Using the Great Cookie Experiment to Teach Qualitative and Quantitative Research Concepts

All nursing baccalaureate nursing programs have a research course that is an essential part of the curriculum. Research knowledge and its application in the classroom, in clinical settings, and in the community is vital for today’s practicing nurses, given the importance of evidence-based practice and its impact on all health care decisions (American Association of Colleges of Nursing, 2008). Yet, students often find that the content is too abstract or have questioned its relevance to nursing, especially at the undergraduate level. Therefore, it is imperative that educators make the course interesting for the purpose of effective learning. Nursing research concepts are abstract and require innovative techniques by educators to make pedagogy educative and engaging. One such strategy used to explain concepts related to research has been the great cookie experiment (Morrison-Breedy, & Côté-Arsenault, 2000; Thiel, 1987; Walden, Cephus, Gordon, & Hagan, 2015). The cookie activity, used to teach concepts related to nursing research, was first introduced by Thiel (1987) and consequently modified by several authors.

This experiment was used to explain qualitative and quantitative research concepts. Students found the activity to be engaging and effective for teaching nursing research contents.

Method

The goal or outcome is to explain research concepts using the Cookie Experiment. The activity is made up of students who are in the fifth semester of their undergraduate nursing program (N = 35) and enrolled in a research course. Students participated in a classroom activity that involved tasting two types of cookies (oatmeal and chocolate chip) and answered three question sets (qualitative and quantitative questions based on concepts related to nursing research and based on the activity). Students were asked to describe their feelings and experiences after eating both cookies. Feelings about the cookie were measured on a continuum of excellent to very bad, and experiences were rated regarding texture, moisture, flavor, and appearance on a Likert scale ranging from 1 (very bad) to 5 (excellent). Students also responded to questions related to consent, research questions, variables, type of design, and data collection techniques of the study. Consent to participate in the study was obtained from students before the activity.

Results

The data were scored on a visual analogue scale (Polit & Beck, 2010), with a range of 1 to 10. No posttest was performed on content retention because the aim was to explain research concepts; thus, only the activity’s effectiveness was measured, with an average rating of 7.42 on 10-point Likert scale (10 = highly effective). Some student responses included:

- Got to see how all concepts relate together. Also got to eat cookies, which is always a plus!
- The activity provided me with examples on how concepts such as blinding, research questions, and research designs are used. This exercise helpful in understanding research concepts.

Conclusion

Students have reported that nursing research can be boring and question the use of research in their practice. The implications of studies such as these will help identify knowledge gaps and attitudes toward research for undergraduate nursing students and help them understand abstract nursing research concepts using fun, innovative pedagogical approaches. Students found the activity to be engaging and effective for teaching concepts related to nursing research.

References


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