

Perception and Satisfaction of Clinical Instructors and Nursing Students Regarding Blended Learning

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Abstract

Background: Blended learning combines the advantages of both traditional face-to-face learning as well as e-learning, helping students perform better academically and motivates teachers to modify their teaching strategies. The aim of this work was to assess the perception and satisfaction of clinical instructors and nursing students regarding blended learning. **Methods:** The study was conducted in Faculty of Nursing at Tanta University. Subjects: included all (n=29) clinical nursing instructors were working in community health nursing and nursing administration departments, and all (n=555) nursing students were enrolled in the 4th academic year. Tools: Two tools were used, Clinical Nursing Instructors' Perception and Satisfaction Regarding Blended Learning and Nursing Students' Perception and Satisfaction Regarding Blended Learning Questionnaire. **Results:** About 48.3% of clinical nursing instructors had a moderate level and 56.2 % of nursing students had a low level of perception regarding blended learning. About 86.2% and 91.5% of both clinical nursing instructors and nursing students had unsatisfactory level of blended learning. **Conclusions:** There was a highly statistical positive correlation between clinical nursing instructors' and nursing students' perception and satisfaction of blended learning.

Keywords: Blended learning, Nursing Instructor, Nursing Students, Perception, and Satisfaction.

Introduction:

As healthcare systems adapt to new social and technological norms, so too does the nursing education system. that is constantly changing in a world that is driven by technology (Kromydas, 2017, Alvarez Jr, 2020). Technology integration into the curriculum becomes an essential component of effective teaching. Successful classroom instruction increasingly relies on the use of technological tools into lesson plans. Learning management systems are being used more and more frequently for distance learning across the globe (J., 2020, Zagouras et al., 2022). Nursing education is increasingly adopting blended learning as the norm. The phrase "blended learning" known as a collection of educational activities where nursing instructors and nursing students participate in both online and in-person interactions. However, blended learning can combine several forms of material delivery, including online and mentor-based approaches (Vasileva-Stojanovska et al., 2015, Gambari(2018), Attard and Holmes, 2022).Nursing students benefit from blended learning as it improves their attitudes, motivation, enjoyment, knowledge, and communication abilities, in addition to helping nursing students perform better academically (Keržič et al., 2019).

Many factors influence the satisfaction of nursing instructor and nursing students with blended learning, such as technology, interactivity, class management issues, instruction, and

the instructor. **Firstly technologies**, unlike more conventional, in-person approaches, technological advancements have the ability to enhance learning experiences and open minds to new possibilities. (Cheng et al., 2023, Zhu and Hu, 2021). Secondly, interactive learning settings takes place in collaborative and socially enabled learning environments (Taghizadeh and Hajhosseini, 2021, Cheng et al., 2023b). Thirdly, class management issues emphasize that administrative support is essential for nursing students taking online classes due to class management concerns. Supplemental resources, including books, technology support, and a help desk, should be easily accessible to nursing students taking blended courses (Cheng et al., 2023, Dinh et al., 2021) Cheng et al., 2023). Fourth, instruction helps nursing students' complete assignments online or view lectures on their own time in a blended learning setting, freeing up classroom time for more interactive, instruction-focused classes thereby allowing nursing instructors more time to concentrate on education and facilitating student participation(Cheng et al., 2023a, Kandakatla et al., 2020). Finally, performances of the instructor, nursing students are highly affected by their instructors' performance, especially in regard to their availability and response speed. Nursing educators act as both learning facilitators and motivators of their nursing students

(Cheng et al., 2023a, Yin and Yuan, 2021).

A nursing instructor's perspective is their own assessment of the benefits, rewards and satisfaction they get from teaching blended courses (Masrom et al., 2019). First, nursing instructors perspective on blended teaching is an important topic to explore because nursing instructors are the backbone of effective blended learning programs since they improve student nurses' skill sets and offering higher-quality training (Masrom et al., 2019, Emarat et al., 2023). Second, a higher level of commitment to and persistence in online teaching, as well as other attitudes and behaviours, are influenced by nursing instructors' perceptions (Masrom et al., 2019, Ateş, 2018) Third, Blended learning has a beneficial impact on nursing educators' satisfaction with online education, which in turn influences the attitudes and behaviours of nursing students (Masrom et al., 2019, Kofar, 2016). Therefore, it is essential to assess nursing instructors and nursing students' perceptions and satisfaction regarding blended learning.

Significance of the study

The unfamiliar situations caused by pandemics cause changes all over the world. Distance between individuals become mandatory to control the infection. One of the most affected institutions by this pandemic is the education. Schools and universities were suspended and shifted to online-learning at first, then to blended-learning all over the world including

Egypt. Faculty of Nursing, Tanta University was not an exemption from these changes. Blended-learning was the suitable solution for learning during the pandemic of COVID-19 and it seemed to continue. Blended learning has become an integral part of 21st-century pedagogy (Singh et al., 2021); (Alsalhi et al., 2021). So, Turning to such learning method without studying how nursing instructors and students perceive this learning method and without enough experience or preparation for both nursing instructors and students would affect instructors and students' satisfaction, which in turn would affect the learning process and outcomes.

The aim of this work was to assess the perception and satisfaction of clinical nursing instructors and nursing students regarding blended learning.

Research question:

What are the clinical nursing instructors' and nursing students' perception regarding blended learning?
What are the clinical instructors' and nursing students' satisfaction levels regarding blended learning?

What is the relation between perception of clinical nursing instructor and nursing students and their levels of satisfaction?

Study design

A descriptive correlational study design was utilized for this study.

Setting:

The present study was conducted at the Faculty of Nursing, Tanta University.

Subjects:

Data were collected from two groups: 29 clinical instructors who were working in community health nursing (14) and nursing administration departments (15) in the Faculty of Nursing, Tanta University.

All (555) nursing students who were enrolled in the 4th academic year (2022/2023)

Tools of the study:**Tool I: Clinical Nursing Instructors' Perception and Satisfaction Regarding Blended Learning Questionnaire**

It contained three parts as follow:

Part one: Clinical nursing instructors' demographic data included age, sex, and marital status, number of children, years of experience, place of residence, economic level, and availability of computer. Academic data included department, work position, skills to deal with computer and soft program as Microsoft Teams, previous experience with electronic teaching, attended courses on E-learning, number of courses taught using e-learning,

Part two: Clinical Nursing Instructors' Perception about Blended Learning Questionnaire:

This part was developed by the investigator guided by (El-Zeftawy and Hassan, 2016, OCAK, 2010). It used to assess clinical nursing instructor's perception toward blended learning. It included 51 items that covered three dimensions as follows:

Instructors' general perceptions of blended learning (13 items),

Instructors' perception about the role of instructor in blended learning (26 items) divided into four dimensions

Facilitator; 6 items, motivator; 8 items from, Controller, 6 items, and Communicator, 6 items and

Instructors' perception of student learning in blended learning, 12 items.

Clinical nursing instructors' perception responses were measured on a five points Likert Scale ranging from (1-5) where, disagree (1), disagree (2), little agree (3), agree (4) and strongly agree (5). The total scores calculated according to statistical cut-off point (60%) into three levels as follow: High perception of blended learning $\geq 75\%$, moderate perception of blended learning $60\% - < 75\%$, and low perception of blended learning $< 60\%$.

Part Three: Clinical Nursing Instructors' Satisfaction Regarding Blended Learning Questionnaire:

This part was developed by the investigator guided by Naaji, et al.,(2012)

Alabdulkarim, (2021)(Othman et al., 2022) .It was

used to assess clinical nursing instructors' satisfaction about blended learning. It included 28 items divided to four dimensions that include Technology, 9 items, Class Management, 6 items, Interaction, 7 items, and Instructions, 6 items. Responses were measured on a five points Likert Scale ranging from (1-5) where, strongly disagree (1), disagree (2), little agree (3), agree (4) and strongly agree (5). The total scores

calculated according to statistical cut-off point into two levels as: Satisfactory level $\geq 80\%$, and unsatisfactory level - $< 80\%$

Tool II: Nursing Students' Perception and Satisfaction Regarding Blended Learning Questionnaire: It contained three parts as follow:

Part one: Nursing Student' demographic data included age, sex, and marital status, place of residence, family income, and availability of computer. Academic data included, department, academic year, skills to deal with Microsoft Teams, frequency of admitting for the team/week.

Part two: Nursing Students' Perception about Blended Learning Questionnaire

This part was developed by the investigator guided by (El-Zeftawy and Hassan, 2016, OCAK, 2010). It used to assess nursing students' perception toward blended learning. It included 51 items and covered three dimensions as student' general perceptions of blended learning, 13 items, Students' perception about the role of instructors in blended learning; 26 items divided into four dimensions as follows:

As facilitator; 6 items, **as motivator;** 8 items, **as controller;** 6 items, **As Communicator;** 6 items

Students' perception of the effect of blended teaching on student learning; it includes 12 items. Nursing student' Perception responses were measured on a five points Likert Scale ranging from (1-5) where, strongly

disagree (1), disagree (2), little agree (3), agree (4) and strongly agree (5). The total scores calculated according to statistical cut-off point (60%) into three levels as follow: High perception of blended learning $\geq 75\%$, moderate perception of blended learning 60% - $< 75\%$, and low perception of blended learning $< 60\%$.

Part Three: Nursing Students' Satisfaction Regarding Blended Learning Questionnaire

This part was developed by the investigator guided by Naaji, et al., (2012); Alabdulkarim, (2021) (Othman et al., 2022). It used to assess nursing students' satisfaction about blended learning. It includes 36 items divided to five dimensions as follows: Technology; 9 items, Class Management, 6 items, Interaction, 7 items, Instructions, 6 items, Instructor, 8 items. Nursing student responses were measured on a five points Likert Scale ranging from (1-5) where, strongly disagree (1), disagree (2), little agree (3), and agree (4) and strongly agree (5). The total scores calculated according to statistical cut-off point into two levels as follow: Satisfactory level $\geq 80\%$ and Unsatisfactory level - $< 80\%$.

Methods

Official permission was obtained from the Dean of Faculty of Nursing, Tanta University.

Ethical considerations:

-Ethical approval was taken from the scientific ethical committee before conducting the study code number (71/6/2022).

-Nature of the study did not cause any harm or pain to the entire sample.

-Confidentiality and privacy for participant was taken into consideration regarding data collection.

-Nursing's students and clinical instructor's consent to participate in the study was obtained after informed them about the privacy of information, nature of the study, their right to withdraw and the confidentiality of their name.

-The tools of the study were developed by the investigators based on related recent literature.

-The Tools I and II translated into Arabic format for better understanding and presented to a jury of five experts in the area of specialty to check their content validity. The experts were four Professors and one assistant professor of Nursing Administration from Faculty of Nursing, Tanta University. The face validity value of tool (I) was 98.7 % & tool (II) 99.6

-A pilot study was carried out on 10% of clinical instructors (n= 3) and nursing students (n= 56).

-Reliability of tools was tested using Cronbach Alpha Coefficient test. Reliability of tool (I) Nursing Students' perceptions about blended learning =0.95. and reliability of tool (II) Nursing Students' Satisfaction Regarding Blended Learning =0.96.

-Data collection phase: Data was collected by the investigator. The investigator distributed the questionnaire on instructors in small group at their work setting and on

student after their classes. The subjects recorded the answer in the presence of the investigator to ascertain that all questions were answered

-The data was collected within 3 months during the academic year 2022/2023. from the beginning of March 2023 to the end of May 2023.

-The estimated time needed to complete the questionnaire items from subjects (clinical instructors, nursing students) for both tools was (20 -30) minutes

Results

Table (1): As noticed in this table around half (48.3%) of clinical nursing instructors were in the age group of 25-<30 years with a mean age of 28.07 ± 2.96 years. Majorities (96.6% and 82.8%) of clinical nursing instructors were females and married respectively. Furthermore, more than half (51.7%) of clinical nursing instructors live in urban areas and about three quarters (69 %) of clinical nursing instructors had just enough income. **Regarding the nursing students,** majority (99.2%) of nursing students were in the age group <25 years with a mean age of 21.93 ± 0.68 years .Around three quarters (73.5%) of nursing students were females and majorities (81.3%) of them were not married .Furthermore, about two third (71.5%) of nursing students were lived in rural areas and about two third (62.3%) of nursing students had just enough family income.

Table (2): Table shows that more than half (51.7%) of clinical nursing instructors were working in the

nursing administration department, while 48.3% were working in community health nursing department. Besides more than half (58.6%) of clinical nursing instructors were demonstrators and 69% of them attended previous courses on E-learning. Majority (93.1%) of the clinical nursing instructors taught one course using e-learning with a mean of 1.0 ± 0.27 . Regarding the nursing students, half (50.1%) of nursing students were enrolled in the community health nursing course and about half (49.9%) of nursing students were enrolled in the nursing administration course and more than two thirds (67.6 %) of nursing students were skilled to deal with computer and Microsoft programs. Besides around two thirds (63.1%) of nursing students had between 3 up to 5 times of admitted to Microsoft teams per week

Figure (1): This figure revealed that around half (48.3%) of clinical nursing instructors had a moderate overall perception level about blended learning while more than half (56.2 %) of nursing students had a low overall perception level about blended learning

Figure (2): Demonstrates that majority (86.2% and 91.5%) of both of clinical nursing instructors and nursing students had overall unsatisfactory level of blended learning respectively. while minority (13.8% and 8.5%) of both of clinical nursing instructors and nursing students had overall satisfactory level of blended learning respectively.

Table (3): Explains that there was a highly statistical positive correlation between all dimensions of clinical nursing instructors' perception of blended learning and all dimension of their satisfaction of blended learning ($P < 0.001^*$).

Table (4): Illustrates that there were a highly statistical positive correlations between all dimensions of nursing students' perception and all dimensions of satisfaction with blended learning ($< 0.001^*$).

Table (1): Clinical nursing instructors' and nursing students' demographic data

		Instructor (n = 29)	Nursing Students (n = 555)	Test of sig.	P
Age (Years)		28.07±2.96	21.93±0.68	t=11.13 8*	<0.001*
<25		4(13.8%)	554(99.2%)	$\chi^2=$ 173.264*	MC P <0.001*
25-<30		14(48.3%)	1(2.0%)		
≥30		11(37.9%)	0(0.0%)		
Sex	Male	1(3.4%)	147(26.5%)	$\chi^2=$ 7.731*	0.005*
	Female	28(96.6%)	408(73.5%)		
Marital status	Married	24(82.8%)	104(18.7%)	$\chi^2=$ 66.002*	<0.001*
	Not Married	5(17.2%)	451(81.3%)		
Number of children		1.24 ± 0.99	--	--	--
0		8(27.6%)	--		
1		9(31.0%)	--		
2		9(31.0%)	--		
3		3(10.3%)	--		
Years of experience		4.21 ± 3.04	--	--	--
<5		18(62.1%)	--		
≥5		11(37.9%)	--		
Residence	Rural	14(48.3%)	397(71.5%)	$\chi^2=$ 7.149*	0.007*
	Urban	15(51.7%)	158(28.5%)		
Economic level\ Family income	Enough and save	3(10.3%)	92(16.6%)	$\chi^2=$ 0.853	0.653
	Just enough	20(69.0%)	346(62.3%)		
	Not enough	6(20.7%)	117(21.1%)		
Availability of computer		29(100.0%)	328(59.1%)	$\chi^2=19.4$ 03*	<0.001*

Data are presented as mean± SD or frequency (%). *Significant p value <0.05.

Table (2): Clinical nursing instructors' and nursing students' academic data

		Instructor (n = 29)	Nursing students (n = 555)	Test of sig.	P
Department\ specialty	Community Health Nursing	14(48.3%)	278(50.1%)	0.036	0.849
	Nursing Administration	15(51.7%)	277(49.9%)		
Position	Assistant lecturers	12(41.4%)	--	--	--
	Demonstrators	17(58.6%)	--		
Skills to deal with computer and Microsoft programs		29(100.0%)	375(67.6%)	13.596*	<0.001*
Previous experience with electronic teaching		23(79.3%)	--	--	--
Attended courses on E-learning		20(69.0%)	--	--	--
Frequency of admitting team (week)	<3	--	40(7.2%)	--	--
	3–5	--	350(63.1%)		
	≥6	--	165(29.7%)		
Number of courses taught using E- learning		1.0 ± 0.27	--	--	--
0		1(3.4%)	--	--	
1		27(93.1%)	--	--	
2		1(3.4%)	--	--	

Data are presented as mean± SD or frequency (%). *Significant p value <0.05.

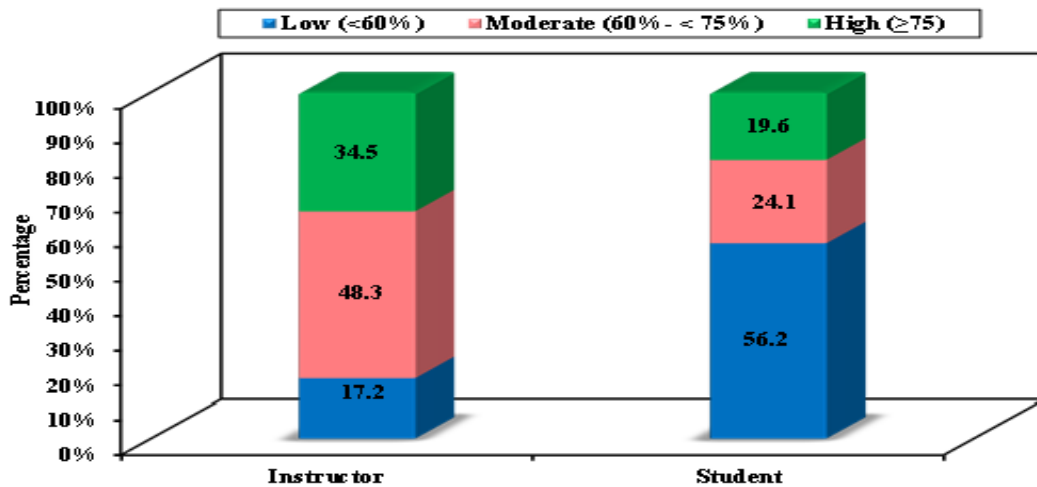


Figure (1): Levels of clinical nursing instructors' and nursing students' overall perception about blended learning

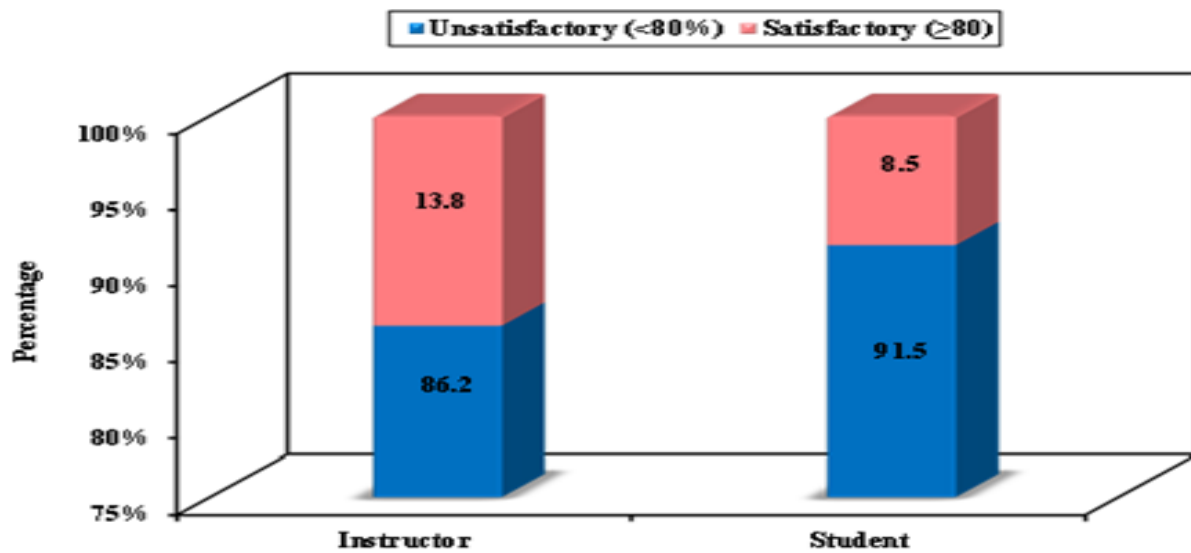


Figure (2): Levels of clinical nursing instructors' and nursing students' overall satisfaction about blended learning

Table (3): Correlation matrix between clinical nursing instructors' perception and satisfaction dimensions about blended learning (n=29).

		Satisfaction about Blended Learning					
		Technology	Class Management	Interaction	Instructions	Instructors	Overall
Instructors' general perceptions of blended learning	R	0.478	0.320	0.412	0.242	--	0.436
	P	0.009*	0.091	0.027*	0.205	--	0.018*
Instructors' perception about their role in blended learning	R	0.475	0.459	0.507	0.441	--	0.542
	P	0.009*	0.012*	0.005*	0.017*	--	0.002*
Motivator	R	0.572	0.451	0.372	0.463	--	0.547
	P	0.001*	0.014*	0.047*	0.011*	--	0.002*
Facilitator	R	0.471	0.410	0.426	0.455	--	0.511
	P	0.010*	0.027*	0.021*	0.013*	--	0.005*
Controller	R	0.565	0.269	0.353	0.367	--	0.475
	P	0.001*	0.159	0.060	0.049*	--	0.009*
Communicator	R	0.587	0.450	0.462	0.489	--	0.585
	P	0.001*	0.014*	0.012*	0.007*	--	0.001*
Instructors' perception of student learning in blended learning	R	0.510	0.414	0.555	0.353	--	0.538
	P	0.005*	0.025*	0.002*	0.060	--	0.003*
Overall	R	0.652	0.490	0.575	0.463	--	0.644
	P	<0.001*	0.007*	0.001*	0.012*	--	<0.001*

r: Person coefficient, * Significant p value <0.05.

Table (4): Correlation between nursing students' perception and satisfaction about blended learning dimensions (n = 555)

		Satisfaction about Blended Learning					
		Technology	Class Management	Interaction	Instructors	Instructors	Overall
Students' general perceptions of blended learning	R	0.587	0.619	0.634	0.614	0.610	0.682
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Students' perception about the role of clinical instructor in blended learning	R	0.614	0.631	0.672	0.658	0.659	0.721
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Motivator	R	0.633	0.658	0.686	0.688	0.691	0.748
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Facilitator	R	0.610	0.633	0.656	0.661	0.664	0.718
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Controller	R	0.631	0.648	0.665	0.701	0.705	0.746
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Communicator	R	0.674	0.696	0.725	0.733	0.736	0.794
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Students' perception about the effect of blended teaching on their learning	R	0.681	0.709	0.737	0.718	0.715	0.792
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Overall	R	0.701	0.730	0.757	0.750	0.749	0.821
	P	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*

r: Person coefficient, * Significant p value <0.05.

Discussion

Understanding nursing instructors' perceptions towards blended learning plays a crucial role in successful technology integration in learning. Satisfaction with blended learning courses is a priority among nursing educators to keep nursing students on track during academic studies (Qassim et al., 2023).

Clinical nursing instructors' and nursing students' perception about dimensions of blended learning

The present study displayed that more than two fifths of clinical nursing instructors had a high level, while more than two third of nursing students had a

low level of general perception regarding dimension of blended learning. This may be due to as clinical nursing instructors agreed that blended learning had good reputation and provides an appropriate environment for teaching. This could be attributed to clinical nursing instructors understand the integration of traditional instruction with online learning components, recognizing its potential to enhance educational outcomes. Instructors On the other hand, nursing students not preferred blended learning than face to face, and not willing to implement blended learning as the traditional type does not require them to improve their

computer skills and that the direct contact with instructors is more effective in gaining knowledge. Along with these present findings, **Aldosemani & Bolliger., (2019)**, reported that most nursing faculty members understood their role in blended learning environments, found the flexibility afforded through blended learning important, and appreciated the fact that they could access course materials anytime and anywhere. In this concern, **Wu and Luo., (2022)**, mentioned that, blended learning provides better understanding of certain topics, and increased nursing student to teacher interaction.

Clinical nursing instructors' and nursing students' satisfaction about blended learning

The present study indicated that majority of both of clinical nursing instructors and nursing students had unsatisfactory level of overall blended learning. This could be because the nursing students do not have the opportunity to interact physically with their peers and with the nursing instructor to obtain timely responses. This may be attributed to inadequate support and training for nursing students in using blended learning technologies that contribute to dissatisfaction.

This result was in agreement with **Mohamed et al., (2022)**, revealed that about two-thirds of nursing students were unsatisfied with their online learning experience. This result was inconsistent with a study performed by **Panes., (2019)**, reported that nursing students were highly satisfied with the use of the blended learning program.

Correlation between clinical nursing instructors' and nursing students' perception and satisfaction about blended learning dimension

The present study highlighted that there was highly statistical significant positive correlation between all dimensions of clinical nursing instructors' perception and satisfaction of blended learning. This may be due to the comprehensive approach of blended learning can improve the overall perception of the nursing learning experience and increase satisfaction levels among nursing instructors, as they can cater to different learning styles and meet educational objectives more efficiently.

The current study findings go in the same line with that of a study conducted by **Alqahtani et al., (2022)**, pointed out that nursing faculty members with perceived online transition as easy were also more likely to be satisfied with the process. This finding was inconsistent with a study carried out by **Elewa., (2022)**, indicated that no significant correlation was seen in nursing instructors' general perceptions of online teaching and class management and instructions dimensions of satisfaction with online teaching.

The current study indicated that there was a high statistical positive correlation between nursing students' overall perception and satisfaction of blended learning. This can be interpreted as nursing students who have a better overall perception of blended learning methods tend to be more satisfied with their learning experience. This positive and significant correlation suggests that improving nursing students' perceptions of blended

learning could lead to higher satisfaction levels.

This result was consistent with a study prepared by , **Alqurashi.,(2019)**, indicated that enhancing nursing students' online learning perception may increase nursing students' satisfaction with online education. Likewise, **Bdair., (2021)**, mentioned that nursing students' perceptions are very important for online learning satisfaction so that learning that takes place can be improved in quality. Nursing students' negative perceptions toward online learning can lead to poor learning outcomes and decreased learning satisfaction.

Conclusion:

Around half of clinical nursing instructors had a moderate level of perception regarding blended learning. In addition, more than half of nursing students had a low level of perception regard blended learning. Besides, majority of both clinical nursing instructors and nursing students had unsatisfactory level of blended learning. There was a highly statistical positive correlation between clinical nursing instructors' as well as nursing students' overall perception and their overall satisfaction of blended learning.

Recommendations

For faculty administration/management:

Enhance the nursing instructor's and nursing student's knowledge and skills about how to use blended learning platforms through workshops and training programs.

Create a reward system such as recognition and certificates of

appreciation for clinical nursing instructors applying blended learning to enhance their performance and achieve the required learning outcomes.

For clinical nursing instructors:

Attend more workshop and training programs on the use of advanced teaching/learning strategies. Design the semester road map to match course scheduling and content to students' needs and expectations.

For nursing students:

Attend more workshops and training programs on E-learning to improve their computer and technological skills and keep updates. Communicate with clinical nursing instructors about the barriers for using blended learning.

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