ABSTRACT: The Nominal Group Technique is a method used to explore issues, generate ideas, and reach consensus on a topic. The Nominal Group Technique includes individual and group work and is designed to ensure participants have the same opportunity to engage and provide their opinions. While the technique has been used for around six decades to assist groups, in industry, and government organizations to examine issues and make decisions, this technique has received limited attention in nursing research, particularly in mental health. This discussion paper describes the use of a modified Nominal Group Technique for a study designed to determine a nursing decision-making framework for a state-wide forensic mental health service. Modifications were made to the traditional technique, to enable participants to make an informed and collective decision about a suitable framework for the novice to expert nurses, across secure inpatient, prison, and community forensic mental health settings. The Nominal Group Technique generated rich data and offered a structured approach to the process. We argue that the Nominal Group Technique offers an exciting and interactive method for nursing research and can increase opportunity for minority group members to participate. This technique also offers a time efficient way to engage busy clinical nurses to participate in research, with the advantage of members knowing the decision on the day of the group. Consideration, however, needs to be given to the duration and effect on participant concentration, and if not actively managed by facilitators, the possible emergence of group dynamics affecting individuals’ decisions.

KEY WORDS: forensic mental health nursing, clinical reasoning, forensic psychiatric nursing, mental health nursing, Nominal Group Technique.
AIMS

Different research techniques can be employed to explore opinions from a group of participants to ultimately achieve consensus (e.g., the Delphi technique, the consensus development conference and the Nominal Group Technique, see Søndergaard et al. 2018). The Delphi technique is one such method that has been used more often in social sciences (Keeney et al. 2001), than perhaps nursing research. Delphi studies are designed to engage participants in a staged approach, with several Delphi rounds, where each round builds on results from previous rounds, as participants work towards achieving consensus (Maguire et al. 2022; McKenna 1994). One of the important aspects of this process includes Delphi members making their decisions independently from others in the group (Jorm 2015), and for this reason, Delphi members identities are not known among the group.

There are, however, other methods such as the Nominal Group Technique that can be used to inform nursing education, as a method of extracting the collective knowledge of a group (Foth et al. 2016). The Nominal Group Technique is a method that uses structure, to conduct a small group face-to-face discussion to integrate viewpoints and opinions of a group of knowledgeable participants, to gain consensus on a topic of interest (Parthasarathy & Sharma 2014). The Nominal Group Technique has been around for the last 16 years, used to assist groups, the industry sector and government organizations to analyse issues and make decisions (Cooper et al. 2020; Fink et al. 1984; Van de Ven 1974). More recently, it has been used in health care settings and general nursing, however, has received less attention in mental health nursing research (Cheevakasemsook et al. 2006; Cooper et al. 2020; Harvey & Holmes 2012).

This discussion paper describes the use of a modified Nominal Group Technique, to enable a service to select a suitable mental health nursing framework to guide clinical practice. We provide an account of a recent research project undertaken with a forensic mental health service where the Nominal Group Technique was used to explore two nursing frameworks to allow the nurses to select the most suitable framework for their practice. We consider some of the advantages and considerations when using this method in nursing research. We hope that our learnings from this project will provide valuable insight for other nurse researchers who might be considering using this technique by offering some practical suggestions.

BACKGROUND

Forensic mental health nursing is a subspecialty of mental health nursing, where nurses will work in a variety of forensic mental health and criminal justice settings (Maguire & McKenna 2020). Forensic mental health nurses work with consumers who have needs related to offending behaviour, as well as a range of mental health, physical, social, cultural, and risk related needs (McKenna et al. 2017). It is crucial that nurses working in forensic settings can define their unique knowledge and skills, recognize their role within the multidisciplinary team, and identify their contribution to assessment, treatment, and intervention (Martin et al. 2012). Having a framework to guide practice and decision-making can assist in directing and defining the nursing contribution to care.

In the state of Victoria, Australian Forensicare is the state-wide service for forensic mental health care. The service delivers a range of mental health programs across prison services, the community, and a secure inpatient hospital for consumers, with different needs at different stages of their recovery journey. In recent years, the service has seen rapid expansion resulting in the nursing workforce, increasing from around 200 to over 500 in approximately 3 years (Victorian Public Sector Commission 2020). Nurses working in this setting need the skills and knowledge common to all mental health nurses, in addition to a unique set of skills, knowledge, and attitudes to work effectively with forensic mental health consumers. These unique requirements are defined in the Forensic Mental Health Nursing Standards of Practice, often referred to as the ‘Standards of Practice’ (Martin et al. 2012).

The nursing framework suggested in the Standards of Practice and taught in graduate training at the service is the Nursing Process (Younas 2017). The Nursing Process includes the following steps: assessment, diagnosis, planning, implementation, and evaluation. While the Nursing Process has been used since the 1980s as a guide for providing consumer care across a range of settings (Jones 2020), there have been more recent frameworks developed to guide nursing care, such as the Clinical Reasoning Cycle (Levett-Jones 2017). Furthermore, the Nursing Process while providing a simple framework, has been criticized for being too nursing focused, and not necessarily capturing features of care provided in complex settings, such as forensic mental health. Concern has also been
expressed that the Nursing Process does not necessarily focus on patient-centred care (Maguire et al. 2022).

In Australia, several universities have moved away from teaching the Nursing Process in favour of the Clinical Reasoning Cycle. The Clinical Reasoning Cycle has eight phases: consider the consumer and the situation, collect cues and information, identify issues and problems, establish goals, take action, evaluate outcomes, and reflect on the process (Levett-Jones 2017). With an impending review of the Standards of Practice by the senior forensic mental health nursing group, and the knowledge that many of the graduate nurses entering the workforce were being taught the Clinical Reasoning Cycle, the senior nursing group considered it timely to explore the Nursing Process and the Clinical Reasoning Cycle frameworks, to determine the most suitable framework for nurses working across all settings in the service.

DESIGN

This paper describes how the research team modified the traditional Nominal Group Technique to explore the most suitable nursing framework for the nurses across Forensicare, where the Clinical Reasoning Cycle was selected by the participants in this study (see Maguire et al. 2022). We outline the modifications, the process, and data collection. We also provide reflections about use of this technique along with considerations that may enhance future use of this technique for nursing research.

METHODS

The Nominal Group Technique

The Nominal Group Technique includes individual and group work (Vander Laenen 2015), and is intended to provide all participants with the same opportunity to engage and participate during the group (Pokorny et al. 1988). A traditional Nominal Group Technique is comprised of four main steps (see table 1). While the number of participants can vary, traditional groups have around four to seven participants, but may have up to ten (Fox 1989; Olsen 2019; Roth et al. 1995). Suitable participants include people who have the relevant experience and knowledge in relation to the issues being explored (Cooper et al. 2020; Sanders 2008).

The Nominal Group Technique has been used for defining, developing, and assessing nursing competencies; curriculum development or renewal; and developing assessment tools (Fisler et al. 2019). In determining an appropriate nursing framework for the service, we identified that the framework needed to be applicable from the novice to expert nurse, and across all settings (secure inpatient, prisons, and community). The Nominal Group Technique was considered suitable to enable equal opportunity for a broad representation of participants to come to a final decision on which nursing framework was most appropriate to their working context. For these reasons, the key stakeholders invited to undertake the Nominal Group Technique were nurses from all settings, and with a range of clinical, operational, and educational expertise.

Further considerations for the use of the Nominal Group Technique over other data collection methods included the need for an in-depth inquiry into the current nursing issues across the service that may enhance or hinder implementation of any selected framework. As suggested by Olsen (2019), the Nominal Group Technique can assist in highlighting issues and concerns that may not have been previously identified. The collaborative features of a Nominal Group Technique can enhance ownership of the issue under investigation, which may then increase the likelihood of shifting clinical practice and policy (Harvey & Holmes 2012; Vella et al. 2000). In this study, it was considered extremely important to involve the very nurses that were going to be directly affected by the framework, and who would be in positions to lead and champion change.

Modification of the traditional Nominal Group Technique

We modified the Nominal Group Technique in two ways. The first modification was the inclusion of education on the frameworks. Participants were sent a document that

| Step | Components |
|------|------------|
| 1 | Silent generation of ideas: Participants list individually and without engaging in any form of discussion, their own ideas on each of the questions contained in the NGT guide |
| 2 | Round robin: Recording ideas, where there is a round robin and each participant presents their ideas. This process is repeated until all questions on the NGT guide have been answered. All ideas are displayed or documented so all participants can see them |
| 3 | Clarification: A structured discussion of the ideas from the participants |
| 4 | Voting: Each participant privately votes, and the group’s views are assessed |
provided an introduction to the Nursing Process and the Clinical Reasoning Cycle 1 week prior to the group discussion and were asked to familiarize themselves with the content. On the day, the group began with a presentation by a nurse academic with content expertise on both frameworks and included opportunities to ask questions and seek clarification. This modification was instigated to ensure all participants understood the Nursing Process and the Clinical Reasoning Cycle, so they were able to make informed choices about application and suitability. There was also an acknowledgement that most nurses who have been practicing for more than 5 years were more likely to have been trained in the Nursing Process, and, therefore, it was considered important to provide background to both options to avoid any potential bias. The modification of including education was also considered important to ensure there was no perceived bias from the researchers regarding a preferred framework for use by the service.

The second modification was in the number of participants included in the group. As mentioned previously, Nominal Groups may have up to 10 participants. Rather than running a series of Nominal Groups, over multiple weeks, the preferred approach was to conduct the one group, include all willing participants, and ensure representation from across the service. To effectively run a Nominal Group with larger numbers of participants, the group commenced together with a total of 17 participants, as one large group for the education on nursing frameworks. Following the presentation, the large group was then split into two groups (one group of eight and one group of nine), to run through silent generation of ideas, sharing of ideas, and group discussion. Both groups then re-joined and provided a summary of their group discussion before members voted privately. The total time of the Nominal Group Technique was 4 h including scheduled breaks.

**Participation on the day of the Nominal Group Technique**

Nurses who agreed to participate varied in skill level with representation from lowest-to-highest nursing grade, including senior clinicians, a graduate nurse, nurses in operational and management positions, as well as nurses relatively new to clinical nurse education. This maximized diverse representation of nursing practices and contexts from across the service ensuring the results from the research aligned with the key stakeholders’ goals for practice delivery. All participants regardless of their contexts had a joint interest to develop nursing skills and practices, and to identify an appropriate supporting framework. As stated by Bailey and Lumpkin (2021, p. 1) “stakeholder theory holds that stakeholders with joint interests create new value when they interact”. It was also considered important to ascertain the drivers for engagement of the participants, this was seen to create a further opportunity to establish the need for change and how and why this might occur (Bailey & Lumpkin 2021).

The processes of Nominal Group Technique afforded equal representation of participants to reach a consensual final agreement on which framework was most appropriate to their working context. Enabling equal participation among members, along with the Nominal Group Technique process assisted in reducing group dynamics and influences of social power (Aspinal et al. 2006; Pokorny et al. 1988; Vander Laenen 2015). This technique was seen to be a particularly suitable method in which the nurses could participate equally whilst limiting the impact of group dynamics and the influence of more senior participants may have on others in the group. It was important that all participants be provided the opportunity to equally voice their ideas, especially when including graduate and junior nurses, who may not always have the confidence to speak up in a large group with senior nurses. The built in stages of the Nominal Group Technique can assist to increase participation of the minority, by affording equal voting opportunities to generate data (Vander Laenen 2015).

**Data collection**

There were several modes used to collect data including post-it notes from the generation of ideas, audio recordings, and facilitator field notes. Within the two groups, there were two facilitators; one facilitator took field notes whilst the other presented the questions and managed the group. The presenter facilitator posed several questions (see Table 2), after each question, each participant wrote their ideas on post it notes and stuck these up on a whiteboard. We limited this process to one idea for each post it however, participants could generate as many ideas as they wanted, resulting in many post-it notes from each participant for each question. During this period, there was no conversation rather silent generation of ideas. At the end of the questions, once everyone was satisfied they had exhausted the generation of ideas, the facilitators, and group members themed the post it notes. The theming of ideas was a collaborative and iterative process that again enabled all to participate, for a more detailed
description of the data collection methods please see Maguire et al. 2022).

The method chosen allowed for group discussion, clarification, and the sharing of experiences in using the frameworks, past enablers, and dis-enablers of using a nursing framework. These discussions were audio recorded and field notes were documented by one of the facilitators in each group. Finally, the larger group reformed where the two groups came back together and themes from each group were presented and further discussion and generation and refining of themes occurred. Again, this was audio taped and supported with documented field notes.

The audio recording continued until the session ended, ensuring individual responses and group discussion were captured. All participants written responses to the silent generation of ideas were also collected and transcribed, along with field notes. The collection of multiple forms of data assisted in the interpretation of the data and allowed for an in-depth analysis. The recordings were then analysed using thematic analysis to capture the richness of the dialogue that occurred during both the group discussions of the theming of the post it notes and then the further conversations that occurred during the larger group discussion.

**Opportunities afforded by the Nominal Group Technique**

The Nominal Group Technique was appealing as a method to reach consensus on a suitable nursing framework for novice to expert forensic mental health nurses working across the varied service settings. The flexibility and capacity to make necessary modifications to the Nominal Group Technique was particularly applicable to the research objectives, which has also been noted by other researchers as advantageous (Cooper et al. 2020; Søndergaard et al. 2018). In a service that is spread across a large geographical area, and where participation in this type of research takes clinicians away from direct consumer care, an important consideration was the ability to limit the required time to participate. The method allowed for a time-efficient collection of data as noted by other studies using the Nominal Group Technique (see Harvey & Holmes 2012; Potter et al. 2004), and allows the collection of a considerable amount of data in a short timeframe (Harvey & Holmes 2012).

Another attractive feature of the Nominal Group Technique is that once the voting is completed, the results are known to the members of the group and researchers as soon as the votes are counted (Cunningham 2017). As noted by Cooper et al. (2020), knowing the outcome can provide participants with a sense of achievement, and in our study afforded the opportunity to have subsequent fruitful discussion about potential implementation of the selected framework.

The Nominal Group Technique also highlighted a range of inherent challenges for nurses at the service that perhaps would not have come to surface if another method was employed. Having nurses from across the service together in one room, allowed the exploration
of key challenges to everyday practice and dedicated time to focus on and discuss nursing care. In practice, these types of discussions may not occur frequently, especially when some forensic mental health nurses may experience professional isolation, for example, nurses working in custodial and prison settings, where they may be the only nurse working with a range of other disciplines and criminal justice and correctional staff (Martin et al. 2013).

Inherent challenges associated with the Nominal Group Technique

It is important to highlight some of the challenges encountered with the modification of the Nominal Group Technique. Specifically, having a large group made the discussion more complex to keep on track, and there was potential for participants to dominate conversation (Cooper et al. 2020; Foth et al. 2016). As always in any group situation, there can be members who will tend to be more vocal. While this was not an identified issue in the smaller groups, there was notably fewer participants contributing to the larger group discussion about implementation after voting was complete. More junior nurses, or lower grade nurses may have found the larger group to be somewhat confronting, and perhaps less likely to contribute.

Another issue is that feedback given in the Nominal Group Technique is not anonymous (Cooper et al. 2020; Ives et al. 2013) and this may have the potential to constrain discussion due to fear of peer group or facilitator disapproval. While this was only an issue after the group had voted on a preferred framework, to avoid such issues occurring before voting, it would be important for facilitators to intervene to ensure less confident participants are involved, and that dominant participants do not skew the conversation and influence the voting (Ives et al. 2013). It is worth noting however that while a larger group may result in some people participating less, the silent generation of ideas, which are incorporated into the thematic analysis, ensures all participants opinions and voices are heard. While this was not identified as an issue in our experience, if not checked, may be an issue if running an unmodified Nominal Group with a larger number of participants.

Time taken to participate in a Nominal Group can also be an impediment, and Cooper et al. (2020) suggests that the extensive time required for the group discussion may result in participants either losing interest or struggling with concentration. While care was taken to build in breaks, during the silent generation of ideas phase, which required the nurses to write responses to six questions and involved concentration and reflection, both groups took an unplanned break. Therefore, there is a need to consider the time taken to complete the silent generation of ideas, to avoid participants losing interest or having difficulty concentrating (Cooper et al. 2020). As noted by Cunningham (2017), only a limited number of issues can be focused on during the Nominal Group.

Recommendations for future use of the Nominal Group Technique

The Nominal Group Technique generates rich data, not only from the discussions that occur in the group, but also from the silent generation of ideas where participants write down their responses to the questions. Data collection includes the audio-recording, and the collection of notes from participants. In our study, while we were able to assign a unique identifier to participants during the discussion sections, we were not able to do this with the written responses. For this reason, the written responses can only be attributed to the group number (e.g. group one or group two) rather than individual participants. While being able to link written statements to participants was not seen as necessary in our study, depending on the topic of interest, the ability to identify participant’s comments of both verbal and written nature may be necessary, or helpful. Consideration could be given to the allocation of a participant number for the purpose of the written information collected during the group (which is then assigned a different unique identifier to protect anonymity for the purpose of reporting).

All participants were considered experts and as White (2011) identified expert opinions can be quite divergent. Therefore, it was important that the facilitators were person-centred and able to understand and navigate the dynamic processes of facilitation. This dynamic process included an understanding of the complexities of the Nominal Group Technique as a dynamic entity and not a linear process. (Shaw et al. 2010). The facilitators were therefore chosen with a diverse set of skills. All were experienced researchers; one was a forensic mental health nurse researcher; one was a mental health nurse researcher and two were nurse academics with expertise in facilitation, but not from a mental health or forensic mental health nursing background, this also enable objective observation. The facilitators were paired together with one mental health nurse academic and one nurse academic, this ensured
there was content expertise, an objective lens as well as the ability to manage complex group facilitation.

Cooper et al. (2020) suggested that results from Nominal Group need to be substantiated by others and suggests this could be done by presenting the results with additional participants or running a parallel study to draw comparisons. Dividing the larger group into two smaller groups, allowed the smaller groups to explore the questions, but subsequently for findings from each group to be compared. This was a time-efficient method, as this was done on the day; however, there is merit to having a different group of participants to undertake this task for additional rigour. It may be helpful for others embarking on similar work to consider how the findings may be verified by others.

In the preparation of reports or manuscripts where the NGT has been used, the scientific write-up needs to clearly articulate the steps taken in the NGT and ensure participants and/or groups can be clearly distinguished from each other in both verbal and written responses.

CONCLUSIONS

By using a Nominal Group Technique, nurses working across a large forensic mental health service, with varying practice locations, were able to convey their views and determine the most suitable nursing framework, using the structured process afforded by this method. Modifications made to the Nominal Group Technique allowed for the provision of education, to ensure all participants had a consistent fundamental understanding of the frameworks. Splitting the participants into smaller groups also encouraged focused exploration of the issues, while allowing for comparison between groups. The Nominal Group Technique is also a time-efficient research method of exploring issues, with the added advantage of the participants and researchers knowing the result at the end of the group.

While there are several advantages, this technique does require attention to facilitation of the group, to limit negative group dynamics, and ensure equal participation. The collection of written answers to questions may also require a method of linking these answers to individual verbal responses. Overall, the Nominal Group Technique provided a suitable structure to explore nursing practice and select a framework, involving the very group of nurses that will be key to implementation, and role modelling best practice in the future. The modified Nominal Group Technique was determined to have high utility, in determining a consensus decision in the forensic mental health setting for busy nurses. We recommend this technique as an appropriate and robust methods of research for similar settings and research questions.

RELEVANCE FOR CLINICAL PRACTICE

Increasing complexity of consumer care across all settings in nursing creates workload challenges (Udod et al. 2021). While the clinical reality is that competing demands can make participation in research challenging, the Nominal Group Technique may be a suitable method for similar health care settings that service large geographic areas, and where taking busy clinicians away from the clinical setting requires efficient use of their time. Furthermore, while it does require planning and support from the organization to conduct such research, there are clear advantages in including the nurses on the ground in decision making and governance, to enhance ownership and buy in, and improve health leadership through inclusive decision making and change management.

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DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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