

Challenges that may arise when conducting real-life nursing research

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Abstract

Aim To reveal some of the unexpected occurrences that can arise during real-life investigations to upset the conventional research process.

Background As novice investigators develop their careers, they are increasingly likely to encounter aspects of research that are rarely mentioned in nursing textbooks. This paper sets out several such occurrences that may challenge the researcher and the practical consequences for an unsuspecting investigator.

Data sources The author's experience in research over the past 30 years.

Discussion In seeking to find satisfactory solutions to problems during research, researchers will also face dilemmas that offer at least two possibilities, neither of which may be acceptable. Experienced researchers will recognise this situation and acknowledge the range of trade-offs that characterise social research.

Implications for practice/research Novice researchers should be forewarned of some of the challenges they could face when carrying out future research.

Keywords Nursing research, practical challenges, real-life investigations

Introduction

THIS PAPER is intended primarily for aspiring and early career investigators, although it is also likely to resonate with more experienced researchers who, like me, may lament that textbooks tend to idealise the conventional steps in research. Ten real-life challenges that researchers might face when collaborating with others are:

- Funding.
- Permissions.
- Logistics.
- Random events.
- Recruitment.
- Confidentiality.
- Roles and boundaries.
- Complaints.
- Dissemination.
- Translation of research findings into practice.

I have drawn on six examples of studies I conducted between 1980 and 2010, taking as the

main example a recent pragmatic randomised controlled trial (RCT) of clinical supervision (CS) in Queensland, Australia, that involved ten human research ethics committees (HRECs), 17 mental health facilities in nine locations across the state, 24 newly trained clinical supervisors, 71 control-arm mental health nurses (MHNs), 115 intervention-arm MHN supervisees, 170 patients, 17 senior service managers and innumerable administrators (White and Winstanley 2009a, 2009b, 2010a, 2010b, 2010c). This was a large, complex and outcomes-driven study, funded by a competitive medical research grant awarded by the Queensland Treasury, Australia.

Funding

The first challenge is to be in a material position to undertake a study with confidence. This will always require the development of a robust funding proposal, designed to satisfy conventional scientific

requirements and to be realistically possible to conduct (Oxman *et al* 2009). The demands it will place on the would-be researcher and the time it will consume should not be underestimated.

It took a research team three months to write the proposal for the RCT but, arguably, nine years to conceptualise, where the authors were co-directors of an earlier large scale CS evaluation (Butterworth *et al* 1997).

The front end of any funding proposal should carefully review what is already known about the research topic and what the proposed study seeks to add. Applications for external funds are always stronger if the introductory sections can be followed with an argument starting 'therefore': that is, the review should be sufficiently compelling for the prospective funder to judge that the proposed investigation will make a telling contribution to the contemporary knowledge base, notwithstanding equally compelling later sections on method and budget. Funding proposals are likely to command the attention of funding agencies if they contain important messages about:

- The study's ability to increase the capacity and improve the quality of the nursing contribution to clinically relevant, outcomes-orientated, collaborative, multidisciplinary research.
- How the study will strengthen linkages at home and overseas around priority areas of investigation (White 2005).

Once you have drafted a proposal, your chosen funding agency will need time to review it for methodological, ethical and financial integrity. Our proposal took five months from submitting the application to when the award was granted.

Permissions

Once you have the funds, you will need to confirm in writing all necessary permission to gain access to prospective respondents. No doubt you will have decided, using explicit entry criteria, which respondents you want to contact, and will have carefully worked out at the proposal writing stage, or earlier, the best way of making contact with them.

In our study, this involved synchronised and extended negotiation with nine senior mental health service (MHS) managers and ten HRECs: eight in the public sector, one in the private sector and one from a university. In addition, sign-off was also required to acknowledge Aboriginal and Torres Strait Islander health research cultures (National Health and Medical Research Council 2003). The Torres Strait Islands are 274 small islands between Australia and New Guinea that are mostly part of Queensland – a similar European example might

be to translate an English language UK research instrument into Welsh.

In Australia, multi-site ethics approval applications are submitted using a national ethics application form (NEAF), a web-based tool developed to enable researchers of all disciplines to submit multi-site research proposals for ethical review and to assist HRECs in consistently and efficiently assessing them. It comprised 49 pages.

We submitted our NEAF in March 2007. Most HRECs approved the application without revision, others after only minor revisions. One HREC, however, reviewed the application twice and, as a matter of routine, also sought external legal opinion. This committee eventually signed off the application four months later in June 2007. These delays led to slippage in start timelines, which needed to be synchronised.

Such a protracted process is not limited to Australia. Similar arrangements previously overseen by the UK Central Office for Research Ethics Committees and now by the National Research Ethics Service have been described as a 'byzantine labyrinth' (Alberti 2000).

Logistics

Negotiating access to prospective respondents will frequently raise logistical issues. Some can be practical issues and anticipated in the early planning of the research; others can be unexpectedly esoteric and require the investigator to be flexible enough to achieve a workable solution, without losing the shape of the research design.

The state of Queensland is 14 times larger than England. In our study, locations were 1,800km apart – the distance between London and Rome. From our university base, the joint chief investigators (JCI) made regular field visits to these locations, which involved a three-hour flight north, or a four-hour drive west or a three-hour drive south on toll-charging freeways. Such distances had direct implications for time, energy and cost, particularly in relation to air travel, accommodation and car hire.

CS has widely been regarded as a force for change in organisational culture and several of the senior officers in our study who managed services said they would prefer their clinical settings to be allocated to the intervention arm of the trial in which CS would be introduced and evaluated, rather than the control arm, in which services would remain constant and bereft of CS. Such was the managers' faith in CS to effect change in their organisational cultures, which they often described in deprecating terms, that some were otherwise unwilling to participate in the trial.

In addition to these declarations of preference, the attrition of data-providing respondents varied by location. In some settings, this was noteworthy. These real-life problems challenged the methodological requirements of the trial by making it harder to ensure a balance between intervention and control arms, and by limiting the scope of appropriate analyses that could be performed on the data received. These real-life practicalities have been acknowledged in the methodological literature (Oxman *et al* 2009).

Random events

Even when you have anticipated practical issues, as far as it is reasonably possible, and addressed other unexpected matters, there will remain events so random that they will surprise the most seasoned social researchers. These events will remind them that a research culture in the nursing profession has yet to be fully embraced.

While collecting data using supplementary qualitative methods, we discovered an unexpected disconnection between senior and middle management. This separation was characterised by the strategic vision of the former and the self-serving operational drivers of the latter. Examples of unsupportive, obstructive and, on occasion, hostile cultures were uncovered that opposed research and CS in particular. One senior manager in response to such an instance said: 'That's dire, absolutely dire. I don't believe it. "Sabotage" - don't be afraid to say it' (White and Winstanley 2010b). Similar middle management practices were revealed in a New South Wales (NSW) study (White and Roche 2006, White and Winstanley 2006).

In addition to the deliberately created difficulties above, other circumstantial changes occurred during the live trial. Problems with prospective respondents included illness, holidays, job changes, secondments, absenteeism, retirements and resignations, while there was also a complete health service restructure to deal with at an organisational level.

The Queensland Treasury funded several competitive medical research grants, including our study, with money accrued from the annual interest on an unclaimed lottery prize. Unexpectedly, some prospective respondents declined to participate in the research study because they objected to the study being funded from the proceeds of gambling.

More sinisterly, in one location, a publicly available padlocked questionnaire-return box, which had been purpose built in metal for the RCT, was stolen. Although this had been previously emptied frequently by the project research officer, it was not known how much data were lost as a result, if any.

Recruitment

These challenges militate against an issue-free process and are rarely reported in the research literature. However, it is at the mid-stage of the research process when such matters are likely to threaten the viability of an investigation. The recruitment of respondents is likely to be the essential element of most, but not all, research designs and it is at this stage that novice and experienced researchers alike can face a genuine methodological crisis, if not a fatal flaw in their research process.

In the survey of NSW MHNs ($n=601$), I found a general reluctance to participate in research ventures (White and Roche 2006). Even with their anonymity guaranteed, most prospective respondents were disinclined to provide data. When they did so, some still withheld personal data such as their gender, age or postcode. There were suggestions that the MHNs were mindful of the increasingly litigious work-research environment and the development of a culture that had become cautious of inquiry. Tellingly, the lowest responding area health service in the NSW survey ($n=18$) was associated with an HREC that had the most arduous ethics approval procedures in the state, a status about which the nurse-member of that committee publicly bragged.

Similar reluctance was apparent during the UK National Quinquennial Community Psychiatric Nursing Censuses that were conducted in 1980, 1985, 1990 and 1995 (White and Brooker 2001). In 1990, for example, although 198 NHS trusts and 3,421 community psychiatric nurses (CPNs) provided data, this represented a 51 per cent response rate for CPNs. A follow-up enquiry revealed 'questionnaire completion fatigue': prospective respondents had frequently been invited to participate in nursing research, particularly over the previous 20 years or so, and they had become tired and disinterested in participating. Non-response was also found to be in part a function of the size of the health service: more complex organisational arrangements mitigated against receipt, completion and return of the questionnaires (White and Brooker 1997). Community MHNs also reportedly experienced pressured working conditions, low morale and demotivation, each of which contributed to a reluctance to respond.

Our studies found echoes of these workforce characteristics in Australia. Researchers who seek, for example, CS data from prospective respondents are thwarted by a paradox to establish the empirical basis for claims of the benefits of CS, prospective respondents must commit additional time and energy to provide the necessary data, which,

according to respondents who have experienced this, is stressful. CS has shown promise as an antidote to stress (White and Winstanley 2011), but systematic introduction of CS still requires a robust evidence base, the production of which needs respondents to commit additional time.

Confidentiality

Some research designs require access to data held in documentary records, which may be legally protected. As part of a documentary study into community psychiatric nursing education (White 1990), I spent several days in the Public Records Office, at Kew, in West London, now the National Archives, where I was granted privileged rights to see official documents held under the Public Records Act 1958, parts of which have since been replaced by the Freedom of Information Act 2000. I was not permitted to copy any document using a machine, although there was no bar to my copying anything, word-for-word, by hand. Legal confidentiality also forbade my disclosure in subsequent presentations and publications of how the study was conducted. The Department of Health and Social Security (DHSS) even provided the following phrase, which was the only permissible reply I could give, if the question ever arose: 'The author was given access to the Department of Health's records and their assistance is gratefully acknowledged.'

The document that provided the original permissions for me to access the archives was issued by the DHSS on May 22 1988. Even so, the author was prohibited access to certain collections: 'On no account should authorisation be given to produce document DY1/12.' This code related to a bundle of documents that contained the minutes of the Joint Board of Clinical Nursing Studies (now the Nursing and Midwifery Council) between 1977 and 1983. These are still held in secret under the so-called 'Thirty-year rule'. However, under the Freedom of Information Act, a copy can now be requested at a cost of £316. On August 17 2010, the prohibition against revealing the information I obtained was lifted when – 22 years after the event – it was confirmed that: 'There are now no formal obligations upon you.'

The vexatious nature of interpreting history has long since been reported: only a part of what was observed in the past was remembered by those who observed it; only a part of what was remembered is recorded; only a part of what was recorded has survived; only a part of what has survived has come to the historian's attention; only part of what has come to their attention is credible; only part of what is credible has been grasped; and only

part of what has been grasped can be expounded or narrated by the historian (Gottschalk 1962). To compound this, documentary researchers should not underestimate the political context in which they attempt their investigations.

Roles and boundaries

When collecting data, researchers must be clear about the role they adopt and frame their protocols and professional behaviour accordingly.

Between 1980 and 1983, I conducted a research study concerned with GP psychiatric referral behaviour (White 1986). Located in a dedicated office of a general practice, I interviewed 180 patients immediately after their GPs ($n=6$) had made psychiatric referral decisions about them.

Many of the patients later returned to try to make an unsolicited appointment with 'the interviewer' because they had felt better after their previous experience.

I have since had similar incidents of role ambiguity and secondary therapeutic gain following interviews and focus groups conducted with melanoma patients and carers in Sydney as part of the so-called MelQoL Project, an international collaborative study to develop a melanoma-specific quality of life research instrument (White 2010).

Complaints

Even when satisfactory data collection is well under way, as per approved protocol, it is wise to remain vigilant. Some 17 months after the ten HRECs associated with the RCT had provided written approvals and data collection in the majority of locations was already complete, one HREC 'suspended the favourable opinion' it had previously confirmed in writing. This was because a participating mental health service (MHS) had received a complaint from a patient about the method of first contact adopted by RCT.

The MHS had provided the research team with sticky labels with the addresses of eligible patients, as per HREC approved protocol. The project research officer then affixed these labels to envelopes in the secure office on the university campus, rather than on MHS property. The envelopes, each of which contained a letter of invitation to patients to participate in the study, were subsequently franked by the university, apparently and inadvertently breaching the Australian Privacy Act 1988.

We later discovered that the key worker in the MHS had forgotten to inform the research team that the same patient had declined to participate in the

study when invited at baseline and had requested there be no further contact from anyone working on the study. However, a second invitation was sent to the same patient to participate at the second data collection time point.

Such an unintended breach raises the question of reliance by researchers on clinical third parties, with whom the fidelity of an HREC-approved protocol has been entrusted, not least because they will rightly remain focused on the therapeutic demands of their heavy workloads and the responsibilities of their jobs.

Within 24 days, the MHS confirmed that the complaint was resolved. However, the HREC required the JCI to inform other centres and reviewing HRECs of the suspension so that they could look into the methods of patient contact at their sites. This had a domino effect – ironically, the opposite effect to the advantage accrued by the single portal for ethics approval purposes. Most HRECs promptly reconfirmed their original approvals without the need for revision.

However, the same HREC continued to insist on protracted post hoc methodological revision to the NEAF and eventually achieved a pyrrhic victory on two counts. First, when the HREC finally approved the amended NEAF, it confirmed that there was no precedent to grant retrospective ethical approval. Second, neither nurses nor patients submitted further data after the HREC suspended the RCT. The JCIs were never permitted to see the letter of complaint that caused the lone HREC to suspend its ethics approval for 44 weeks.

Dissemination

Funded research, particularly that commissioned by a government agency or national regulatory authority, is rarely value free. Political airbrushing of inconvenient truths and substantial edits of successive draft reports are not uncommon, particularly if the findings run counter to the policy imperative at the time. Researchers should not be surprised when this is requested or demanded.

Not uncommonly, the final instalment of a staged programme of payments is held back until the commissioner approves the revised document and signs off the contract. In that event, it is not unknown for senior officers in the university to experience the tension between the need for fulsome and timely research income for the institution and the obligation to support credible research from their staff.

Between 1989 and 1992, I conducted a large evaluation of early Project 2000 (P2K) courses in England for the English National Board for Nursing,

Midwifery and Health Visiting (ENB) (White *et al* 1994). I submitted three revised versions of the final P2K report, which needed extensions to the research contract, before the commissioner accepted it. Afterwards, I wrote two versions for presentation at the 1993 ENB research conference: one was an ‘upbeat’, commissioner-preferred version; the other remained strictly faithful to the data. In the event, the latter was presented and considerable media attention followed (White 2004).

More than 20 years later, three formal reviews of the final report on the recent RCT were carried out. It took 20 weeks before the report was accepted.

Similarly, articles published in reputable journals do not merely represent the opinions of their authors: they have scientific authenticity, as given to them by the editor and the referees (Ziman 1966). Some nursing journals are subject to the pedantry of methodologically partisan reviewers. Other journals boast about their manuscript rejection rates – some of which are more than 85 per cent. Some journals rarely publish international material, with publication rates as low as 2 per cent of all papers (Dougherty *et al* 2004). Other journals are sometimes overly prescriptive and require manuscripts to be considerably massaged to meet their house styles.

Twelve-page author guidelines and 37-pages of advice on how to submit a manuscript are not uncommon. In an increasingly litigious environment, at least one journal ‘must receive the acknowledged person’s written permission, before being acknowledged in a published article’.

Translation of research findings in practice

After the funding proposal has been written, the grant has been secured, all the permissions have been approved, the logistics have been mastered, the random events have been accommodated, recruitment has been satisfactory, confidentiality has been maintained, roles and boundaries have remained intact, complaints have been dealt with, and reporting and dissemination issues have been reconciled, arguably the most important stage in the process can ensue: the translation of research findings into practice.

Almost 500 years ago, the Italian political theorist, Machiavelli, wrote ‘The Prince’ (Machiavelli 2003). In an allegorical sense, he articulated better than most one of the main and most enduring challenges of all: ‘And it ought to be remembered, that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction

of a new order of things. Because the innovator has for enemies all those who have done well under the old conditions and but lukewarm defenders in those who may do well under the new.'

Conclusion

The foregoing case examples have challenged the practical conduct of some of the research studies I have undertaken. If and when similar examples arise in your studies, you will need to consider and satisfactorily resolve them within the unique context of each investigation. This process will often stretch your intellectual and emotional resources and will inevitably consume time, energy and finances, all of which are likely to be finite.

Insofar as any advice might prove helpful in these real-life research scenarios, the following summary may assist aspiring and early career investigators to strengthen their attempts to make a robust and positive contribution to patient outcomes – surely, the sine qua non of all healthcare research (White 2005):

- Trust that 'anything that can go wrong will go wrong' (Murphy's Law).
- Understand that real-life research involves the study of unique human beings, operating in complex social systems.
- Be aware that self-interested individuals and organisations may compromise the original research plan, driven by differing personal agendas and cultures.
- Anticipate their influence and, if necessary, factor in appropriate remedies.
- Alternatively, embrace the impediments – the 'wrongs' – in the conventional research process and seek to record them as bona fide data.
- Data from these unexpected quarters are likely to illuminate, if not replace, the ostensible focus of the study.
- Accept that in all social research there will always be a trade-off between: the substantively necessary; the methodologically convincing; the ethically defensible; the financially affordable; the practically doable and the politically acceptable.

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Conflict of interest

None declared

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