PROBLEM-SOLVING ABILITIES OF CRITICAL CARE NURSES WHO WORK 12-HOUR SHIFTS

ABSTRACT OF

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ABSTRACT

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Critical care departments make the treatment of many life-threatening conditions possible. As critical care nurses monitor patients' conditions and collaborate with other health care professionals, they are an integral component of the critical care department. To help ensure safe and appropriate care, it is imperative that nurses are able to practice effectively throughout work shifts. Evolving changes in healthcare have increased stress on nurses. Increased stress might hinder job performance, thereby limiting the number of consecutive hours nurses can work effectively.

Problem-solving abilities drive nursing actions. The purpose of this study was to the assess problem-solving abilities in critical care nurses working 12-hour shifts. It was proposed that if abilities decreased with shift length, the need to limit the number of consecutive work hours might be found. Previous research found that problem-solving abilities did not decrease with hours worked. This study hypothesized that there would not be a significant difference in problem-solving abilities, as measured by total mean scores obtained on two instruments. The Three Minute Reasoning Test Based on Grammatical Transformation (Baddeley, 1968) was administered to assess

syntactic ability; the Vital Signs Form instrument, devised for this study, was administered to assess ability to identify abnormal vital sign values. These instruments were administered over a 2-week period to a sample of 30 critical care nurses working 12-hour shifts. Subjects were tested during the first, eighth, and twelfth hours of a work shift. Total mean scores, for all but one comparison between scores, increased significantly on both instruments leading to the rejection of corresponding hypotheses. The hypothesis accepted, which proposed that there would not be a significant difference between the total mean scores on the Baddeley instrument when administered at the eighth and twelfth hours of a work shift, was accepted due to a nonsignificant increase in scores at the twelfth hour. As increased scores could have been caused by practice effects, these increases were not equated with heightened problem-solving ability. However, as scores had not decreased, it was inferred that problem-solving ability had not declined with shift length. Therefore, this study supports past research advocating 12-hour work shifts for nurses practicing in critical care settings.

Data obtained through a demographic questionnaire, administered at the completion of the twelfth hour of testing, were reported. Subgroup scores on the Baddeley instrument were highest for those who held a baccalaureate

degree in nursing, those who worked the 7 PM to 7 AM shift, those who had between 16 and 20 years of total nursing experience, and those who had between 11 and 15 years of critical care experience. Scores were significantly lower for one subject who did not have English as a native tongue. Differences in mean scores on the Vital Signs Form test were insignificant in relation to subgroups.