Promoting Creativity Using a History and Physical Examination Project in an Undergraduate Course

Nurse educators face new challenges daily, especially with the emphasis on preparing students to critically think and provide holistic nursing care. Encouraging student creativity and choices in projects has been one mechanism that has been successful in promoting autonomy, critical thinking, and holistic nursing care, as demonstrated by Pavill (2011) . However, educators may struggle to find activities that allow students to be creative, while still demonstrating knowledge and an ability to integrate key nursing concepts—especially in nonclinical courses such as pathophysiology, to which some students may have some level of aversion. As part of a junior-level pathophysiology course, following a health assessment and nursing fundamentals course (during the third of six semesters in the major) in an undergraduate Bachelor of Science in Nursing program, students develop a custom history and physical examination (H&P) for a patient.

At the beginning of the semester, students are asked to select a specific pathology that they would like to study in depth through the development of an H&P form for a patient with their selected pathology. Specifically, the H&P represents a patient who is newly diagnosed with the pathology. If students select a chronic disease, they are asked to create the H&P for a patient experiencing an exacerbation or major complication of their selected pathology. Students search the extant literature for high-quality, applicable evidence to incorporate into their project. As they identify evidence, such as peer-reviewed journal articles, they are encouraged to discuss the evidence with faculty before and after class or during office hours to explore the strengths and weaknesses of the findings, and faculty attempt to assist students in recognizing the relevance, authority, and utility of the various pieces of evidence that they have identified, a strategy suggested by Christie, Hamill, and Power (2012). These discussions often last 5 to 10 minutes and are spread out throughout the semester, given that students are informed of this project at the beginning of the 16-week semester and have approximately 14 weeks to complete the project. Throughout the process, students are encouraged to be as creative as possible and to use their imagination, while supporting their creativity with strong evidence.

The H&P project is divided into two major sections, and students are given a template as a guide while they develop their project. The template is set up in landscape orientation with two columns. In the left column, key components of an H&P form are listed, including the history of present illness, medical history, surgical history, social history, family history, review of systems, physical examination, and diagnostic and laboratory data. In the right column, next to each H&P section, students are asked to rationalize, citing high-quality evidence and the various findings that they include within the H&P. For example, if the patient is said to have a history of cigarette smoking, the student is asked to describe how this risk factor affects the pathology overall. When abnormalities are noted in the review of systems, physical assessment, and diagnostic and laboratory data portion of the H&P, students must describe the pathophysiologic mechanism that is occurring to cause the abnormality and explain how the findings originate in the pathology. In the laboratory section, students are required to include at least a complete blood count and comprehensive metabolic panel, although they are instructed to include all laboratory and diagnostic data relevant to their chosen pathology.

Students are also encouraged to build into their H&P scenarios a few different comorbidities that commonly co-occur with their selected pathology, given that many patients in the real-life clinical setting tend to be complex. Essentially, creation of a comprehensive, holistic patient case is the goal. At the end of the template, students are asked to describe the typical prognosis for patients diagnosed with the pathology and are also asked to describe common complications and associated signs and symptoms. This project is then graded by the course faculty and represents approximately 10% of the course grade.

This project has been well received by students for a few reasons. Anecdotally, students have suggested that the project allows them to be creative and to use their imaginations to devise a clinical situation that would be typical of a particular pathology. In addition, students have a choice—they are able to specifically focus on a pathology that interests them, while still demonstrating an ability to retrieve, use, and synthesize evidence in their projects. The project has also helped students to recall the important elements of an H&P form, along with key health assessment and fundamental topics, as they complete their health assessment and nursing fundamentals courses the semester prior to the pathophysiology course. Their close interaction with an H&P form also allows them to recognize the utility and purpose of various sections of the document. Further, this activity helps each student understand that their chosen pathology will affect every person differently and goes beyond the content taught in the classroom because students develop a self-created, comprehensive picture of a patient in their minds, thinking about the effect of the diagnosis and nursing care on the individual.

This project assists students in meeting expected student outcomes in several courses, and we have been careful to align the assignment components with both course- and program-expected student outcomes, consistent with suggestions by Scheckel (2016). For example, by completing this project and supplying evidence-based rationales, students are able to meet outcomes such as "integrate an understanding of the effect pathophysiologic processes have on assessment and diagnostic data as well as physical well-being" and demonstrate their ability to "use appropriate scholarly resources and references." In addition, both formative and summative elements of evaluation are included in this assignment. Formative evaluation assists

us in identifying particularly confusing elements of the assignment and selected disease process while also allowing us to assess students' overall ability to apply their knowledge throughout the development of their H&P (Scheckel, 2016). Summative evaluation helps us identify whether students have achieved expected student outcomes in the course and program by the end of the semester (Scheckel, 2016). As students create the H&P and discuss elements with the faculty, they are testing their own knowledge and reflecting on what they know from a formative perspective, and as faculty evaluate these projects at the end of the semester, the student's knowledge is assessed in a more summative fashion. This project could be expanded to other courses outside of pathophysiology and could be easily adjusted for the level of student. For future semesters, we have considered having students succinctly present their cases at the end of the semester to the entire class.

References

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