

# INSTRUCTIONAL STRATEGIES TO INFLUENCE BSN STUDENTS' TEAM MENTAL MODELS OF COMMUNITY HEALTH NURSING

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**Background & Significance:** The complexity of nursing practice in community settings frequently surpasses the cognitive capabilities of single individuals and thus requires a team approach. Therefore, effective baccalaureate nursing (BSN) programs develop students' team problem solving skills through instruction on team dynamics. Team knowledge is an equally important element of team problem solving. Team knowledge includes (1) understanding of domain concepts and the relationships between them: *team mental model* (MM), and (2) the conceptualization of the problem under consideration: *the team situational model* (SM). During problem solving, teams draw on their MM to develop a SM that incorporates specific characteristics of the problem situation and available solution strategies. In non-nursing domains, high quality SMs are maximized by team MMs that are accurate, appropriately shared among members, and structured to support compatible problem assessments. Unfortunately, little research evidence on team knowledge in nursing exists on which to base instructional strategies to improve team knowledge. This deficit is especially problematic for courses in team-reliant specialties such as community health nursing (CHN). Therefore, the **purpose** of the study was to determine if a team oriented CHN course positively influences team MM characteristics and the congruence between MMs and SMs. **Specific aims** were to: (1) describe changes in accuracy, structure, and inter-team member similarity of BSN students' team MMs during a semester course in CHN; and (2) examine the relationship between end-of-semester team MMs and team SMs for a complex community health problem. **Methods:** A one-group pretest-posttest quasi-experimental design was used to accomplish aim 1 with descriptive correlational procedures to achieve aim 2. Volunteers from students enrolled in a senior-level CHN course were randomly assigned to 21 teams of 4-5 students each. Students remained on the same team throughout the semester and worked together on course projects. MMs were measured by having subjects rate degree of relationship between all possible pair-wise combinations of 16 key CHN concepts on a scale of 1 (completely unrelated) to 9 (highly related) at the beginning and at the end of the course. Team members' ratings were averaged and transformed using Pathfinder scaling techniques into network representations of team MM. To test for accuracy, student MMs were compared to an instructor model created using identical techniques. Teams completed a written CHN case study at the end of the course as a measure of team SM. Course instructors used a predetermined coding scheme to evaluate the teams' ability to identify significant elements in the case, to identify CHN problems, and to develop solution strategies. **Findings:** Data analyses are in process. Preliminary findings indicate increased accuracy of team MMs during the semester. Changes in intra-team member similarity were mixed. **Discussion:** Completed results will indicate whether team assignments are an effective modality for influencing team mental model characteristics to improve the quality of team situational models.

