The use of interdisciplinary seminars for the development of caring dispositions in nursing and social work students

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Abstract
Title. The use of interdisciplinary seminars for the development of caring dispositions in nursing and social work students.
Aim. This paper is a report of a study to evaluate the influence of interdisciplinary seminars for undergraduate nursing and social work students on development of their understanding of the meaning of caring. 
Background. There is growing international interest in interprofessional education, which is believed to have the potential to improve patient care. If interprofessional education and subsequent collaboration are truly to be patient-centred, it is important to identify a value base which creates a healthcare professional identity that facilitates collaboration. Caring, as a humanistic value, is found in both nursing and social work professionals.
Method. A mixed method approach, primarily qualitative but with a quantitative component, was chosen for evaluation of the interprofessional seminars. The data were collected between 2007–2008 by videotape recordings of the sessions, follow-up telephone interviews and a questionnaire.
Findings. There was cultivation in the nursing students of a deeper understanding of caring based on openness and a non-judgmental approach, learned from their social work counterparts. Reciprocally, social work students learned about the nursing students’ daily activities as they observed the natural process of trust and communication in the context of caring.
Conclusion. Enhanced understanding of caring in practice is not possible via learning through a uni-professional approach. Students’ reflections and dialogue enable their development of relation-centred caring, particularly in the realm of biomedical and technical environments.

Keywords: caring dispositions, interdisciplinary seminars, interprofessional education, Newman’s model, nursing, social work, values
Introduction

Interprofessional education (IPE) refers to occasions when two or more professions learn from and about each other to improve collaboration and the quality of care (CAIPE 1997). Interprofessional collaboration can improve patient outcomes from acute to rehabilitative care (Zwarenstein et al. 2001, McPherson et al. 2001). However, despite the benefits of this approach to health care, it has traditionally not been a clear focus in the education of healthcare professionals (Leipzig et al. 2002). Structural factors within the healthcare education system, such as the complexity of the design for IPE, are often cited as reasons for the failure to engender necessary interprofessional skills; the discipline-specific orientation fosters attitudes that also hinder collaboration. However, if quality patient care is important, IPE should be in place. Learning about interprofessional work should be viewed as a continuum of learning from prequalification to postgraduate education (McPherson et al. 2001).

The growing international interest in IPE is based on a belief that it has the potential to improve patient-centred care, enabling a holistic understanding of patients’ needs through better interprofessional communication and collaboration (McPherson et al. 2001). One philosophical underpinning of patient-centred care is its humanistic value of caring. If IPE and subsequent collaboration are truly to have value in the healthcare system, it is important to distinguish a value base that creates a professional identity that facilitates collaboration (Kenny 2002). Caring, as part of the humanity found in both nursing and social work professionals, is often based on relationships with patients. Moran (1989) examined the impact of social work education on undergraduate humanistic attitudes, finding that the number of social work courses completed was positively associated with students’ attitudes toward human nature. Caring, curing and change are said to constitute the threefold mission of social work (Segal 1992). Clifford (2000) defined the values that underpin nursing care as humanistic. Both social workers and nurses place great importance on values (Itzhaky et al. 2004).

However, in Hong Kong the use of a cross-disciplinary approach in educational institutions is limited to the postgraduate level. As the aging population is a global issue with a focus not only on health but also on social care, the traditional segregation of the education of health and social care professionals in Hong Kong is a barrier to IPE (Lee 2003). Collaboration between nurses and social workers, however, seems to come naturally and can operate smoothly (Cook et al. 2001, Itzhaky et al. 2004). To our knowledge, there are no local studies of interprofessional teaching in undergraduate healthcare programmes where students of social and nursing disciplines have learned interactively together. Additionally, since nursing and social work both address ethical and humanistic values in the field of health care (Wilmot 1995), we conducted a pilot project using an interdisciplinary approach to enable students of these two professions to learn about their own and each others’ meanings of caring and ethical decision-making process based on their profession-specific paradigms. The findings related to ethical decision-making will be reported elsewhere.

Background

Caring in nursing

Watson (2008), in her work on caring science, applied the term ‘caring/caritas literacy’ to fluency in caring at both personal and professional levels. An awakening of one’s being and abilities to practise ways to communicate thoughts of caring is part of one’s professional being. While Watson’s work seems to focus principally on nurses, her reference to caring science as human science and how this field embraces an interprofessional collaboration in its inquiry has made it suitable for use as the framework for our understanding of caring. Along with Watson’s (2008) work, we also sought to understand nursing students’ comprehension of caring through potential synergistic learning from their social work peers based on Newman’s (2008) expanding consciousness. Newman (2008) speaks of consciousness as information capacity. This information is accessible to us as feeling and meaning. It is a process of becoming more of oneself, of finding greater understanding of caring.

Caring in social work

Turning now to social work’s unique contribution to the caring professions, this lies in its broad, contextualized approach to addressing human needs (Barnes & Hugman 2002). Although care entails perceiving, interpreting and acting on needs while at the same time being aware that the social and the organizational contexts affect these actions (Lloyd 2006), responsiveness to the moral imperative of caring for the neediest (Bisman 2004) is at the core. Unlike in nursing, the concept of care in social work has often been an assumed characteristic of the profession itself. In essence, the act of caring is in part synonymous with the relationship that social workers build with their clients. The casework nature of social work cannot be understood independently from the worker–client...
relationship, since it incorporates the use of self and of social relationships in the identification and resolution of personal and social problems (Jones 1983).

**Interdisciplinary learning**

Interdisciplinary learning generally takes the form of an interactive method such as problem-based learning (Barrows & Tamblyn 1980). Increasing the success of problem-based learning (PBL) within the healthcare education system suggest that it is appropriate for use in IPE (Gosling 2005). At our School of Nursing, we have used PBL as a mode of teaching for a decade; hence our adoptions of the PBL approach for this IPE initiative between nursing and social work students, using authentic case scenarios. The use of a case study on elder abuse was designed to facilitate students to learn from each other about caring processes in a scenario for ethical decision-making that could be very different from uni-professional learning. McPherson et al. (2001) asserted that two components have to be central in the IPE-learning process. The first is to reflect on one’s own knowledge and how it is presented to others, and the second is to question how we attend to others’ knowledge. Our learning approach took these into account in addressing the research.

**The study**

**Aim**

The aim of the study was to evaluate the influence of interdisciplinary seminars for undergraduate nursing and social work students on development of their understanding of the meaning of caring.

**Design**

A mixed method approach, primarily qualitative but with a quantitative component, was chosen to evaluate this project.

**Participants**

Two groups of mixed nursing (N) and social work (SW) students took part in the study.

**The intervention**

Four interdisciplinary seminars were conducted and each student group participated in two sessions that lasted for about 3 hours. The two seminars were a week apart, allowing the 32 students to search for necessary information for their subsequent discussion. In the first session, small groups, with a mix of N and SW students, were formed to discuss their individual identified issues from the case scenario on elder abuse. The discussions reflected the medical and social issues faced by nurses and social workers. The facilitators listened to the small group discussions. After about an hour, the students reconvened in a large group. Each group shared its discussion, and the floor was opened for further questions and comments from the other groups. Discussions thereafter were more spontaneous and student-led. The facilitators served as content experts or guided the process through questions that prompted the group to think more deeply about the content or to examine evidence that would substantiate their decisions. Facilitators devoted the last 15–20 minutes to a discussion of the learning process and of the knowledge acquired from each other. The subsequent session started off in either a small or large group discussion, depending on the group’s preference. Students would continue their discussion from their last session and also shared with others information that they had found independently from the internet, for example on community placements for elders and the roles of nurses. The same groups of students attended both the first and second seminars.

**Data collection**

The data were collected between 2007–2008. Transcribed qualitative data from the videotaped recordings of the seminars were used because they best revealed students’ ongoing transaction with each other (Kolb 1978). According to Morse (2000), the sample size for data saturation depends on whether the information is easily obtained from the group discussions, the quality of the data from the information obtained, and the study design. Since a greater amount of usable data was obtained from each student in the groups from the videotaped recording, fewer sessions were needed. As no further new information emerged as the second session drew to a close, data saturation was deemed to have been achieved.

The supplementary quantitative component in the form of a self-questionnaire was completed at the end of the last seminar. It comprised 14 questions, the first five addressing the student’s view of the design of the approach for their learning and the remaining nine on whether this approach was effective in furthering their learning about caring and the ethical decision-making process. The questionnaire was based on literature on IPE with regard to learning about each other’s roles, caring aspects that include relationships, communications, values and beliefs, and the ethical theories and principles used in discussions on the ethical decision-making process.
A four-member panel of experts who had investigated the construct, caring and ethical decision-making process, supported the content and face validity of the questionnaire. Panelists were instructed to comment on two areas: (a) the appropriateness of the items as relating to student’s reported learning about caring and the ethical decision-making process through the interdisciplinary seminars and (b) the general clarity of each item. A 5-point Likert-type scale was used for responses, and ranged from ‘1’ as ‘very effective’ to ‘5’ as ‘very ineffective’. The quantitative data were used to corroborate the qualitative transcripts from the videotaped recordings, lending credence to the findings and interpretations (Campbell & Johnson 1999).

Ethical considerations

The study was approved by the university’s ethical review committee. At the first seminar, the purpose of the project and its voluntary nature were explained to the students and their written consent was obtained. Six teachers from the nursing and social work departments, who were also members of the research team, were invited to be facilitators for these seminars. None of the lecturers had taught the students previously or were expected to do so in the future.

Data analysis

For the quantitative data, descriptive statistics (means and standard deviations) were calculated (Table 1). For the qualitative data, after the transcriptions of the students’ interactions from the videotapes, content analysis was conducted to code the manifest/surface and latent contents (Babbie 2001). The codings were read and re-read to identify themes and patterns. Sections within the text that yielded certain themes were eventually collapsed into various theme clusters. Members of the research team would then meet and engage in in-depth discussions of the themes, and conduct further analyses where needed. Newman’s (2008)’s theory, particularly the notion of resonating with the whole, was used in the analyses to address students’ consciousness. Expanded consciousness was the way in which students’ information capacities were enhanced through their connectedness with others, and how they accessed this information through their feelings and uncovered the kinds of meanings that those feelings represented. With this expanded consciousness, students reported learning from each other about their roles in patient care and their enhanced understanding of the meaning of caring for the older woman and her family as a whole that went beyond the realm of single discipline-specific knowledge.

Guba and Lincoln (1994) concept of trustworthiness was addressed by member checking through further clarifications of their meanings in follow-up phone calls with the students, as well as through prolonged engagement with the data processing and analysis to achieve consensus on the themes and sub-themes. Two follow-up telephone interviews were conducted after a review of the transcript data, as discussed at the research team meetings and as directed by the researcher, for the research associate to clarify some of the contents of the transcripts.

Credibility of the data (Guba & Lincoln 1994) was established through data triangulation by incorporation of the supplementary findings from the quantitative data into the qualitative results to enhance the conclusions.

Findings

A total of 32 undergraduate senior year students participated in the study: 16 N and 16 SW students. They were 22 women and 10 men. All mean Likert-scale scores on the questionnaire were close to 2 (Table 1), indicating that on average the seminars were seen as an effective learning process by the students. Figure 1 illustrates the response pattern with positive skewness and a descriptor ‘effective’ as the model answer in students’ responses to their learning about caring from the interdisciplinary seminars.

At the seminars, the qualitative findings of the learning about caring by SW and N students revolved around the following theme and subthemes:

- Increased self-awareness of one’s professional values and personal judgement and their inherent enhanced meanings in caring
  - Non-judgemental approach and open-mindedness.
  - Communication skills and beyond.
  - The building of a trusting relationship.

- Increased self-awareness of one’s professional values and personal judgement and their inherent enhanced meanings in caring

Non-judgemental approach and open-mindedness

While it is expected that healthcare professionals will be non-judgemental in the care of patients, a critical consciousness of values and beliefs is important since neutrality makes implicit norms and assumptions more difficult to see as they shape students’ decisions (Doane & Varcoe 2005). In the context of interdisciplinary seminars, the presence of students from another discipline enabled students to start thinking about their decision-making process, which in turn facilitated them to address their professional values and personal beliefs. Oandasan and Reeves (2005) note that learners carry with
them their professional beliefs and personal attitudes, as demonstrated through the following student comments:

In this exchange, I have become more aware of my own professional values and their influence on me. For example, I have embraced the notions of patients' rights and the influence of a patient's particular family values and Chinese customs. Thus, when facing a case such as that in which the elderly person was physically abused by her daughter-in-law, I would first think of the patient's needs and the impact of her decision based on her Chinese values. (SW12)

Through our interactions with the social work students, I noticed that nursing students tended to focus on the patient's safety needs along with her physical health despite our intent to provide holistic care.

I would have tried to stop her from going home and supported the calling of the police to arrest the daughter-in-law. Thanks to the social work students, I am now more aware of the need to respect the autonomy of the elderly patient, and have come to realize that she might consider having an 'intact' family, being with her grandson, as of utmost importance. (S6)

...social work students seemed to view the situation with a wider lens and were more open-minded than us. They saw a need to explore a situation with other stakeholders before arriving at a conclusion. I have developed a new perspective. For instance, I used to think that the daughter-in-law was wrong, but now the social work students have taught me to keep an open mind. (N2).
As it is not easy to be totally non-judgemental, the social work students’ training to be open to each version of the story from different stakeholders of the situation might have enabled them to keep their own bias in abeyance (Rothman 1998). Students of nursing learned from their social work peers about the value of being non-judgemental and open. This captures a need to be aware of how their values guide their practice, which is part of the essence of Watson’s caring framework that has been adopted in some clinical settings overseas and empirically tested to explore a culture of caring (Caruso et al. 2008, Carter et al. 2008). The interdisciplinary exchange further evoked nursing students’ recognition of the different views of the situation of the elderly woman and her family members. There is a need for a contextual understanding of the whole (Newman 2008). Hence, it is crucial to gain a comprehensive understanding of the ‘abuse’ situation from the elder’s perspective, along with the family’s perceptions.

Communication skills and beyond
Through this interdisciplinary exchange, nursing and social work students gained a different understanding of how to communicate with a patient and their family. It requires communication skills and more. The following comments reflect this learning:

The social work students taught me a lot about how to talk to the patient and her family…helping to transfer some of the communication skills I had learnt from books into practice. For example, the meaning of empathy, the tones of our voices, etc….I also learnt that social work students were more skilful in their approach with the daughter-in-law—they did not use words which were threatening or put the daughter-in-law on the defensive. (N6)

I am more aware of the actual situation of how nurses care for patients. For instance, I was surprised by their descriptions of the patient’s care. It was a very natural process of care. Nurses see their patients several times a day for their basic needs, so they are able to build better relationships even just by saying a few words to show concern, which is a significant step in the relationship-building process. However, for social workers, when we visit a patient, we normally have a goal. First is an assessment, followed by trying to understand and getting an in-depth background history. So for us, the care is very goal-oriented. (SW2)

While nursing students learnt from social work students about how they showed care in their communication so that the patient’s family would not feel threatened and become defensive, social work students acknowledged how their approach to client care could be more natural and personal. Rather than approaching the client to elicit social information for assessment, words of care and comfort based on the client’s interests could be a starting point. McPherson et al. (2001) aptly pointed out that IPE should aim to have everyone learn to ‘understand and capitalize on the different competencies various professions bring to patient care’ (p 30).

Communication through being non-judgmental and open and searching for a whole understanding may lead to trust.

The building of a trusting relationship
Social work students’ emphasis on understanding the older person and their family’s versions of the situation through listening and openness would make them feel accepted, which in turn would enable their telling. In addition, learning from the nursing students through active listening to the client’s physical needs, social work students believed there could be an establishment of trust and a relationship:

Social workers can also use the elderly person’s health issues to start our conversation with her in order to establish a relationship. The nurses can provide this information to us so that the patient can feel that the social workers indeed care for them. This level of relationship building through the patient’s perceived care is critical for social workers in our later plan. (SW5)

I believe that in this situation the first priority is to treat the health problems. In providing such care we will be able to establish a trusting relationship. If the elderly person trusted us, she might be more willing to share her home situation with us, enabling us to gain a better understanding of the situation and the patient herself. (N11)

Students from both disciplines acknowledged that nursing students are in a unique position to communicate with patients. As the primary caregiver, the ability of the nurse to talk to a patient during treatment and examinations is a recognized advantage. Indeed, simple matters such as tending to the minute needs of a patient are a tool that can be invaluable in establishing dialogue as well as acting as a bridge between patients and their families. It was observed by the students that there is actually a difference in terms of how they communicate with client, and how they can learn from each other to strengthen the trust through being open to the various stories for family counselling and establishing a more natural way of building relationships with older people. This kind of trusting relationship, based on the person’s perceived care needs, could facilitate to pave the way for both nurses and social workers in subsequent issue identification and management/counselling. This is because older people might be bound by Chinese traditions and their own shame, and
therefore might not want to discuss the situation with professionals.

The quality of a relationship with another person is considered to be one of the most significant elements in determining facilitating effectiveness (Watson 2008). Developing a caring relationship goes beyond expert communication skills where one knows the right thing to say or do, even though these are facilitative resources to enable healthcare professionals to enter into meaningful relationships with their patients (Doane & Varcoe 2005). While nursing students learned communication skills from their social work counterparts, a further understanding of opening oneself up to the uncertainty of human relating would be the educative component for students of both disciplines. Watson also comments that ‘authentic caring relationship building is concerned with deepening our humanity...becoming more humane, compassionate, aware and awake to our own and others’ human dilemma’ (p. 72). This awakening to their own dilemma facilitated the students to be more reflective:

Since the patient does not wish to go to the nursing home at this point, nurses will normally refer her to us social workers. But I may, due to my own personal values, believe that letting her go home is too dangerous and so would not encourage her to do so but rather suggest that she leaves home for now. I might not know if I have inadvertently projected my own values or violated her autonomy: the situation isn’t life-threatening, so we can’t ignore the elderly person’s wishes. (SW7)

But what if she commits suicide after she goes home? This would be on our conscience. (N6)

Actually, I have been thinking about whether getting the elderly woman to move is to make her feel safe or to make us feel safe. In the end, are we sending her to a safe environment because of our own beliefs about what is good, or simply feeling glad that nothing happened to our client as she didn’t die? (SW8)

This reveals a notion consistent with Watson’s (2008) transpersonal caritas consciousness, that ‘our intentionality...makes a difference for better or for worse’ (p. 87). Students’ comments about their possible intentions reminded them of what is important, i.e. their choices and their actions. In this case, their reflections facilitated them to pay closer heed to the possible meanings of their choices and actions, which would then enable continuous growth toward a better understanding of themselves in the caring practice. IPE is about not only fostering the role recognition of different health team members, but also enabling students to value and engage with the differences arising from the knowledge and practice of various healthcare professionals (McPherson et al. 2001).

Discussion

Several limitations can be identified in this study. Given that we used a purposive sample of students from one university who volunteered to participate, these students might already have had the openness and motivation to learn from their peers in another discipline. This would increase the likelihood of their motivation to combine the different knowledge and skills to benefit patients, rather than being fearful of diluting their professional identity. In addition, while the study had a qualitative core component combined with a quantitative strategy, the sample size for the quantitative part was small. However, our total number of 32 participants (i.e. > 30, which can follow a normal distribution) meets the minimum number required to estimate a mean score (Pett 1997). Finally, the test–retest reliability of the questionnaire needs to be established.

Caring is a dynamic and complex process that is expressed in many forms. Corbin (2008) learned from Kirkevold (1993) that there are two main forms of (caring) actions: alleviating and enabling. Alleviating refers to interventions that mitigate a patient’s physical symptoms. Providing physical care that promotes comfort as part of caring mirrors our nursing students’ caring for older patients through a natural process. This was appreciated by their social work counterparts, who considered it a foundation for relationship-building between practitioner and patient. For us, the enabling phase may not only extend to the patient in retaking control of their physical and psychological health, but may also lead to reciprocal learning for nursing and social work students about meanings of caring that go beyond the emphasis on rational, cognitive and analytical thinking. As Watson (2008) indicates, the humanistic values that we bring to patients’ situations affect the encounters, relationships and moments that we have with ourselves and others. The students’ reported recognition and the appreciation they acquired of each other’s values and beliefs through this interdisciplinary exchange opened the education and possible practice that went beyond our conventional requirements for the knowledge and skill to do the job by placing much-needed effort on ‘how to be’ while caring for patients.

This translation of one’s own self-awareness and sensitivity into informed moral practice in relation to the self and others is a major task of professional practice (Watson 2008). The opportunity for this interdisciplinary exchange afforded the students a beginning platform for reflection on their personal and professional values and beliefs, which are fundamental for continuous growth in their caring relationships within them and others.

An educational template for teaching relationship-centred caring to all healthcare professions was developed by the Pew...
What is already known about this topic

- Interprofessional collaboration, as teamwork, is assumed to lead to a more holistic approach to meeting patients’ needs.
- Interprofessional education that facilitates acquisition of the knowledge and skills necessary for collaborative work to take place is not always possible.
- There are different views on the ontology and epistemology of caring.

What this paper adds

- Understanding of caring from a uni-disciplinary approach can be augmented through exchange of experiences and discipline-specific values and beliefs between nursing and social work students.
- There was cultivation in the nursing students of a deeper understanding of caring based on openness and a non-judgmental approach, learned from their social work counterparts.
- Reciprocally, social work students learned about the nursing students’ daily activities as they observed the natural process of trust and communication in the context of caring.

Implications for education and practice

- Interdisciplinary learning between nursing and social work is essential for better management of the health and social issues faced by the global aging population.
- Introducing interdisciplinary seminars for senior year students in undergraduate programmes of nursing and social work could enhance their decision-making process through recognition of their values, beliefs, and personal and professional bias.
- An understanding of caring needs to be re-emphasized in the care of older clients for both nurses and social workers working within a biomedical tradition.

Fetzer Task Group (Tressolini and The Pew-Fetzer Task Force 1994). Of interest to us is the practitioner’s relationship with self, patients and other practitioners (Watson 2008). Having an awareness of their own personal and professional values and beliefs is important not just in facilitating to understand the shaping of decision-making process but also in enabling listening to the meaning of the experiences of older people and their families. Given nursing and social work students’ initial preconceived notion of a family relationship with older people, for some of them their initial view of the daughter-in-law in the case study would result in their taking more time to understand the life of the older patient and her family and subsequently to grasp their patterns. The interdisciplinary exchange, however, enabled an interpretation of the situation that does not derive independently from nursing or social work, but takes into consideration how the patient and her family might be seeing the problem. Newman (2008) addresses how differences in family culture or belief systems between a patient and healthcare professionals influence the interactions and therefore the rhythm of the evolving pattern.

Learning from the cross-disciplinary exchange between students of nursing and social work mimics the co-creation of a field of resonance, in that the feeling of the whole of their respective uni-disciplinary knowledge about caring is reflected in the parts as they discuss in a connecting way about caring, relationships and communication in the care of the older client and her family from the scenario provided. The basic way of knowing is through attunement and resonant receptivity, which manifests itself in intuition and revelation. The essence of information is resonance. The students could only sense the resonance by attending to the feelings and through an intention to connect with others (Arguelles 1987).

If an experience is analysed and evaluated before we have resonated with it, the resonance is lost. This often occurs as a novice nurse or social worker tries desperately to intellectualize the situation as a detached professional. Rather, it will be more facilitative to engage with the patient and be cognizant of novice’s own personal judgments about health behaviour for the underlying pattern of the patient and the family to emerge. In addition, students’ recognition of their own feelings and how those feelings may influence their care of the older person and her family afforded them the opportunity to become reflective professionals. Given this educative experience, students began to appreciate how theories guided practice as part of their awareness of their personal and professional bias, so that their caring would be more conscious. The interdisciplinary seminars facilitated the enhancement of caring in this context. The dynamic nurse–patient relationship is built on the nature of this caring and the need for students to learn more about communication between healthcare professionals and patients which goes beyond an emphasis on skills.

Conclusion

We would support the development of interactive shared learning modules for nursing and social work in the senior
years of their undergraduate curriculum. Caring relationships and shared consciousness needed between patients and practitioners are also needed by healthcare professionals: respecting the unique subjective world of the other, openly listening with intent to hear the other’s point of view, and communicating congruence and differences effectively. While no potential contradictions were recognized in the seminar discussions between social work and nursing students in our research, how to optimize their collaboration for a holistic approach merits our further study.

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Conflict of interest

No conflict of interest has been declared by the authors.

Author contributions

EAC and AH were responsible for the study conception and design; EAC, AH, JH and EM performed the data collection; EAC, NL, EM, AH and JH performed the data analysis; EAC was responsible for the drafting of the manuscript; EAC and NL made critical revisions to the paper for important intellectual content; AW provided statistical expertise; EAC obtained funding; NL provided administrative, technical or material support.

References


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