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

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# Background

- Novice nursing students (NSs) feel highly anxious during their first clinical rotation due to limited clinical experiences and knowledge
- Obtaining patient information during a fast-paced shift report with unfamiliar terminologies in an unfamiliar clinical environment can be a threat to security for novice NSs
- 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.

# Purpose of the Study

- To identify the anxiety levels of novice NSs
- To gain the knowledge on the types of patient information and sources of information that NSs utilize during the first clinical rotation.

# Sample

- 40 NSs in their first clinical semester of a BSN program
- There were four groups and each comprised of ten students and one clinical instructor, assigned to four different units at 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.
- Each student has completed four semesters of general education required for BSN program and have been introduced to basic nursing skills and pathophysiology.

# Methods

- The study was approved by the Protection of Human Rights in Research Committee (PHRRC) within the university.
- The State-Trait Anxiety Inventory (STAI) was purchased and used to assess anxiety levels of novice students.
- The STAI scores range from 10 (the lowest anxiety level) to 40 (the highest level in the short form).
- STAI was given to students during the pre-clinical conference
- Post-clinical survey was given to students during the post clinical conference.
- Post clinical survey asked students the patient information they obtained by 9am prior to making the first visit to their assigned patients.
- Both STAI and post clinical survey were given on the 1<sup>st</sup>, 5<sup>th</sup> and on 10<sup>th</sup> clinical days.

		Night Shift RN	Your Day RN	EHR	Patient and/or family	Clinical instructor	Descriptions: No need to fill out where grayed
<b>Pt's name</b>	Yes No						
<b>Admission date</b>	Yes No						
<b>Pt's Age/DOB</b>	Yes No						
<b>Gender</b>	Yes No						
<b>Diagnosis/ Procedure</b>	Yes No						
<b>Isolation/ Precaution</b>	Yes No						
<b>Allergy</b>	Yes No						
<b>6 am vital signs</b>	Yes No						
<b>6 am O2 saturation</b>	Yes No						

		Night Shift RN	Your Day RN	EHR	Patient and/or family	Clinical instructor	Descriptions: No need to fill out where grayed
<b>6am intake and output</b>	Yes No						
<b>6 am pain level</b>	Yes No						If, yes what pain level?
<b>How patient slept during last night</b>	Yes No						
<b>Abnormal events at night</b>	N/A Yes No						if yes, describe in descriptions
<b>Interventions taken for abnormal events</b>	N/A Yes No						If yes, describe what interventions
<b>Lab results</b>	Yes No						
<b>PRN medication given by night shift</b>	Yes No						If yes, describe

# Results

- Among the forty junior year NSs, there were 38 female NSs and two male NSs with the average age of 20.8 years old.



**Table 1. The mean SA scores for the novice NSs on all units on the first, fifth and tenth clinical days.**

<b>Clinical units</b>	<b>1st day of clinical Mean+/-SD</b>	<b>5th day of clinical Mean+/-SD</b>	<b>10th day of clinical Mean+/-SD</b>
<b>Neurology unit (N=10)</b>	<b>24.8 +/-4.02</b>	<b>20.0 +/-4.90</b>	<b>18.6 +/-4.58</b>
<b>Oncology unit (N=10)</b>	<b>27.6 +/-6.07</b>	<b>21.9 +/-5.17</b>	<b>20.1 +/-4.11</b>
<b>Respiratory unit (N=10)</b>	<b>25.8 +/-7.13</b>	<b>18.1 +/-3.21</b>	<b>14.4 +/-3.17</b>
<b>Surgical unit (N=10)</b>	<b>23.0 +/-4.45</b>	<b>19.1 +/-3.55</b>	<b>16.5 +/-3.68</b>
<b>The mean of the total sample (N=40)</b>	<b>25.3 +/-5.68</b>	<b>19.8 +/-4.42</b>	<b>17.4 +/-4.41</b>
<b>P Values</b>		<b>P &lt; 0.0001 (Between 1st day and 5th day)</b>	<b>P &lt; 0.0001 (Between 5th day and 10th day)</b>

Table 2. Comparison of resources students used to obtain patient information (means)

	<b>1st Clinical Day (N=40)</b>	<b>5th Clinical Day (N=40)</b>	<b>10th Clinical Day (N=40)</b>
<b>Night RN</b>	6.8 (15%)	7.0 (15.1%)	6.2 (14.4%)
<b>Day RN</b>	3.8 (9.2%)	2.0 (5%)	1.8 (4.6%)
<b>Computer</b>	9.0 (22.4%)	13.3 (33.3%)	18 (45%)
<b>Patient/Family</b>	1.2 (3%)	2.4 (6%)	4.2 (10.6%)
<b>Other</b>	1.7 (4.2%)	1.1 (2.7%)	1.3 (3.2%)

# Supplemental Data on Night Shift RN

	Night shift RN					
	Diagnosis	O2	VS	Pain	Total	Mean
1st Clinical Day (N=40)	9.08	6.33	7.33	4.5	27.24	27.24/4 = <b>6.81</b>
5th Day (N=40)	10.66	5.33	5.33	6.58	27.9	27.9/4 = <b>6.975</b>
10th Day (N=40)	4.66	6.33	9	5	24.99	24.99/4 = <b>6.2475</b>

**Table 3. Comparison of types of patient information obtained by students (total)**

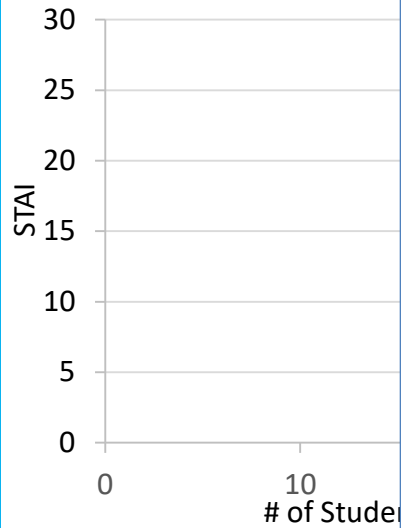
	<b>1st Clinical Day (N=40)</b>	<b>5th Clinical Day (N=40)</b>	<b>10th Clinical Day (N=40)</b>
<b>6 am Intake/Output</b>	9 (22.5%)	11 (27.5%)	17 (42.5%)
<b>6 am Vital Signs</b>	20 (50%)	25 (62.5%)	32 (80%)
<b>6 am O2 Saturation</b>	17 (42.5%)	22 (55%)	28 (70%)
<b>6 am Pain</b>	16 (40%)	16 (40%)	16 (40%)
<b>Early AM Laboratory Results</b>	13 (32.5%)	29 (72.5%)	35 (87.5%)
<b>Sleep Quality</b>	21 (52.5%)	23 (57.5%)	25 (62.5%)

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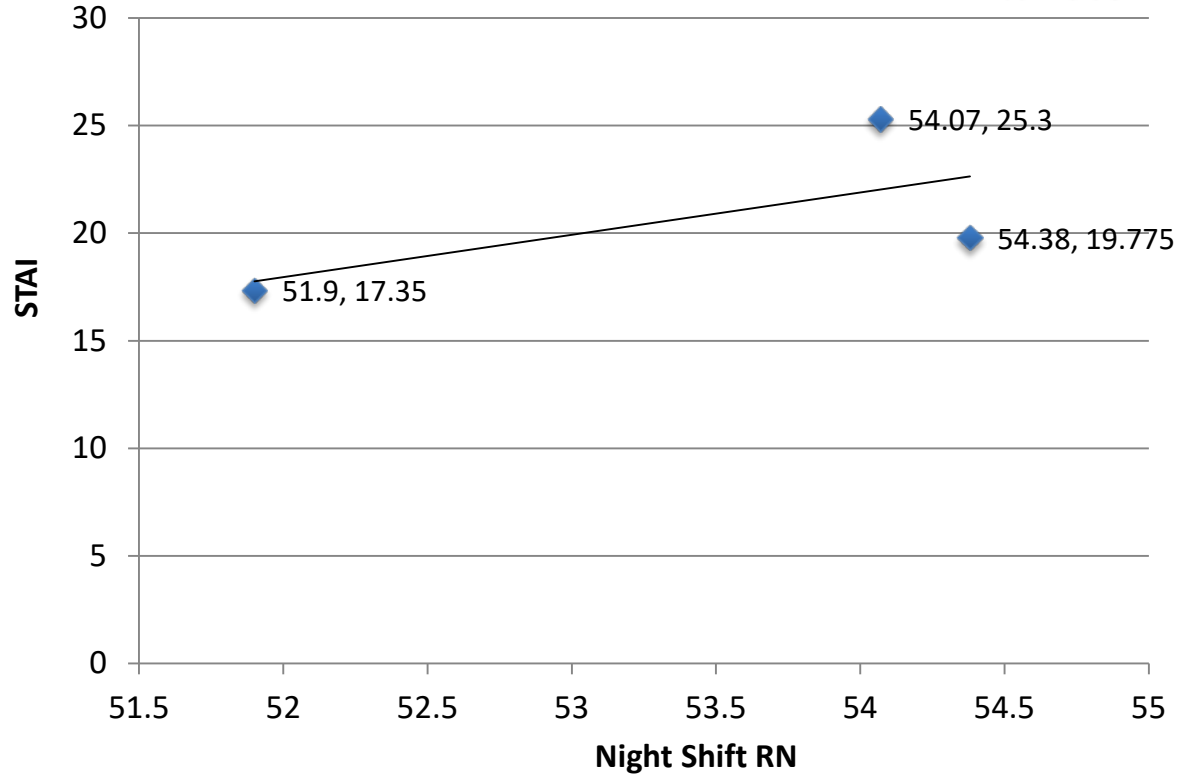
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# Correlations between STAI scores and patient information

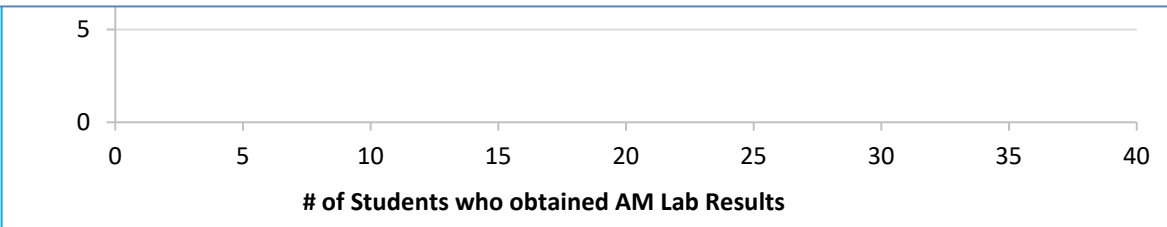
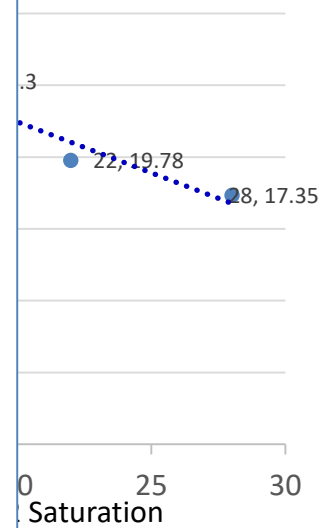
### Vital Signs



### Night Shift vs. STAI



### Saturation



# Conclusions

- Novice NSs' anxiety levels decreased over time as they had more clinical experiences.
- Computer use was consistently the most popular source for all types of patient information throughout the rotation
- The majority of novice NSs obtained laboratory data by the tenth clinical day indicating that they were quickly learning to use critical thinking to understand their patients' conditions
- More than a half of novice NSs failed to obtain the previous shift's pain levels of their patients

# Applications and Recommendations

- It is important to gradually encourage novice NSs to obtain patient information from the shift report, especially information such as pertinent events that occurred during the previous shift.
- It is important to instruct 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.
- As the computer is consistently the most popular resource, it is important to provide students the access to the clinical facility's EHR system as early as possible.



# Applications and Recommendations

- Based on these findings, a student “brain sheet” was created to collect necessary patient information from the previous night. Currently the study is being repeated with the new group of novice students who were provided the brain sheet, in order to assess its efficacy in increasing students’ ability to gather critical patient information.

<b>Demographic Data</b>	<b>Age</b>	
	Diagnosis/Surgical Procedure	
	Admission Date	
	Isolation status	Contact, Respiratory, No isolation
<b>Vital Signs</b>	Most recent Temp	
	Most recent HR	
	Most recent RR	
	Most recent BP	
	Most recent O2 Sat.	
	Most recent Pain Level	
<b>Clinical Data</b>	Most recent I/O	
	Most recent pertinent lab data	
<b>Source of information below (circle): EHR, day RN, night RN, patient</b>		
<b>Events during the previous night</b>	Patient's sleep quality	
	Significant events during the night	
<b>Source of the data:</b> <b>EHR</b> <b>Night RN</b> <b>Day RN</b> <b>Patient</b>	Interventions taken by RN	
	The results of the intervention	
<b>Other data from the previous night</b>		

# Acknowledgment

Six senior BSN students, Soorin Hong, Sarah Kim, Nataleigh Maia, Aimee Nelson, Nataly M. Mehne, and Aleksandra Banas from Biola University contributed to literature review, data entry and analyses of the complex data set for this study as a part of their project in Applied Nursing Research course.

Also four clinical instructors, Glenn Styffe, Katie Thede, Kate Estes, and Jenna Hagler, collected data from the students for this study.



# **Supplemental Data**

<u>Diagnosis</u>	Sources of patient's information					
	Night-shift RN	Day shift RN	EHR	Patient/Family	Other	Total
1st Clinical Day (N=40)	9.08	6.08	12.08	0	10.75	<b>38 (95%)</b>
5th Day (N=40)	10.66	2.99	16.49	0.33	8.5	<b>39 (97.5)</b>
10th Day (N=40)	4.66	4.66	21.16	0	7.5	<b>38 (95%)</b>

<u>Diagnosis</u>	Night shift RN					
	Diagnosis	O2	VS	pain		Total
1st Clinical Day (N=40)	9.08	6.08	12.08	0	10.75	<b>38 (95%)</b>
5th Day (N=40)	10.66	2.99	16.49	0.33	8.5	<b>39 (97.5)</b>
10th Day (N=40)	4.66	4.66	21.16	0	7.5	<b>38 (95%)</b>

<u>Isolation Status</u>	Night RN	Day RN	Computer	Patient/ Family	Other	Total
1st Clinical Day (N=40)	7.5	7.5	7	0	4	<b>25 (62.5%)</b>
5th Clinical Day (N=40)	8.33	4.33	11.33	2	1	<b>27 (67.5%)</b>
10 Clinical Day (N=40)	8.5	7	13.5	0	2	<b>31 (77.5%)</b>



<u>Vital Signs</u>	Night RN	Day RN	EHR	Patient/ Family	Other	<b>Total</b>
1st Clinical Day (N=40)	7.33	2.33	10.33	0	0	<b>20 (50%)</b>
5th Clinical Day (N=40)	5.33	1.83	17.83	0	0	<b>25 (62.5%)</b>
10th Clinical Day (N=40)	9	0	21	0	1	<b>32 (80%)</b>



	<u>6 am Intake/output</u>	<u>6 am O2 saturation</u>	<u>Sleep quality</u>	<u>Early AM Laboratory results</u>
1st Clinical Day (N=40)	9 (22.5%)	17 (42.5%)	21 (52.5%)	13 (32.5%)
5th Clinical Day (N=40)	11 (27.5%)	22 (55%)	23 (57.5%)	29 (72.5%)
10th Clinical Day (N=40)	17 (42.5%)	28 (70%)	25 (62.5%)	35 (87.5%)