

Nurse educators' attitude and satisfactory level regarding use of students' portfolio as an assessment tool

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Abstract: Identifying nursing program outcomes to be attained by students is a critical but not difficult task. The challenge for faculty is to actually determine what students have learned; how they have changed academically, professionally, and personally; and whether program outcomes were met at the end of their journey through the curriculum. There is a growing national and international trend in nursing education programs to use portfolios to assess learning and competence. They have become a valuable alternative/ adjunct method for assessing student performance. **Aim:** The aim of this study was to investigate nurse educators' attitude and satisfactory level regarding use of students' portfolio as an assessment tool. **Materials and Methods:** This study involved 70 nurse educators, it has a descriptive design and it was carried out at Faculty of Nursing, Alexandria University. Nurse educators' attitude and satisfactions regarding portfolio assessment questionnaire was used to collect data. The questionnaire consists of 2 parts. Part I It consists of 19 statements to evaluate nursing staff performance during different 5 steps of portfolio assessment and part II includes 7 statements for to determine nurse educators' attitude towards portfolio assessment. **Results:** It was found that more than half of the studied group (57.9%) agreed that portfolio assessment is considered time consuming for them. (69%) of studied sample stated that portfolio assessment is easy for them, provokes their interesting to know the level of their students' achievement, and it is very substantial to evaluate their students' achievement. (50.7%) of studied sample agreed that portfolio assessment is unburdening for them during works. Nurse educators had positive attitude regarding the use of students' portfolio as an assessment tool. A positive attitude was more observed among nurse educators who had master and doctoral degree and those who had years of experience from 5 - 10 and from 16 – 20 years. The majority of nurse educators were satisfied in relation to steps of portfolio assessment. **Conclusion:** The finding of the present study showed that educators have a positive attitude towards the use of student portfolio assessment which leads to high satisfactory level of their performance. The least positive attitude during portfolio assessment was considering it as time consuming, burden task and less easy in its application. Moreover, educators with doctoral degree had the least satisfactory level regarding all steps of portfolio assessment. In addition, educators with bachelor degree had low satisfactory level regarding step of utilizing results of portfolio assessment.

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1. Introduction:

Identifying nursing program outcomes to be attained by students is a critical but not difficult task. The challenge for faculty is to actually determine what students have learned, how they have changed academically, professionally and personally and whether program outcomes were met at the end of their journey through the curriculum. There is a growing national and international trend in nursing education programs to use portfolios to assess learning and competence^(1, 2). They have become a valuable alternative or adjunct method for assessing student performance^(3, 4).

It is recommended that an assessment be implemented during the instruction, not separately done after the instruction finishes.⁽⁵⁾ In addition, student learning assessment should be holistically performed under the active participation of various

parties, e.g., students themselves, their peers and their teachers. Traditional tests have failed to allow students to demonstrate the multidimensional aspects of what they have learned.⁽⁶⁾ Moreover, students are viewed as subjects of the testing rather than partners in the testing tests. Therefore, many teachers have refused to accept this one-shot formalized instrument as a tool to assess student learning. In contrast to the traditional tests, an authentic assessment is more similar to a real-life task rather than a test that appears rigid and static. Portfolio, which is one of the authentic assessment methods, has been used by educators in addition to traditional tests.⁽⁷⁾

A portfolio is potentially an authentic assessment tool to assess student learning, which could be applied in a complex real-world situation. Portfolio is an organized purposeful collection of evidences accumulated on a student's academic progress,

achievements, skills, characteristics, and attitudes over time. Moreover, it is evidenced that the process of making a portfolio is also a learning tool that promotes students' improvement in academic achievement, achievement motivation, critical thinking, self-directed learning, self-confidence, and creative thinking⁽⁸⁻¹⁰⁾

Portfolios help students improve their communication skills, as well as reflect on their learning process and products, due to the fact that during the process of organizing the portfolios, students become highly engaged in their learning through the steps of product selection and reflection. Students can then further assess and revise their products. Moreover, portfolios could help students become aware of their strengths and weaknesses.⁽¹¹⁻¹²⁾

Portfolio use allows students to be accountable and autonomous learners responsible for the direction and quality of their learning and professional development progress.^(13, 14) Self-confidence is built as students, receiving feedback about portfolio work, recognize and appreciate their ability, skills, and future potential. Student growth is promoted in the areas of reflective thinking and practice, critical incident analysis work, and writing skills.⁽¹⁵⁾ Also beneficial for students and faculty is the creation of strong relationships between them as a result of continued portfolio-related dialogue. Ongoing discussion about the student's portfolio work establishes a two-way learning process from which both parties can benefit. For example, a faculty member might reexamine and change a teaching strategy or course content as a result of reviewing students' reflections on course material. It is important that faculty members play a key role in fostering this relationship and support students as they reflect on their learning experiences and build their portfolios.⁽¹⁶⁾

Literature suggested that different steps in making a portfolio, depending on the learning environment and the portfolio purpose. This makes the portfolio process flexible. However, from analyzing the related literature, there are five common essential steps in making a portfolio, which are planning for portfolio assessment, collecting created products, selecting products and reflecting on selected products, revising and evaluating products, as well as utilizing portfolio assessment results.⁽¹⁷⁻¹⁹⁾

Problems related to using portfolios in nursing education have been documented. The major issue relates to time; students may view the portfolio as time consuming and postpone developing it as they focus on other course work. Faculty also may view the work entailed as time consuming. As a result, commitment on their part may vary leading to inequalities in student support, guidance, and

assessment. Students may be reluctant to engage in self-reflection and not value or have developed the knowledge or skills to do it. As well, faculty may need assistance in developing and fostering students' self-reflection and self-assessment abilities.^(1, 16)

Aim of the study:

The aim of this study was to investigate nurse educators' attitude and satisfactory level regarding the use of students' portfolio as an assessment tool.

2. Materials and Methods:

A-Design:

This study has descriptive exploratory design.

B-Setting:

The study was carried out at Faculty of Nursing, Alexandria University.

C- Study population:

This study involved 70 nurse educators who were available during data collection and accepted to participate in this research from different departments including medical surgical nursing, critical care nursing, pediatric nursing, obstetrics and gynecology nursing, community health nursing, psychology nursing, gerontological nursing and nursing education.

Tool of data collection:

Nurse educators' attitude and satisfactory level regarding portfolio assessment questionnaire was developed by the researcher after reviewing previous literature⁽⁵⁾ and used to collect data. The questionnaire consists of two parts.

Part I:

It consists of 19 statements to evaluate nurse educators', satisfactory level during different steps of portfolio assessment which include:

- 1- Planning for portfolio assessment.
- 2- Collecting created products.
- 3- Selecting and reflecting on selected products
- 4- Revising and evaluating products.
- 5- Utilizing portfolio assessment results.

For each statement nurse educators were asked to respond by using the following answers always, usually, sometimes, rarely and never.

Part II:

It includes 7 statements for to determine nurse educators' attitude towards portfolio assessment. Each statement nurse educators were asked to rate their responses on a point scale rating from 1-3. (1) For disagree, (2) neutral, (3) for agree.

Methods:

Permission to conduct the study was obtained from the Dean of the Faculty of Nursing, Alexandria University.

After reviewing related literature to fulfill the aim of the study, tool was developed by the researchers. The tool was tested by 5 experts in education nursing field and critical care nursing for

content validity (95%). Tool reliability was asserted using the cronbach's coefficient alpha test. The reliability coefficient was 0.757.

A pilot study was carried out on five nurse educators to check and ensure the clarity and applicability of the tool and the necessary modifications were done.

All nurse educators involved in the study were interviewed and were told about the aim of the study and its significance. Consent of the every nurse educator for their participation was obtained after explaining the aim of the study and they were invited to participate in this study.

Data analysis:

Data was analyzed using the Statistical Package for Social Science (SPSS version 16). The obtained data were coded, analyzed and tabulated. Descriptive analysis was performed in this study including frequencies, percentage and Mont Carlo exact probability test.

3. Results:

Table (I) shows Frequency distribution of nurse educators according to gender, level of education and experience. In relation to their gender, it was found that the majority of the study group was females (95.7%).

Regarding educational qualifications, the table illustrated that about half of nurse educators (47.8%) had bachelor degree.

As regards to their level of experience the table revealed that less than half of the studied sample (40.6%) were less than 5 years. Moreover, educators with years of experience 16-20 were (8.7%) and educators with more than 20 years of experience were 1.4%.

Table (II) shows nurse educators' attitude regarding portfolio assessment. The table illustrated that more than half of the study group (57.9%) agreed that portfolio assessment is considered time consuming for them. Moreover, about (69%) of nurse educators agreed that portfolio assessment is easy for them, provoked their interesting to know the level of their students' achievement, and it is very substantial to evaluate their students' achievement. About half of the study group (50.7%) was agreeing as regarding portfolio assessment is unburdening for them during works.

Finally, the majority of the study group (71% and 72.5%) stated that using portfolio enhanced the interaction between them and their students and it is an appropriate method to assess student's achievement respectively.

Table (I): Frequency distribution of nurse educators according to their personal characteristics:

Socio demographic data	No	%
Gender		
Male	4	4.3
Female	66	95.7
Educational qualification		
Bachelor degree	33	47.8
Master degree	21	29.0
Doctoral degree	16	23.2
Years of experience		
less than 5 years	28	40.6
5-10 years	18	26.1
11-15 years	16	23.2
16-20 years	6	8.7
more than 20 years	2	1.4

Table (II): Nurse educators' attitude regarding portfolio assessment:

Characteristics of portfolio assessment	Nursing attitude					
	Disagree		Neutral		Agree	
	No	%	No	%	No	%
1- Time consuming	14	20.2	16	21.7	40	57.9
2- Easy	12	17.3	10	13.0	40	69.6
3- unburden	23	33.3	12	15.9	35	50.7
4- Promoting interaction between teacher and student	9	13	12	15.9	49	70
5- Helping to know student's achievement	8	11.5	14	18.8	48	69.5
6-An appropriate method to assess student's achievement	8	11.5	12	15.9	50	72.5
7- substantial to evaluate student's achievement	4	5.8	18	24.6	48	69.6

Table (III): Shows relation between nurse educators' attitude toward using portfolio assessment and their personal characteristics.

The table reveals no significant differences between nurse educators' attitude and their gender, educational level and years of experience. About two thirds of female nurse educators (62.1%) had positive attitude regarding portfolio assessment. A positive attitude was more observed among nurse educators who had master and doctoral degree (75%). Also, it was more observed among nurse educators who had experience from 5 - 10 and from 16 – 20 years (77.8% and 83.3%) respectively.

Table (III): Relation between nurse educators' attitude and their personal characteristics:

Nurse educators' characteristics	Nurses' attitude						MCP
	Negative		Neutral		Positive		
	No	%	No	%	No	%	
Gender							0.45
Male	0	0	2	66.7	1	33.3	
Female	4	6.1	21	31.8	41	62.1	
Educational qualification							0.14
Bachelor degree	2	6.1	16	48.5	15	45.5	
Master degree	1	5	4	20	15	75	
Doctoral degree	1	6.3	3	18.8	12	75	
Years of experience							0.27
less than 5 year	2	7.1	14	50	12	42.9	
5-10 year	1	5.6	3	16.7	14	77.8	
11-15 year	1	6.3	4	25	11	68.8	
16-20 year	0	0	1	16.7	5	83.3	
more than 20 year	0	0	1	100	0	0	

FEP: *p* value based on Fisher exact probability. MCP: *P* value based on Mont Carlo exact probability. * *P* < 0.05 (significant)

Table (IV) shows nurse educators' satisfactory level during different steps of using of portfolio assessments. Concerning step of planning for portfolio, the majority of nurse educators (97.1%) were satisfied. In relation to step of collecting products the majority of nurse educators (88.4%) were satisfied. Moreover, the majority of nurse educators (84.1%) were satisfied during steps of selecting products and reflecting on selected products and utilizing portfolio assessment results.

As regarding step of evaluation products less three quarters of nurse educators (71%) were satisfied. Regards the total satisfaction of practice of nurse educators, the table revealed that, the majority of them (84.1%) were satisfied. Moreover the mean score for nurse educators as regarding total practice were 59.6±12.7.

Table (IV): Nurse educators' satisfactory level regarding different steps of portfolio assessment.

Steps of portfolio assessment	Nurse educators' satisfactory level				X ± SD
	Unsatisfactory (↓ 60%)		Satisfactory (↑ 60%)		
	No	%	No	%	
Planning for portfolio	3	2.9	67	97.1	17.2 ± 3.1
Collecting products	8	11.6	61	88.4	9.9 ± 2.2
Selecting products and reflecting on selected products	12	15.9	58	84.1	12.3 ± 3.4
Evaluating products	21	29.0	49	71	10.6 ± 4.1
Utilizing portfolio assessment results	12	15.9	58	84.1	9.6 ± 2.4
Total practice	12	15.9	58	84.1	59.6 ± 12.7

Table (V) shows relation between nurse educators' satisfactory levels related to portfolio assessment and their personal characteristics.

As regards to gender it was found that there was no significant difference between gender of nurse educators and their satisfactory level related to portfolio assessment.

Regarding educational qualification it can be noted that there is low satisfactory level during evaluating product and evaluating results steps among nurse educators with bachelor degree (60.6% and 69.7%) respectively. Furthermore, there was low satisfactory level among nurse educators with doctoral degree during evaluating products step (68.8%). On the other hand, it can be noted that, the lowest satisfactory level for all steps of portfolio assessment was among nurse educators who had doctoral degree (25.9%) with significant difference ($P=0.01$).

In relation to years of experience low satisfactory level was found among nurse educators with experience less than (60.7%) and with experience from 11-15 years (56.3%). On the other it can be observed that there was the lesser satisfactory level with higher years of experience with significant difference (0.04).

Table (V): Relation between nurse educators' satisfactory levels regarding different steps of portfolio assessment and their personal characteristics

Nurse educators' characteristic	Nurse educators' satisfactory levels of different steps of portfolio assessment					
	Planning for portfolio	Collecting products	Selecting products	Evaluating products	Utilizing results	Total
Gender						
Male	100	100	100	100	100	5.2
Female	97	87.9	83.3	69.7	83.3	94.8
FEP	0.8	0.5	0.4	0.3	0.4	0.4
Educational qualification						
Bachelor degree	97	84.8	78.8	60.6	69.7	39.7
Master degree	100	95	95	90	100	34.5
Doctoral degree	93.8	87.5	81.3	68.8	93.8	25.9
MCP	0.5	0.5	0.3	0.07	0.01*	0.01*
Years of experience						
less than 5 year	100	85.7	78.6	60.7	71.4	32.8
5-10 year	100	94.4	94.4	94.4	94.4	31.0
11-15 year	87.5	87.5	75	56.3	87.5	24.1
16-20 year	100	83.3	100	83.3	100	10.3
more than 20 year	100	100	100	100	100	1.7
MCP	0.16	0.89	0.36	0.07	0.18	0.04*

*FEP: p value based on Fisher exact probability. MCP: P value based on Mont Carlo exact probability. * P < 0.05 (significant)*

4. Discussion:

The result of this study indicated, that, overall educators were found to have positive attitudes on the use of student portfolios (Table II). Their attitude was most positive on its appropriateness as an assessment method. On the other hand, their attitude was least positive on its burden, easiness and consuming time in using student portfolio assessment. This is consistent with other previous research study done by Samnaingdee⁽²⁰⁾ it was found that educators with different teaching experience had positive attitudes toward the use of portfolio assessment. Moreover, Khantong⁽²¹⁾ revealed that educators had positive attitudes toward the use of portfolio assessment. Moreover, a positive attitude on the use of portfolio assessment could also help educators deal with any problems in using student portfolio assessment since

research shows that a positive attitude helps people cope with troubles more easily⁽²²⁾.

In this study it was found that, as a whole, satisfactory level of performance of educators was high (Table IV) in all of the steps (i.e., planning for portfolio assessment, collecting created products, selecting products and reflecting on selected products, revising and evaluating products, and utilizing portfolio assessment results). This finding is similar to finding of Pearson Education Development Group, 2001⁽²³⁾. While, it is in the contrary with the finding of previous study done by Kornketkamon⁽²⁴⁾ It was found that educators had problems in the use of portfolio assessment, especially encouraging students to organize their artifacts in the portfolios, giving students a chance to express their opinion on students' artifacts, and utilizing the students' portfolios as a

means to evaluate the success of educators' instruction.

In addition, this research finding is different than finding of Srirod⁽²⁵⁾ study which found that educators have some difficulties in guiding students in selecting the products in their portfolios, encouraging students to reflect on their products, as well as guiding students to evaluate their products and learning. High satisfactory level of nurse educators in this study may be related to their positive attitude toward usage of portfolio which makes them able to overcome any obstacle or difficulties during their performance.

The results which show there is a statistically significant difference in satisfactory level of educators with doctoral degree on the use of student portfolio assessment (Table V) because using portfolio assessment started during the last decade. This reason explains the lower satisfactory level of educators with doctoral degree as they did not use portfolio when they were undergraduate student or during their studying for master degree. So, they had not enough experience to use portfolio and they may face some difficulties in application of portfolio assessment. Furthermore, the inverse relationship between satisfactory level and years of experience (Table V) fosters this explanation.

Satisfactory level of educators with bachelor degree for step of utilizing portfolio results was lesser than satisfactory level of other educators with significant difference. That may be due to the fact that planning for portfolio assessment and collecting created products selecting products and reflecting on the selected products, followed by the step of revising and evaluating products, is rather straight forward compared to step of utilizing results in the portfolio process.

Evaluation of employees' satisfactory level at any organization may help its directors to determine needs of them. So, Finding of this study related to nurse educator satisfactory level indicated that educators with doctoral degree had needs with the use of students' portfolios assessment in all of the steps of student portfolio assessment and educators with bachelor degree had most critical needs in the use of student portfolio assessment in the step of utilizing results of portfolio assessment.

Conclusion:

The finding of the present study showed that educators have a positive attitude towards the use of student portfolio assessment which leads to high satisfactory level of their performance. The least positive attitude during portfolio assessment was considering it as time consuming, burden task and less easy in its application. Moreover, educators with doctoral degree had the least satisfactory level

regarding all steps of portfolio assessment. In addition, educators with bachelor degree had low satisfactory level regarding step of utilizing results of portfolio assessment.

Recommendations:

- Continuing workshop training sessions on the use of student portfolio assessment should be provided for educators.

- Educators who do not practice using portfolio while they were undergraduate student or during post-graduate studies should have more attention. Furthermore, the step of utilizing portfolio assessment results should be incorporated and heavily emphasized in the training sessions.

- In order to make educators understand the process of student portfolio assessment more clearly, the workshop sessions should be in hands-on format so that educators will have opportunities to practice using student portfolio assessment step by step.

- A handout should be provided for nurse educator to guide them to use student portfolio effectively.

- Using E- portfolio has to start to decrease work load and save time.

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