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***2021 NCSBN Scientific Symposium - Are there Outcome Differences between NMNEC ADN, BSN and ADN/BSN Co-enrolled Students: Testing an Educational Model for Academic Progression in Nursing Video Transcript***  
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**Event**

2021 NCSBN Scientific Symposium

More info: [ncsbn.org/15185.htm](https://ncsbn.org/15185.htm)

**Presenter**

Judy Liesveld, PhD, PPCNP-BC, RN, Associate Professor, Education Chair, University of New Mexico Health Sciences Center College of Nursing

- [Host] Judy Liesveld is a professor, and is the Associate Dean for Education and Innovation at the University of New Mexico. Dr. Liesveld is on the Leadership Council for the New Mexico Nursing Education Consortium, a partnership of all 18 state funded schools, bringing the BSN to community colleges. Dr.

Liesveld has been a nurse for over 30 years, in nursing education, community health, school nursing, primary care, and prison nursing.

- [Judy Liesveld] Thank you for introducing me. I'm Judy Liesveld, and I'm from the University of New Mexico, and I'm pleased to present our project called, "Are there Outcome Differences Between NMNEC ADN, BSN and ADN/BSN Co-enrolled Students: Results of the NCSBN Research Project."

So what sparked this project? The New Mexico Nursing Education Consortium, which we call NMNEC, includes 12 state funded schools in 16 locations in New Mexico. This includes ADN, BSN, and ADN/BSN co-enrolled students with a community college and university.

Courses for co-enrolled students are totally taught on the community college campuses. All schools also share a common statewide concept-based curriculum. Our model needed rigorous testing. Funding was applied for through NCSBN's Center for Regulatory Excellence. This is a slide of our NMNEC Educational Model.

As you can see on the left, the prerequisites all filter into the pre-licensure degree options, which there are three. The university BSN, the community college/university partnership BSN, or the community college ADN. And then, of course, from there, we encourage students to go on for higher education.

We wanted to align our study, of course, with nursing regulation. And as you may recall, several years ago NCSBN had a project called Taxonomy of Error Root Cause Analysis of Practice, or TERCAP. TERCAP's goal was to categorize and track practice breakdown with a comprehensive standardized system.

Clinical reasoning and professional responsibility, or values, were found to be the top two reasons for practice breakdown. So the purpose of our study became: How can NMNEC show that we are graduating safe, competent, professional students with excellent clinical reasoning skills?

Our hypotheses became to determine if there are differences in clinical reasoning, professional values, motivation, and demographics for senior-level nursing students in the NMNEC Curriculum between the three sectors of students: the ADN students, the university based BSN students, and the community college/university ADN/BSN co-enrolled students.

These are the participating NMNEC schools. As you can see, we had four community college pre-licensure ADN and co-enrolled pre-licensure BSN schools, and two university pre-licensure BSN schools. IRB was obviously obtained and letters of support were also obtained.

The criteria was that each of these schools did need to be teaching the NMNEC Curriculum for at least one year to participate in the study. This is a slide that shows our grant team. Our funding was between April 1, 2017 and March 30, 2019.

And our personnel included not only myself, but Beth Rodgers with Virginia Commonwealth University, she was a Co-PI, Mary Wright was our project outreach manager, Blake Boursaw, our statistician, and Jenny Landen also consulted with us from the community college perspective. So senior level nursing students, near the end of their program at each participating school, were invited to complete four paper and pencil research instruments at the end of their programs.

So, the ADN program was at Level 4. These were senior students, and the pre-licensure BSN and co-enrolled ADN/BSN were Level 5, or also senior students. We had several research instruments. We had a brief custom demographic instrument.

The Script Concordance Test was selected for measuring clinical reasoning. The Nurses Professional Values Scale was selected to look at professional value identity in RNs, and the Academic Motivation Scale was also used. All of these had great Cronbach alpha results.

So the Script Concordance Test is a very interesting survey that's given to students, or nurses. The person is presented with a scenario. For instance, in this scenario, the woman is 78 years old. She's complaining of difficulty breathing, and it's gotten worse over a few days.

She does suffer from COPD, which is obstructive and chronic, and she's had this for several years. But she asks you, as the nurse, if she can go outside to smoke without her oxygen. So then, what happens, the student is presented an "if you think" scenario. So, if you think that Ms.

Davis is not aware of the seriousness of her condition, and that she denies her state of health, and then you find, for instance, that her oxygen saturation of 91%, with oxygen in place, then you get to select the

hypothesis, from a minus two to a two. Minus two means that the hypothesis is rejected, and all the way up to a two, which means that it needs to be explored in the immediate future.

So this is a really interesting way to measure clinical reasoning. The next scale that we used was the Nurses Professional Values Scale. This one includes value statements such as assume responsibility for meeting health needs of the culturally diverse population.

Then the student answers A equals not important, all the way up to E equals most important, if they consider that a high value of theirs. The next scale that was used was the Academic Motivation Scale. This includes, for example, an item might say, "Because with only a high school degree I would not find a high-paying job later on."

And then the student would answer one, does not correspond to reasons why you would go to college, to seven, which corresponds exactly to why you would go to college. So, participation by the students was, of course, voluntary. They completed this near the end of their program during regular class time.

We did find that all of the surveys took quite a bit of time, 75 to 90 minutes. So each cohort of students was given a \$150 gift certificate for the cohort to use collectively in any manner that they desired. The course instructor was not in the room during the time that the surveys were administered.

However, another unbiased faculty member was in the room with the students during the completion of the surveys. So there was no linkage to any individual student. The data was analyzed by our statistician and project co-investigators. And, of course, we made quarterly reports to NCSBN.

So, our statistical analysis, we use means and standard deviations that were calculated for instrument scale and subscale scores, and then compared across educational patterns, the ADN, the co-enrolled ADN/BSN in community college environments, and the traditional university-based BSN. We used ANOVAS with planned pairwise post hoc comparisons.

Statistical significance for all analyses was set at 0.05. For our sample size we ended up with surveys from 569 students in the final term of their programs. 207 were ADN students, 232 were university-based BSN students, and 130 were co-enrolled ADN/BSN community college students.

For the instrument results, we found that students did not show statistically significant different scores by educational pattern on the Academic Motivation Scale or the Nurses Professional Values Scale-Revised.

However, the Script Concordance Test, which are on a 0 to 100 scale, did vary significantly by educational pattern, showing higher scores with the ADN students than the BSN students, but not the co-enrolled students. The effect size was, however, small, at .02, with .01, .06, and .14, respectively, as small, medium, and large.

So, in our discussion, we found that it seemed that traditional BSN students on university campuses and ADN and BSN/ADN co-enrolled students on community college campuses had similar outcomes with clinical reasoning, professional identity values and motivation. The model did seem successful with the common statewide curriculum taught at all sites.

The ADN students sitting in the same classroom as the ADN/BSN students seemed to benefit from the high level curriculum meeting both ADN and BSN accreditation standards. For the implications, we want to continue curriculum integrity. We want to include good faculty development for new faculty members so that they understand the NMNEC concept, the NMNEC curriculum, and the NMNEC model.

We want to continue good communication via our webpage, networking, our statewide meetings, and with our newsletter so that all NMNEC faculty continue to be up to date with NMNEC changes and updates. We also want to continue our solid infrastructure with our staff, our NMNEC Leadership Council and our NMNEC committees.

So, what's next? We want to continue disseminating our findings. We think that our model has a lot of value for other states or regions. We would like to do more evaluative studies, and we want to do more student outcomes research following entry to practice.

We want to know how do these students do one to two years out, and beyond? And we'd also like to know what patient outcomes are with this particular model. These are some of the references that we used with this presentation. And thank you very much for listening to the presentation.

- Good afternoon, everyone. I'm really pleased to be here with you. I'll just give you a little bit of update on NMNEC.

We continue to grow. The University of New Mexico, we alone have six partnering community colleges where we offer the BSN on the community college campus, and we continue to have really successful results. It's interesting listening to the previous presentation. We actually have a study going on that will look at NCLEX and standardized exit testing scores pre, and during, pandemic teaching strategies and pedagogy.

So, it will be really interesting to see Dr. Osturk's study as well. And I'm really pleased to take any questions that you might have. If you don't have any questions at this time, I'm really happy to speak to you by email any time. My email address is [jliesbeld@salud.unm.edu](mailto:jliesbeld@salud.unm.edu).

Yeah, that's, um... Yeah, your question is very interesting, Beverly. We didn't really find that they had inferior... We found that they were actually very similar, because the effect size was so small and insignificant.

Well, that's a great question, to describe NMNEC's relationship with the New Mexico Board of Nursing. So, yes, we certainly did have to get approval through the Board of Nursing to do our consortium. Each school that has the ADN/BSN students, they have their own code for NCLEX testing.

The Board of Nursing has been incredibly supportive of us. In fact, they gave us a lot of funding from the Board of Nursing to put this consortium together. The question about curriculum with the community colleges, not all community colleges belong to our consortium.

But all of the state funded community colleges do belong to the consortium. Three of them are just joining in now, and starting with the new curriculum. Thank you so much for attending my presentation. It was a pleasure to be with you this afternoon.