

Nursing Students' and Educators' Perception and Experiences with the Implementation of Analytic Rubrics Evaluation Tool in Medical Surgical Nursing

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Abstract: *Rubrics* are rating scales that are applied with concentrating assignment. They are counting monitors, involving of precise pre-established performance standards, utilized in appraising students. Creating convenient, **rubrics** can assist educators develop high quality assessments.

Aim explore medical surgical nursing students & educators' perceptions toward the effectiveness of implementation of analytic rubrics as an evaluation tool. The study passed through a quasi-experimental research design in the medical surgical nursing skills lab at the Faculty of Nursing, Damanhur University.

Subjects: second semester of the first year in academic year 2018-2019 (n=158). They were equally randomly assigned to either one for two groups.

Students' Study group: include 81 students; they were evaluated by analytic rubrics.

Students' Control group: include 77 students; they were evaluated by conventional evaluation tools (checklists, and evaluation sheets). Subjects include also, all nursing educators in Medical Surgical Nursing Department.

Tool I: Students 'personal and academic questionnaire; **Tool II:** Students' Perceptions of Evaluation Questionnaire (SPEQ), **Tool III:** Educators personal and academic profile & **Tool IV:** Educators' Perceptions of evaluation Questionnaire. **Results:** Post the evaluation interventions there were statistically significant difference between the two groups and the study group who had higher mean scores in all scales of SPEQ as well as the total mean score of (SPEQ). All educators perceived high effectiveness of evaluation post implementation of the analytic rubrics.

Conclusions: analytic rubrics had a positive influence on the assessment process.

Recommendations: Addressing clear, written policy for the staff and the nursing students to be educated about rubrics forms.

Key words: Nursing students, Educators, Rubric, analytic rubric, tool, and evaluation.

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I. Introduction

Assessment is one of the principles without which it is difficult to govern the students' achievement and also educators' success in transmitting the knowledge to their students precisely. **Rubrics** are rating scales that are utilized with performance assessments. They are formally defined as counting monitors, involving of precise pre-established performance standards, utilized in appraising students. "work on performance assessments". **Rubrics** are classically the precise method of grading instrument utilized when judging students' performances or products resulting from a performance assignment. ^[1,2]

Currently **rubrics** comprise creating a standard and an expressive notification that explain in what way the standard is to be accomplished. **Rubrics** are frequently applied by educators to assess student assignment but several researchers debate that they able to add more vital tasks as well. When utilized by students as a portion of a formative assessment of their assignments in advancement, **rubrics** can explain as well as appraise. Used as portion of a student-centered method to evaluate, rubrics have the chance to support students comprehend the objectives for their learning and the values of quality for a specific task, as well as make reliable decisions about their individual effort that can notify correction and progress. ^[2] **Rubrics** have been using in education to assist students for a number of years for a different of reasons. Educators want to be able to evaluate their students using real world activities and/or problems. ^[3]

Many educators believed that we were evaluating students in ways that were not certainly fair or accurate.

^[4] Others believed that many Educators were not providing students a clear understanding of what the assessment

criteria were or on how the criteria were being used to assess students. ^[5] There are educators who believe that educators have not been conducting formative assessment concepts as well as we should in order to inform student growth and teacher instruction. ^[6] However, more educators believe that our assessment practices should be fair to all students (e.g. gender, culture, socioeconomic status, etc.) and should help all students by having clear expectation, informative and useful feedback, and provide clear and positive reinforcement to learning objectives. Generating convenient, **rubrics** can assist educators create high quality assessments. ^[7]

Grading strategy of **rubrics** could be for grading a product or process in its wholeness, i.e. holistic. Given its method of general evaluation, **holistic rubrics** do not deliver full and analytical feedback of the strong point and restrictions of the product/performance. grading strategy could too be for grading each standard independently for eventual combination to form a complete score, i.e. analytic. **Analytic rubrics** have a part-to-whole; criterion-by-criterion decision approach which creates multidimensional assessment promising. ^[8]

A grading **rubric** is a matrix that provides levels of achievement for a set of criteria or dimensions of quality for a given type of performance. ^[9] Moreover, **rubrics** generally are either **analytic or holistic** in nature. ^[10] Within each level of achievement, **analytic rubrics** assess various aspects of performance. Contrary, **holistic rubrics** are designed to assess the overall quality of the task in question. ^[11]

Moreover, **rubrics** are useful for teachers and learners for five reasons: They are useful as tools of teaching and assessment. They help students become more thoughtful assessor of the quality of their task and those of their peers and they save teachers' time spent on evaluating student work. They accommodate heterogeneous classes. They are easy to use. ^[12]

Rust mentioned that ^[13], students value an effective and usable **rubric** that is specific and built from well-defined assessment criteria. He recommends that assessment criteria should be based on explicit criteria associated with intended learning outcomes, since the criteria become a referent for both the teacher and students. Thus, other study point that students' participation in establishing the criteria and rubrics would reinforce them and acknowledge their actions. ^[14] Moskal^[15] adds that the overall benefits to students who are involved in establishing a **rubric** include clarity about what skills they need to master, higher confidence in their capabilities and more solidarity in solving problems themselves. So, it has been recommended that a new partnership in the classroom is needed, where both the teacher and students participate towards aligning the outcomes, pedagogy and measurement methods. ^[15,16]

The ways students perceive and use **rubrics** in the process of learning is important. Exploring the impact of rubrics on learning, then, can stimulate the ongoing discussion regarding the relationship between student learning and assessment. Some evidence presents considering how **rubrics** impact student learning and assessment, as well as relating to the impact of **rubric** use on the quality of student assignments. ^[17] Assessment significantly affects students' approach to learning so, assessment paradigms have shifted from "testing learning of students to assessing for students learning". Nowadays, assessment approaches are trying to raise the harmony between what students' necessity to learn and what is expected for them to know once they ending their studies. ^[18] Other study propose that two strategies can instead be applied: 1) examine the research on assessment forms/approaches that teachers use; 2) inquire into students' perceptions about assessment. Looking at students' and teachers' perceptions about the role of assessment in the classroom and students' approach to learning. First, because students' perceptions of assessment will affect their learning method which will affect in turn the extent to which students are successful in their classrooms. Second, assimilating teachers' perceptions will form a foundation and rationale for the assessment practice they use in their classrooms, through which one can learn to what extent and in what way students' perceptions of classroom assessment influence their learning. ^[19] So development of competent professional nursing students in providing nursing care in general and in medical surgical department in particular can be achieved through integration of both knowledge and skills competencies by applying rubrics in all clinical practice since traditional evaluation tools have some subjectivity.

1.1. Significance of the Study

Nursing educators need to reinforce their capabilities to improve their evaluation on a day-to-day basis. Faculty ongoing education and academic staff training are crucial processes to develop the academic programs, especially in a critical area such as students' evaluation in a fairly and accurately way. Many researches have been conducted around the world on how to establish **rubrics** for evaluation, some are on analytic and some are on holistic rubrics. There are even fewer researches that have conducted to explore students' and educators' perceptions toward the effectiveness of using analytic **rubric** on nursing students. Therefore, this study was carried out to determine Nursing Students' and Educators' Perception and Experiences with The Implementation of Analytic Rubrics Evaluation Tool in Medical Surgical Nursing.

II. Materials and Method

2.1. Materials

2.1.1. Research Design

A quasi-experimental research design was utilized in this study.

2.1.2. Aim

To examine Perception and Experiences of Nursing Students and Educators with The Implementation of Analytic Rubrics Evaluation Tool in Medical Surgical Nursing department.

2.1.3. Research Questions

What are the Perception and Experiences of Nursing Students and Educators with The Implementation of Analytic Rubrics Evaluation Tool in Medical Surgical Nursing department?

2.1.4. Setting

The study was carried out in the medical surgical nursing skills lab at the Faculty of Nursing, Damanhur University.

2.1.5. Subjects

The subjects of this study comprised all nursing students, enrolled in medical surgical nursing course second semester of the first year in academic year 2018-2019 (n=158). They were equally randomly assigned to either one for two groups. **Students' Study group:** include 81 students; they were evaluated by analytic rubrics. **Students' Control group:** include 77 students; they were evaluated by conventional evaluation tools (checklists and evaluation sheets). Subjects include also, all nursing educators in Medical Surgical Nursing Department.

2.1.6. Tool for Data Collection: Four Tools were used for Data Collection

Tool I: Students' personal and academic questionnaire; to collect information about students' age and gender.

Tool II: Students' Perceptions of Evaluation Questionnaire (SPEQ); This tool was developed by Fisher, Waldrip and Dorman (2005).^[20] It was used to explore students' perceptions as a student who studies Medical surgical nursing towards the effectiveness of evaluation. It comprised 23 items to inquire about students' perceptions in five dimensions (scales) and students were asked to rate their responses on a Likert scale ranged from 1 to 5 (strongly disagree to strongly agree). In addition to the following open-ended question; Is there anything new that you consider is significant to identify about your evaluation process? Please write in brief.

Scales of SPEQ

Scale (SPEQ)	Description	Item
1. Congruence with Planned Learning	Alignment of assessment with the goals, objectives of the learning program.	My assignments/tests are about what I have done in class.
2. Authenticity of Assessment	Assessment is relevant to real life situations that are important to the learner.	I find my assessment tasks relevant to what I do outside of school.
3. Students' Consultation	Consultation and involvement of students about the forms of assessment tasks being employed.	I have a say in how I will be assessed in science.
4. about Assessment		
5. Transparency of Assessment	Assessment tasks are well defined and clear to the learner.	I am clear about what my educator wants in my assessment tasks.
6. Students' Capabilities	The extent to which all students have an equal chance at completing assessment tasks.	I am given a choice of assessment task.

Scoring system:

Low effectiveness: Less than 50 percentiles, Medium effectiveness: 50 to Less than 75 percentile and High effectiveness: 75 percentiles and more.

Tool III: Educators personal and academic profile; to collect information about age, gender, year of experience, academic degree, position, previous training in evaluation methods and tools.

Tool IV: Educators' Perceptions of evaluation Questionnaire; This tool was developed by the researchers after reviewing relevant literature.^[17,20-22] It aims to explore educators' perceptions toward the effectiveness of medical surgical nursing department clinical evaluation tools. It comprised 12 items on a Likert scale ranged from 1 to 5 (strongly disagree to strongly agree). In addition to the following 3 open ended questions; Is there anything new that you consider is significant to identify about evaluation process? Do you have any additional concerns? Do you have any suggestions to improve evaluation system?

Scoring system:

Low effectiveness: Less than 50 percentiles, Medium effectiveness: 50 to Less than 75 percentile, and High effectiveness: 75 percentiles and more.

2.2. Method

The study was implemented according to the following steps:

2.2.1. Administrative Process

- An official approval was obtained from responsible authorities and participants after explaining its purpose.

2.2.2. Study tools

- Content validity of the tools was tested by a jury of 5 experts in Nursing Education and Medical Surgical Nursing fields and consequently, few modifications were done.
- Validity of analytic rubrics was done by the following 3 validity methods;
- **1) Construct validity:** establishing correct operational measures for the concepts being studied.
- **2) Internal validity:** establishing a causal relationship, whereby certain conditions are shown to lead to other conditions, as distinguished from spurious relationships.
- **3) External validity:** establishing the domain to which a study's findings can be generalized.
- Reliability of tools II and IV was checked by Cronbach's Alpha test. Its result were 0.869 and 0.789 respectively, which indicates an accepted reliability.
- Reliability of analytic rubrics was as follow; regarding nursing care plan grading rubric the Cronbach's alpha was (0.801), role play participation grading rubric the Cronbach's alpha was (0.889), evaluation of student in practice setting the Cronbach's alpha was (0.830). The results of the Cronbach's alpha test indicating that the three analytic rubrics were 80 % reliable. Moreover, reliability was measured for grading rubric for written assignment seminar the Cronbach's alpha was (0.902), portfolio assessment rubric the Cronbach's alpha was (0.920) and rubric of oral presentation the Cronbach's alpha was (0.931). The results of the Cronbach's alpha test indicating that the three analytic rubrics were 90 % reliable.

2.2.3. Pilot study

- Pilot study was conducted by the researchers to test the clarity and applicability of the tools on 30 students enrolled in the second academic year (out of the sample). According to the results of the pilot study, the tools were put in its final form.

2.2.4. Data Collection

1- The data was collected over a period of approximately three months during second term of the academic year 2018-2019. Data was collected through self-administered questionnaires that were distributed among the students after orientation session in medical surgical nursing skills lab. Each questionnaire took approximately from 5 to 10 minutes/student.

2- Self-administered questionnaire was distributed to educators in Damanhur University. Each questionnaire took approximately from 5 to 10 minutes/educator.

2.2.5. Research procedure The present study was conducted passing into six phases:

Phase I. Assessment phase; it includes two sub **phases:**

Sub phase 1: measuring baseline evaluation practices; Materials used in this phase included two pre-study questionnaires with one for students and one for educators to investigate the current situation of evaluation in the department.

Sub phase 2: tool II: Students' Perceptions of evaluation Questionnaire (SPEQ) to explore students' perceptions as a student who studies Medical surgical nursing.

Phase II. Analytic rubrics development phase; in this phase the researchers after reviewing the relevant literature develop the following analytic rubrics; and tests them for validity by five experts in the field of medical surgical nursing and nursing education and the necessary few modifications were done. Reliability of analytic rubrics were tested on 30 second year students;

- 1- Nursing care plan grading rubric; contains the following 4 criteria;** Priority NANDA Nursing Diagnosis, Outcome criteria Client/patient goals and evaluation, Interventions and General Organization.
- 2- Role play participation grading rubric; contains the following 4 criteria;** Preparedness, Participation, Understanding of Topic, and Presentation.
- 3- Grading Rubric for Written Assignments/seminar; constitutes the following 6 criteria;** Organization, Level of Content, Development, Grammar and Mechanics, Elements of citation, and Quality of Resources.
- 4- Portfolio Assessment Rubric; constitutes the following 6 criteria;** Table of content, Overview section, Artifacts, Artifact Selection and Placement, Artifact Reflections, and Appearance and Organization.
- 5- Rubric of oral presentation; constitutes the following 6 criteria;** Body language, Eye contact, Introduction and closure, Pacing, Poise, and voice.

Phase III: Staff training; A training workshop was conducted to medical surgical nursing staff. There were three parts of the training. Part one was the general knowledge of evaluation and analytic rubrics. Part two was steps and procedure of developing analytic rubrics. Part three application session to design analytic rubrics.

Phase IV: students' explanation session; a lecture was implemented to explain the analytic rubrics. Then in the student's clinical subgroups they were encouraged to ask questions to clarify their doubts about the analytic rubrics. They were asked to recall and write down the assessment criteria (analytic rubrics) before they did the tasks.

Phase V: Implementation of Analytic rubrics;

In this phase, the trainee clinical educators applied the content of training to practice.

Phase VI: Evaluation phase; Post implementation of analytic rubrics Tool II: Students' Perceptions of Evaluation Questionnaire (SPEQ) was used to explore students' perceptions towards evaluation. In addition, Tool III: Educators' Perceptions of evaluation Questionnaire; was utilized to explore educators' perceptions toward the effectiveness of medical surgical nursing department clinical evaluation tools.

2.2.6. Ethical Considerations

All students and educators were informed about the purpose of the study and given brief explanation; oral informed consent was obtained from each of them. The right to refuse to share or withdraw from the study was highlighted after reassuring students that their response would have no influence on their grades. Data anonymity and confidentiality were respected.

2.2.7. Statistical Analysis

The collected data were coded and analyzed using PC with the Statistical Package for Social Sciences (SPSS version 25) and tabulated frequency and percentages were calculated. Descriptive statistics as frequency, distribution, mean and standard deviation were used to describe different characteristics. The Chi-square test was used for testing relationship between categorical variables. The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of two or more independent groups (F Test). The level of significance selected for this study was p value equal to Or less than 0.05.

III. Results

Part I: Quantitative findings:

Table (1): Distribution of nursing students among the intervention and control groups regarding to their demographic characteristics.

Students demographic	Study n=81		Control=77		Test of significance
	No.	%	No.	%	
Age					
19.00	47	58.0	47	61.0	X ² :1.900 P:0.593
20.00	24	29.6	24	31.2	
21.00	4	4.9	4	5.2	
22.00	6	7.4	2	2.6	
Mean ± SD	19.6±0.8		19.4±0.7		
Sex					
Male	37	45.7	35	45.5	X ² :0.001 P:0.977
Female	44	54.3	42	54.5	

Table 1 donates absence of any significant difference between the study and control groups regarding to their demographic characteristics. Where, slightly more than one-half (58.0%) of the study group were in the age group of 19, compared to 61.0% of the control group. Nearly equal percentages of students' distribution in relation to gender were male among both study and control groups (45.7% and 45.5% respectively). Whereas, more than half (54.3% and 54.5% respectively.) Were females in the study and control group.

Table 2: Comparison between students in both study and control groups according to their perception of evaluation level (Study n=81, control n=77)

Students perception of evaluation level	Study		Post		Control		Post		Test of significant							
	No.	%	No.	%	No.	%	No.	%	X ²	P1	X ²	P2	X ²	P3	X ²	P4
Low effectiveness (Less than 50 percentile)	29	35.8	0	0.0	13	16.9	47	61.0	3.237	0.198	8.102	0.017*	7.395	0.025*	121.698	<0.001*
Medium effectiveness (50 to Less than 75 percentile)	39	48.1	13	16.0	50	64.9	30	39.0								
High effectiveness (75 percentile and more)	13	16.0	68	84.0	14	18.2	0	0.0								

X²: Chi-Square Test

P1: Stands for p-value for Chi-Square Test for comparison between pre and post in the study group

P2: Stands for p-value for Chi-Square Test for comparison between pre and post in the control group

P3: p value for Chi-Square Test for comparing between study and control pre evaluation

P4: p value for Chi-Square Test for comparing between study and control post evaluation

*: Significant at P value ≤0.05

Table 2 denotes comparison between students in both study and control groups regarding to their perception of evaluation level; it can be deduced that, students of the control group significantly higher percentage (61.0%) of the low level of perception of evaluation post the evaluation interventions than pre the evaluation interventions (16.9%).

By comparing between study and control pre-evaluation interventions; students of the control group got significantly higher percentage in the high effectiveness level of perceived evaluation 18.2% Vs 16.0%. while post the implementation of evaluation interventions the study group got a significantly higher percentage 84.0% in this level compared to 18.2% among the control group.

Table (3): Mean differences between study and control groups in relation to their perception of evaluation scales (Study n=81, control n=77)

Scale SPEQ)	Maximum allowed score	Groups				Test of significance										
		Study		Control		ANOVA		t test								
		Mean ±SD Pre	Post	Mean ±SD Pre	Post	F	P1	F	P2	t	P3	t	P4			
Congruence with Planned Learning	25	21.4±1.4	13.9±1.0	14.0±1.1	13.6±1.2	2.735	.025	3.965	.001*	-	68.997	<0.001*	46.282	<0.001*		
Authenticity of Assessment	30	2.6±0.6	23.5±2.2	10.6±1.2	10.2±0.9	12.472	.001*	1.810	.122	-	45.742	<0.001*	55.860	<0.001*		
Students' Consultation about Assessment	20	4.0±0.0	23.2±2.1	6.9±0.7	8.0±0.9	---	#	1.139	0.345	-	35.552	<0.001*	60.566	<0.001*		
Transparency of Assessment	20	7.4±1.2	18.3±1.6	7.6±1.2	7.2±0.7	3.386	.022*	2.182	.079	-1.651	.103	53.913	<0.001*			
Students' Capabilities	20	7.6±1.1	18.6±1.7	7.7±1.1	7.2±1.6	4.125	.004*	3.198	.012*	-2.002	.049*	32.455	<0.001*			
Total Scale (SPEQ)	115	46.2±2.7	105.3±8.9	47.0±2.7	46.3±2.4	2.384	.014*	2.664	.007*	-3.439	.001*	54.600	<0.001*			

F: ANOVA test P1: Stands for p-value for ANOVA test for comparison between pre and post in the study group

P2: Stands for p-value for ANOVA test for comparison between pre and post in the control group

P3: p value for Student t-test for comparing between study and control pre evaluation

P4: p value for Student t-test for comparing between study and control post evaluation *: Significant at P value ≤0.05 # No statistics calculated ALL the students give the same response

Table 3, denotes mean differences between study and control groups in relation to their perception of evaluation scales; it can be deduced that, post the evaluation intervention, students of the study group got significant higher mean scores than pre the evaluation intervention in the following scales; authenticity of assessment (23.5±2.2 Vs 2.6±0.6), transparency of assessment (18.3±1.6 Vs 7.4±1.2), students' capabilities (18.6±1.7 Vs 7.6±1.1), as well as Total Scale (SPEQ) (105.3±8.9 Vs 46.2±2.7).

Students of the control group got significant lower mean scores post the evaluation intervention than pre the evaluation intervention in the following scales; congruence with planned learning (13.6±1.2 vs 14.0±1.1) and students' capabilities (7.2±1.6vs 7.7±1.1) as well as well as Total Scale (SPEQ) (46.3±2.4 Vs 47.0±2.7).

In comparing between study and control pre-evaluation interventions; there were statistical significance difference between the two groups in the following scales of SPEQ; congruence with Planned Learning, Authenticity of Assessment, Students' Consultation about Assessment, and Students' Capabilities. Where the study group had significantly higher mean score only in congruence with Planned Learning scale compared with the control group (21.4±1.4 Vs 14.0±1.1). While the control got significant higher mean score in Authenticity of Assessment, Students' Consultation about Assessment, Students' Capabilities and Total Scale (SPEQ); (10.6±1.2 vs 2.6±0.6), (6.9±0.7 vs 4.0±0.0), (7.7±1.1 vs 7.6±1.1) and (47.0±2.7 Vs 46.2±2.7).

Post the evaluation interventions there were highly statistically significant difference between the two groups and the study group had higher mean scores in all scales of SPEQ as well as the total mean score of (SPEQ).

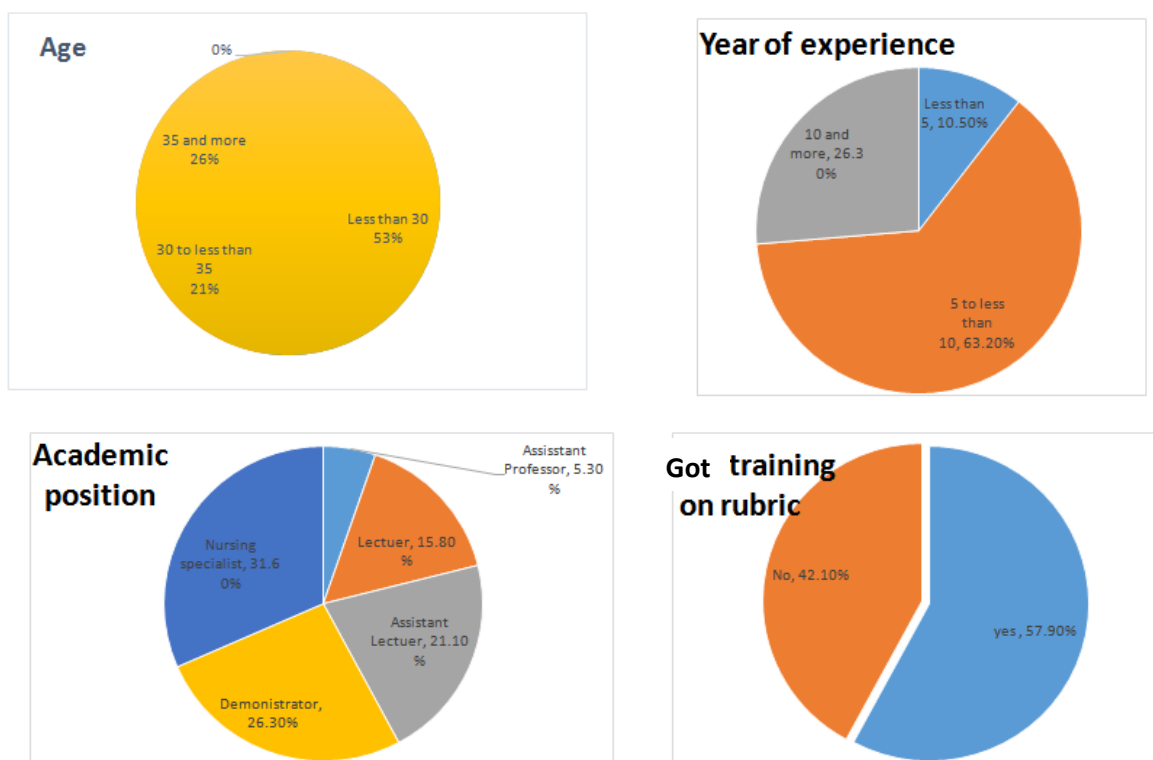


Fig.1: Distribution of educators according to their personal and academic profile (N=19).

In relation to age; more than half of the educators were less than 30 (52.6%), more than one quarter were in the age group of 35 and more and the rest were in the age of 30 to less than 35 and the mean of age was 30.6. Concerning year of experience; the highest percentage 63.2% had 5 to less than 10 year of experience and the mean of the experience years was 8.1.

Regarding academic position; the highest percentage (31.6 %) was among Nurse specialists, followed by Demonstrators, Assistant lecturers, Lecturers, Assistant professor; 26.3%, 21.1%, 15.8%, 5.3%. Finally, more than half 57.9% reported that they got previous training in evaluation methods and tools. (Fig. 1).

Table (5): Comparison between educators' perception of evaluation level pre and post the application of the analytic rubrics (N=19).

Percentile levels of educator perception of evaluation	Pre		Post		
	No.	%	No.	%	
Low effectiveness (Less than 50 percentile)	5	26.3	0	0.0	
Medium effectiveness (50 to Less than 75 percentile)	11	57.9	0	0.0	
High effectiveness (75 percentile and more)	3	15.8	19	100	
Mean scores of educators' Perceptions of evaluation	Maximum allowed score	Mean ±SD		Test of significance	
		Pre	Post	F	P
	70	18.3±11.2	68±0.6	.893	.429

Table 5 represents comparison between educators' perception of evaluation level pre and post the application of the analytic rubrics; All educators perceived high effectiveness of evaluation post implementation of the analytic rubrics. Furthermore; A very high mean score of educators' perceptions of evaluation that represents the effectiveness of evaluation 68±0.6 was noticed post the implementation of analytic rubrics when the maximum allowed score is 70.

Part II: Qualitative findings addressed by the open ended questions of Tool II and IV:

The qualitative data regarding the perception of the study group students toward the benefits of analytic rubrics in the current study could be clustered under the following categorical schemes: **First,**

Opportunities for improvement benefits, Second, Organization of work benefits, Third Authenticity and forth suggestions.

Students claimed the following statements under the previously mentioned themes; *"I think rubrics respond to our needs and demands in evaluation and give us a chance to improve our performance."*, *"We obtain, direct comment, particularly on faults."*, *"I can estimate marks preceding to the offer of tasks and concentrating assignments to develop performance on following tasks."*, *"I love that the rubric is so specific, there is exact description of what are the step and what your next step might be"*, *"It's just like a plan of work."*, *"We feel more confident because we know what standard we are at now before going for practice in hospitals."*, *"The steps are so real, even the mistakes."* And most of the students suggested applying self-evaluation using rubrics".

The qualitative data regarding the perception of the educators toward the benefits of analytic rubrics could be scaled under the following categorical schemes: **First, Effect on teaching skills**, educators reported that, *"With the rubric we have a common ground or common language in our teaching."*, *"The rubric has kept me organized."*, *"My lesson plans are better."*, *"I think applying these accurate tools will make us better teachers."*, *"I appreciate the rubric. It helps keep me focused."* **Second, Effect on evaluation they commented as follows**, *"Helped me to overcome a problem that faced me that I had no enough time to justify the grades for each student."*, *"A rubric helps to get rid of pre-judgments because it draws the evaluator's attention to performance criteria."*, *"Ensure consistency of evaluation between observers"*, **Third Effect on students and their learning, educators responses were as follows**; *"I teach students how to fish instead of putting a fish in their mouth it helped me to facilitate our goal to enhance independent learning."*, *"When students have the grading standard in hand, they are better able to critique their own performance and improve it."* and **forth educators suggested to**; *"Apply peer evaluation and self-evaluation, Apply these tools in all departments, Conduct more training programs, and Design a rubric for evaluating teacher performance."*

IV. Discussion

Despite the concerns of using a rubric, a well-designed and formulated rubric can be an effective evaluation tool for nursing education. Labor market demands high quantity nursing care and highly competent nurses. However, the supply of educational tools to both faculty members and students seems overdue. Compared with existing literature, which focused either only on student or teachers, this study examined the experiences and perception of both students and educators. aimed to explore the perception and experiences of nursing students and educators with the implementation of analytic rubrics evaluation tool in medical surgical nursing department.

[23]

Results of the present study revealed that post the evaluation interventions there were statistically significant difference between the two groups and the study group had higher mean scores in all scales of SPEQ as well as the total mean score of (SPEQ). Regarding **Congruence with Planned Learning**; results could be justified as students have a better gratitude for rubrics because they diminish ambiguity; clearly relation the problems that a tutor senses are significant and offer the students with a connection between assignment, expected outcome, and learning objective. These results were in line with Wu,Xet al. 2015 [24] who reported that Students in the open-ended questions that mentioned;

"It's just like a plan of work", I love that the rubric is so specific, there is exact description of what are the step and what your next step might be.

Same results were found in a previous study of Becker in 2016, who reported that students were rated on separate papers, separate presentations, and individual projects, by means of rubrics that were delivered to the students when the task was completed. During the last gathering of each class, students were requested to comprehensive a feedback form that comprised queries concerning the usage of rubrics. Subsequent running of the inquiry form, students contributed in focus group discussions that revised that authentic usage of the rubric in the course. They stated that rubrics "provide you a standard and display precisely what is predictable." "You identify what the criterions are when arranging tasks". [25]

As for authenticity of assessment; results denoted that the study group got significantly higher mean score than the control group, post the implementation of evaluation interventions. A rubric provides students with clarity about what they will face in the practice settings.it is considered an authentic assessment consists of a performance task that presents a real-life learning situation requiring nursing students to apply their knowledge and make decisions to solve problems. Students in the open-ended questions reported that;

"We feel more confident because we know what standard we are at now before going for practice in hospitals"
The steps are so real, even the mistakes.

In nursing education, experiential learning plays a critical role, as Nightingale pointed out: "It is as impossible in a book to teach a person in charge of the sick how to manage, as it is to teach her how to nurse. Circumstances must vary with each different case" [23] (Gulikers et al.,2006). Authentic assessment promotes learning and assessment of cognitive, functional, ethical, and personal competence in professional, real-world situations. [24]

These results are in line with those of Wu et al. in 2015 [24] in their study "Nursing students' experiences with the use of authentic assessment rubric and case approach in the clinical laboratories" The use of the authentic assessment (AA) rubric developed students' confidence in performing skills before going for clinical practice. The use of the AA rubric with an authentic clinical case in this study helped students integrate both knowledge and skill competencies, and this forms an important foundation for the development of competent professional nurses. When used in a case context, a rubric offers instructors a way to develop and assess critical thinking skills. Critical reasoning develops over time through varied experiences and not through one lecture or one clinical experience.

As for students' consultation about assessment; results cleared that the study group got significantly higher mean score than the control after the implementation of evaluation interventions. Self-regulation can be developed so enhancing the ability of students to understand and make use of feedback. The applicability of feedback to assessment criteria make student aware of every detail in their evaluation. Adding student's remarks on their grade will be more fruitful. In addition, rubrics permitted students to involve in significant procedures including finding critical questions in a task and, thus, decreasing ambiguity and exploit additional expressive effort, defining the total effort desired for a task, appraise their own performances. Students reported that;

"I can estimate degrees preceding to the submission of tasks and concentrating efforts to develop performance on following tasks"

This result is somewhat consistent with to the findings of Cabrera et al., 2017. [26] One clear explanation that emerged from those studies was that rubrics were effectively as if it was co-created with students. In addition to student engagement being identified as important, Bradford, 2016 [27] found that the use of rubrics enhanced the dialogue and relationship between academics and students. In their small longitudinal study, they found that as the rubric was used to assess different pieces of work. In addition, the relationship between the academics and students was enhanced with a shared meaning and expectations developing about the assessment.

Concerning, transparency of assessment; results revealed that the study group got significantly higher mean score than the control after the implementation of evaluation interventions. By using rubrics, students identified that they used the rubric as a 'recipe' that helped guide them and that it acted as a resource which they could use to complete their work to the required and transparent standard.

Reddy and Andrade, (2010) [5] published a review of the experiential research on the usage of rubrics at the post-secondary level, where they recognized gaps in the literature and suggested are a necessity of research. researches of students' feedback to rubric usage propose that graduate and undergraduate students worth rubrics because they explain the objectives for their effort, permit them to control their growth and create grades or marks obvious and unbiased. In the study undertaken by Rakedzon and Tsabari in 2017 [28] the instructors observed that clear articulation of expectations resulted in reduced conflict over grades and limited potential for successful grade appeals. Furthermore, rubrics increase transparency and objectivity in assessment.

Regarding, students' capabilities; results revealed that the study group got significantly higher mean score than the control post implementing the evaluation interventions. Rubrics can be linked to self-efficacy through feedback the learner receives while completing the task. Determining one's self-efficacy requires information about one's performance, which can be evaluated with the standards set in the rubric. Self-efficacy can be increased when learners are taught effective learning strategies and evaluated by methods and tool that enhance their capabilities. Instruction on using a rubric can be considered a learning strategy and if taught as guided practice, is likely to increase self-efficacy, capabilities and subsequently academic achievement.

Results were in harmony with those of Yosmaoglu in 2015. [29] He reported other factors that contributed to the usefulness of a rubric was that, students found the criteria used in the rubric to be comprehensible and useful, the rubric was also used to; assess progress, structure the work and to reflect on their own competency in completing the work. Students also saw rubrics as a valuable grading tool. They routinely commented that rubrics provide "immediate" and "positive feedback." Students valued the rubrics because they help to "tell you about your weaknesses." This in turn allows students to focus their efforts and improve performance on subsequent assignments.

Although 57.9% of the he medical surgical nursing educators reported that they got previous training in evaluation methods and tools. It; still a low percentage because there is more work to be done in evaluation reform to attain quality of education. Similar finding was revealed by Li in 2018 ^[17] According to the responses, 42% of teachers claimed that they did not have too much knowledge about rubrics. Li added that, 59% of teachers and 63% of administrators say education authorities is not doing enough to promote, and improve teaching skills, but there is disagreement about how that should happen. Some would argue that teacher evaluation should be based on their competencies in evaluation as teaching; others would suggest inequitable funding is the greatest problem to plan and implement training programs to improve education.

Results of the present study revealed that all educators (n=19) perceived high effectiveness of evaluation post implementation of the analytic rubrics. From the instructor's perception, rubrics delivered a significant value. Through careful training of rubrics; the subsequent core profits could be achieved; a) critical issues that focus on students learning and performance will be improved, b) teaching skills, and c) evaluation skills will be enhanced. as the analytic rubric is a valued tool in reducing weaknesses of the students.

Regarding students learning and performance; analytic rubrics permits students to emphasis on their efforts and develop performance on following tasks. And help them to be active learners who are responsible for the improvement of their performance. In the open-ended questions educators stated that;

"Rubrics is beneficial for students as it increases awareness of learning the goal was enhanced and by developing and applying rubrics students became active learners".

" I teach students how to fish instead of putting a fish in their mouth it helped me to facilitate our goal to enhance independent learning".

" When students have the assessment principles in hand, they are better able to critique their own performance and improve it".

In this line Cabrera et al. in 2017^[26] stated that, rubrics guide students as with clear indicators of performance so it is just like in each criterion, educator specify what is must done to get the highest score. Rubrics make the teaching and learning process more detailed and purpose more specific.

Similar results were reported by Li in 2018 ^[17], according to the responses, 68% of teachers believed that their assessment was effective in helping students make progress in many aspects of learning and 32% of them believed that the assessment was effective only in certain aspects. Moreover, results were on the same track of Becker 2016 ^[25], who reported that rubrics could help students improve performance to a large extent. additionally, survey outcomes showed that the initial usage of rubrics promoted students' self-efficacy. Self-efficacy was defined as an individual's belief that they have the ability to achieve specific goals. Moreover, rubrics increase students' satisfaction with evaluation process, and encourages learners' autonomy. ^[30,31]

As for teaching skills; findings of the present study revealed that educators perceive benefits of analytic rubrics in teaching skills. Analytic rubrics guide students in designing their lesson plan and in organizing the sessions. Another issue is the unification of work among all educators that facilitate team-teaching. Educators stated in the open-ended questions that;

" Think with the rubric we kind of have a common ground or common language in our teaching".

" The rubric has kept me organized. My lesson plans are better".

" I think applying these accurate tools will make us better teachers. "

" I appreciate the rubric. It helps keep me focused".

Similar results were reported by Bradford et al. (2016) ^[27] who conducted a study on 20 first grade and 12 second grade students of different ages and races. The experiment compared the difference between teaching mini lessons alone and teaching mini lessons with provision of a rubric along with instructions on how to use it. The results indicated that most participants agreed that the rubric helped by providing explanations for how to do the lesson plan.

Concerning, perceived benefits in evaluation. Rubrics improve reliability, and objectivity in evaluation. Analytic rubrics could be the quality and objectivity of evaluation formula, as it provides exactly the characteristics for each level of performance on which they should base their judgment. In this respect, educators commented in the open-ended questions that;

"Helped me to overcome a problem that faced me that I had no enough time to justify the grades for each student".

"A rubric help to get rid of pre-judgments because it draws the evaluator's attention to performance criteria".

" Ensure consistency of evaluation between observers".

Similar findings were reported by Yosmaoglu in 2015. [29] When the scoring rubric was used, the congruity between observers was much higher than by using rating scale. This finding suggests that when scoring rubric is used in evaluating proficiency in the practical examination, the probability of different scorers assigning the same score to the same level of performances is higher. This is important for minimizing the problem of the raters' making subjective judgments during the assessment.

V. Conclusion

It can be concluded from the present study that analytic rubrics had a positive influence on the assessment process as perceived and experienced by both the nursing students and medical surgical nursing educators. The study revealed that, post the implementation of evaluation interventions the study group got a significantly higher percentage in the High effectiveness level of perceived evaluation. Post the evaluation interventions there were statistically significant difference between the two groups and the study group had higher mean scores in all scales of SPEQ as well as the total mean score of (SPEQ).

All educators perceived high effectiveness of evaluation post implementation of the analytic rubrics. Furthermore; a very high mean score of educators' perceptions of evaluation that represents the effectiveness of evaluation was noticed post the implementation of analytic rubrics.

VI. Recommendations

To deduce, the current study has presented significant results in relations of growth of the evaluation system. So the following points are recommended;

- Addressing clear, written policy for the staff and the nursing students to be educated about rubrics forms.
- Training workshops and seminars should be conducted and supported to make sure that all the educators have vital practical training to make their own rubrics.
- Foster alternative assessment approaches and adequate support from institutions.
- Ensure that all the departments usage the rubrics in all courses and faculties of nursing should take necessary steps to achieve that goal.

Further researches:

- The researchers propose that further studies should be done in diverse disciplines in different Universities and all educational institutions.
- The effect of an analytic trait, task-specific rubric with or without explanation on self-efficacy and academic achievement.
- Impact of the usage of rubrics on the performance of students.
- Effect of self-evaluation rubrics on enhancement of student learning.
- Design a rubric for evaluating teacher performance.
- Self-regulation and rubrics assessment in medical surgical nursing.
- Effects of implementing of Rubric-Based Feedback on Learning Outcomes.

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