The Development and Evaluation of an Analytical Framework to Explore Student Nurses' Cultural Beliefs of Dementia

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ABSTRACT

Background: People diagnosed with dementia need culturally sensitive, person-centered care to promote their health and well-being. Therefore, healthcare professionals should be able to provide culturally competent care, of which an element is the understanding of their own cultural heritage and how this impacts on their beliefs regarding dementia, as cultural norms and values provide meanings and understanding of chronic conditions such as dementia. This study used focus groups to explore the cultural beliefs of student nurses regarding dementia, generating a large set of qualitative data that required structure and a framework to analyze.

Purpose: One purpose of this article was to present the methodological analysis, which encompasses the analytical framework. The second purpose was to apply the framework to elicit the cultural beliefs regarding dementia among student nurses from multiple national backgrounds.

Methods: Focus groups with student nurses from five higher education institutes in England, the Philippines, Slovenia, and New Zealand were conducted, audiotaped, and transcribed verbatim. The qualitative data were analyzed using the framework method of analysis. Data from the focus groups conducted at the two higher education institutes in England were analyzed by encompassed synthesizing, refining, and agreeing on the codes, categories, and themes that were established separately by four researchers. The developed analytical framework was then tested on the qualitative data obtained from the focus groups conducted in Slovenia, the Philippines, and New Zealand.

Results: The results were presented in three parts: the cultural analytical framework, the process of developing the initial categories/themes, and the final themes that emerged from the data obtained from the focus groups.

Conclusions: An analytical framework was developed and applied to understand student nurses’ cultural values and beliefs of dementia.

Key Words: framework analysis, dementia, culture, student nurses, qualitative analysis.

Introduction

Globally, it is estimated that 135.5 million people will be living with dementia by 2050, with an estimated 10 million new cases identified every year (World Health Organization, 2015). Dementia is a progressive terminal syndrome that affects memory, thinking, behavior, and activities of daily living (World Health Organization, 2017). The needs of people with dementia are unique to each individual as well as complex and dynamic, requiring culturally appropriate and responsive health and social care services (Alzheimer’s Society, 2014; Dilworth-Anderson & Gibson, 2002).

Culture has been defined as a set of shared symbols, beliefs, and customs that define individual and/or group behavior (Dilworth-Anderson & Gibson, 2002). Culture includes shared patterns of behaviors and interactions as well as understandings that are learned through socialization. Culture may be seen as the growth of a group identity fostered by social patterns that are unique to that group and that change over time (Spencer-Oatey, 2012). Furthermore, some cultural norms and values provide meanings and understanding of syndromes such as dementia and enable collective knowledge within a group (Ow Yong & Manthorpe, 2016).

The need to consider the experiences of people with dementia from diverse cultural backgrounds and the need to provide culturally competent care have been widely acknowledged (Mullay, Schofield, Clarke, & Primrose, 2011). Cultural competence, the capacity of healthcare workers to provide culturally appropriate care to people with diverse values and
beliefs, is essential to providing person-centered care to people with dementia (Mullay et al., 2011).

Ethnicity and culture may affect the care that nurses provide to people with dementia (Ow Yong & Manthorpe, 2016) through the influence of underlying cultural assumptions and perspectives (Mullay et al., 2011) as well as dementia-related stigmas and shame and beliefs that dementia is a normal part of aging (Flaskerud, 2009). Consequently, nurses must understand their own cultural beliefs and values to provide culturally competent care to people with dementia (Brooke, Cronin, Stiell, & Ojo, 2018). Furthermore, this understanding will help nurses apply the concepts of person-centered care from the cultural perspective of the person with dementia (Doyle & Rubinstein, 2014; Johnston & Narayanasamy, 2016).

In many European countries, the nursing workforce has become culturally diverse because of the recruitment of nurses from Asian, African, and other European countries (Egede-Nissen, Sellevold, Jakobsen, & Sørlie, 2017). Moreover, the student nurse population is becoming increasingly culturally diverse. Therefore, the factors that may influence their beliefs, perceptions, and understandings about dementia must be evaluated and addressed to develop a culturally sensitive workforce (McKenzie & Brown, 2014).

One purpose of this article was to present the methodological analysis, which encompasses the analytical framework. The second purpose was to apply the framework to elicit the cultural beliefs regarding dementia among student nurses from England, Slovenia, the Philippines, and New Zealand.

Methods

This article draws on the framework method of data analysis defined by Gale, Heath, Cameron, Rashid, and Redwood (2013). Therefore, a cultural analytical framework was developed and then applied to support the interpretation of nursing students’ cultural beliefs regarding dementia. The data will be discussed in a separate article.

The data were collected via focus groups, which allowed students to be recruited from naturally occurring groups, where existing relationships and social context support a deeper conversation on cultural beliefs regarding dementia (Brown, 2015; Githaiga, 2014). All focus groups were audio recorded and transcribed verbatim. The framework method of data analysis defined by Gale et al. (2013) was applied.

The Framework Method of Data Analysis

The framework method of analysis is one of many approaches to thematic analysis and qualitative content analysis (Gale et al., 2013). Framework analysis was first conceptualized in the 1980s by the National Centre for Social Research to support the analysis of qualitative data in applied policy research (Dixon-Woods, 2011). This approach to analysis entails the development of a matrix of thematic categories into which data may then be coded (Dixon-Woods, 2011). Moreover, this approach ensures that themes and concepts identified through knowledge or reasoning can be combined with other new themes or concepts that may emerge (Dixon-Woods, 2011).

Framework analysis is used widely in healthcare research, as it enables flexibility and team work while providing a rigorous and systematic method for conducting qualitative data analysis (Dixon-Woods, 2011; Ward, Furber, Tierney, & Swallow, 2013). Despite the use of framework analysis as an approach to qualitative data analysis in fields such as psychology, social policy, and nursing research (Parkinson, Eatough, Holmes, Stapley, & Midgley, 2016), this approach has rarely been used to explore cultural beliefs and values regarding dementia across different student nurse populations.

Gale et al. (2013) described seven stages of framework analysis, as follows:

Stage 1: Transcription – involves a good audio recording and a word-for-word transcription of the focus group interviews.

Stage 2: Familiarization – enables the researchers to know the data extensively by immersing themselves in the transcript and being able to gain a sense of the focus groups before coding and identifying recurring themes.

Stage 3: Coding – in this stage, the researcher reads every line of the transcript carefully and applies labels, codes, or paraphrasing that provides a description of what they have read in the transcript.

Stage 4: Developing a working analytical framework – all of the researchers meet to organize the data meaningfully to identify recurring and important themes.

Stage 5: Applying the analytical framework – this involves indexing subsequent transcripts by applying the conceptual framework that was developed in Stage 4. This enables the extraction of data into theoretical themes and subthemes.

Stage 6: Charting data into the framework matrix – involves organizing and summarizing the data in chart form to make the data more manageable. A spreadsheet may be used for the matrix, and the data are charted into the matrix.

Stage 7: Interpreting the data – involves synthesizing and interpreting the data, allowing refinement of the themes and subthemes, which enables the overall development of a conceptual framework. This stage involves the comparison of themes and subthemes and checking against the original transcripts and audio recordings to ensure appropriate context.

Development of the Cultural Analytical Framework

The cultural analytical framework was developed from data acquired during a multicenter and multinational study involving focus groups (n = 23) with nursing students from five higher education institutes (HEIs), including two institutes in England (n = 81 nursing students) and one institution each in the Philippines (n = 53), Slovenia (n = 41), and New Zealand (n = 6). Data were collected between November 2016 and December 2017.

The development and preliminary testing of the cultural analytical framework encompassed a review of the framework...
method of analysis of qualitative research described by Gale et al. (2013) and Spencer, Ritchie, Ormston, O’Connor, and Barnard (2014; Figure 1). The focus groups were then facilitated and audio recorded at two HEIs in England. Focus groups were transcribed and analyzed separately by four researchers using framework analysis (Gale et al., 2013; Parveen, Peltier, & Oyebode, 2017; Robertshaw & Cross, 2017). To ensure transparency and reflexivity, all of the stages (Gale et al., 2013; Spencer et al., 2014) were carefully followed by the researchers.

**Familiarization, coding, and categorization of data**

The data from the focus groups that were conducted at the two HEIs in England were analyzed independently by four experienced researchers using a process that included familiarization, coding, and categorization (Table 1). The researchers read and reread the transcripts to become familiar with the data, analyzed and reanalyzed the data, and checked and rechecked the data at different stages. The codes were developed independently by the four researchers, who used labels or paraphrases to denote their interpretations of passages in the transcripts. The four researchers then met multiple times to discuss the respective codes, agree on a common set of codes for the data, and categorize the codes into themes (Table 1). Codes with similar meanings or concepts were aggregated into the same category.

The cultural analytical framework was further developed by drawing on, synthesizing, and refining the codes and categories/themes that were established by the four researchers based on the data obtained from the two participating universities (Palmer et al., 2018; Roberts & Goodhand, 2018). This process involved the four researchers working together and having lengthy discussions to resolve disagreements and later to reach agreement regarding the themes that had emerged. Each stage of the framework was discussed exhaustively,

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**TABLE 1. Coding and Categorization**

| Category/Theme               | Code                                                                 |
|------------------------------|----------------------------------------------------------------------|
| Defining dementia            | 1. Biological dementia                                               |
|                              | 2. Social and emotional dementia (impact on patient and family)       |
|                              | 3. Cultural and religious dementia                                    |
|                              | 4. Types of dementia                                                  |
| Experience and education     | 5. Experience                                                         |
|                              | 6. Family                                                             |
|                              | 7. Moving countries                                                    |
|                              | 8. Carer to student                                                   |
|                              | 9. First to third year                                                 |
|                              | 10. Knowledge and awareness                                           |
| Dementia language            | 11. Dementia as other                                                  |
|                              | 12. Aggression                                                        |
|                              | 13. Avoiding discussion                                                |
|                              | 14. Fear                                                              |
|                              | 15. Stigma                                                            |
|                              | 16. Media                                                             |
| Care setting                 | 17. Family/own homes                                                  |
|                              | 18. Care homes                                                        |
|                              | 19. Acute hospitals                                                    |
| Care roles                   | 20. Family                                                            |
|                              | 21. Cultural                                                          |
|                              | 22. Specialized                                                       |
|                              | 23. Nursing                                                           |
| Ethical issues               | 24. Control                                                           |
|                              | 25. Trust/honesty                                                     |
|                              | 26. Capacity                                                          |
|                              | 27. Institutionalization                                               |
|                              | 28. Resource/impact                                                   |
| Cultural perceptions         | 29. Growing up with dementia (in and out of the United Kingdom)       |
|                              | 30. Different generations                                              |
|                              | 31. Labeling                                                          |
|                              | 32. Different cultural approaches to care                             |

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**Figure 1.** Process of developing the cultural analytical framework and its use in evaluating the dementia care experiences of nursing students.
The seven themes/categories identified in this study included “defining dementia,” “experience and education,” “dementia language,” “care setting,” “care roles,” “ethical issues,” and “cultural perceptions.” These themes were further associated with 29 subthemes (Table 2) that had emerged from the final data analysis. After further refinement, “cultural and religious dementia” was upgraded from a subtheme of “defining dementia” to the theme “religion and spirituality,” and the “experience and education” theme was renamed and amalgamated with the original theme of “cultural perceptions,” which was renamed “dementia over generations.” Furthermore, “care settings” and “care roles” were amalgamated, and a range of subthemes, including “experience,” “family,” “moving countries,” and “carer to student” were also moved to other themes (Table 2). The decisions for each stage of the analytical process were achieved through the cooperative efforts, rigorous discussions, disagreements, and agreements among the researchers, with resolutions reached through consensus.

The abovementioned process of refinement resulted in a final set of six themes (defining dementia, dementia language, care settings and roles, ethical issues, dementia over generations, and religion and spirituality) and 22 subthemes (Table 3). Further refinement of the themes to ensure a clear focus on cultural beliefs regarding dementia occurred, resulting in two major themes, “familial piety” and “dementia discourse,” with the former encompassing five subthemes (familial experience, growing up, intergenerational, cultural view of aging, and family/own home) and the latter encompassing only three subthemes (aggression, stigma, and patience; Table 3). Selected quotes from nursing student participants at the participating HEIs are presented in the findings article (Brooke et al., 2019).

### Discussion

This cultural analytical framework was established based on the principles of framework analysis (Gale et al., 2013) and developed using the cultural beliefs regarding dementia of student nurses from four different countries. Qualitative data must be analyzed using a set of principles (Smith & Firth, 2011). The principles underlying the analysis conducted in this article include transcribing the focus group interviews, gaining detailed insights into the phenomena under study using data review, coding the data, and linking the codes or units of data to form broad categories or themes that may guide the theory development process (Dixon-Woods, 2011; Smith & Firth, 2011).

This study applied the seven stages of framework analysis (Gale et al., 2013) to develop a cultural analytical framework that may be used to analyze the cultural beliefs of student nurses regarding dementia.

The processes used in the framework approach to analyze data involve numerous stages that enable researchers to move across the data in different directions until they develop an understanding of the essence of the data and the emerging themes (Smith & Firth, 2011). The constant refinement of themes in this study presented in Tables 1–3 led to the development of a conceptual framework.
Limitations to the framework analysis approach have been discussed in the literature (Akinlua et al., 2017; Robertshaw & Cross, 2017; Ward et al., 2013). Ward et al. (2013) used a worked example and highlighted that framework analysis may be excessively time consuming. A review of other studies noted that, although Parveen et al. (2017) had used framework analysis to evaluate the perceptions of dementia and use of services among minority ethnic communities in the United Kingdom, participants were recruited at community events rather than purposively sampled, and no ethnic Whites were included in the sample. Moreover, the analysis relied on notes made by the research facilitator rather than on recordings and transcripts.

Similarly, Robertshaw, and Cross (2017) applied framework analysis to study the experiences of integrated dementia care from the perspectives of patient family members and care providers. Although the study relied on an open online course, which made the course accessible to a wide range of participants, including hard-to-reach groups, the study did not hold follow-up activities or probe further to clarify/resolve outstanding questions. Furthermore, the study lacked the rigor and depth of more traditional qualitative research studies and did not provide participants the opportunity to review the responses of other participants.

Data management often involves immersion in the data through reading and rereading, identifying the initial themes/categories, developing a coding matrix, and assigning data to the themes and categories in the coding matrix (Smith & Firth, 2011). According to Spencer, Ritchie, and O’Connor (2003), the data management stage involves generating a set of themes and concepts from which data are labeled, sorted, and synthesized.

Moreover, the process of qualitative data analysis involves obtaining descriptive accounts that summarize and synthesize the range of coded data by refining initial themes and categories, identifying the associations among the themes until the “whole picture” emerges, and developing more abstract concepts (Smith & Firth, 2011). This process typically involves

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**TABLE 2. Development and Change of Themes and Subthemes**

| Theme                        | Subtheme                                      |
|------------------------------|------------------------------------------------|
| Defining dementia            | - Biological dementia                         |
|                              | - Social and emotional dementia               |
|                              | - Cultural and religious dementia → moved to become a new theme “religion and spirituality” |
|                              | - Types of dementia                           |
| Experience and education → renamed and amalgamated with “cultural perceptions” | - Experience of dementia → moved to theme “defining dementia” |
|                              | - Family → moved to “care roles” or “care settings” (depending on each quote) |
|                              | - Moving countries → moved to new theme “dementia over generations” |
|                              | - Career to student → moved to “nursing” in “care roles” |
| Dementia language            | - Dementia as other                           |
|                              | - Aggression                                  |
|                              | - Avoiding discussion                         |
|                              | - Fear                                        |
|                              | - Stigma                                      |
|                              | - Media                                       |
| Care settings → amalgamated with “care roles” | - Family/own homes                           |
| Care roles → amalgamated with “care settings” | - Care homes                                  |
|                              | - Acute hospital                              |
| Ethical issues               | - Control                                     |
|                              | - Trust and honesty → changed to “trust and therapeutic lying” |
| Cultural perceptions → renamed “dementia over generations” | - Growing up with                             |
|                              | - Different generations                       |
|                              | - Labeling → moved to dementia as other in “dementia language” |
|                              | - Different cultural approaches to care       |
### TABLE 3.
**Further Development and Refining of Themes and Subthemes**

| Refined Theme | Initial Subtheme | Final Theme | Final Subtheme | Selected Quote |
|---------------|------------------|-------------|----------------|----------------|
| **Defining dementia** | Biological dementia | Familial piety | Familial experience | GFG1, P1 (Black British, Caribbean), p4, 87–89: “So, just being able to deal with people with dementia. I was able to deal with my granddad and that made the difference because I understand what is like living with dementia.” |
| | Social and emotional dementia | | | |
| | Types of dementia | | | |
| | Experience of dementia | | | |
| **Care settings and roles** | Family/own homes | Growing up | | SFG1, P2 (Filipino), p14, 311–315: “So, growing up I see my mother taking care of relatives, so I would never send my parents to a nursing home. For me it is because they have devoted their lives to me to take care of me, so I would also do the same for them. So that is just me, that is what I have seen, what my Mum has done, so I think that relates to my culture.” |
| | Care homes | | | |
| | Acute hospital | | | |
| | Specialized Nursing | | | |
| **Dementia over generations** | Growing up with dementia | Intergenerational | | EFG2, P1 (White British), p17, 386–390: “I think me and my sister have a better understanding, well maybe not a better understanding, but a different attitude towards it maybe, more understanding of it and using less stigmatic words, so we would never say demented or senile, we wouldn’t say he was mad, but I don’t really know why that is....” |
| | Different generations | | | |
| | Different cultural approaches | | | |
| | Moving countries | | | |
| **Dementia language** | Dementia as other | Dementia discourse | Aggression | GFG2, P2 (White British), p5, 141–144: “I didn’t really realize that only, that patients with dementia could get aggressive, but it didn’t really come into my head, I didn’t think that they would and that was on my experience when I was on hospital placement and saw a dementia patient come in aggressive and I was like gosh. I didn’t realize that it could go to that level.” |
| | Aggression | | | |
| | Avoiding discussion | | | |
| | Fear | | | |
| | Stigma | | | |
| | Media | | | |
| **Ethical issues** | Control | Stigma | | GFG2, P5 (White British), p2, 39: “One of the beliefs that I have is, is that dementia can be a label.” |
| | Trust and therapeutic lying | | | |
| | Capacity | | | |
| **Religion and spirituality** | No subthemes identified | Dropped from analysis, as a weak theme from only a couple of focus groups from England | | |

**Note.** G = Greenwich; S = Silliman; E = Essex; FG = focus group number; P = participant number; p = page number, lines.
using synthesized data to prepare descriptive accounts, identifying key dimensions, and mapping the range and diversity of each phenomenon (Spencer et al., 2003).

The explanatory accounts relate to developing associations/patterns within the concepts and themes and then reflecting on the original data and analytical stages to ensure that participant accounts are correctly presented (Smith & Firth, 2011). This process aims to reduce the risk of misinterpretation (Smith & Firth, 2011). Although these processes are useful, the authors of this article have shown further fidelity with respect to the approach that was used to develop the framework, the application of this framework in qualitative data analysis, and the clarity of the methods used. The stepwise approach used in this study was transparent, making it easy for researchers from institutions in different geographical areas to interpret and follow. In addition, the framework method of analysis is not tied to any theoretical approach, which helps ensure flexibility.

Implications for Practice
One of the goals of using framework analysis in the study of dementia is enabling the evaluation of the experiences of student nurses from different cultural backgrounds to address any significant gaps in knowledge and understanding. In addition, areas identified as inadequate may be referenced by nursing educators and added to or reinforced in the nursing curriculum. Finally, this approach facilitates the continued professional development of nursing students in terms of promoting culturally sensitive, person-centered dementia care.

Conclusions
In this study, a cultural analytical framework was developed and applied to elicit and clarify the cultural values and beliefs of student nurses regarding dementia. Despite the many qualitative approaches available to study this topic, researchers who clearly and transparently use framework analysis through the steps of transcription, familiarization, coding, developing a working analytical framework, applying the analytical framework, charting data into the framework matrix, and interpreting the data will be able to present their work in a valid and reliable framework matrix. This study applied framework analysis to develop a cultural analytical framework that was used to analyze data obtained from student nurses. However, further work is required to define and refine this framework to consider cultures that were not included in the original study.

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Study conception and design: All authors
Data collection: All authors
Data analysis and interpretation: All authors
Drafting of the article: OO
Critical revision of the article: All authors.

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