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Obtaining Patient Information and Anxiety in Novice Nursing Students During the First Clinical Rotation

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Background: While admission to a nursing program is exciting, rigorous education demand can cause stress, depression and anxiety in students, that interfere with learning, affect academic performance, and impair clinical performance (Chernomas & Shapiro, 2013). Particularly, novice nursing students (NSs) feel highly anxious during their first clinical rotation due to limited clinical experiences and knowledge (Bayoumi, Elbasuny, Mofereh, Assiri & Al fesal, 2012; Sun, Long, Tseng, Huang, You & Chiang, 2016). According to Hildegard Peplau's theory of interpersonal relations, any threats to security (i.e. environment, health, interaction), particularly the experiences of actual or potential unmet needs, are major sources of anxiety (Kim, 2003). Attaining patient information during a fast-pace shift report with unfamiliar terminologies in an unfamiliar clinical environment can be a threat to security for novice NSs. Nursing students, however, are required to obtain data on their assigned patients at the beginning of the shift, as pertinent patient information guides to plan the care of the assigned patients. A study showed that students had difficulty retaining information when their anxiety level was elevated (Cheung & Au, 2011). It is not clearly known how proficient novice NSs are in obtaining information on their patients during the shift report when their anxiety levels are high. The purposes of this study were to (1) identify the anxiety levels of novice NSs and (2) to gain the knowledge on the types of patient information and sources of information that NSs utilized during the first clinical rotation. It is hypothesized that at the beginning of the first clinical rotation when the anxiety levels were high, novice NSs would depend more on the computer to obtain patients' data and that they would gradually obtain more information from the shift report as they became less anxious.

Materials and Methods: Forty NSs in their first clinical rotation of a bachelor of science in nursing (BSN) program participated in this study. They have completed four semesters of general education required for BSN program and have just been introduced to basic nursing skills and pathophysiology in the fifth semester of BSN program. The expected learning outcome of the first clinical rotation is for NSs to demonstrate fundamental nursing skills, critical thinking, and clinical reasoning to enhance patients' health outcomes and quality of life, by developing nursing care plans and applying theoretical content in the clinical setting. The novice NSs were divided into four groups. There were ten students with one clinical instructor in each group and four groups were placed on four different units in an urban community hospital. Each group stayed on the same unit throughout the semester. Students were generally assigned to different patients on each clinical day except on the second consecutive clinical day if the same patients were available. The clinical days started at 7am and were composed of two 6-hour clinical days per week for three weeks, then one 8.5-hour clinical day per week for the following five weeks, excluding pre and post conferences. The State-Trait Anxiety Inventory (STAI) has been widely used to assess anxiety levels among various adults and children (O'Roark, Priet, & Brunner, 2014; Julian, 2011). The short form of STAI was used to assess NSs' anxiety levels in the morning of a clinical day. In the short form, state anxiety and trait anxiety are each measured by the 10 best items from the original STAI (Spielberger, 2015). At the end of the day NSs were asked to indicate the types of patient information that they obtained by 9am and from what resources they gathered the patient information. The anxiety levels and the patient information were assessed on the first clinical day, fifth clinical day (midpoint) and the tenth clinical day (excluding onsite orientation day). A Paired T test was used for the comparisons of the mean STAI scores between the first clinical day and the fifth day and between the fifth day and the tenth day.

Results: The anxiety levels of novice NSs dropped significantly and consistently throughout the clinical rotation ($P<0.0001$ for the differences in mean STAI scores both between the first and fifth day and

between the fifth and the tenth day). The most prevalent resource for obtaining patient information used by novice NSs was the facility's computer system throughout the rotation. In addition, there is a slight, progressive increase in the number of NSs who obtained patient information from the previous shift RNs (18% of the students on the first day, 18% at midpoint, 22% on the last day). As the anxiety levels decreased and NSs had more clinical experiences, more patient information was obtained as expected. By the tenth clinical day, more than 90% of NSs obtained demographic information such as diagnoses, isolation status and allergies by 9am but less NSs obtained night-shift vital signs (80% of the students), oxygen saturation (70%) and the pain levels (38%). By the tenth clinical day, the early morning laboratory data of their patients were collected by 90% of NSs by 9am. The previous night's sleep status and intake and output were not consistently obtained by novice NSs.

Conclusions: The study was conducted to identify the types of patient's information and the sources of information during the first clinical rotation when the anxiety levels were high. Novice NSs' anxiety levels decreased over time as they had more clinical experiences. Continuous reduction in anxiety levels may indicate that students were gaining more confidence, becoming familiar with the clinical environments and becoming more comfortable providing patient care as the semester progressed. Regarding resources for obtaining patient information, computer use was consistently the most popular source for all types of patient information throughout the rotation and this indicates the importance of orienting NSs to the facility's computer system at the very beginning of the clinical rotation. Not as many novice NSs as hypothesized obtained patient information from the previous shift RNs even by the end of the first clinical rotation, though there was a slight trend that more NSs obtained information from the previous shift RNs overtime. It is important to gradually encourage novice NSs, as their anxiety levels decrease, to obtain patient information from the shift report, especially information such as pertinent events that occurred during the previous shift. There were additional important findings from the results of this study. The fact that the majority of novice NSs obtained laboratory data by the tenth clinical day indicated that they were quickly learning to use critical thinking to understand their patients' conditions. On the other hand, it is eye opening to discover that more than a half of novice NSs failed to obtain the previous shift's pain levels of their patients. This suggests the importance of instructing NSs that obtaining pain levels as well as other vital signs of their patients is essential as they assess the patients and plan to provide the care for the patients. These findings will assist clinical instructors in guiding novice NSs to obtain essential information on the assigned patients at the beginning of the clinical day. This will enable NSs to develop systematic plans to provide safe and appropriate care for their patients. This may also help reduce novice NSs' anxiety levels leading to positive clinical experiences with greater learning outcome.

Title:

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Keywords:

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Abstract Summary:

BSN students' anxiety levels during the first clinical rotation and the students' ability to obtain previous shift's patients' data were investigated and the resources of the patients' data students used were studied in order to better assist students to provide safe and appropriate care for patients during the first rotation.

Content Outline:

1. Purposes of the study

a. To identify the anxiety levels of novice nursing students (NSs) during their first clinical rotation.

b. To gain the knowledge on the types of patient's information and from what resources NSs obtained it during their first clinical rotation, as pertinent patient information guides NSs to assess and plan the care of the assigned patients.

2. Materials and Methods

a. Subjects: Forty novice NSs in BSN program in their first clinical rotation.

b. Anxiety assessment: NSs took the short form State Trait Anxiety Inventory (STAI) at the beginning of the clinical day.

c. Patient information assessment: At the end of the clinical day, NSs were asked to indicate the types of patient information obtained within the first 2 hours of clinical and the resources of information.

d. Frequency of assessments: the first clinical day, the fifth clinical day (midpoint) and the tenth clinical day (the last day) of the first rotation.

e. Methods of analyses: Paired T test for comparisons of the mean STAI scores between the first day and the fifth day and between the fifth day and the tenth day. Descriptive statistics for the types and the resources of patient information (percentage of NSs who obtained each type of information).

3. Results

a. The anxiety levels of novice NSs dropped significantly and consistently throughout the clinical rotation ($P<0.0001$ for the differences in mean STAI scores both between the first and fifth clinical day and between the fifth and the tenth clinical day)

b. The most popular resource: the facility's computer system throughout the rotation

c. A slight, progressive increase in NSs who obtained the patient information from the previous shift RNs during the first rotation (18% of the students on the first day, 18% at midpoint, 22% on the last day).

d. Types of patient information obtained:

i. Demographic information (by 90% of NSs by the end of rotation)

ii. Early AM laboratory data (by 90% of NSs by the end of rotation)

iii. Previous shift's vital signs (80% of the students), oxygen saturation (70%), pain levels (38%).

iv. The previous night's sleep status and intake and output were not consistently obtained by NSs.

4. Discussions

a. Novice NSs' anxiety level decreased over time as they had more clinical experiences.

b. The computer was consistently the most popular source for all types of patient information and this indicates the importance of orienting NSs to the facility's computer system at the very beginning of the clinical rotation.

c. Not many novice NSs obtained patient information from the previous shift RNs even by the end of the first clinical rotation when the anxiety levels were the lowest.

d. It is important to gradually encourage novice NSs, as their anxiety levels reduce, to obtain patient information from the shift report, especially information such as pertinent events that occurred during the previous shift.

e. It is eye opening to discover that more than a half of the novice NSs failed to obtain the previous shift's pain levels of their patients even at the end of their first rotation. This suggests the importance of instructing NSs that obtaining the previous pain levels as well as other vital signs of their patients is essential as they assess and plan the care for the patients.

f. These findings will assist clinical instructors in guiding novice NSs to obtain essential information of the assigned patients at the beginning of the clinical day, and this will enable NSs to develop systematic plans to provide safe and appropriate care for their patients.

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Author Summary: She received her Ph.D. in nursing from University of California, San Francisco in 2001 and has been teaching both theory and clinical nursing for novice students, as well as nursing research to senior students in BSN program since 2009. Recently she has been studying on various aspects of clinical education for novice nursing students for their better clinical learning outcomes.