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Nursing teaching staff' knowledge and attitude regarding peer assisted learning at governmental faculties of nursing, Khartoum state 2022

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Abstract

Introduction: Peer assisted learning (PAL) is nontraditional strategy of learning that has a lot of creativity and innovation used to assist others to learn, and so doing learning by themselves is more effective **Methods**: 93 nursing teaching staff completed an online questionnaire out of 108 nursing teaching staff which was recruiting in seven governmental faculties of nursing in Khartoum state at the time of the study, the response rate was 86% (93). Data were collected using structure questionnaire after validation is confirm, which explored nursing teaching staff' knowledge about peer assisted learning. Frequencies distributions (mean, median, mode, SD. Minimum and maximum), weighted average to determine answer direction and one sample T test were used. **Results**: The study found that almost the nursing teaching staff responses significantly goes toward agree about the statement that test their knowledge about peer assisted learning as learning strategy, with (p value0.00). The study also showed that most of the nursing faculty did not use it in their teaching and learning strategies.**Conclusion:** Nursing teaching staff demonstrated positive knowledge and attitude towards peer assisted learning as learning strategy

Keywords: Peer assisted learning (PAL) - Knowledge – Attitude – Nursing – Teaching staff - Governmental faculties of nursing.

Introduction:

Learning is a complex process motivated by human nature that tends to search and discover new things and desire to upgrade learning level. This complexity can be facilitated as the differences between the learners and learning environment are considered. An open learning environment free from stress, pressure, fully mutual trust among students, in addition to easy informal communication, are motivating factors for students to increase learning outcomes. Many researchers found that working in groups allows students to be more active and fully engaged in the learning process.[1,2] Peer assisted learning (PAL) is one of the methods that increase student engagement, The social theorist stated that the individual relationship is either cooperative or competitive relationship. [3] PAL is nontraditional strategy(4) used to assist others to learn, in cooperative manner, Topping and his colleague in 1998 defined PAL as acquiring knowledge and skill through active support from other matched peers. [5] In PAL; one of the students plays the role of instructor (tutor) in providing information related to a topic, while the rest of the students become tutees. The teachers in the PAL act as guidance, provide answers to non-answered questions and help facilitate discussion and interaction.[6] Tutors are appointed according to their excellence in a specific topic,[4] literatures support that Peer learning can be peer-to-peer, that from the same level, or near peer from the above level, that is senior students tutoring junior students. [7] PAL has positive effects on examination score; student satisfaction; personal and professional development,[8] and peer tutoring can also encompass areas of social needs exhibited by students.[9] Nursing education is aimed to graduate competent and qualified nurses, capable to meet the needs of the contemporary healthcare.[10] Nurses are assumed to be self-dependent, leaders and at the same time accountable for their action.[11]. PAL has been

recognized as a valuable learning strategy enhancing these characteristics.[12] Douglas and others in 1997 and Lynn with others in 1999 studied the effectiveness of peer tutoring program in reading their finding showed that students engaged in PAL improve reading ability greater than compared to counterparts not involved in PALS.[13,14] In the field of medical education PAL approach is well known and familiar to both teachers and students.[15,16] All studies conducted on peer learning strategy have proven its effectiveness in acquiring knowledge as well as mastering various skills.[12,17] Many studies worldwide have evaluated the perception of students towards PAL and found that the students had positive perception about PAL as a method of teaching and learning.[18,19] In an ethnographic study to investigate the roles and relationships between the peer tutors and tutees to uncover their perceptions of peer tutoring and their perceived effects, the study prove that peer learning contributes to develop and increase a successful relationship between tutors and tutees.[20] Thinking about introducing a new approach requires knowledge about students and their capacity, resources and material, culture and environment, supervision and assessment as well as careful estimation of financing needs and cost. The researchers prove that the PAL approach helps to tackle all of these issues and requires less cost as there is no need for equipment.[5] Although the PAL approach offers many benefits, but it may show some drawbacks such as student's noise, complaints and cheating.[5] According to researchers application of PAL may face many challenges to both educators and students whether in classroom or clinical setting. In study carried out at Batterjee medical college; Saudi Arabia 2021 to identify the challenge of PAL in online clinical skills training of ophthalmology module in, the results revealed a group of challenges from the students' prospective, which are Learning environment, scheduling, psychological problems in terms of behavioral issues and personality changes, interaction deficit with peers, tutor, learning desires, and desire for feedback on

performance.[21] Sevanhhuysed and her colleagues in 2015 utilizing a focus group discussion to explore the experience of clinical educators PAL model. They found that the clinical educators were challenged by the mandated frequency of tasks and they perceived PAL as extra load. In addition to the learning experience, they have to aid in the logistics of learning situation arrangement.[22] A result of a randomized trail published in the journal of physiotherapy 2016 about educators and student's preference regarding the teaching model showed that educators and students prefer the traditional clinical education to PAL with similar students' performance outcomes in both models.[23] However, the findings in literature support that, PAL is still effective and interest method on student's learning and retention of knowledge, attitude and skill levels.[24] PAL can make substantial contribution to students by improving engagement in a learning process, and generally it is valuable and advisable strategy to be adopted in nursing curricula as it enhance social relationship and help students develop a better understanding of cultural diversity and acceptance. [6]

Materials and methods:

A descriptive cross – sectional-Institutional-based design was adopted in this study. It was conducted in Khartoum state, at governmental faculties of nursing, which include seven nursing faculties. Khartoum. Faculty of nursing Al-Neelain, University of Technology. Omdurman, Academy of Health Sciences. Bahray and Elzaim Azhary. A one hundred and eight (108) nursing teaching staff were eligible for participation as total coverage; ninety-three (93) teaching staff was responded to the questionnaire, with response rate 86%. The data were gathered using structured questionnaire, which was developed after extensive search in the literature. The tool has four parts. The first part contained the socio-demographic characteristics. The second part,

consist of two main axes that include questions related to knowledge twenty items. And attitude of the nursing teaching staff, which consist of five items. Five points Likert -scale was used to measure the response of the participants ranged from strongly agree to strongly disagree. The tool was reviewed by two experts in the field of medical education (External & internal), in addition to an expert statistician (contents, structure & suitability for analysis), the questionnaire was modified accordingly, then the developed tool was piloted for its validity and to determine the clarity of tool items and to estimate the time needed. Cronbach's Alpha to test the reliability was don which was. 0.830. The participants were invited and gathered in one of the social media groups. The self-administration technique was used, utilizing the free Google forms software to collect data. The link of the questionnaire was sent and remained open for 3 weeks. Frequencies distributions and charts were used to analyse demographic information; for section two frequencies distributions, descriptive (mean, SD), weighted average to determine answer direction and one sample T test were used; for section three & four the frequencies distributions (mean, median, mode, SD. Minimum and maximum were used. Data were presented in tables and figures, utilizing statistical package for social sciences (SPSS) version (23)

Results:

Table (1): Gender& years of experience distribution (N =93)

Gender		Frequency	Percent
	Male	4	4.3
	Female	89	95.7
	Total	93	100.0
Years of experience			
	3-7 years	42	45.2
	8-12 years	20	21.4
	13-17 years	14	15.1
	18 years and above	17	18.3
	Total	**93**	**100.0**

Table (2): Distributions and the results of nursing teaching staff Knowledge related Students' Benefits of PALS (N =93)

No.	First axes Nursing Students' Benefits related Knowledge towards PALS	Frequencies & ratio	Strongly disagree	disagree	Neutral	Agree	Strongly agree	Respond average	SD	Answer Direction
1	Methodology support learner	**f**	5	1	8	42	37	4.13	1.002	**Agree**
		%	5.4	1.1	8.6	45.2	39.8			
2	Small group learning method	**f**	4	7	4	60	18	3.87	0.958	**Agree**
		%	4.3	7.5	4.3	64.5	19.4			
3	Other students acting as mentors for facilitating	**f**	3	7	12	51	20	3.84	.959	**Agree**
		%	3.2	7.5	12.9	54.8	21.5			
4	Is participative activities	**f**	3	0	4	53	33	4.22	0.806	**Strongly Agree**
		%	3.2	0	4.3	57.0	35.5			
5	Encourages collaborative, rather than competitive learning ills	**f**	3	0	4	36	50	4.40	0.849	**Strongly Agree**
		%	3.2	0	4.3	38.7	53.8			
6	Benefits all students regardless of current academic competency	**f**	6	2	7	51	27	3.98	1.021	**Agree**
		%	6.5	2.2	7.5	54.8	29.0			
7	Gives privacy to practice the subject, make mistakes and build up confidence	**f**	2	7	12	46	26	3.94	.953	**Agree**
		%	2.2	7.5	12.9	49.5	28.0			
8	Encourages learner autonomy	**f**	3	0	10	48	32	4.14	.855	**Agree**
		%	3.2	0	10.8	51.6	34.4			

9	Enjoyable activities for students	**f**	6	9	16	49	13	3.58	1.056	**Agree**
		%	6.5	9.7	17.2	52.7	14.0			
	First axes result	**f**	**4**	**4**	**9**	**48**	**28**	**4.01**	**٠.939**	**Agree**
		%	**4.18**	**3.94**	**9.20**	**52.08**	**30.60**			

Table (3: The distributions and the results of nursing teaching staff' Knowledge related PAL strategy

No.	Second axes Nursing PAL Strategy related Knowledge	Frequencies & ratio	Strongly disagree	disagree	Neutral	Agree	Strongly agree	Respond average	SD	Answer Direction
1	Voluntary activities help learners	f	4	10	13	48	18	3.71	1.038	Agree
		%	4.3	10.8	14.0	51.6	19.4			
2	Is non-remedial activities	f	10	27	24	29	3	2.87	1.076	Unsure
		%	10.8	29.0	25.8	31.2	3.2			
3	Content - based and process- oriented	f	2	0	11	50	30	4.14	0.788	Agree
		%	2.2	0	11.8	53.8	32.3			
4	PAL strategy have empirical evidence to support its effectiveness	f	2	5	12	48	26	3.98	.909	Agree
		%	2.2	5.4	12.9	51.6	28.0			
5	Can be used in place of an existing instructional activity	f	1	1	20	49	22	3.97	.773	Agree
		%	1.1	1.1	21.5	52.7	23.7			
6	Gives opportunity to increase academic performance	f	3	2	7	43	38	4.19	.912	Agree
		%	3.2	2.2	7.5	46.2	40.9			
7	Used in place of an existing instructional activity	f	5	19	26	38	5	3.20	1.006	Unsure
		%	5.4	20.4	28.0	40.9	5.4			
8	Pro-active, not reactive	f	9	21	30	28	5	2.99	1.068	Unsure
		%	9.7	22.6	32.3	30.1	5.4			
9	Targets high risk courses, not high- risk	f	3	3	23	46	18	3.78	.907	Agree

	groups	%	3.2	3.2	24.7	49.5	19.4			
10	Decreases drop-out rates/aids retention	**f**	2	4	6	48	33	4.14	.880	**Agree**
		%	2.2	4.3	6.5	51.6	35.5			
11	Integrates effective learning strategies within the course content	**f**	3	2	10	39	39	4.17	.940	**Agree**
		%	3.2	2.2	10.8	41.9	41.9			
	Second axes result	**f**	**4**	**9**	**17**	**42**	**21**	**3.74**	**٠.936**	**Agree**
		%	**4.30**	**9.20**	**17.80**	**45.53**	**23.17**			

Table (4): The iterative distributions and the results of Nursing Teaching Staff Attitude towards PAL Strategy

No.	Third axes Nursing Teaching Staff Attitude towards PAL Strategy	Frequencies & ratio	Strongly disagree	disagree	Neutral	Agree	Strongly agree	Respond average	SD	Answer Direction
1	You use PAL in place of an existing instructional activity	f	5	5	13	55	15	3.75	.974	Agree
		%	5.4	5.4	14.0	59.1	16.1			
2	You identify and develop instructional materials to be used with PAL	f	4	7	13	53	16	3.75	.974	Agree
		%	4.3	7.5	14.0	57.0	17.2			
3	You develop a strategy for selecting students and/or assigning them to groups	f	4	9	13	48	19	3.74	1.031	Agree
		%	4.3	9.7	14.0	51.6	20.4			
4	You developed strategies to monitor students' performance during PAL	f	3	7	7	50	26	3.96	.977	Agree
		%	3.2	7.5	7.5	53.8	28.0			
5	You developed strategies to evaluate the effectiveness of PAL	f	4	5	11	49	24	3.90	.990	Agree
		%	4.3	5.4	11.8	52.7	25.8			
	First axes result	f	**4**	**7**	**11**	**51**	**20**	**3.82**	**٠.989**	**Agree**
		%	**4.30**	**7.10**	**12.26**	**54.84**	**21.5**			

Table (5): Test results (One Sample T-test) to indicate the level of nursing teaching staff's knowledge and attitude towards PALS.

The field	Mean	Std. Deviation	T-Test	Sig. (2-tailed)	The level Nursing teaching staff' knowledge and attitude towards PALS
Nursing teaching staff' knowledge and attitude towards PALS	3.854	0. 50746	16.225	0.000	High

Table (6): Using of PAL in nursing educational (N =93)

		Responses		
Using (PAL) strategy in teaching		N	Percent	Percent of Cases
If you use this strategy can you provide any example(s) of how you use PALS in your practice	I don't use it	79	84.9%	84.9%
	Yes	6	6.5%	6.5%
	Used in seminar	4	4.3%	4.3%
	log book	1	1.1%	1.1%
	By small groups	3	3.2%	3.2%
Total		**93**	**100.0%**	**100.0%**

Discussion

Nursing is a complex profession that requires an innovative and creative teaching and learning approaches to inspire, motivate and enhance students involved in the process of learning, which leads to preparing them for the future profession and taking full advantage of the learning outcomes. [25] The dominant teaching model in nursing curricula in studied faculties of nursing is

mainly reliant upon the conventional education; that is, the teacher center, with new and little approaches that involve students in the learning process such as TBL and PBL, this finding is similar to Sevanhhuysed and his colleague finding , they studied the educators and students preference regarding traditional clinical education to PAL, they found similar students' performance outcomes in both models, and both educators and students were more satisfied with traditional education. [23] Previous studies have documented that the PALS have a long history as a pedagogical approach in kindergarten, primary and secondary schools and even for those with disabilities. [26] And in medical education; prior works have documented the effectiveness of peers when involved in the process of learning in improving the academic performance, enhancing the learning outcomes, and reducing distraction of information as well as improving social skills; Bugaj and Topping, for example, reports that this strategy is a well-established concept in the medical training in general and nursing in particular. However, these studies have not focused on the teacher's perception and knowledge nor barriers that may challenge its implementation. In this study we explore the knowledge and attitude of the Sudanese nursing teaching staff towards peering assisted leaning, and how they use this method. We found that in virtually the nursing teaching staff responses significantly goes toward agree about the statement that test how well they know the benefits students get when applying the PAL strategy (P value 0.00); also most responses of teaching staff about general knowledge related PAL as strategy is positive (P value 0.00), however 21%of respondents unsure that PAL can be used in place of an existing instructional activities. And 32% of respondents are unsure whether PALS is a proactive or reactive approach. The current study shows positive teaching staff' attitude towards peer assisted learning with (P value 0.00); this results aligned with the role of teaching staff when conducting PAL as they function as coordinator in designing, planning, curriculum alignment,

delivery, and evaluation in addition to responsibility to make sure all opportunities are made available for students to practice these teaching skill, [7, 27] which requires that they be familiar with this strategy. This study found that 84% of respondents they did not use this methods with their students because they believed that peer-mediated learning challenged with an ethical aspect, traditional culture may not accept new approaches and it takes time to prepare for session. Almost these responses in the line with Sevanhhuysed et al' beliefs, where they found that the clinical educators challenged by the mandated frequency of tasks in the PAL model, and they perceived PAL as extra load and burden for them [22]., while the rest of respondents said that they used it in a seminar, small group, and others, these findings are contrary to what is available in literature. This method became popular, dominant and familiar to the teachers with positive perception as well as to students. [5, 15] The literature search produced little research on teachers' knowledge and attitude about PAL as a learning method. To my knowledge, this is the first study to explore nursing teaching staff's knowledge, attitude towards PAL in nursing education in Sudan. Our results provide base data to attract the attention of teaching staff in medical education in general and nursing in particular to adopt and implement this strategy in education.

ETHICAL APPROVAL:

A written ethical agreement was obtained from the research ethics committee at International University of Africa (REC). Hence verbal consent was attained individually from each nursing teaching staff after full explanation and details about the study and its aim; confidentiality and data privacy were guaranteed.

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