

The Use of Chocolate Chip Cookies to Introduce Nursing Research Concepts

By

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Nursing research is an essential component of baccalaureate nursing education.

According to the *Essentials of Baccalaureate Education for Professional Nursing Practice*, nursing practice must be grounded in the translation of current evidence into practice (American Association of Colleges of Nursing [AACN], 2008). AACN recommends that baccalaureate education should prepare the student for a basic understanding of the elements of research for the application to nursing practice.

Nursing research involves a combination of applying critical thinking to the evaluation of professional literature, and understanding the process of conducting and applying scientific knowledge for evidence-based nursing practice. Nursing faculty are challenged to provide baccalaureate nursing students with a basic understanding of the important concepts, as well as fostering an appreciation for nursing research that will ultimately be integrated into their future practice. The educational strategy using chocolate chip cookies was implemented to engage the students to stimulate their interest in nursing research.

Background

Involvement in research is vital to the expansion of nursing science. Research is a key component of quality patient care and the value of nursing research has been recognized by many associated with nursing education and practice (Roll et al., 2013; Walden, Cephus, Gordon & Hagan, 2015). Research courses are fully integrated into nursing curricula to assist the student in the process of utilizing up to date knowledge and evidence to enhance the quality of nursing care delivered (Brooke, Hvalic-Touzery & Skela-Savic, 2015). Within a demanding curriculum

many nursing students struggle with appreciating the importance of conducting research. Some students described nursing research courses as compulsory exercises that consume their time with futile writing assignments, while others expressed a need for understandable and meaningful learning (Beebe, L., Smith, K., Davis, J., Roman, M., & Burke, R., 2011; Kohtz, 2011). An effective method to actively engage students to explore each stage of the research process should be the focus of a nursing research course. Peckover and Winterburn (2003) stated teaching and learning strategies should ensure that research education is enjoyable and effective (p. 104).

One strategy identified in the literature was Thiel's (1987) *Great American Cookie Experiment*. Cookies were utilized as an approach by the nurse educator to illustrate the elements of the research process. This activity enticed student participation in research and enhanced their understanding of research concepts (Thiel, 1987). The *Great American Cookie Experiment* was also utilized to engage staff nurses in developing knowledge, skills and confidence in their research abilities (Hudson-Barr, Weeks, & Watters, 2002; Walden et al., 2015). Nurses in practice found the *Great American Cookie Experiment* enhanced their knowledge of the research process and promoted future participation in research experiences.

Guided by Thiel's (1987) *Great American Cookie Experiment*, nursing faculty at one university in the northeast developed an educational strategy using chocolate chip cookies. Baccalaureate students were enrolled in a required nursing research course as part of the sixteen month accelerated program of study. This experiential learning activity was implemented as one strategy to introduce accelerated baccalaureate nursing students to the key concepts and process of nursing research. Key concepts included qualitative and quantitative research methods, sampling techniques, data collection and measurement, legal and ethical considerations of

engaging in nursing research, as well as other concepts related to the research process. The cookie activity was the teaching strategy utilized to introduce students to research in a manner that involved active participation.

Chocolate Chip Cookie Activity

A cookie activity, initially introduced by Thiel (1987) and later modified by Morrison-Breedy and Côté-Arsenault (2000), provided the foundation for this teaching strategy to introduce students to nursing research. Each student was given two different, homemade chocolate chip cookies. Cookies were distributed individually with demarcation on a napkin as cookie A and cookie B. One batch of cookies (cookie A) was prepared following a well-known recipe, and the other (cookie B) was prepared using the same ingredients with the exception that eggs were replaced with an egg substitute. The same individual who was not involved in the research course baked the cookies following an identical procedure each time.

After sampling the cookies, each student worked with a partner and completed a worksheet that included qualitative and quantitative research questions (Appendix A). This exercise provided the students an opportunity to practice with each method of questions. Students rated the texture, moisture, flavor, and appearance of cookies A and B using a Likert rating scale. Students also asked each other a series of qualitative research questions used to describe the experience of eating the cookie, their feelings about food in general, and chocolate chip cookies in particular.

Other concepts such as sampling, consent, data collection, and analysis were briefly presented related to the cookie activity. This entire process required approximately 30 minutes of class time. The purpose of this experiential activity was to demonstrate to students that research can be easily understood and conducted in a short period of time. As the essential

concepts of nursing research were presented throughout the semester, faculty enhanced an understanding of the concepts by referring students back to the earlier conducted cookie activity.

Following the experiential activity the students completed a survey assessing their perceptions of their preparedness for a research course, their understanding of nursing research, and the relevance of research to nursing practice. The survey was distributed during class time once the students finished sampling the cookies, and upon completion of the semester.

Conclusion

The nursing faculty were interested in any new insights gained by nursing students' participation in this activity. It was anticipated that participation in the cookie activity would increase students' knowledge of research concepts and foster positive attitudes toward evidence-based practice. Prior research suggested an increase in knowledge and positive attitudes were predictors of future utilization of research for evidence-based practice (Brooke et al., 2015). The benefit from participation in of this experiential learning activity was noted; however, the faculty also noted a lack of appreciation regarding the value of research to nursing practice. This observation may be the result of the novice status of these students. Students' limited clinical experience may be a factor that will be amenable following additional patient care experience. It is the hope of these faculty members that as students spend greater amounts of time in the direct care of patients, the importance of evidence based practice becomes more meaningful. Further research is suggested to assess students' perceptions of the value of research to nursing practice following additional clinical experience. Ongoing study of students' perceptions of the value of research to nursing practice is essential. It is the responsibility of all nursing faculty, not solely those that teach nursing research, to foster an appreciation of the value of research to nursing practice.

The cookie activity was evaluated by accelerated baccalaureate nursing students with anecdotal reports and written course evaluations. Students did comment on the value of this activity in allaying their fears of conducting nursing research. Aspects of the 29 year old *Great American Cookie Experiment* (Thiel, 1987) remain useful as a teaching strategy for novice student nurse researchers and should be considered as a tool that should continue to be utilized by nursing faculty faced with the challenges of fostering an appreciation of nursing research amongst nursing students.

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Appendix A: Cookie Activity Worksheet

Quantitative Research Questions

COOKIE A

A. How would you rate the **texture** of the cookie?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

B. How would you rate the cookie in regards to **moistness**?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

C. How would you rate the **flavor** of the cookie?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

D. How would you rate the cookie in regards to **appearance**?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

COOKIE B

A. How would you rate the **texture** of the cookie?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

B. How would you rate the cookie in regards to **moistness**?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

C. How would you rate the **flavor** of the cookie?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

D. How would you rate the cookie in regards to **appearance**?

1. Very bad 2. Bad 3. Not bad 4. Pretty good 5. Excellent

Qualitative Research

Choose the cookie that appeals the most to you A_____ B_____

Why did you choose that one?

Pick it up and feel its qualities, smell it etc. Describe your experience of the cookie.

Take a bite or two. Describe the experience of eating the cookie

How does this experience feel to you?

How did you feel about food in general and chocolate chip cookies like this one in particular?

