Use of Mini-CEX Tool to Assess Clinical Competence in Family Nurse Practitioner Students Using Undergraduate Students as Patients and Doctoral Students as Evaluators

The ability to objectively evaluate clinical skills in nurse practitioner students is paramount to ensure competency in independent practice. Faculty are challenged to directly observe and evaluate students in the clinical setting because the facility may be located hours away. Therefore, faculty must rely on preceptors who may not be adequately prepared to evaluate students. The authors’ aim was to create a learning activity to address this issue and to include students from all nursing program levels.

Guided by a constructivist model of active learning, where learning is an active, contextual process of building on previous knowledge, the authors used an objective structured clinical examination (OSCE) approach using the Mini-Clinical Evaluation Exercise (Mini-CEX) tool to assess clinical competence in family nurse practitioner (FNP) students. The Mini-CEX is a reliable and valid tool developed by the American Board of Internal Medicine in the 1990s to assess performance-based clinical skills among medical residents (Norcini, Blank, Arnold, & Kimball, 1995). A major strength of the Mini-CEX is immediate appropriate critical feedback that includes areas of strength and opportunities for improvement (McWilliam & Botwiniski, 2012). The tool has a 9-point rating scale, where scores of 1 through 3 are unsatisfactory, 4 through 6 are satisfactory; and 7 through 9 are superior. Positive indicators for the assessment areas of interviewing skills, physical examination, humanistic qualities/professionalism, clinical judgment, counseling skills, organization/efficiency, and overall clinical competence are defined (Norcini et al., 1995).

A learning activity was developed to meet the following objectives:
- Use the Mini-CEX to evaluate FNP student clinical competence during a routine patient visit.
- Expose baccalaureate nursing (BSN) students to the patient perspective and FNP role, and to reinforce theory on diseases.
- Expose Doctor of Nursing Practice (DNP) students to the faculty role.
- Reinforce BSN and FNP students’ self-reflective practice.

The BSN students created a patient scenario from assigned common primary care diagnoses that included the pathophysiology, typical signs and symptoms, reason for visit, past medical and family history, cultural or age-related considerations, social history, health-promoting behaviors, and current medications. Faculty approved the patient scenarios, and BSN students practiced their roles to eliminate the use of notes during the OSCE. Students were also encouraged to use any props, makeup, or accessories that would enhance the realism of the scenario.

Faculty reviewed the Mini-CEX tool and the specific clinical skills to be assessed with the FNP and DNP students. Faculty assured the students that the diagnoses being portrayed by the BSN students were straightforward and that credit would be given, provided the FNP student determined one of the possible diagnoses. The participating DNP students were actively practicing nurse practitioners and experienced preceptors.

The OSCE consisted of the DNP students observing the FNP students, who performed a 15-minute focused history and physical examination on the BSN students, culminating in the FNP students presenting a diagnosis and treatment plan. The DNP students scored the FNP students’ performance using the Mini-CEX and provided immediate feedback to the FNP students. During this time, the BSN students were also encouraged by the DNP students to provide feedback to the FNP students. The FNP faculty worked closely with the DNP students and observed every encounter to ensure that scoring was accurate for each student.

Both BSN and FNP students received a grade for this learning experience. The BSN students received 50% of their grade for their preparation, 40% for role-playing, and 10% for their self-reflections. The FNP students were given a pass-or-fail grade. Students who scored in the unsatisfactory range on any of the skills on the Mini-CEX for either encounter were allowed to remEDIATE and retest 3 weeks later. Remediation involved direct, multiple-time faculty instruction in the skill areas that were unsatisfactory, as well as reevaluation of skills prior to retesting.

The DNP students and the faculty met to debrief after all the OSCEs were completed. During this meeting, all Mini-CEX scoring sheets were reviewed for any extremes in grading or inconsistencies. The DNP students explained their thought processes for scoring, and faculty provided guidance where needed. The DNP students also shared their thoughts about the exercise and being in a faculty role.

Both BSN and FNP students were asked to write self-reflections immediately following the OSCE. Two faculty members read all the reflections and identified common descriptors. A third faculty member, who was not involved with this teaching experience, reviewed these descriptors and condensed where appropriate. Each (100%) of the 28 FNP students completed two encounters, resulting in a total of 56 patient encounters (55 BSN students and one BSN student who went twice). Five DNP students and four faculty members were evaluators.

Overall, the students from all programs enjoyed the collaborative learning. The BSN students learned from watching the FNP students, and the FNP students appreciated the realistic scenarios portrayed by the BSN students, along with the immediate feedback from the DNP students. Anxiety was reported by every FNP student. Both BSN and FNP students reported skills that needed improvement and that skills gained from the encounter will be incorporated into
their practice. Finally, a noisy, crowded clinic environment was reported by several students.

Several lessons were learned during this activity. Allowing for proper space to ensure privacy and to decrease the noise level will be addressed in the future. The coordinators will schedule fewer students in each laboratory and space the clinic rooms farther apart. In addition, the DNP students will participate in the self-reflection process. To address the anxiety reported by all FNP students, faculty will identify and pilot an anxiety reduction strategy to use with the students while they are waiting.

References