# Special Focus on Statistics Education

This issue includes articles focused on statistics education in nursing programs. Collectively, they offer both conceptual and practical ideas and recommendations for improving the scope and content of statistics in nursing curricula. They also demonstrate the value of new teaching–learning approaches to enhance student appreciation of and engagement in learning statistics content and methods essential for evidence-based nursing practice.

Statistics coursework is a standard requirement in baccalaureate and higher degree programs, providing an essential foundation for achieving program learning outcomes related to evidence-based practice. The ability to understand quantitative, qualitative, and mixed methods research processes and to apply research findings to clinical practice are fundamental underpinnings of nursing scholarship, and these skills require basic or advanced knowledge of statistics depending on degree level. The American Association of Colleges of Nursing's (AACN) *Essentials* series delineates specific knowledge, application, and evaluation of research, including the understanding and employment of various statistical concepts and methods for baccalaureate (AACN, 2008), master's (AACN, 2011), master's of advanced nursing practice (AACN, 1996), and Doctor of Nursing Practice (AACN, 2006) programs. At the PhD level, advanced study of research methods, measurement, and higher order statistics, as well as the ability to apply this knowledge to the design and conduct of original and independent research, is expected.

As these articles demonstrate, it is important that statistics educators and nurse educators work collaboratively to ensure

that the appropriate level and depth of statistics knowledge and application are integrated in nursing curricula. Together, they are able to design optimal learning experiences that build student competency (a) in using statistics to evaluate the validity and reliability of research as it applies to clinical nursing practice and nursing education and (b) at more advanced levels, employing the appropriate statistical methods and statistical modeling in the design, conduct, and analysis of nursing research.

Statistics educators add value to nursing programs with their depth and breadth of statistics knowledge and experience, and they help to ensure that statistics courses and learning experiences in nursing curricula remain current with advances in the field. In turn, nurse educators can help enliven statistics coursework by working with statistics educators to incorporate examples of actual clinical practice or nursing education problems that lend themselves to study using quantitative methods. Further, nurse educators have a responsibility to familiarize themselves with the focus, scope, and depth of required statistics coursework so they are able to help students integrate statistics knowledge with the theory and practice of nursing practice and education.

The appointment of one or more statistics educators to the nursing faculty is increasingly common in larger schools of nursing, especially those with doctoral programs. This can be an especially effective model for ensuring teamwork and collaboration between statistics educators and nurse educators. When program size or funding cannot support doing so, nurse educators should reach out to faculty in the campus statistics department and work with them to ensure that

required statistics coursework provides the foundation students need in order to meet the nursing program's learning outcomes. Inviting a statistics educator to coteach nursing research courses is another approach for strengthening the integration of statistics knowledge and application into the nursing curriculum at any level.

As experienced statistics educators who work closely with nursing faculty and students, the authors of the articles in this issue share their unique perspectives and experiences on the scope, content, and delivery of statistics education in contemporary nursing curricula. They address both challenges and opportunities and offer recommendations for improving statistics education and, ultimately, student understanding, application, and appreciation of statistics as a foundation for evidence-based nursing practice, nursing education, and nursing scholarship.

## References

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