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## Designing experiments: a collaborative activity to learn research concepts

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Before recognizing how research contributes to evidence-based practice, undergraduate nursing students first need to develop an understanding of basic research components and related abstract concepts. This quasi-experimental study, undergirded by Vygotsky's sociocultural theory, examined the relationship between participation in a collaborative learning activity and students' acquisition of knowledge. A convenience sample of 34 junior-level BSN students received instructions to design a series of quantitative experiments in which cookies and cake icing could be used as variables. Working in small groups, students developed and described elements of quantitative design, including types of study, research questions, hypotheses, dependent and independent variables, and samples. Students completed a 7-item pre- and post-activity multiple choice quiz. Paired t-test analysis revealed a significant relationship between the learning activity and knowledge about quantitative research elements and concepts. Future students, through collaborative learning activities such as, can develop a knowledge base that provides a solid foundation for analysis of nursing research..

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