

The Effect of Clinical Instructor Versus Peer Assisted Learning on Students' Knowledge and Performance and Clinical Instructor Burnout

Zeinab F. Bahgat⁽¹⁾, Rasha E. Ahmed⁽²⁾

(1) Lecturer, Medical Surgical Nursing Department, Faculty of Nursing, Tanta University, Egypt

(2) Assistant Professor, Medical Surgical Nursing Department, Faculty of Nursing, Tanta University

Corresponding Author: Zeinab F. Bahgat

Abstract

Peer-assisted learning is a purposeful component of professional preparation programs in the fields of nursing. Close supervision and individual feedback were proven to be important in ensuring effective skills training. Peer tutor system in our skills lab of medical surgical nursing allows intense training sessions with small learning groups taught by one student tutor. **This study aimed** at evaluate the effect of clinical instructor versus peer assisted learning on clinical instructor burnout and students' knowledge and performance regarding neurological health assessment and evaluate the effect of peer assisted learning on clinical instructor burnout. **Design:** Quasi experimental study was conducted in Faculty of Nursing at Tanta University. **Methods:** Study subject comprises two groups; 170 second year nursing students group and 40 clinical instructors working in Medical surgical Nursing Department group during the academic year 2019/2020, each of both groups was divided randomly and equally into two equal groups. **Three tools were used in this study** Tool I: Knowledge assessment questionnaires: It was consisted of two parts: **Part 1**, Student's - socio-demographic data and **Part 2**, Student's knowledge assessment sheet, **Tool II**, Neurological health assessment Student's performance observational checklist and **Tool III**, Maslach Burnout Inventory. **The main results** from the study reported that students who were thought by clinical instructors reported higher level of knowledge and higher total practice than those who were thought by their peer. The current study reported no statistical differences in the level of burnout among clinical instructors in both groups with a little pit higher burnout level among clinical instructor group. **Conclusions:** Based on the finding of the study, it can be concluded that: Peer assisted learning (PAL) has been shown to be as effective as a learning method on knowledge and skills of nursing students regarding neurological health assessment. Also, the current study reported no statistical differences in the level of burnout among clinical instructors in both groups with a little pit higher burnout level among clinical instructor group. **The study recommended that**, integrate both PAL and clinical instructors learning into nursing education to provide the most effective learning and to overcome the limited numbers nursing staff.

Keyword: Clinical Instructor, Peer Assisted Learning, Students' Knowledge and Performance, Neurological Health Assessment, Clinical Instructor Burnout.

Introduction

Nursing education consists of theoretical and practical parts that complete one another. Learning basic psychomotor nursing procedures is a main component of the clinical nursing curriculum; clinical training is often a stressful experience for students and clinical instructor. Nursing clinical procedures are conducted in both the traditional classroom setting and the hospital setting. Traditionally, clinical procedures are conducted in which the clinical instructor demonstrates the procedure at first then return demonstrations from students is applied. However, this method can impact on student's education and learning due to time constraints,

and lack of student engagement (**Brannagan and Dellinger, 2013; Gray, 2018**).

Over the past two decades, the learning environment in nursing clinical practice education has increased special concerns and attentions. Different learning models have been applied, one of which is peer teaching. Peer teaching means students acquire knowledge and skills from each other in the form of collaboration and has likely existed in higher education (**Pålsson, 2017; Havnes, 2016**). Peer learning encourages learners to actively participate in classes and acquire a variety of competencies through interaction with other students. It is known as "peer teaching", "peer instruction", "Peer tutoring," and "peer mentoring," and requires students to share

knowledge, experiences, and ideas in a reciprocal manner (Oh, 2019). In medical education, peer-assisted learning (PAL) for undergraduate courses has emerged as the most suitable method for training and continuous supervision in the area of clinical education and is becoming a general teaching and learning method (Salerno-Kennedy, 2010). PAL can be defined as acquiring knowledge and performance through the active help and support of matched peers or partners. It involves individuals from similar social groups, but not professional teachers, helping each other to learn (Bo-YeoulKim, 2019). The reason for the practicing of peer teaching has been mentioned as alleviate teaching pressure for the faculty, providing teaching and learning to students at their own cognitive level, creating a comfortable and safe theoretical environment, offering students alternative motivation and study method (Soheir Weheida, 2014). Furthermore, with the large students' numbers and financial costs on the universities, peer teaching method may resolve this issue as a cost-effective way to permit one-on-one attention, feedback and practice errors correction to junior while lowering demand on faculty (Vae and Kvalevaag, 2017).

Positive outcomes identified by peer learners include a decreased level of stress or anxiety by easing the learning environment when working with peers compared to clinical instructors, improved communication skills, increased cognitive and psychomotor abilities and sequentially improvement of scores, help and create positive learning and teaching perception, increased confidence in clinical performance and decision making, and improved organizational performance. Positive outcomes identified by peer teachers include opportunities to practice leadership and teaching skills, improve communication skills, review knowledge and enhance understanding of clinical skills (Secomb, 2008).

The advantages of PAL do not appear to be limited just to the peer learners. Peer tutors also have been shown to benefit significantly in this learning environment. In fact, in some studies it has been shown that peer tutors appear to show significantly greater cognitive gains than their peer parallel learner (Soheir Weheida, 2014).

One of the most advantages of PAL is decrease clinical instructor burnout. Burnout is a psychological syndrome of physical and emotional exhaustion that can occur through long-term exposure to chronic stressors, particularly job stress and lack of adequate coping mechanisms (Othman Alfuqaha, Hussein Salem Alsharah Burnout, 2018). Burnout can lead to many psychological and physical problems. The psychological problems include dissatisfaction, role conflict, role ambiguity, excessive demand, time pressure, overload, inability to do one's job, absenteeism, lack of motivation and support in addition to potential conflict with colleagues and supervisors (Bakker, 2009; Rawal Shradha, 2014).

On the other hand, many studies have found that burnout may cause physical body complains such as headache, sleep disturbances, muscle pain, irritability, tiredness, hypertension and myocardial infarction. Furthermore, when individuals suffer from burnout, they may also experience discomfort, distress, decreased level of energy, and loss of interest in work (Embriaco Papazian, 2007; Hooper Craig, 2010). Teaching is considered one of the important occupations that provide human services and teachers play an essential role in the teaching-learning process and success is strongly associated with teachers' morale. Teachers deal with a variety of students, have to take control of a class, work hard in faculty and may have to take their work home; all of this puts them under stress (El-Omari A, Freihat, 2011; Evers, 2011). Thus, the study aim to evaluate the effect of peer assisted versus clinical instructor learning on students' knowledge and performance regarding neurological health assessment and clinical instructor burnout.

Significance of the study:

Due to shortage and overload of nursing faculty staff; clinical instructor teaching can be assisted by peer learning to inspire students to enthusiastically contribute in classes, acquire a variety of competencies and decrease clinical instructor burnout.

Aim of the study:

Evaluate the Effect of Clinical Instructor versus Peer Assisted Learning on Students' Knowledge and Performance and Clinical Instructor Burnout.

Research Hypothesis:

- Students' who receive teaching by clinical instructor may exhibit increase in their knowledge and performance level more than those who be receive teaching by their peer.
- Burnout of clinical instructor of the student who taught by their peer tutor may exhibit decrease compared to clinical instructor' burnout of student who receive teaching by their clinical instructor.

Materials &Methods**Materials**

I. Design: The present study followed a quasi-experimental design

II. Settings: The study was carried out in Nursing Laboratory where the clinical session is usually conducted, Faculty of Nursing, Tanta University.

III. Subjects: A convenient sample includes 170 second year nursing students who selected randomly during the academic year 2019/2020, second semester and studying medical –surgical and critical nursing course, they were divided alternatively into two equal groups as follow:

Students Study group I: This group comprises 85 students who received their learning regarding neurological health assessment by clinical instructor.

Students Study group II: This group comprises 85 students who received their learning about neurological health assessment by peer tutor.

2. In addition, study subject includes 40 clinical instructors from medical surgical and critical care nursing staff who fulfill the following criteria:

- Working as demonstrator or assistant lecture
- Years of experience not less than one year
- Willing and agreed to participate in the study which divided into two 40 Clinical instructors were divided into two equal groups as follow:

Clinical instructors Group A: 20 clinical instructor who were actually teach the student regarding neurological health assessment theoretical and training sessions.

Clinical instructors Group B: 20 clinical instructor who were supervising the tutor peer student (10 students) who will replace the clinical instructor and teach the student regarding neurological health assessment theoretical and training sessions

3. Peer tutors: Comprised of 10 students who fulfill the following criteria:

- Have got excellent as passing mark in first year
- Have the interest and ability of teaching which assessed by interview.
- Willing and agreed to participate in the study.

Tools: three tools were used in this study**Tool I: Knowledge assessment questionnaires:**

It was consisted of two parts:

Part 1: Student's - socio-demographic data, as age, sex, grades, years of previous nursing education if any & place of work if any (some students finished their two years technical nursing institute and are working in private hospitals)

Part 2: Student's knowledge assessment sheet:

This part was developed by researchers after reviewing relevant literature(Williams,2019; Usker,2019 and Neurological assessments,2019 at [www. nurseslearning.com/courses/nrp](http://www.nurseslearning.com/courses/nrp)) to assess student's knowledge related to neurological health assessment. It consisted of 22 true, false & multiple choice questions related to the assessment of; level of consciousness, eye examination, assessment of reflexes, sensation, assessing of motor function, balance and coordination and assessing of cranial nerves. **Scoring system:** Each question was assigned a value of one score to the correct one, while zero score was given for the wrong answer. The total marks were summed up and the total level of knowledge were categorized as; low (<60%), moderate (60-<80%) and high (≥80%).

Tool II: Neurological health assessment Student's performance observational checklist: This tool was developed by the researchers after reviewing related literature(Clinical Skills,2011 and Neurological Clinical Checklist,2015)to assesses student's performance related to neurological health assessment. It includes 28 steps which measures; level of

consciousness (3 steps), eye examination(2 steps), assessment of reflexes(6 steps), sensation(4 steps), assessing of motor function(3 steps), balance and coordination(2 steps) and assessing of cranial nerves(8 steps). The possible responses for each step were correctly done or not done.

Scoring system: include one mark for correctly done steps, while zero was given to wrong or not done step. The marks were summed up and the total marks of performance were categorized as Unsatisfactory (<60%), Moderate (60-<75%) and Satisfactory ($\geq 75\%$).

Tool III: Maslach Burnout Inventory: This tool was developed by **Horn, J.E. van & Schaufeli, W.B. (1998)** and was modified by the researcher to measure clinical instructor burnout. The scale consisted of 22 questions which answered on a rating Likert scale of 1-5, with 1 indicating never, 2 rarely, 3 sometimes, 4 often and 5 indicating always. The level of clinical instructor burnout was summed up and then converted into total score percent and categorized as follow: no burnout (< 30%), mild burnout (>30- < 50 %) and moderate burnout (> 50 %-< 65%).

Methods

- 1) Official permission to carry out the study was obtained from the dean of the faculty.
- 2) Student's consent to participate in the study was obtained.
- 3) Student' confidentiality was ascertained
- 4) Peer tutors who fulfill the inclusion criteria were interviewed to assess their willingness and acceptance to participate in the study.
- 5) **Tools validity:** Tools of the study were developed after reviews of related literature. They were tested for comprehensive, appropriateness. & a revised by (5) expert for content validity; needed modification was done. The panel ascertained the content validity of the tools.
- 6) Reliability of the tools was tested through using Chronbach Alfa.

- **Tool I:** The reliability coefficient of the test was = 0.89.

- **Tool II:** The reliability coefficient of the test was = 0.97.

- **Tool III:** The reliability coefficient of the test was =0.81.

7) A pilot study was conducted by 10% of students to test tools applicability & feasibility. Modification was done accordingly; data obtained from the pilot was excluded from the actual students.

Assessment phase

8) Student's knowledge and performance was assessed by using tool I & tool II for both students groups I & II pre and post neurological health assessment theoretical and training sessions. The questionnaire distributed to all students to assess their knowledge, while they were observed during the procedures to assess their performance.

Planning phase:

9) Neurological health assessment theoretical and training teaching sessions was taught by the researchers to the peer tutors (10 tutor peer students) through theoretical and training sessions in the skill lab. The peer tutors were asked to practice the procedure more than one time until they perform it correctly, accurately and efficiently.

10) Implementation phase:

Theoretical session: was given by clinical instructors (Group A) to all students in student' study group I; students were divided into 5 groups, 17 students in each group. Information related to neurological health assessment including; level of consciousness, eye examination, and assessment of reflexes, sensation, assessing of motor function, balance and coordination and assessing of cranial nerves was teaches to the students for two consecutive days.

Training session: was given to all students in study group I where three and four procedures were given in the first and second day respectively. Each procedure lasts for 1 hour.

11) Same processes in the theoretical and training teaching sessions were given using the same teaching methods to the student' study group II by the tutor student (10 Students) under the supervision of clinical instructors group (B).

Evaluation phase:

12) All students in group I & II were evaluated by using tool 1 and II after the theoretical and training teaching session.

13) Tool III was used for both clinical instructor Group A & B post theoretical and training sessions to assess the level of the clinical instructor' burnout.

Statistical analysis:

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. The Kolmogorov-Smirnov test was used to verify the normality of distribution Quantitative data were described using range (minimum and maximum), mean, standard deviation and median. T test were used for statistical correlation. P value was statistically significant at level 0.05 % (Petrie A and Sabin, 2005).

Results

Majority of the total studied students group I were in age < 21 years while more than two third of studied students' group I & II (65.9%) and (70.6%) respectively were female. Regarding to grades in previous year, it was found that less than half (44.7%) and (47.1%) of studied students group I & II have got excellent grades; in addition same percent 44.7% for both groups had previous nursing education program.

Table (1): Percentage distribution of the students in both studied groups according to levels of the total knowledge regarding neurological health assessment

This table demonstrates that the majority of the students (90.6%) in the student' study group I who taught by clinical instructor have low level of total knowledge score pre the neurological theoretical teaching sessions compared to more than half (57.6 %) of them post teaching while small percent (2.4%) of the same group have high level of knowledge pre teaching theoretical session compared to about quarter (25.9%) of

them post teaching. Also this table shows that most of the students (85.9%) in the student' study group II who receive their theoretical teaching session by their peer tutor have low level of knowledge pre compared to less than quarter (23.5%) post the theoretical teaching session while small percent (2.4%) of the same group have high level of knowledge pre compared to more than half of them (54.1%) post the theoretical teaching session. It is also illustrates that there was a statistical significant difference between total knowledge score level pre and post the theoretical teaching session since $P = < 0.001$ for both groups.

Table (2): Percentage distribution of the studied groups according to levels of the total practice regarding to neurological health assessment

This table showed that 48.2%, 10.6% and 41.2% of the student' study group I who taught by clinical instructor compared to (18.8%, 8.2% and 72.9%) have unsatisfactory, moderate and satisfactory level of the total practice regarding neurological health assessment pre and post the training session respectively. Also, the same table reveals that; 50.6%, 21.2% and 28.2% compared to 29.4%, 1.2% and 69.4% of the student' study group II who receive their training session by their peer tutor has unsatisfactory, moderate and satisfactory level of the total performance regarding to neurological health assessment pre and post the training session respectively with a significant difference found between pre and post the training session in the both group, where $P = < 0.001$ for both groups.

Table (3): Percentage distribution of the studied groups according to their socio-demographic data

Table 3 demonstrated distribution of the studied groups according to their socio-demographic data; it showed that, it presented that; 45% and 55% of the Clinical instructor (Actual teaching) while 65% and 35% of the Clinical instructor (Peer teaching) were demonstrator and assistant lecturer respectively. Moreover, same table proved that less than third 30% compared to more than half 55% of the clinical instructor in Actual teaching and Peer tutor teaching groups respectively have less than 5 years teaching experience and same percent of both groups 5% have a teaching experience more

than 10 years although the difference between the two groups was not significant since $P = > 0.05$.

Table (4): Percentage distribution of clinical instructor' burnout level among the two studied group

Table 4 showed distribution of clinical instructor' burnout level among the two studied group, the table presented that, small percent 15% of the students' actual teaching clinical instructors compared to forth 25% of the clinical instructors of peer teaching have no burnout; in addition, less than half 45% and half 50% of actual teaching clinical instructors and clinical instructors of peer teaching respectively have moderate level of burnout, for mild, it was found that; less than half 45% compared to half 50% of actual teaching clinical instructors and clinical instructors of peer teaching respectively have mild level of burnout with no significant difference found between the

two groups regarding level of burnout since $P = > 0.05$.

Table (5): Correlation between the studied groups according to students' overall knowledge and performance

Table illustrated Correlation between the studied groups according to students' overall knowledge and performance; it is obvious that there was a negative correlation between overall knowledge and overall performance for actual teaching clinical instructor and clinical instructor of peer teaching groups in the pre and post teaching and training sessions, in addition; there was a significant difference found between overall knowledge and overall performance for actual teaching clinical instructor and clinical instructor of peer teaching groups in the pre and post teaching and training session where $P = 0.003$ and 0.020 respectively.

Table (1): Percentage distribution of the students in both studied groups according to levels of the total knowledge regarding neurological health assessment levels of the total knowledge

	Study group I (n = 85) Clinical instructor teaching				Test of sig.(p ₀)	Study group II (n = 85) Peer teaching				Test of sig.(p ₀)
	Pre		Post			Pre		Post		
	No.	%	No.	%		No.	%	No.	%	
Low (<60%)	77	90.6	49	57.6	MH= 5.117* (<0.001*)	73	85.9	20	23.5	MH= 7.418* (<0.001*)
Moderate (60-<80%)	6	7.1	14	16.5		10	11.8	19	22.4	
High (≥80%)	2	2.4	22	25.9		2	2.4	46	54.1	
Total score (0–22)										
Min - Max.	5.0 – 19.0		9.0 – 22.0		Z=7.017* (<0.001*)	5.0 – 19.0		10.0 – 22.0		Z=7.647* (<0.001*)
Mean± SD.	9.78 ± 3.29		14.51 ± 3.88			10.31 ± 3.09		17.24 ± 3.84		
Median	9.0		13.0			10.0		18.0		
Mean score										
Min - Max.	0.23 – 0.86		0.41 – 1.0			0.23 – 0.86		0.45 – 1.0		
Mean± SD.	0.44 ± 0.15		0.66 ± 0.18			0.47 ± 0.14		0.78 ± 0.17		
Median	0.41		0.59			0.45		0.82		
% score										
Min - Max.	22.73 – 86.36		40.91 – 100.0			22.73 – 86.36		45.45 – 100.0		
Mean± SD.	44.44 ± 14.97		65.94 ± 17.66			46.84 ± 14.06		78.39 ± 17.46		
Median	40.91		59.09		45.45		81.82			

*Significant or $P < 0.05$

Table (2): Percentage distribution of the students in both studied groups according to levels of the total practice regarding to neurological health assessment

levels of the total practice	Study group I (n = 85) Clinical instructor teaching				Test of sig. (p ₀)	Study group II (n = 85) Peer teaching				Test of sig. (p ₀)	Test of sig. (p ₁)	Test of sig. (p ₂)
	Pre		Post			Pre		Post				
	No.	%	No.	%		No.	%	No.	%			
Unsatisfactory (<60%)	41	48.2	16	18.8	MH=4.304* (<0.001*)	43	50.6	25	29.4	MH=4.703* (<0.001*)	$\chi^2=5.098$ (0.078)	$\chi^2=6.431^*$ (MC p=0.039*)
Moderate (60-<75%)	9	10.6	7	8.2		18	21.2	1	1.2			
Satisfactory ($\geq 75\%$)	35	41.2	62	72.9		24	28.2	59	69.4			
Total score (0-7)												
Min - Max.	0.0 – 7.0		0.0 – 7.0			0.0 – 7.0		0.0 – 7.0				
Mean± SD.	4.76 ± 2.27		5.48 ± 1.91			4.09 ± 2.44		5.24 ± 2.52				
Median	5.0		6.0			4.0		7.0				
Mean score												
Min - Max.	0.0 – 1.0		0.0 – 1.0		Z=2.696* (0.007)	0.0 – 1.0		0.0 – 1.0		Z=3.572* (<0.001*)	U=3097.50 (0.099)	U=3271.0 (0.260)
Mean± SD.	0.68 ± 0.32		0.78 ± 0.27			0.58 ± 0.35		0.75 ± 0.36				
Median	0.71		0.86			0.57		1.0				
% score												
Min - Max.	0.0 – 100.0		0.0 – 100.0			0.0 – 100.0		0.0 – 100.0				
Mean± SD.	68.07 ± 32.45		78.32 ± 27.23			58.49 ± 34.90		74.79 ± 36.0				
Median	71.43		85.71			57.14		100.0				

*Significant or P<0.05

Table (3): Percentage distribution of the studied groups according to their socio demographic data

Socio-demographic data	Clinical instructor Actual teaching(n = 20)		Clinical instructor Peer teaching(n = 20)		Test of Sig.	p
	No.	%	No.	%		
Position						
Demonstrator	9	45.0	13	65.0	$\chi^2=1.616$	0.204
Assistant Lecture	11	55.0	7	35.0		
Years of experience						
<5	6	30.0	11	55.0	$\chi^2=2.834$	MC p=0.248
5-<10	13	65.0	8	40.0		
≥ 10	1	5.0	1	5.0		
Min. – Max.	1.0 – 10.0		2.0 – 10.0			
Mean ± SD.	6.20 ± 2.44		4.70 ± 1.89		t=2.171*	0.036*
Median	7.0		4.0			

*Significant or P<0.05

Table (4): Percentage distribution of clinical instructor' burnout among the two studied group

Clinical instructor burnout level	Clinical instructor Actual teaching(n=20)		Clinical instructor Peer teaching (n = 20)		Test of Sig.	p
	No.	%	No.	%		
No burnout (< 30%)	3	15.0	5	25.0	$\chi^2=1.258$	MC p=0.507
Mild burnout (>30- < 50 %)	9	45.0	10	50.0		
Moderate burnout (> 50 %-<65%)	8	40.0	5	25.0		
Total Score						
Min. – Max.	43.0 – 82.0		37.0 – 77.0		t=1.052	0.299
Mean ± SD.	60.30 ± 11.37		56.55 ± 11.17			
Median	56.0		54.0			
Mean Score						
Min. – Max.	1.95 – 3.73		1.68 – 3.50			
Mean ± SD.	2.74 ± 0.52		2.57 ± 0.51			
Median	2.55		2.45			
%Score						
Min. – Max.	23.86 – 68.18		17.05 – 62.50			
Mean ± SD.	43.52 ± 12.93		39.26 ± 39.26			
Median	38.64		36.36			

χ^2 : Chi square test MC: Monte Carlo t: Student t-test SD: Standard deviation
p: p value for comparing between the studied groups

Table (5): Correlation between the studied groups according to students' overall knowledge and performance

Overall performance	Overall knowledge			
	Clinical instructor (Actual teaching) (n = 20)		Clinical instructor (Peer teaching) (n = 20)	
	r	p	r	p
Clinical Instructor teaching (pre the teaching Session)	-0.318*	0.003*	-0.098	0.370
Peer review teaching (post the teaching Session)	-0.083	0.449	-0.251*	0.020*

r: Pearson coefficient

*: Statistically significant at $p \leq 0.05$

Discussion

The aim of the current study was to evaluate the effect of using clinical instructor versus peer assisted method of learning on clinical instructors' burnout and students' knowledge and performance regarding neurological health assessment theory and practical session. A quazi-experimental design was used with 2 groups of 170 nursing students; one group was thought by the clinical instructors and the other by assisted peer tutor.

Results from the current study proved that students who were thought by peer tutor reported higher level of knowledge and higher total practice score than those who were thought by their clinical instructor. This may be due to close and smooth interaction and collaboration between peer and students which contributed to increased learning curve and acquisition of further knowledge. This result was accepted with **El-Sayed et al (2013)** who indicated that students performed better with peer-teaching group than those who were thought with teaching staff. **Weheida et al (2014)** also showed that peer assisted learning was significantly correlated with higher level of students' knowledge and skills. In addition; **Lee and Kim (2019)** agreed with the result of the present study and reported higher score among students thought by peer assisted learning. **Bibb and Lefever (2002)** also indicated in their study that a micro-course developed and thought by peer assisted learning provided practical and valuable experience, confidence, understanding the curriculum, and presentation skills. Moreover; **Ahmed and Mohamed (2018)**, **Palsson et al. (2017)** reported better performance and higher scores among peer assisted groups. Assisted peer teaching is considered a new trend in nursing education and it is well recognized.

Studies which contradicted results of the current study reported by **Hendelman (2004)** who stated that students reported better understanding of clinical concepts when they

were thought by clinical instructors and that peer teaching was incomplete and was lacking sufficient details. The study was conducted among medical students and clinical concepts are important to be explained by experienced instructors than peer. There was another studies who showed that there was no statistical significance differences regarding knowledge and practice with peer teaching and traditional method among nursing students in dialysis unit (**Shaaban and Mohamed (2020)** ;**Rad, Yamani and Ehsanpour (2020)**), indicated that there were no significance differences between students who are trained by peer teaching and by traditional teaching. These results could be explained by the demographic characteristics of the participants in each different study.

The current study reported no statistical differences in the level of burnout among clinical instructors in both groups with a little pit higher burnout level among clinical instructor group. Burnout was never studied in relation to the method of teaching as it was in the current study, it was linked previously to stress in the workplace, years of experience, setting, educational level or organizational factors. Burnout is defined as psychological feeling that is related to physical and emotional exposure to long term job stress with lack of effective coping strategy. This definition does not support the aim of the current study that was to examine the effect of using different teaching methods for nursing students on burnout among clinical instructors.

Previous research concluded a high level of burnout among newly assigned preceptors and preceptors with longer years of experience (**Yun and La 2019**) However, burnout among clinical instructors could be influenced by many factors, including personal characteristics, years of experience in instructing nursing students.

Clinical instructors in this study are assigned only to precept students in the clinical training

and in the class. They are well trained and adequately prepared for such responsibilities and duties. In addition, they are affiliated to the university and the work environment is supportive for their career. This would contribute to predicting no significance differences in burnout among both groups.

Limitation

It would be better modifying the burnout survey that was used in this study to fit with the nature of the work of the clinical instructors affiliated to the college of nursing and who are not involved in hospital duties. The causes of burnout would be different in both institutions.

Conclusion and Recommendations:

Conclusion: Based on the finding of the study, it can be concluded that: Peer assisted learning (PAL) has been shown to be as effective as a learning method on knowledge and skills of nursing students regarding neurological health assessment. Also, the current study reported no statistical differences in the level of burnout among clinical instructors in both groups with a little higher burnout level among actual learning clinical instructor group.

Recommendations: Based on the findings of this study; the followings are suggested:

- 1- Integrate both PAL and clinical instructors learning into nursing education to provide the most efficient and effective learning and overcome the deficiency of limited numbers of teachers in nursing colleges.
- 2- Conduct training of nursing student through (peer) to overcome shortages of nurse educators and clinical instructor.

References

- Ahmad, I.& Mohamed, H.(2018). The effect of peer learning vs. traditional learning on knowledge and clinical performance of critical care nursing students. *Journal of Education and Practice*;9(8).
- Bakker AB. The crossover of burnout and its relation to partner health. *Stress Health*. 2009; 25(4): 343-353.
- Bibb, CA and K. H. Lefever, KH (2002). "Mentoring Future Dental Educators Through an Apprentice Teaching Experience," *Journal of Dental Education*, 66, (6) 703-709.
- Bo-YeoulKim : Differences in The Effects of Core Nursing Skills Education According to the Use of Peer-Assisted Learning (PAL) Among Nursing Students. *International Journal of Contents*, Vol.15, No.3, 2019.<https://doi.org/10.5392/IJoC.2019.15.3.039>
- Brannagan, K., Dellinger, A., Thomas, J., Mitchell, D., Lewis Trabeaux, S. & Dupre,S.(2013).Impact of peer teaching on nursing students; perceptions of learning environment, self-efficacy, and knowledge. *Nurse Education Today*; 33(11), pp.1440-1447.
- Clinical Skills: Neurological Examination 05/02/2011 Alan Glass, M.D. Allyson R. Zazulia, M.D.
- El-Omari A, Freihat A. Burnout levels of Jordanian teachers of English in Ajloun Province. *J Al-Quds Univ Res Studies*. 2011; 24(2): 71-97.
- El-Sayed, SH; Metwally, SG and Abdeen, MA (2013). Effect of peer teaching on the performance of undergraduate nursing students enrolled in nursing administration course. *Journal of nursing education and practice*, 3(9), 156-166.
- Embriaco N, Papazian L, Kentish-Barnes N, et al. Burnout syndrome among critical care healthcare workers. *Curr Opin Critical Care*. 2007; 13(5): 482-488.
- Evers R. A Relational Study of Elementary Principals' Leadership Traits, Teacher Morale, and School Performance (PhD thesis).The University of Southern Mississippi; 2011.
- Gray,S.,Wheat,M.,Christensen,M.&Craft,J.(2018) .Snaps;peer-to-peerandacademic support in developing clinical performance excellence in under-graduate nursing students; an exploratory study. *Nurse Education Today*;73, pp.7-12.
- Havnes, A., Christiansen, B., Bjørk, I. &Hessevaagbakke, E.(2016). Peer learning inhigher education; patterns of talk and interaction in skills centre simulation. *Learning, Cultureand SocialInteraction*; 8, pp. 75-87.

- Hendelman W. (2004). Reciprocal peer teaching by medical students in the gross anatomy laboratory. *Medical Education Journal*, 61, 674-80.
- Hooper C, Craig J, Janvrin DR, et al. Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *J Emerg Nurs*. 2010; 36(5): 420-427.
- Horn, J.E. van &Schaufeli, W.B. (1998).Maslach Burnout Inventory: The Dutch Educators Survey (MBI-NLES) Psychometric evaluations. Manual (unpublished manuscript). Utrecht University: Department of Social and Organizational Psychology.
- La, PS and Yun, EK (2019). Effects of Trait Anger and Anger Expression on Job Satisfaction and Burnout in Preceptor Nurses and Newly Graduated Nurses: A Dyadic Analysis. *Asian Nursing Research*, 13 (4), 242-248.
- Lee, Mi-Young and Kim, B0-Yeoul (2019). Differences in the effect of core nursing skills according to the use of peer-assisted learning (PAL) among nursing students. <https://doi.org/10.5392/IJOC.2019.15.3.039>.
- Neurological assessments, <https://www.nurseslearning.com/courses/nrp.2019>.
- Neurological Clinical Checklist, Revised January, 2015.
- Oh, E. (2019). Research on the effective of peer instruction and students' involvement. *Asia-Pacific of Multimedia Services Convergent with Art. Humanities, and Sociology*, 9, 199-208. <https://doi.org/10.35873/ajmahs.2019.9.018>
- Othman Alfuqaha, Hussein Salem Alsharah. *Archives of Psychiatry and Psychotherapy*, 2018; 2: 55–65 DOI: 10.12740/APP/80168 Burnout among nurses and teachers in Jordan: a comparative study.
- Pålsson, Y., Mårtensson, G., Swenne, C., Ädel, E. &Engström, M. (2017).A peer learning intervention for nursing students in clinical practice education; a quasi-experimental study.*Nurse Education Today*; 51, pp.81-87.
- Palsson, Y.,Martensson,G.Swenne,C.,Ädel,E.&Engström,M.(2017). A peerlearning intervention for nursing students in clinical practice education; a quasi-experimentalstudy. *Nurse Education Today*; 51, pp.81-87.
- Petrie A and Sabin C: *Medical Statistics at a Glance*. 2nd ed. New york, Blackwell Publishing, 2005.
- R. Salerno-Kennedy, P. Henn, and S. O'Flynn,“Implementing Peer Tutoring in a Graduate MedicalEducation Programme,” *Clinical Teacher*, vol. 7, no. 1,2010, pp. 83-9. doi : 10.1111/j.1743-498X.2010.00354.x.
- Rad, R., Yamani, N. &Ehsanpour, S. (2020). Effects of teacher-centered teaching and peer teaching methods on improving some clinical skills of midwifery students; a comparative study. [online] *Ijme.mui.ac.ir*. Available at: <http://ijme.mui.ac.ir/article-1-4233-en.html> [Accessed 2 Mar. 2020].
- Rawal CN, Shradha A. Job stress causes attrition among nurses in public and private hospitals. *J Nurs Health Sci*. 2014; 3(2): 42-47.
- Secomb J. Review a systematic review of peer teaching and learning in clinical education ,*ClinNurs J*, 2008; 17(6):703-16.
- Shaaban, AA and Mohamed, TM (2020).Effect of peer teaching on nursing student's performance of clinical training in hemodialysis unit.*Port Said Scientific journal of nursing*, 7(3), 81-95.
- Soheir M. Weheida, ,Amany L. Abdel-Aziz, , Hend M. Elazazay, Safaa E Sayed and Gehan A Younes. The Effect of Peer Assisted Versus Clinical Instructor Learning on Knowledge, Skills, Self Confidence and Perception of Undergraduate Nursing Students Regarding Injections Administrations. *Tanta University, Faculty of Nursing journal*.2014.
- Usker N, Andrew I, Sherman, *Muscle Strength Grading*, Jan 2019. <https://www.ncbi.nlm.nih.gov>.
- Vae, K., Vae, K., Kvalevaag, H. &Löfmark, A.(2017). Nursing students' perceptions ofpeerlearningasalearningmodelinclinicalpracticeandstudents'learningthroughpeerlearning;an evaluation study.*Nordisktidsskriftfor helseforskning*;13(2).
- Williams LS, Hopper PD. *Understanding medical surgical Nursing*.Fifth edition, Jaypee Publication.2019.