

# EXAMING NURSING STUDENTS' UNDERSTANDING OF THE CARDIOVASCULAR SYSTEM IN A BSN PROGRAM

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## ABSTRACT

This study investigated the alignment of important cardiovascular system (CVS) concepts identified by expert nurses with nursing student's knowledge. Specifically, it focused on the prevalence of nursing students' alternative conceptions for these important concepts as a potential reason for a theory-practice gap in nursing (Corlett, 2000; Jordan, 1994). This is the first study to target nursing student alternative conceptions exclusively whereas other studies focused on diverse groups of undergraduates' CVS knowledge (Michael et al., 2002). The study was divided into two phases and used a case study approach with each phase of the study representing a single case. The first phase of the study sought to understand what CVS concepts expert nurses deemed relevant to their daily practice and how these experts used these concepts. The second phase identified nursing student alternative conceptions through the use of open-ended scenarios based on the results of phase I.

For the first phase of the study involved four CVS expert nurses practicing in emergency rooms and cardiac intensive care units at two local hospitals. Interviews were used to elicit important CVS concepts. The expert nurses identified five broad concepts as important to their practice. These concepts were a) cardiovascular anatomical concepts; b) cardiovascular physiological concepts; c) homeostasis and diseases of the CVS; d) the interdependence and interaction of the CVS with other organ systems and e) the intersection of the CVS and technology in patient diagnosis and treatment. These findings reinforce concepts already being taught to nursing students but also suggest that instruction should focus more on how the CVS interacts with other organ systems and how technology and the CVS interact.

The presence of alternative conceptions in the nursing students was examined through the use of open-ended questions. A total of 17 students fully completed the scenario questions. Results indicate that this group of nursing students does hold some CVS alternative conceptions. Overall, the alternative conceptions can be grouped into four categories: a) CVS anatomy, b) blood flow and pressure, c) anthropomorphic views and d) miscellaneous alternative conceptions. These findings suggest there is indeed a misalignment between expert nurses' and nursing students' knowledge of the CVS with this misalignment potentially contributing to the theory-practice gap.