

## Editorial

### Quality in the qualitative content analysis studies

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In the healthcare system, the aim of qualitative studies is to deeply evaluate the complex phenomena that nurses and other health staff might encounter. One of the main characteristics of qualitative studies is determination and in-depth recognition of the studied phenomenon, participants' experiences and enriched narration of the achieved results (1). On the other hand, due to lack of scientific accuracy, lack of transparency in the analysis methods, results' dependence on researchers' personal point of view and also non-generalizability, qualitative studies have always been criticized. Therefore, due to an extended use of qualitative research in the field of nursing, one of the duties of nursing researchers is to improve the quality of qualitative studies (2).

A qualitative study is not a singular research approach; instead, different approaches of epistemology have created a wide range in the approaches of qualitative studies, such as grounded theory, phenomenology, ethnography, action research and content analysis (3). Burns and Grove believed that content analysis is one of the qualitative research methods which would be conducted for categorizing the words of a text; these categories would be established because of the importance of the words in a formation of theories (4). Also, Polit and Beck stated

that content analysis is the process of organizing and integrating the texts and qualitative data in a way that it would lead to the formation of themes and concepts (5). Besides this methodological view at content analysis and categorizing it as a qualitative research method, another viewpoint considers content analysis as the process of perception, interpretation, and conceptualization of the internal meanings of qualitative data and mostly considers it an analysis method rather than a research method (6).

Currently using qualitative research methods is increasing but the validity and quality of these studies have not been evaluated systematically and even have been neglected by the authors (7). So content analysis studies have always been explored by critics of qualitative studies. However the number of qualitative studies in the field of nursing is increasing and consequently, regarding their validity and quality is necessary (8, 9). So it is important that the authors would consider the validity of content analysis studies at three steps of preparation, organization and report the results and it is essential for them to regard the key points of these three steps to achieve a high content analysis study (7).

At the preparation step, the most important challenges for validity are at three phases of

data gathering, sampling and selecting the appropriate units for data analysis. To increase the validity of the study at the data gathering phase, the information should be in line with the research questions (10). Another notable matter that must be considered by the researchers at the preparation step is sampling method and usually, the purposeful sampling method is used. In this method, the researcher must be informed about who has the best-needed information (11). To improve the quality of this phase, researchers should explain and describe a summary of their sampling method which includes the method of choosing the participants and the number of participants (12). Elo et al have mentioned that in qualitative content analysis studies, the sampling method is rarely explained (7) and it might damage their validity.

Another important matter that must be regarded by the qualitative researchers is selecting the analysis units. Analysis unit could be a letter, a word, a part of a sentence or a few words. The most appropriate analysis unit is one that is large enough to cover the entire content and is small enough not to be extended outside the subject of thematic analysis. Providing sufficient transparent explanation about the manner of selecting the analysis units would improve the quality of content analysis studies (7).

At the organization step, the researcher should explain the manner of formation of the concepts and categories so that the validity of the study could be evaluated. On the other hand, explanation and description of the concepts and their formation are facing challenges. One of these challenges is that some concepts could not be classified into any specific categories and some of the categories overlap each other (11). At this point, it is recommended that the content would be checked by two or more researchers (7). Holdford has stated that the result reporting step must be conducted

usefully and scientifically; while the most important part of qualitative content analysis studies, which is results reporting, has been neglected (13). Paying attention to the process of analysis and self-awareness would help correct reporting of the results at this step. Using images and table would also lead to clearer result presentation and improved quality of the study (7).

Considering the mentioned issues, content analysis authors must have content analysis and self-criticism skills and should constantly have critical thinking and reconsideration during the analysis process of all of their analyses (14). Considering that, many researchers believe that content analysis method is a simple method, they would use this method widely and ignore its quality provision criteria. This could affect the validity of these studies (7). Based on the mentioned issues and to achieve quality in content analysis studies, regarding the evaluation criteria for this approach at all of the steps of the study is necessary. Content analysis authors must comprehensively explain and describe the steps of analysis and consider the limitations of their own studies and by enriching their information and considering the philosophical presupposition of content analysis, improve the quality of their study.

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