is probably the equivalent of the tendency to publish only statistically significant results. Bad news or difficult scenarios make for unpleasant reading.

A number of authors identify the importance of equal commitment of time, resources and involvement by all of the team.24 Others discuss the importance of investing time and energy in relationships and team functioning.2,5,6,13 Another issue raised by some authors is that of value conflicts between researchers and practitioners or competing goals between the two groups.9,14,15 However, conflict in itself might not be a bad thing as it can increase the range and diversity of views which can contribute to active problem solving.

Power and control seem to be other important issues even though they are rarely raised in the literature. Carrick et al. discuss power as a significant dimension in research with health service users.16 Beattie et al. discuss control as part of the politics of institutions, which inevitably impacts on the individuals involved in collaborative work and on decisions related to how a study will be conducted.9 Power issues between researchers and clinicians, and between different levels of staff in the clinical setting, are likely to influence many collaborative studies to a greater or lesser extent. Beattie et al. state:

There is a somewhat deafening silence in the nursing literature about the collaborative research venture as a political exercise and the ramifications that the political nature

of collaborative research have for participants in the research enterprise, and the organizations from which they are drawn.9

Other political issues associated with collaborative research identified by the authors include marginalization from peers, which can affect both university and clinical staff, and financial and other administrative factors related to institutional issues of funding and status.9 A further issue is that collaboration in nursing research between universities and practice settings has often meant that academics plan, coordinate and manage the project while clinical staff might be involved principally in data collection and associated activities. This has led to the devaluing of the contribution of clinical personnel and a perpetuation of the mystique of research in the eyes of many practitioners.2 It is also likely to contribute to continuing separation between research and practice. Indeed, it could be questioned whether this is, in fact, collaborative research.

Lancaster identified the 'six C's of collaborative research' as contribution, communication, commitment, consensus, compatibility and credit.17 Lancaster describes contribution as referring to the diverse but complementary skills and expertise contributed by a group of people of differing experience and background.17 In discussing this concept in relation to their prenatal project, Henry et al. describe the contributions that various team members made, noting that clinical staff were involved in decision-making including developing and refining data collection tools.2 A number of authors stress the importance of both research staff and clinical staff being involved in all stages of the research process. Tierney and Taylor, for example, advocated the need for collaboration during all stages of the research process.15

The issue of exactly who in the practice setting is involved in the collaborative process is a critical one. In reality, there will be many staff who are not part of the actual research team but who are required to support research occurring in their workplace. LeGris et al. present a model of collaborative research which addresses the processes of the research itself and of change made necessary by the study, organizational processes and processes of collaboration.10 Drawing on a definition of collaboration put forward by Browne and colleagues, LeGris et al. define collaboration for their project as 'an ongoing relationship and process of activities between administrative and academic personnel from two organizations designed to develop . . . cooperation, leadership and change on a mutually established and beneficial project.10

While the study by LeGris et al. was about leadership development in nurse managers, collaboration on many projects might occur at this level (the level of academics and managers), leaving many clinical staff largely out of decision-making processes. This might well be appropriate in the early stages of a project, but if the goal is to have some impact at the clinical practice level, then it might be strategic to involve staff from the various levels of the practice setting. An inclusive model is more likely to result in wider utilization of any positive findings and recommendations for change, and change is likely to be central to most collaborative studies.

In a discussion of the difficulties entailed in collaborative studies, Perkins and Wandersman14 mentioned practitioners' suspicion of researchers' motives, often

related to basic value conflicts between the two groups. Practitioners value responding flexibly to solve clinical problems or needs and researchers focus on working from a scientific position to maintain a study's integrity.

To solve this problem, these authors suggest early discussions between all stakeholders in order to identify a research problem and approach that makes sense to everyone. However, this might not always be feasible when a project is being used to introduce legislative or practice requirements which are mandatory but not necessarily accepted by staff, or when there are relatively large numbers of staff of various categories in the setting. There is a distinction between staff on the research team and other staff who might be approached to be participants in the study or to support it in the course of their work. Moreover, all stakeholders are not equal. Given the differences in perceived status and authority, it is unlikely that a 'low status individual' (for example, nursing assistant) will challenge the authority of a senior university academic.

OVERVIEW OF THE PROJECT

Details of the research project can be found in Edwards et al.18 The research project was conducted in a residential aged care setting over a period of two years and was completed in 2001. The industry partners in the team were the Proprietor (Executive Nursing Officer) and Director of Nursing of a 78 bed residential aged care facility in Brisbane, Australia.

The primary aim of the project was to encourage change in nursing staff attitudes and practices related to promoting and supporting independence among elderly people in a residential setting. Coincidentally, a year after the project was planned, new government legislation introduced standards in aged care which included the requirement that residents be enabled to maintain maximum independence.19 All nursing staff were offered a series of workplace seminars (the intervention: a tailored education programme) designed to gently and creatively challenge ageist attitudes and facilitate alternative ways of thinking about aged care. The education programme offered staff the opportunity to read, discuss and evaluate educational principles and strategies for nursing interventions that could enhance greater independence in residents.

The project comprised five phases:

1. Consultation, liaison and planning.

2. Data collection.

3. Implementation of the education programme

4. Evaluation.

5. Development of a teaching/learning resource kit for application in other residential care agencies.

The data collection phase used multiple methods for pre and post-tests and content for the education programme including self-administered staff questionnaires, assisted resident questionnaires, observation schedules and video recordings of staff and resident interactions.

This paper addresses our attempts to engage in collaborative research based in this clinical setting. It deals with many of the challenges that arose during phases 1-3.

PHASE 1: CONSULTATION, LIAISON AND PLANNING

The project was developed in response to interest from both academics and nurse managers in investigating ways of enhancing the independence of elderly residents in long-term care settings. As academics, we were further influenced by research2022 which demonstrates that staff in residential aged care frequently support dependent rather than independent behaviours among elderly residents.

Both nurse managers (Director of Nursing and Executive Nursing Officer) had recently completed their studies towards a Master of Nursing degree in aged care and were keen to advance research in their facility. Although proposal writing was undertaken by the academics, the whole team regularly met to discuss drafts and ratify details. In addition to writing and submitting the proposal through the various university research and ethics committees, the academics took responsibility for interviewing and employing a Senior Research Assistant (SRA) to oversee the project and Research Assistants (RAs) for some of the data collection activities. The SRA and the two RAs were registered nurses (RNs) studying towards higher degrees. The SRA was being supervised by two of the project researchers for her Master of Nursing thesis which related to development, implementation and evaluation of the project's education programme.

Ethics approval

Separate Participant Information Sheets and Consent Forms for both residents and staff were prepared. The project was submitted to the university ethics committee and a standing committee of the residential aged care facility. The latter comprised at least two physicians who regularly attended the facility. If the resident was unable to sign because of physical or cognitive impairment, the project was explained by the SRA to the next of kin or legal guardian. Once permission to proceed with the study was granted, the SRA held project information sessions on-site with residents and staff and obtained written consent from those agreeing to participate.

Liaison and planning

Ideally, any research team is comprised of individuals with diverse yet complementary experience.17 For this study, the project required experience in nursing, research methods, education principles and aged care. Both academics and the senior nurse managers were genuinely and equally committed to the project. However, what ultimately became apparent was that the nursing staff, principally Assistants in Nursing (AINs) with some RNs and Enrolled Nurses (ENs), who were not, nor could be, involved in devising the project, experienced considerable concern

about the research methods employed to gather data (videos and observation schedules). Consequently, most of the challenges that arose related to issues of trust and marginalization.

A number of strategies were implemented to include and engage staff in the project so that they might experience a sense of ownership. These were conducted principally by the SRA and included weekly information sessions, often onetoone interactions with staff over a cup of tea, bulletin board posters, newsletters and visits by Cosmo, the SRA's silky terrier dog. On occasions, one of the academics accompanied the SRA to morning tea sessions. We believed at the time that the SRA's personality and the commitment and enthusiasm she brought to the project were sufficient to engender trust. Nevertheless, a number of significant issues arose. Despite meetings and information sessions with these staff, we failed to counter their suspicions about the team's 'real motivations'. They expressed concerns about the need to observe their daily practice when providing basic nursing care to clients and how this might lead to improvements in client care.

Although participation in the project was voluntary, most staff came in contact with the activities of the project during the various phases of data collection, and these activities elicited the strongest, negative responses. The SRA was the 'face' of the university and the one person who was most frequently seen in the aged care setting. She was also very involved with the data collection and consequently, bore the brunt of staff hostility. The role was new to her and she had expected that she would be accepted as a RN. She felt that the role of RN carried with it a 'badge of honour' or shared identity that would be respected by all nursing staff. In reality, a number of the AINs and one of the RNs, in particular, challenged her repeatedly about what she was doing. On many occasions, she felt that despite all her efforts, trust could never be achieved.

PHASE 2: DATA COLLECTION

During the period of data collection, one staff member who was in a position of influence subverted the project at every opportunity. In fact, she was a negative force in relation to many issues in the nursing home during that period. She was hostile towards the project and the researchers themselves at times, and this led to division among staff. This might have been compounded by the data collection activities and the presence of 'potential spies in the organization'.23

Observation and video recording

Despite efforts to inform and involve nursing staff in the project, a number of issues arose relating to data collection procedures. Based on the extensive research of Baltes,21 an observation schedule was used to observe and code the behaviours of nurses and residents during their everyday interactions. Following consultation with senior management, these observations were made during high interaction times in the mornings, lunch times and evenings over a five-day period. The observation periods included mobilization and hygiene needs as research in aged care has identified that the majority of interactions between residents and nurses occur during these personal care activities.24 Often it is within this domain of personal care that nurses' actions

indicate their primary tendency to encourage independence or dependence in residents.

To assist staff to learn strategies to support independence during the education programme, selected interactions between residents and nursing staff were video recorded. The video recordings also assisted in establishing inter-rater reliability between the two RAs and the SRA. If personal hygiene tasks were being attended to such as showering or toileting, the observer either withdrew to a respectable distance or pointed the camera to the floor to ensure no residents were videotaped in an undignified or compromised state.

The observation of nurse/resident interactions and the videotaping resulted in staff concern regarding resident privacy, even though the data were being collected by RNs. Despite the earlier information sessions and agreement to participate, the staff began to question whether ethical approval or informed consent had been obtained. One staff member's comment captured concerns regarding resident consent and privacy:

I can't imagine how any ethics committee could approve this. Did you tell them (residents/family) they would be naked?

Interestingly, from the residents' perspective, the majority felt rather special about being involved in the research study. On one occasion, the staff member was about to close the bathroom door in front of the data collector when the resident said:

No, don't do that, I'm in the research project she has to follow us.

The research assistants, despite being RNs with experience in aged care, were seen by most staff as outsiders and experienced the mistrust normally afforded to 'strangers'. Or, as Ashworth and Morrison described in another context, the research staff were involved in a role which 'was in the organization but not of it'.23

At the same time, the nursing staff frequently asked: 'But what is the purpose of the study?' One particularly difficult decision is how much information to divulge to participants without biasing the results. Some staff were persistent in their questioning of what was happening, feeling they were being left in the dark, and not seeing the logic of what was being done. However, as the SRA was the person they usually questioned, she was concerned about how much she should say about the project. We did not want nursing staff to modify their behaviour to meet the demand characteristics of the study.

This is also an issue in deciding how much and how early staff could be involved in such a project. On one occasion, instead of repeating the purpose of the study (to increase resident independence), the SRA attempted to give a more concrete example such as:

One strategy to promote independence might be to let the resident use the remote control for the TV.

Unfortunately, this was interpreted at the time as a criticism of the nurse's practice and was conveyed as such to other residential care staff.

A perception that the RAs were oblivious to the residents' privacy was of greatest concern to the project's SRA who had difficulty in coming to terms with staff resistance. She was taken aback by the lack of support from the other RNs on staff and contemplated resigning despite the fact that her thesis depended on her continued involvement in the project. The SRA kept a reflective journal during this time and the following excerpts reflect her response to the mistrust and suspicion she felt:

Reassurance that the researchers were all registered nurses did nothing to allay their concerns regarding resident privacy. I felt insulted that they believed that I, as a RN, would not be acutely concerned with resident privacy. I felt that my reputation both as a registered nurse and as a researcher was being undermined, and that if it hadn't been for the residents I would leave the project . . . I suppose the biggest distinction is the issue of trust. As far as the study went, despite all my efforts, the element of trust was never achieved and the staff must have felt I was a spy, hoping to uncover dark secrets relating to their practice.

Questionnaires

The SRA administered the resident questionnaires comprised of scales designed to elicit their attitudes towards a number of areas including resident perceptions of staff help-giving practices and trustworthiness. A number of the residents preferred the SRA to read the questions aloud to them and, on one occasion, she was overheard by a staff member. In an atmosphere of increasing mistrust and unfounded perceptions of the real motivation behind the data collection, some of these items were taken out of context. For example, we were told that some of the questionnaire items were construed as research staff attempting to gauge whether nursing staff could be trusted in order to facilitate some kind of punitive measure by management. In addition, staff were concerned that the questionnaires provided a stimulus for negative behaviours among residents. The SRA reflected in her journal:

Staff complained that I was upsetting the residents and causing those with dementia to 'go off'. So, despite all my efforts to make people aware of what was going to happen, I was still met with criticism and resistance.

Nursing staff were also asked to complete an anonymous questionnaire related to work environment and social climate. Although management offered an inducement to participate (tickets to a film of their choice) via a confidential, lucky draw system, it was interesting, but understandable given the developing climate in the workplace, to note that the response rate was low (50% for the pretest and 31% for the post-test).

Although the research project simply might have been a catalyst for staff unrest, it was apparent that a tense atmosphere was developing. Nevertheless, nursing management wanted the project to continue. A further consideration was the integrity of the research project. How could implementation of the education programme and post-test data collection proceed in this climate? As the SRA was bearing the brunt of staff anger, it was decided that one of the academics (rather than a delegation of four or five) should meet with nursing staff to listen to their concerns. The meeting took

place on the grounds of the aged care facility away from work-related distractions and included refreshments.

Significant reconciliation between all stakeholders was achieved by encouraging staff to be as candid as they wished, by simply listening and by being open to suggestions for future progress. It appeared that the nursing staff welcomed the opportunity not only to ventilate their concerns but also the opportunity to meet with one of the 'invisible' university researchers. This was a salutary lesson.

Overall, our impression was that staff were defensive and felt terribly insecure. They were not accustomed to being observed and genuinely believed that they were 'sticking up for the rights of the residents' and acting as advocates for people they had come to know over an extended period of time. No doubt, they also felt anxious or even threatened about how the study might impact on their continuing employment. Although the purpose of the data collection strategies was reaffirmed with nursing staff, we decided, collectively, to discontinue the video recordings.

Would greater day-to-day involvement of academic staff in the practice setting have defused the situation? It would have provided the SRA with more frequent and experienced support. It might have led to increased reassurance of staff and additional explanation of the project and its methods. However, academic staff might have been viewed as removed from the concerns of practitioners and, therefore, their presence might not have had a positive effect. We will never know, and there is probably not any ideal approach. A lot might depend on the individual circumstances of the place, people and timing.

PHASE 3: IMPLEMENTATION OF THE EDUCATION PROGRAMME

Despite resistance to the process of video recording resident and staff interactions, the segments appeared to be useful adjuncts to the teaching strategies employed in the education programme. The videos were used as triggers to ask participating staff to identify nursing actions that supported residents' independence or dependence and to suggest alternative actions for promoting residents' independence.

An implication of not having achieved the commitment of all staff (despite the opportunity to be entered into a draw for a $500 cash prize) was that it became more difficult for those who participated in the education programme to implement change in the workplace. Strategies for increasing and supporting residents' independence were explored and participants selected a resident with whom to use appropriate strategies. Many reported delighted responses from residents when they were able to undertake even a small task for themselves which had been done for them, perhaps for months or years.

A major difficulty arose when staff who did not attend the program continued to do these tasks for residents and this negated the efforts of those staff who did. Staff who took part in the education programme also felt that there was minimal support for their endeavours and that they were therefore unable to discuss the issues raised by the education sessions. The end result was that the gains made by residents were undermined by the actions of those staff not involved in the education programme.

The question is whether reactions would have been different had all the staff been involved from the proposal writing stage. Is this even feasible? The provision of information to staff commenced shortly after it was known that funding had been obtained and every effort was made by the SRA, in particular, to spend time in the setting getting to know people. If the whole staff had been asked whether they wanted the project to take place, the consensus might well have been 'no'. Does this mean that such activities should not be embarked upon unless everyone is in agreement? Although the literature presents advice about effective collaboration strategies, it does not address circumstances where changes to practice are required but not necessarily welcomed by all staff, or where staff cannot be part of the research team to avoid biasing results.

LESSONS LEARNED

Research partnerships need to be long term for everyone's benefit. McWilliam et al. report a successful collaboration between community practitioners and academics but this evolved over a period of six years.5 It is unlikely that a so-called 'quick and dirty' approach to research of obtaining funding, completing a project and moving on to the next would ever result in productive collaboration. Trust is vital to successful collaboration and takes time to develop. This is a prerequisite to establishing the level of open rapport that is needed to achieve long-term solutions to difficult organizational problems. Even with the problems we experienced with trust, it seems that now, trust of us and of the process, is beginning to become established more widely among the staff.

Our inability, despite considerable effort especially on the part of the SRA, to convince staff of the benefits of the project was a major issue. In hindsight, it might have been compounded by the staff's lack of previous exposure to or knowledge about research in health settings. Perhaps staff needed to be educated about the research process first and then introduced to the project. Even the clothes worn proved to be a barrier. Research staff wore civilian clothing while nursing home staff wore uniforms. Small factors can do a lot to establish feelings of difference. However, perhaps if people feel threatened by the very notion of anyone looking at their practice, they will find barriers, no matter what strategies are put in place.

Perhaps the difficulties which emerged in this project, or others like them, are an unavoidable part of the process of developing trust for people totally unfamiliar with a research culture and practice. The important thing might be to deal with problems in the best way possible as they arise and to persist in the setting to move through that stage onto a more mature collaborative relationship.

Now, some three years after the challenges of data collection, it seems that staff attitudes are far more positive. On each occasion that we have reported results from the study, nursing staff have been genuinely interested in the findings and some have even suggested that the education programme should be repeated. Feedback on performance is a very powerful tool. Among the very positive outcomes is that the collaborative relationship between the two organizations is continuing, with aspects of this study being extended into other nursing homes associated with the health service, and with the writing of papers for publication and conference presentations.

CONCLUSIONS

Collaboration is hard work in most circumstances, with the more individuals involved, and the more diverse their backgrounds and interests, the greater the potential for differences to arise. Nevertheless, this is the reality of research in practice settings, which are neither controllable nor predictable environments. The issues related to collaboration arising from our study differ from those generally discussed in the literature. For instance, most studies confine their discussion of collaboration to the politics and ethics of working with relatively small teams of academic researchers and nurse administrators10 or academics and specialist nurse clinicians.2,12,15

Although our approach was also confined initially to academics and nurse managers, we have attempted to broaden the discussion in this area by including other members of the collaborative effort, and those most directly involved. The politics of collaborative research discussed by Beattie et al.9 was an important factor in our study, entwined as it was with legislative and practice requirements and organizational changes that were occurring at the time.

Developing the necessary staff cooperation proved to be the greatest hurdle because we were unable to allay feelings of threat or suspicion. Indeed, the challenges arose because of concerns of this broader staff rather than because of problems within the research team. Moreover, it is vitally important that efforts to change the practice world ensure that most, if not all of the staff group, have an investment in the success of the programme. This is especially hard to achieve, but failure to address this issue will inevitably lead to unsuccessful implementation of new techniques or innovations.

It is likely that any study which involves scrutinizing practice will meet with resistance at some level. This has posed more questions than answers. Was the defence of the privacy of residents by some staff actually masking fears about this aspect of the study? When is informing people and seeking their collaboration not enough? With the exception of an action research design, is it feasible to even consider that collaboration should extend to the whole staff? How can staff be research team members and also sources of data? How much information can be given to staff to allay their fears without compromising results, particularly in such a study where we attempted to evaluate an intervention via a pretest and post-test design?

For true collaboration to be effective, particularly when changes to clinical practice are envisaged, a necessary prerequisite from all members of the research team is an investment of time to build rapport and trust prior to the commencement of data gathering. A strong sense of trust, which might take considerable time to develop, is essential to successful collaboration.25 This has implications for time frames, the requirements of funding bodies and, therefore, costs. The processes of funding research and the requirements of funding bodies might be at odds with the need for longer time lines. The expectation that studies in natural settings can be carried out with maximum efficiency in minimum time is usually misplaced.

Honest and open discussion of researchers' and practitioners' experiences during the collaborative research process is vital. Simply reporting positive outcomes at the expense of ongoing challenges is tempting but will not contribute to exploring these processes in any meaningful way. Given the complexity of collaborative relationships, especially in settings where many staff do not have research knowledge or experience, a focus on discussion of the issues that arise seems overdue.

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