Developing and Validating Standards for Effective Clinical Training Settings for Nurse Students

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Abstract: Introduction: Clinical training is very important for any clinical profession. It facilitates the student acquisition of fine skills. The focus in clinical education settings must include educational standards and experiences designed to augment students' knowledge and to promote their professional maturity. **Aim**: The study was aimed to develop the standards for the selection of an effective clinical practical setting for nurse students, through determining clinical practical setting criteria from clinical nurse teachers' point of view, eliciting the clinical practical setting criteria from nurse students' point of view, designing standards based on literature review and examining the proposed standards' validity based on experts' opinions.. The study was conducted in tow Technical Institutes affiliated to Ain Shams University using methodological design. **Subjects** of The study included three groups consists of (25) nurse teachers, (130) nurse students enrolled in these institutes and jury group consists of 16 members from the Nursing Faculties. **Tools of data collection** included three tools namely; a questionnaire sheet was used to determine the importance of the developed standards and its criteria from participants view points, opinionnaire sheet to examine the face and content validity of the proposed standards and observation checklist which aimed at assessing the applicability of developed standards. **Results**: The main findings indicated that most of nurse teachers and nurse students agreed upon the proposed standards and its criteria. Jury group were agreed upon almost all of the proposed standards and related criteria. **Conclusion:** there was an agreement on the proposed standards and its criteria for selection of an effective clinical practical setting for nurse students. **Recommendations:** using the developed standards as a tool for assessing and evaluating the clinical practical setting for nurse students.

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1. Introduction

The clinical segments of all health professions education are designed to prepare students to be sensitive and proficient practitioners of their respective disciplines. Although students may learn their responsibilities from the clinical setting where they trained by observing training role models who are experienced professionals, formal and consistent clinical education would help to ensure that all students are exposed to a comprehensive, uniform clinical experience in their profession ***(De Torney and Thompson, 2007).***

Clinical teaching is an important part of nursing education because nursing is a professional practice discipline. Clinical learning activities provide real-life experiences and opportunities for transfer of knowledge to practical situations. Clinical teaching was described as the heart of the professional education. Also, it is a vital for the preparation of professional nurses, who can function competently and independently in a diversity of nursing situations. It focuses on the relationship between theory and practice, and can assist students not only to apply theory, but also to search the ways that nursing theory can emerge from the rich texture of clinical practice ***(Guilbert, 2002 and Oermann and Gaberson, 2009).***

In nursing education, the classroom and clinical environments are linked because students must apply in clinical practice what they have learned in the classroom, and through other experiences. However, clinical settings require different approaches to teaching. The clinical environment is complex and rapidly changing, with a variety of new settings and roles in which nurses must be prepared to practice ***(Kathleen and Oermann, 2009)***.

Clinical learning environment is defined as interactive forces within the clinical setting that influence student's clinical learning outcome. Clinical practice setting provides students with opportunities to develop the knowledge, skills, and attitude of a nurse within realistic setting which they will eventually practice. Although the structure and process of clinical nursing education has changed overtime, the critical role of the clinical setting in preparing the student for challenges of practice has remained a central component of nursing curricula ***(Irby and Bowen, 2004 and O'connor, 2006).***

Several factors can influence the effectiveness of student learning in the clinical environment, the mix of patients seen by the students, the supervision they receive, organizational quality, and the number of students simultaneously learning at the site ***(Jack and Lewin, 2004; Simpson, 2006).*** Humanistic approach,

good team spirit, management style and learning support are other factors which affect clinical training effectiveness. Clinical setting needs to provide experiences that based upon important criteria as compatibility of school and agency philosophy, availability of opportunities to meet learning objectives, geographical location, agency licensure or accreditation, availability of positive role models and physical resources ***(Gardner and Supple, 2010)***.

The clinical training settings are selected somewhat at random for convenience, geographic location, and availability of ‘‘slots’’ for students. Perceptions and experiences of the clinical instructors and staff concerning learning, training, and clinical education come into play as well. Randomness should be reduced in the selection, use, and evaluation of the training clinical education settings ***(Kattleen and Oermann,2010)***

Previous work has focused on the teaching and learning involved in clinical education not on the environmental, administrative, and personnel factors of a clinical education setting. Currently, there is no widely accepted set of standards and measurement criteria for the evaluation and selection of clinical education settings in training.

Aim of the study:

This study was aiming at developing standards for the selection of an effective clinical practical setting for nurses students through:

1- Determining clinical practical setting criteria from clinical teacher's point of view
2- Eliciting the clinical practical setting criteria from nurse students' point of view
3- Designing standards based on literature review.
4- Examining the proposed standards' validity based on experts' opinions.

Research hypothesis:

There is significant difference between nurse teachers’ and nurse students’ opinion on the criteria for selecting effective clinical practical setting for nurse students.

2. Subjects &Methods

Design:

A methodological design was used in the conduction of the study

Setting:

The study was conducted in two technical institutes of nursing which affiliated to Ain Shams University. The Technical Institute of Nursing (TIN), Ain Shams University was established in 1986. This setting has (22) nurse teachers, and (120) nurse students. The other Technical Institute of Nursing, at Ain Shams Specialized Hospital was established in 1996. It is also affiliated to Ain Shams University. This setting has (10) nurse teachers, and (59) nurse students.

Subjects:

Three groups of subjects were included in this study, namely nurse teachers' group, nurse students' group and jury group. **Nurse teachers' group:** The total number of nurse teachers who accept to participate in the study was (25). This group included (18) nurse teachers from the Technical Institutes of Nursing, at Ain Shams University, and (7) nurse teachers from the Technical Institute of Nursing, at Ain Shams Specialized Hospital. **Nurse students' group:** This group was enrolled in the chosen Institutes during the time of the study. The total number of nurse students included (130) nurse students. This group included (79) nurse students from the Technical Institute of Nursing, at Ain Shams University, and (51) nurse students from the Technical Institute of Nursing, at Ain Shams Specialized Hospital. **Jury groups:** This group was recruited for assessing the face and content validity of the proposed standards by eliciting their opinions. This group consisted of sixteen faculty members from four faculties of nursing namely, Ain Shams, Cairo, Alexandria, and Banha Universities.

Tools of data collection:

Three tools were developed by the researcher and used to conduct this study, namely;

An Opinionnaire sheet: This tool was aimed at testing face and content validity of the proposed standards by jury group. Development of the tool was guided by literature review ***(American Nursing Association (ANA), 2004; Marquis and Huston, 2006)***. It included (8) proposed standards, and (33) related criteria. It consisted of two main parts as the following: the first part was intended to collect data related to socio- demographic characteristics of the jury group such as age, years of experience, and specialty, second part concerned with validity of the proposed (8) standards divided in three parts, A (structure standards), B (process standards) and C (outcome standards) . ***Part A: Structure standards:*** This part had (4) proposed standards with (13) related criteria including the hospital and external units (4), institute laboratory (2), equipment and supplies (2), and manpower (5) criteria. ***Part B: Process standards***: This part had (3) proposed standards with (18) related criteria including: Task Orientation (7), Personalization (6), and Student Involvement (5) criteria. ***Part C: Outcome standards***: This part had (1) proposed standard with (2) criteria related to student's satisfaction. Face validity was tested through eliciting the jury group opinion regarding the general form of the proposed standards. Their responses were as agree or disagree. While content validity was tested through indicating the response of jury group on the last part of the opinionnaire, which divided into two main parts as

the following: left part included the proposed standards and their criteria while the right part was divided into two main subdivisions. the first subdivision was the agreement of jury on the proposed standards and their criteria and the second subdivision was clarified through which jury group indicated their response regarding nine characteristics of the proposed standards and their criteria including applicable, measurable, desirable, clear, flexible, realistic, understandable, written in academic context . The scores ranged from 2 to 1 for agree to disagree respectively. Mean percent was used for statistical analysis regarding both face and content validity. According to ***Geri (2002); Huber (2003) and Richard (2005)*** preliminary statistical analysis was done to obtain the valid items of the standard, which obtained a percentage of jury group agreement of 60**%** or more. ***Questionnaire sheet*** aimed at determining the importance of the developed standards and their related criteria from the participants view points (nurse teachers, nurse students). The proposed standards and their criteria were translated from English into Arabic language by specialized professionals. Validity was done for Arabic version. This tool consisted of two main parts as following: first part which was intended to collect data related to socio- demographic characteristics of nurse teachers such as institute name, age, qualification, and years of experience. As well, it related to socio- demographic characteristics of nurse students such as number of family members, father job, and educational level of father.

The second part concerned with participants' agreement upon the importance of proposed standards and related criteria. Responses of participants were measured through important (2 points) or not important (1 point) these scores were converted into a percent scores. The response was included if 60% of participants considered it as important.

Observation checklist aimed at determining the applicability of developed standards. It was divided into two parts: The first part was intended to collect data related to the institute as its name, date of observation, and the period of observation, and the second part including the developed standards, which consisted of 8standards with 33related criteria. Scoring system was ranged from 1point to zero point for present/not present, respectively. These scores were converted into a percent score.

Procedures

An official permission was obtained from the director of each institute before conducting the study. Data was collected in the period from November 2010 till May 2011. A pilot study was carried out after the development of the tools for testing its clarity, relevancy to study and estimate time needed to complete data collection forms. The pilot study was conducted on (3) respondents nurse teachers and (13) nurse students selected from two Institutes for testing the questionnaire sheets. It took around 35 minutes to fill the sheet.Those who participated in the pilot study were excluded from the main study. Few modifications were occurred based on their comments. The fieldwork was achieved through the following four different phases: ***First phase*****:** It was characterized by the development of an opinionnaire sheet by researcher and distributed to be filled by jury group members in their work setting for testing face and content validity of the proposed standards. The opinionnaire sheet took about 30 minutes. Data collection of this phase took about one month . Preliminary statistical analysis was done to obtain the valid items of the standard, which obtained a percentage of jury group agreement of 60**%** or more ***(Geri, 2002; Huber, 2003; Richard, 2005)***. This was done to ascertain the face and content validity of the standards. The percentage of the jury group agreement ranged between 78.7 % and 100%.

Second phase**:** characterized by the development of a questionnaire sheet based on the results of face and content validity of the proposed standards. This sheet was distributed to participants (nurse teachers and nurse students) in their work / education settings by the researcher to elicit their opinions regarding the importance of the proposed standards and their criteria. The participants filled out the questionnaire sheet at the time of distribution. Components of questionnaire sheet were explained to participants, they were completed during day duty, and their filling in took about 25-30 minutes. The researcher checked each questionnaire sheet after filling by each participant to ensure the completion of all information. This step took about four months. ***Third phase*** was characterized by the development of standards for effective clinical training setting based on the results obtained from opinionnaire sheet and questionnaire sheets. ***Fourth part*** was characterized by designing observation checklist based on the developed standards. It used by the researcher to test the applicability of the developed standards with their criteria, through observing the clinical settings .it was filled by the researcher during duty day through repeated and continuous three observations to each setting. Filling out the observation checklist took about 60 minutes .this took about two months duration.

Ethical considerations

Prior to the actual work of research study, ethical approval was obtained from the Scientific Research Ethical Committee of faculty of Nursing, Ain- Shams University. Official letters were issued from Faculty of Nursing, Ain shams University to get permission from the director of each institutes for gathering data of research. Verbal consent was obtained from each participants either nurse teachers or nurse students prior to the study conduction and after the explanation of the purpose of the study. They were informed about

their right to withdraw at any time and the collected data will be kept confidential.

Statistical analysis

Data were analyzed using the Statistical Package for Social Science (SPSS) software version (17). Quality control was donning at the stage of coding and data entry. Data were presented using descriptive statistics in the form of number and percentage distribution to determine the highest responses for qualitative variables, means ($\bar{x}$) and standard deviation (SD), for quantitative variables. Qualitative categorical variables were compared using chi-square (x^2) test. Quantitative categorical variables were compared using (T) test. Statistical significance was considered at $P<0.05$.

3. Results:

More than two thirds of nurse teachers (72%) were from Technical Institute of Nursing, Ain Shams University, affiliated to faculty of Medicine. While less than two thirds of nurse teachers (64%) aged less than forty years, regarding experience, less than three quarters of them (72%) had l ten years and more. 60.77% of the studied nurse students was from technical institute of nursing affiliated to faculty of Medicine.

Table (1) represents the agreement of jury group on the general form of the proposed standards. The table demonstrates that (100.0%) of jury group agreed were related to item "statements look like a standard, from the structure point of view", while the lowest percent of agreement (81.25%) was related to the item "standard statements entail the acceptable performance.

Mean percent agreement of jury group on the developed standards and related criteria is presented in table (2). The data revealed that the highest percent of agreement (97.9%) was related to institute laboratory standards, while more than three quarters (78.5%) was related to student involvement and student satisfaction standards.

Table (3) displays a comparison between nurse students' and nurse teachers' opinions about the developed standards. The table indicates that highly statistically significant difference between both groups in relation to personalization standard (*p<0.000)*. As well there was a statistically significant difference between both groups in relation to student involvement standard (*p=0.0*18).

Table (4) represents the agreement of jury group on the hospital and external units' and institute laboratory standards. The table indicates that all jury group (100%) agree upon the hospital and external units have all basic specialty departments for nursing students, while slight more than two thirds of them (68.75%) agreed on the setting should have a variety of clinical diagnoses in each department, and should have a hall or room for daily classes and meetings with students. The table also demonstrates that all of jury group agreed upon all institutes lab standard and related criteria except in two criteria are the labs should have adequate space suitable for the number of students, and a seating for each student have (87.50%) agreed form the jury group.

Table (5) displays the agreement of jury groups on manpower standard. The table demonstrates that all of the jury groups (100%) agreed on the joint committee will be formed through a formal training program protocol between the hospital and the institute of nursing to facilitate nursing students' training in the hospital and solving problems, suitable place for lectures and presentation of cases, suitable place to hold meetings and review practical exercises, and equipment and supplies required for practical training, and safety measures in the training setting. While more than three fifths (62.50%) only agreed on the involvement of nurses in the team in students' performance assessment.

Table (6) indicates the agreement of jury group on the task orientation and personalization standards. The table shows that majority of jury groups (93.75%) agreed on each student should know exactly what she/he should do in the training setting and clear assignment of tasks to students, while more than four fifth of them (81.25%) agreed on concentrating on the quality rather than the quantity of work. and accurate planning for distribution of workload. And the table demonstrates that most of jury groups (93.75%) agreed on trainer respecting students' feelings, and trainer having individual conversations with students, while three quarters of the jury group (75%) agreed on the trainer treating students in a friendly way.

As evident in table (7) the agreement of jury groups on student involvement and students' satisfaction standards. The table demonstrates that most of jury groups' agreement (93.75%) was on making students not feel the length of the lesson time by attractive activities. while more than half (62.50%) agreed on improving students' self-confidence. The table also demonstrates that the majority (81.25%) of them agreed on the training program will assess students' responses to training activities through: Compliance to attendance of practical lessons, and acceptance of training procedures in the setting, and Interest in the content of practical training, while more than three fifths (62.50%) agreed on lack of feeling of boredom.

Table (8) displays the comparison between practical settings in Ain Sham University Hospitals and practical settings in Ain Shams Specialized Hospital about the standards' items. The table indicates statistically significant differences between the two technical institutes practical settings in relation to Manpower standards (*p<0.000)*. The mean of the

manpower standards in setting of Ain Shams Specialized Hospital was (4.500± 0.577), compared to those in settings of Ain Sham University Hospitals with a mean of (1.500±0.577). As well there was a statistically significant difference between the two technical institutes' practical settings about personalization standards (p=0.050). The practical settings in Ain Sham University Hospitals mean of personalization standards was (5.500±0.577), compared to those in the Ain Sham Specialized Hospitals practical settings with a mean of (4.500±0.577). No of statistically significant differences could be detected for the other items of standards.

Table (1): Agreement of jury group on general form of proposed standards (face validity) (n=16).

Proposed standards	Agree	
	No	%
1 – Statements look like a standard, from the structure point of view.	16	100.00
2 – Statements include the standards stem and criteria.	15	93.75
3 –Standard statements entail the acceptable performance.	13	81.25
4– Criteria are described with the required characteristics for each standard.	15	93.75
5– Standard statements could be used as a guide for the selection of an effective clinical practical setting for nurse students.	14	87.50

Table (2): Mean percent for agreement of jury group on proposed standards. (Content validity) (n=16).

NO	ITEM	Agreement	Criteria Characteristics								
		Mean percent	Mean percent								
			1	2	3	4	5	6	7	8	9
1	The hospital and external units	84.3	93.4	91.8	97.4	94.9	95.8	91.0	91.0	92.5	94.1
2	Institute laboratory	97.9	96.1	98.9	95.1	95.0	97.8	95.5	98.3	96.2	97.8
3	Equipment and supplies	83.7	83.2	84.6	83.2	84.4	84.6	84.4	84.6	84.6	84.6
4	Manpower	88.9	87.9	89.6	87.9	90.1	88.2	89.3	88.3	89.1	88.6
5	Task orientation	87.5	84.3	91.7	87.1	89.9	88.0	87.0	87.0	87.0	87.0
6	Personalization	87.5	87.0	92.5	89.2	92.5	87.0	88.0	88.0	87.0	87.0
7	Student involvement	78.5	84.6	87.2	85.8	84.6	84.6	89.6	84.6	85.8	84.6
8	Student satisfaction	78.5	81.7	84.4	87.1	85.4	83.6	83.6	83.6	83.6	83.6

1- Applicable 2- Measurable 3- Desirable 4- Clear 5- Flexible 6- Realistic 7- Understandable
8- Written in academic context 9- Relevant

Table (3): Comparison between nursing students' and nurse teachers' opinions regarding the developed standards.

Standards	Group				T-test	*P*-value
	Nurse Students (n=130)		Nurse Teachers (n=25)			
	Mean ± SD		Mean ± SD			
Hospital and external units	7.100 ± 1.960		7.080 ± 0.862		0.050	0.960
Institute laboratory	13.377 ± 2.009		13.160 ± 1.573		0.510	0.611
Equipment and supplies	3.800 ± 0.730		3.880 ± 0.332		-0.536	0.593
Manpower	18.754 ± 3.864		19.560 ± 1.193		-1.031	0.304
Task orientation	6.715 ± 0.974		6.640 ± 0.569		0.374	0.709
Personalization	5.854 ± 0.695		5.280 ± 0.843		3.651	0.000*
Student involvement	4.638 ± 0.965		4.160 ± 0.624		2.383	0.018*
Student satisfaction	8.454 ± 1.761		7.920 ± 0.759		1.486	0.139

(*) Statistically significant at p<0.05

Table (4): Agreement of jury group on the hospital and external units & institute laboratory standards and its related criteria (n=16).

Standard 1. Hospital & External Units	Agree	
	No	%
1.1. There will be affiliation to a designated hospital or other similar settings for training nursing students.	15	93.75
1.2. This setting should :		
1.2.1. Be a near location from Technical Institute (walking distance).	14	87.50
1.2.2. Have all basic specialty departments.	16	100.00
1.2.3. Allow students to be distributed to all departments.	14	87.50
1.2.4. Have a variety of clinical diagnoses in each department.	11	68.75
1.2.5. Have a hall or room for daily classes and meetings with students.	11	68.75
1.3. Include the schedule of daily rounds should coincide with the training schedule.	13	81.25
1.4. The hospital visiting hours should not affect students' training.	14	87.50
Standard 2. Institute Laboratory		
2.1. The Technical Institutes have designated skill labs for training nursing students.	16	100.00
2.2. The lab should:		
2.2.1. Have appropriate location that is :		
2.2.1.1.Calm	16	100.00
2.2.1.2.Accessible to students	16	100.00
2.2.2. Have adequate space suitable for the number of students.	14	87.50
2.2.3. Have a seat for each student	14	87.50
2.2.4. Have available places for revisions.	16	100.00
2.2.5. Have adequate lighting	16	100.00
2.2.6. Have adequate ventilation (natural or artificial)	16	100.00
2.2.7. Provide clear visibility for each student	16	100.00
2.2.8. Have safety measures and equipment: Fire extinguishers/sprinkles,	16	100.00

Table (5): Agreement of jury group on manpower standard and its related criteria (n=16).

Standards 4.Manpower	Agree	
	No	%
4.1. The training setting/learning environment will be staffed with competent personnel.	13	81.25
4.2. Technical institute staff must be qualified and experienced in training.	15	93.75
4.3. There must be a written protocol between institute and hospital for allocating this team to:	14	87.50
4.3.1. Distribution of students to patients by head nurses	12	75.00
4.3.2. Involvement of nurses in the team for students' Performance assessment.	10	62.50
4.4. Rewarding nursing team for participation in training.	15	93.75
4.5. A joint committee will be responsible for administration of the training program of nursing students.	16	100.00
4.5.1. This committee will be formed through a formal training program protocol between the hospital and the Institute of nursing to:	16	100.00
4.5.1.1.Set the organizational structure of the Program	15	93.75
4.5.1.2. Define the mutual responsibilities/authorities of the hospital and the institute.	13	81.25
4.5.1.3.Designate the person responsible for program management and be responsible to provide with:	14	87.50
4.5.1.4. Set a system for follow -up of the level of students' performance during practical training by the hospital.	15	93.75
4.5.1.5. Facilitate nursing students training in the hospital and solve problems.	16	100.00
4.5.1.6. Suitable place for discussion and presentation of cases	16	100.00
4.5.1.7.Suitable place to hold meetings and review practical exercises	16	100.00
4.5.1.8. Equipment and supplies required for practical training	16	100.00
4.5.1.9. Enhance the safety measures in the training setting	16	100.00

Table (6): Agreement of jury group on the task orientation & personalization standards and its related criteria (n=16).

Standards 5. Task Orientation	Agree	
	No	%
5.1. Each student should know exactly what she/he should do in the training setting.	15	93.75
5.2. Concentrating on the quality rather than the quantity of work.	13	81.25
5.3. Proper use of time by trainer	14	87.50
5.4. Organization of practical training in laboratory	14	87.50
5.5. Clear assignment of tasks to students.	15	93.75
5.6. Commitment to time schedule	14	87.50
5.7. Accurate planning for distribution of workload	13	81.25
Standard 6. Personalization		
6.1.Trainer respecting students' feelings	15	93.75
6.2. Trainer having individual conversations with students.	15	93.75
6.3. Trainer changing of her/his style to help students.	14	87.50
6.4. Trainer providing help to students who find it difficult to work in class	14	87.50
6.5. Trainer paying attention to students' Problems	14	87.50
6.6. Trainer treating students in a friendly way	12	75.00

Table (7): Agreement of jury groups on student involvement & students' satisfaction standards and its related criteria (n=16).

Standard 7. Student Involvement	Agree	
	No	%
7.1.Trainer listening more than talking	13	81.25
7.2. Encouraging students to make a significant more effort in training	14	87.50
7.3. Making students not feel the length of the lesson time by attractive activities	15	93.75
7.4 Improving students' self-confidence	10	62.50
7.5. Allowing students to participate in the process of shift report exchange.	12	75.00
Standard 8. Students' Satisfaction		
8.1.The training program will assess students responses to training activities through:		
8.1.1. Compliance to attendance of practical lessons.	13	81.25
8.1.2. Acceptance of training procedures in the setting.	13	81.25
8.1.3. Interest in the content of practical training	13	81.25
8.1.4. Sense of achievement at the end of the lesson	12	75.00
8.1.5. Lack of feeling boredom	10	62.50
8.1.6. Enjoying coming to the training setting	11	68.75
8.2. Success rates in practical exams.	12	75.00

Table (8): Comparison between practical settings in both institutes regarding fulfilling the developed standards as observed by the researcher.

Standards	Max score	Practical Settings in Ain Sham University Hospitals			Practical Settings in Ain Shams Specialized Hospital			T-test	*P*-value
		Mean	±	SD	Mean	±	SD		
Hospital & external units	8	6.000	±	0.000	6.500	±	0.577	-1.732	0.134
Equipment & supplies	4	0.000	±	0.000	1.500	±	1.732	-1.732	0.134
Manpower	17	1.500	±	0.577	4.500	±	0.577	-7.348	0.000*
Task orientation	7	7.000	±	0.000	7.000	±	0.000		
Personalization	6	5.500	±	0.577	4.500	±	0.577	2.449	0.050*
Student involvement	5	1.500	±	0.577	1.500	±	0.577	0.000	1.000
Student satisfaction	8	6.000	±	0.000	4.000	±	0.000		

(*) Statistically significant at p<0.05

4. Discussion

Clinical education is used across many health care professions as a way to practice didactic information in a hands–on environment. The goal of clinical education is to integrate theory and practice in a controlled environment to provide student with learning that has appropriate skills, behaviors and attitudes that necessary for entry into professional practice. A lack of formal emphasis on clinical education settings promotes haphazard and coincidental learning during students' clinical experiences ***(Lorraine and Hardingham, 2002)***

Findings of the present study indicated that the agreement of jury group upon face validity of the developed standards was ranged from 81.25-100%. While in relation to content validity, the agreement ranged from 78.5-97.9%. These study results were on the same line with those of a study carried out by **Fathy (2009),** who stressed that the validation of any tool should be done by obtaining the academic experts agreement upon its content, in addition to verification of its face validity. Their agreement might reflect the high concern and awareness about the importance of this issue by academic experience.

Results of this study indicated that jury group agreement on the standard of hospital and external units and its criteria was ranged from 68.75%-93.25%. All jury group was agreed upon the hospital should have different specialties, and more than two thirds of them agreed upon the setting should have a variety of clinical diagnoses in each department. This result was congruent with ***windsor (2007)***, who found that, the variety of diagnoses and cases, adequate space for studying, conferences and different treating patients should be available to the students.

This result may be due to students in clinical education are primarily concerned with learning and practicing clinical skills. Therefore, the setting must have an adequate variety and number of patient along with adequate equipment and resources, also the benefit of presence of different diagnosis which facilitate and enhance the students' acquisition of different clinical skills and exposure to different experiences.

As regarding institute laboratory standard, finding of present study indicated that all jury group were agreeing upon the technical institute should have a designated skill lab for training nursing students, The role of the lab has also been clarified by ***Hilton (2005),*** who indicated that the lab gives more chance to practice psychomotor skills, increases students' confidence, and in the long-term bridges the gap between theory and practice. The finding of the present study points to the agreement of the nurse students on the importance of the laboratory and noted that the laboratory should be prepared and equipped to facilitate the training effectively.

These finding were in line with ***Johnson (2003)*** whose investigations have used simulations' role played by students in clinical laboratory setting and found it enhance students' learning and facilitate their acquisition of skill. This result may be due to the importance of the lab for the nurse students, the lab gives the student the chance to demonstrate and redemonstrate the skills while the error that can occurs during training in the lab does not affect/ harm the patient. It also provides opportunities to the student to practice any skill many times without fearing from mistakes. it helps the student to acquire psychomotor skills necessary for the practice of nursing.

Concerning equipment and supplies standard, the study result indicated the majority of jury group was agreed upon the training settings /labs should be supplied with all equipment and supplies needed for training students while all jury groups was agreed upon availability of equipment and supplies to each student. These findings are congruent with ***Cheek (2003)***, who emphasized the importance of equipment and media in learning and training the nurse students.

This finding was also supported by ***Cust (2005)***, who found that laboratory should be equipped with adequate materials to allow a number of students to have the opportunity to demonstrate nursing procedures and secure skills. The equipment required should be like those found in the real clinical setting in which the students have their clinical experience. These results were incongruent with, ***Ironside (2004)***, who pointed to the limitation of resources strategies. They need to be given the opportunities to supplement the students with good preparation of practice clinical environment with resources is important because the context of care is rapidly changing, and the schools of nursing continue to allocate limited resources to practical training.

The present study has demonstrated that jury group was agreed up on manpower standard. All jury groups agreed on the joint committee will be responsible for administration of the training program for nurse student and also this committee should be formed through a formal training program protocol between the hospital and the institute of nursing to facilitate nursing students' training in the hospital.

These findings are congruent with ***Thomas and Weidner (2003)***, who reported that the integration of classroom knowledge into the world of practice requires a team approach that includes academic faculty, Clinical Instructors, organization staff and students. This approach must be intentional; all team members should aware of their roles in the process and cognizant of the interactions necessary to accomplish the goals of clinical education.

The desirable learning environment in the clinical education setting should be characterized by good management, high staff morale, harmonious working

relationships, and sound interdisciplinary patient management procedures ***(Kandee, 2004).*** These results may be attributed to that, the need to involve the staff members in the clinical training process of nurse student in their organization and act as key person for coordinating the clinical education program and facilitate training process.

Related to task orientation standard, the result of the current study showed that the majority of jury group agreed upon this standard and its related criteria. Each student should identify exactly what she/he should do in the training setting and clear assignment of tasks to students. This finding is in line with ***Richerd (2005)***, who explained that a thorough orientation to the clinical education program, plans and activities and the personnel of the clinical setting should be planned and implemented for the student. This result could be explained as awareness of nurse student about the objectives , skills and experiences which should acquire from clinical training setting will facilitate his/her induction to clinical training setting and acquiring practices needed easily and simply.

Most of the jury group in the present study has agreed upon personalization standard. Finding of this study was supported by ***Gidding (2002)*** in ***Magnussen (2003),*** who have pointed to relationship between trainer and students must be close, they needs to be proficient as a clinician, experienced in clinical education, and interested in students. The trainer should have good interpersonal relationship and organizational skills and be knowledgeable about the learning models that lead students to extend their thinking about practice. These results may be due to the crucial role of trainer in trainee life; the student considers the teacher as a savior in clinical training setting. So mutual deep relationship was build between both of them especially if the teacher has effective interpersonal skills.

Regarding personalization standard, most of jury group was agreed on almost the related criteria. In a similar study, ***Wong and Wong (2003)***, found that the effective interpersonal relationships between teacher and students help to develop a personal interest in students, being accessible for conferences, being fair in dealing with others, permitting students to express differing points of view, creating an atmosphere in which students feel free to ask questions, and conveying a sense of warmth.

This result congruent with ***(Love and Patton, 2003)*** who found that student identified a desire for autonomy and an acknowledgment of their skills as helpful acceptance behaviors which consisted of confidence-building actions like positive reinforcement and support. This may be due to the trainer should deal in a respect (private) way in conversation with students and the teacher should have the ability to highly help the students , because nurse teacher should know how to deal with the students and how to be able to make students confident in her. Then, she becomes able to make the students dealing with her in a respectable way.

The present study finding revealed that the jury group agreement on student involvement was ranged from 75-93.75% except in relation to improving students' self confidence, it was 62.5 %. This result agrees with ***Chinn (2005),*** who clarified the personal characteristics of the clinical instructor should include enthusiasm, interpersonal relations, sensitivity to students, and receptiveness to suggestions. Clinical Instructor should provide students with information about professional meetings and encourage their participation.

Investigating student's satisfaction standard, the present study finding revealed that there was agreement of jury group on this standard. These findings were ascertained with the study conducted by ***Love and Patton (2003)*** who identified student satisfaction is the most reliable indicator of a positive learning environment in that, if the student had a supportive learning environment, the student was more satisfied, and conversely, if the student was satisfied, the environment was seen as more supportive.

The research hypothesis was confirmed by that, there was a statistically significant difference between nurse teachers and their students' opinion in relation to personalization and student involvement standards. This result is also congruent with ***Mlek (2011)*** who found that the study participants identify teachers' role toward students is to support, advocate, guide, expert, and evaluate. They described positive characteristics of their clinical teachers to be: approachable, supportive, open for discussion, respectful of students' opinions, and understanding.

Observation of two Technical Institutes revealed that, there were statistically significant differences between two settings regarding manpower standard. This result may be attributed to that, Technical Institute of Nursing which affiliated to Ain shams specialized hospital had written protocol with the training hospitals and their staff intense to comply with this protocol.

Result of the present study revealed that statistically significant differences regarding personalization standard between two institutes, this result may be due to nurse teachers who working in Technical Institute of Nursing which affiliated to faculty of Medicine are younger and more than their peers who working in the another setting . So, they passionate to build interpersonal relationship with their students and spend more time with them.

Conclusion:

According to the jury group, there was an agreement on the proposed (developed) standards and their criteria for selection of an effective clinical

practical setting for nurse students regarding the face and content validity. Further, the study determined the importance of all the developed standards and related criteria. The majority of nurse teacher agreed upon the importance of all proposed standards and their criteria. Finally, the majority of nurse students agreed upon the importance of all proposed standards.

There were significant differences between nurse teachers and nurse students' opinion on the importance of standards for selecting an effective clinical practical setting related to involvement and personalization standards (P<0.05).while the observation of both setting clarified statistically significant differences between two setting in relation to manpower and personalization standards.

Recommendations:

The standards and criteria developed for the selection of clinical education settings can be used as guidelines to foster and augment effective nursing training clinical education.

The institute laboratory and training setting should equipped with sufficient supplies and equipment needed for each student for training.

Written protocol between institute and hospital should be developed and applied for define the mutual responsibilities /authorities.

Further studies are needed for evaluating and comparing perceptions between sexes and among nurse teacher groups concerning their clinical education experiences. Testing the effect of the developed standards on nurse students' performance.

Implication of the study

The results have implications for nursing practice, and education as the study considers organizational and individual factors that might influence clinical training. The outcome of this study would also be useful in supporting clinical education for nurse student in clinical training setting. Additionally, it could help nurse teachers to create effective clinical training setting which affect on nurse student skill acquisition and its impact on the newly graduate performance level.

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