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# Clinical Evaluation of Baccalaureate Nursing Students Using SBAR Format: Faculty versus Self Evaluation

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**Abstract**
Clinical training is of paramount importance in nursing education and clinical evaluation is one of the most challenging responsibilities of nursing faculty. The use of objective tools and criteria and involvement of the students in the evaluation process are some techniques to facilitate quality learning in the clinical setting**. Aim**: The aim of the present study was to assess the relationship of self and faculty evaluation of clinical competency of baccalaureate nursing students using SBAR tool. **Methods**: A cross-sectional comparative design was adopted. 53 undergraduate nursing students enrolled for pediatric nursing course during the study period were included in the study. Three pediatric nursing clinical faculty conducted evaluation of these students with SBAR tool followed by self - evaluation by students using the same tool. The data were analyzed using SPSS software descriptive (mean and standard deviation) and inferential (Independent sample t-test and Pearson correlation coefficients) statistics. **Results**: There was no significant difference between self and faculty evaluation on most of the domains of the tool and there was a significant correlation between self and faculty evaluation on all the four domains of SBAR. **Conclusion**: The results of the present study support the use of SBAR tool and self - evaluation along with faculty evaluation to facilitate clinical learning of undergraduate nursing students.
**Keywords:** Clinical evaluation; SBAR tool; self – evaluation; faculty – evaluation; nursing students

## Introduction

The learning course for nursing students commonly involves more than acquiring cognitive knowledge. It usually includes the practice dimension where the student has to exhibit his or her capability to pertain or transfer theories learned in the classroom to a mixture of clinical care patient settings (Indar-Maraj, 2007). Clinical learning is one of the major cornerstones of professional nursing education and clinical evaluation plays a vital role to ensure the achievement of practical learning objectives.

Clinical evaluation is defined as an integrated form of evaluation seeking to combine knowledge, understanding, problem solving, technical skills, attitudes, and ethics in evaluation. In clinical evaluation, it must be ensured that the students in clinical settings have an appropriate professional behavior, establish an appropriate interaction with the patients, prioritize the problems, have the basic knowledge about clinical methods, perform the care procedures correctly, and apply critical thinking"( Rafiee, Moattari, Nikbakht, Kojuri, & Mousavinasab, 2014). Clinical evaluation is one of the difficult tasks for faculty and health instructors and a challenge for nursing and other health professions (Reising & Devich, 2004). Significance of clinical evaluation lies in identifying areas of strengths and weaknesses in knowledge and practice simultaneously, and reflecting on them through modification of the course contents or the delivery method (Rafiee et al., 2014).

Generally, clinical evaluation of nursing students has been challenging. Tools of measurement for clinical performance have been subjective and, at times, prejudiced at several levels (Han, James & Mclain, 2013). Many studies were using different kind of tools for evaluating the skill of students in clinical settings. Clinical performance manual for instance, was one of the tools used in a study to overcome the obstacle of subjective clinical evaluation. It described five components of the evaluation process including: ability to consistently exhibit professional behaviors; random skills performance examination; plan of care examination; critical situations examination; and required course assignments (Wolly, Bryan & Davis, 1998).

Another tool was used in a pilot study conducted in the University of Alabama. The tool evaluated five main aspects: communication, professionalism, teamwork, nursing process, and patient safety. The study aimed at examining the relationships between nursing student peer and faculty evaluations of clinical performance. 23 students participated in this study and the result showed significant positive correlations between peer and faculty evaluations for all domains. The researchers discussed some limitations that were observed in the study such as: non-probability sampling, a small sample size, subjective evaluation scoring, low reliability coefficients for some instrument domains, and different ways students and faculty interpret and apply evaluation criteria (Han et al., 2013).

However, there were no studies that evaluated student's clinical skills using SBAR (Situation,

Background, Assessment and Recommendation) format especially in Saudi Arabia. SBAR was initially developed by the armed forces, especially the nuclear submarine industry (Pope, Rodzen and Spross, 2008). It was then used in the aviation industry, which adopted a similar form before it was put into use in health care. It was introduced to rapid response teams at Kaiser Permanente in Colorado in 2002, to monitor patient safety (Sherwood , Thomas , Bennett & Lewis , 2002). The main rationale was to alleviate communication harms traced from the differences in communication styles among healthcare professionals. SBAR was later on adopted by several other health care organizations.

The Joint Commission has recommended SBAR as one of the effective tools to standardize hand-off communication. SBAR tool can be used for prompt and proper communication of patient information (Thomas & Dixon, 2012). Situation describes the state of the patient clearly and briefly; Background includes background information relevant to the situation; Assessment comprises statement of your professional conclusion and Recommendation explains what intervention you will recommend (Labson,2013). This communication form has gained popularity in hospital settings, mostly among nursing professionals. It is a way for health care providers to communicate competently with one another, and allows for considerable information to be transferred perfectly.

SBAR is enabling for all forms of communication between healthcare professionals and hence provides a standard composition to transfer vital information. SBAR help students to sort out their judgment prior to calling physicians, during handover to another healthcare provider, and when shifting patients to other organizations or levels of care (Thomas, Bertram and Johnson, 2009). SBAR tool can be used as an effective clinical evaluation technique. It helps the nursing students to organize the sequence of their information related to the care of their assigned patients and improve their communication skills. With these thoughts and past experiences in mind, the faculty of pediatric nursing at King Saud bin Abdulaziz University for Health Science (KSAU-HS) Riyadh, developed a comprehensive approach for clinical learning and evaluation using SBAR format.

Naturally, clinical evaluation process can be subject to judgment and bias, and this bias can be from both the evaluator and student, as well as by variables present in the clinical environment. Evaluating student's clinical performance is also influenced by one's own professional theoretical orientation and expectations (Indar-Maraj, 2007). Preceding factors and other elements make evaluating the clinical experience a complex and challenging mission. Nursing faculties have an accountability to review their own performance capability and so students should be provided with opportunities for self appraisal during their academic program in order to build up and improve their ability (Adib –Hajbaghery, Karbasi-Valashani & Heidari-Haratmeh, 2012).

According to Andrade and Du (2007) "Self evaluation is a practice of formative appraisal during which students replicate on and evaluate the excellence of their work and their learning, critic the degree to which they reflect explicitly affirmed goals or criteria, recognize strengths and weaknesses in their work, and modify accordingly". One of the most interesting reported benefits of self assessment is the feedback from students that the self- assessment prerequisites made them return regularly to the criteria as they were working on the assignment and kept them examining their own performance. This finely tuned selection with the implications of criteria can help expand students understanding of what constitutes quality education (Spiller, 2012). Moreover, self-evaluation has many benefits for students of all levels; first, it actively involves students in the learning process making it more effective and self-directed. Second, it decreases the load on the instructors by allowing the students to reflect on their own learning, third, it eliminates the mystery that often characterizes the assessment process, and forth, it leads to changes in the way evaluation is conducted to avoid confusion that can result in future disparities (Black & Wiliam, 2001).

A study conducted to assess the correlation between clinical skills self-assessment of nursing internship trainees with their teacher's evaluation found that self-evaluation can allow the students to attain higher goals and try harder to recognize these goals (Adib-Hajbaghery et al., 2012). Self appraisal also improves the student's judgments about their professional prospect and enhances their knowledge. Another study that compared the student's self evaluation to instructor's evaluations in an obstetrics course had concluded that no major difference was found between the mean score of assessment by instructors and the mean score of student's self-assessment (Delaram & Tootoonchi, 2010). In dissimilarity, a study of self, peer, and teacher's evaluation in the process of midwifery student's clinical skills evaluations, revealed that there was a major difference among these three methods of evaluation (Sokhan, Haghighi, Bagheri & Ebrahimi, 2011). While going through the literature we couldn't find studies conducted in Saudi Arabia that assess the correlation between the instructors' and students' evaluation, more specifically among nursing students and there is no evidence of using SBAR tool for clinical evaluation of nursing students. The objective of the present study was to assess the relationship between pediatric nursing students' self-evaluation and their faculties' evaluation of clinical skills using SBAR format.

## Methodology

A cross-sectional comparative design was used for this study. All the fall semester, level 7 baccalaureate nursing students (n=53) enrolled for pediatric nursing course during the academic year 2015-2016 were participated in the study. Data was collected using SBAR tool which was developed by the researcher and incorporating all the relevant comprehensive patient care information under the four domains of SBAR-situation, background, assessment and recommendation. The scale demonstrated an internal consistency cronbach's alpha 0·78.

Each clinical faculty member discussed the tool with her entire group of students. Each student was encouraged to use the SBAR format as a guide to develop comprehensive patient care skills throughout the pediatric nursing clinical rotation. The faculties were available in the clinical field to support students and the preceptors whenever needed. On the last week of their pediatric rotation faculty met on a one-to one basis with each student to evaluate their comprehensive patient care skills using the SBAR tool. Student is asked to evaluate themselves using the same tool. Feedback was given immediately to the students about their performance.

Data were entered and analyzed using the SPSS version 22 for windows. Independent sample t-tests were carried out to test for differences between students and faculty scores, and Pearson correlation coefficients were used to test the correlation of mean scores. Voluntary participation of the subjects was assured. Subjects were assured about the confidentiality and anonymity of the collected data.

## Results

### Demographic data

The study participants consisted of 53 baccalaureate nursing students; all were females from level 7 with age ranging from 21 to 23 years.

### Comparing scores on SBAR

Mean scores and standard deviations were computed for each item of the faculty evaluations (FE) and Students Evaluation (SE) for SBAR rating scale. There was no significant difference in the mean scores between the FE and SE in all of the SBAR items except for past history and documentations.

**Table 1: Differences between the faculty evaluation (n= 53) and students self-evaluation (n=53) scores**

| | FE Mean | SD | SE Mean | SD | T value | P value |
|---|---|---|---|---|---|---|
| Demographic data | 1.92 | 0.69 | 1.9811 | 0.57651 | -1.766 | 0.083 |
| Pathophysiology | 1.90 | 0.84 | 1.8679 | 0.86623 | 0.704 | 0.485 |
| Medical Devices | 1.86 | 0.66 | 1.92452 | 0.05371 | -1.352 | 0.182 |
| Past History | 1.75 | 0.94 | 1.83021 | 0.25431 | -2.060 | 0.044* |
| Immunization Status | 1.66 | 0.55 | 1.7358 | 0.52444 | -1.272 | 0.209 |
| Holistic assessment | 1.64 | 0.48 | 1.6792 | 0.51041 | -0.574 | 0.569 |
| Growth measurement | 1.71 | 0.45 | 1.6981 | 0.57462 | 0.299 | 0.766 |
| Developmental assessment | 1.67 | 0.51 | 1.6415 | 0.59142 | 0.531 | 0.598 |
| Lab and other diagnostic procedures | 1.6981 | 0.50 | 1.7547 | 0.51537 | -0.830 | 0.411 |
| Medications | 1.64 | 0.48 | 1.7358 | 0.52444 | -1.299 | 0.200 |
| Nursing Diagnosis | 1.47 | 0.50 | 1.6038 | 0.49379 | -1.729 | 0.090 |
| Safety measures | 1.86 | 0.34 | 1.8491 | 0.45557 | 0.299 | 0.766 |
| Interventions Performed | 1.84 | 0.36 | 1.8868 | 0.37521 | -0.629 | 0.532 |
| Health Education | 1.7736 | 0.42252 | 1.7358 | 0.48639 | 0.629 | 0.532 |
| Documentation | 1.9057 | 0.35432 | 1.7736 | 0.50541 | 2.184 | 0.033* |

### Difference between category scores

Table 2 represents the means, standard deviations and t-test for significance of students' and teachers' scores for the four categories of the SBAR. The independent sample t-test didn't show significant difference between the rating given by the faculty and the student's self-evaluation. Differences between them were significant only in the background subscale but there was no effect size.

**Table 2: Differences between the faculty evaluation (n= 53) and students self-evaluation (n=53) scores over the four SBAR domains**

| Domains | Faculty Mean ± SD | Students Mean ± SD | T value | P value | Effect size |
|---|---|---|---|---|---|
| Situation | 5.6981 | 5.7736 | -.893 | .376 | -0.01 |
| Background | 3.4151 | 3.5660 | -2.060 | 0.04* | -0.03 |
| Assessment | 9.8491 | 10.1132 | -1.275 | .208 | -0.02 |
| Recommendation | 7.39623 | 7.2453 | .955 | .344 | 0.01 |

*$p$<0.05

**Relationship between the faculty evaluation and the students' self-evaluation**

Table 3 represents Pearson correlation coefficients for peer and faculty evaluation scores. Highly statistically significant positive correlations at P < 0.001were found between self and faculty evaluations for all of the SBAR domains ranging from .48-.80. Accordingly, students' self- evaluation mirrored those of the faculty.

**Table 3. Correlation between faculty evaluation (n= 53) and students self-evaluation (n=53) scores over the four SBAR domains**

| Domain Faculty | Student's self-evaluation Situation | Background | Assessment | Recommendation |
|---|---|---|---|---|
| Situation | 0.54** | | | |
| Background | | 0.80** | | |
| Assessment | | | 0.69** | |
| Recommendation | | | | 0.48** |

**$p$<0.01; *$p$<0.05

**Discussion and Limitation**

The present study showed a highly significant correlation between self and faculty evaluations of comprehensive nursing care using SBAR format. Furthermore there was a positive correlation on all the four domains of SBAR. Adib-Hajbaghery et.al., |(2012) in their study found a similar correlation between nursing internship trainees total mean of self -evaluation in clinical skills and the scores they received from their teachers. These findings indicate that the clinical evaluation utilizing SBAR format can be effective in providing a convincing feedback to students regarding their clinical competency in different aspects of patient care. It also supports the use of self-assessment in the teaching learning process as it is identified as an important skill to develop for lifelong learning. Lifelong learning is inevitable for the development of a productive nursing workforce (Shapland, 2011). Three projects exploring assessment for future learning among different higher education settings by Thomas, Martin and Pleasant (2011) highlighted potential value of using self and peer-assessment to encourage and measure learning that persists into future.

In spite of several identified benefits of self-evaluation such as high quality learning, skills development, increasing student confidence ,responsibility and independence (Hernandez,2010), few studies have used this method to facilitate clinical learning of nursing students especially in middle east. Additionally most of the studies that have used this method, mostly with medical students have reported varied results. In the present study there was no significant difference between the mean scores of faculty evaluation and student evaluation for 13 out of 15 SBAR items. The only items having the difference were patient past history and documentation. Further, there were no significant differences between the rating given by faculty and the student's self-evaluation among the major SBAR categories.

Contrastingly, a comparative study on self, peer and teacher evaluation to evaluate the clinical skills of nursing students found significant difference between clinical teacher and self-evaluation and between clinical teacher and peer evaluation mean scores (Mehrdad, Bigdeli & Ebrahimi, 2012). Different research studies reported a week correlation between self and teacher evaluation (Reiter, Eva, Hatala & Norman, 2002; Rudy, Fejfar, Griffith, & Wlson, 2001). Alias, Masek and Salleh (2015) in their study found that in problem based learning, students' self- ratings and peer ratings were much higher than that of teachers. Another study revealed that students were substantially under-marking their own performance (Papinczak, Young, Groves &Haynes, 2007). These contrasting findings between the present study and other reported studies may be related to the dissimilarity in the evaluation formats and the process used and to the differences in the level of achievements among students from different educational settings.

Indar- Maraj (2007) reported that teacher biases and the use of objective and subjective measures are two challenges of evaluation in the clinical setting. The investigators' experience of using SBAR format and the highly significant correlation between students' self- evaluation and faculty's evaluation in this study, support the utilization of objective SBAR evaluation format to minimize the challenge of teacher biases.

In summary, the two major recommendations based on this study are the following: 1. the clinical learning and evaluation of comprehensive patient care by nursing students can be objectively and effectively facilitated through the use of SBAR format, 2. Students' active participation in the clinical evaluation process through self-assessment utilizing an objective format can enhance their motivation for the fulfillment of short term clinical learning objectives and can equip them for lifelong learning. A potential limitation of the study is that the study was carried out in a single institution and on a single course. Further study is needed to determine whether these results can be replicated at other institutions or for other type of educational activities.

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