

Factors Influencing on Nursing Students' Readiness for Guided Reciprocal Peer Questioning Learning at Benha Faculty of Nursing

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Abstract: Peer interaction readiness, students' self-esteem and their perception of learning environment are considered factors which affect on nursing students' readiness for guided reciprocal peer questioning learning.

The study aimed to: Identify factors influencing on fourth year nursing students' readiness for guided reciprocal peer questioning learning. **Design:** A descriptive design was utilized.

Setting: The study was conducted at Benha Faculty of Nursing.

Subjects: Consisted of 305 fourth year nursing students.

Four tools were used for data collection: Guided reciprocal peer questioning readiness questionnaire, peer interaction readiness questionnaire, Rosenberg self-esteem scale and perception of learning environment questionnaire.

Results and Conclusion: Nearly half 47.5% of fourth year nursing students had high readiness for guided reciprocal peer questioning learning. The majority of fourth year nursing students had high peer interaction readiness. More than two third of fourth year nursing students had high level of self-esteem. More than three quarter of fourth year nursing students had moderate level perception of learning environment. There was a highly statistical significant correlation between fourth year nursing students' readiness for guided reciprocal peer questioning learning and their peer interaction readiness factor and their perception of learning environment factor.

The study recommended: Start applying guided reciprocal peer questioning learning approach in educational methods used by the faculty, focus on measuring students' qualitative learning outcomes rather than measuring only quantitative learning outcomes and train students on critical thinking, interpersonal skills, anxiety reduction and leadership skills.

Keywords: guided reciprocal peer questioning learning, nursing students' readiness.

1. INTRODUCTION

For many decades, education followed a model of teacher or content centered classrooms, in which students sat quietly in ordered rows, listening to the teacher present, explain, and demonstrate what they were to learn, without much activity on the students' part except the hidden kind of mind activity involved in paying attention and making sense. Activity in the classroom was focused on teacher, and this was true at all levels of education, especially higher education (*Chandra,*

2015). There are many different kinds of peer learning, some peer learning tasks, such as review and comprehension tasks, require recall and repetition of material or simple application of concepts learned. Such tasks promote mastery of skills and content and may entail students working together to review math facts, learn spelling words, or check each other's comprehension of science concepts. In contrast, there are other peer learning tasks that demand a higher, more complex, level of cognitive processing. One of these approaches is " Guided Reciprocal Peer Questioning" (*Sezer, 2018*).

There are many factors affecting guided reciprocal peer questioning learning readiness including; Peer interaction, self-esteem and learning environment. Assessing students' readiness for guided reciprocal peer questioning learning is very important to start applying this approach. Guided reciprocal peer questioning is an approach in which students question each other about the content they are learning using higher-order, open-ended question stems. The questions are used to promote thinking and generate focused discussions in small groups. When students ask questions to each other, they activate their own thinking, elicit ideas from others, and promote shared learning within their group. Asking higher-order questions in a mutually supportive peer environment allows students to articulate their thoughts and exchange ideas in ways that differ from their interactions with the teacher (*Van, 2015*).

Peer interaction is defined as the relationships and roles developed by students in the classroom environment when undertaking any kind of task or activity, teachers are the ones with the "power" to control the way students can organize themselves in order to develop a specific activity. Peer interaction contributes to student behavioral and academic adjustment. Positive social interactions among students are the key to cognitive, social, and language development. Most students naturally develop appropriate behaviors for positive social interactions with peers, despite other students with behavioral disorders often fail to naturally acquire such abilities and often struggle to develop and maintain positive peer relationships (*Cappella, Kim, Neal and Jackson, 2013*).

Self-esteem is a capacity to see oneself as valuable and competent, loving and lovable, having certain talents and a worthwhile personality to share in relationships with others, this definition means that to possess healthy self-esteem a person should have a realistic awareness toward oneself and toward one's rights. People with healthy self-esteem are usually self-confident, they are able to build healthy relationships, see themselves as successful, and act toward others in no threatening ways. When looking at someone with healthy self-esteem, he or she does not worry about being better than one person or not as good as another person. Someone with high self-esteem is not concerned on what other people think. They are not perfect but are confident. They are special. They are the kind of people who can say; "I like myself" (*Mona and Fathia, 2014*).

An interaction in guided reciprocal peer questioning promotes students' self-confidence as a sub-item of self-esteem and results in students' ability to face and cope with any dilemma during education. Excessive emphasis of nursing educators on traditional teaching indirectly imposes a sort of curriculum designed based on students' obedience and mere acceptance that suppress their ideas, resulting in their lower self-confidence. On the other hand, most of the researches have studied the association between self-esteem and educational development and success, but less attention has been paid to the effect of an appropriate educational method in promotion of educational development and success. A review of the literature shows that the range of self-esteem in nursing students ranges from normal to low. It is hypothesized that different contextual factors could affect levels of self-esteem (*Leila et al., 2015*).

Learning environment has been defined as everything that is happening in the classroom or department, faculty, or university. Learning environment refers to the diverse physical locations, contexts, and cultures in which students learn. The term includes the culture of a faculty or class and its presiding characteristics, including how students interact with and treat one another, as well as the ways in which teachers may organize an educational setting to facilitate learning (*Saz, Engel and Coll, 2016*).

The students' perceptions of the educational setting can be a basis for implementing modifications and thus optimizing the educational environment. Meaningful learning correlates positively with the students' perceptions of the educational environment, which affect students' learning experiences and outcomes. It influences how, why, and what students learn. The students' perceptions of their educational environment have been studied at all the levels of educational systems because of the recent direction towards enhanced quality assessment monitoring and the commitment of the health profession education towards student-centered teaching and learning (*Ahmed, Taha, Al-Neel and Gaffar, 2018*).

Significance of the Study:

The reciprocal peer questioning learning could be expected to promote the social construction of knowledge because it provides a context which fosters the emergence and resolution of socio-cognitive conflict. It provide students with opportunities to fill in gaps in their knowledge structures, correct misunderstandings, discover and resolve discrepancies in information, and reconcile conflicting views (*Song, 2016*). It promotes students' self-confidence and allows them to share on their own educational process. Accordingly, the present study concerned with identifying factors influencing guided reciprocal peer questioning learning readiness among fourth year nursing students at Benha University.

Aim of the Study

The present study aimed to:

Identify factors influencing on nursing students' readiness for guided reciprocal peer questioning learning at Benha Faculty of Nursing through the following objectives:

1. Assessing nursing students' readiness for guided reciprocal peer questioning learning.
2. Assessing nursing students' peer interaction readiness factor and its influence on their readiness for guided reciprocal peer questioning learning.
3. Assessing nursing students' self-esteem factor and its influence on their readiness for guided reciprocal peer questioning learning.
4. Measuring nursing students' perception of learning environment factor and its influence on their readiness for guided reciprocal peer questioning learning.

Research Questions

1. Does nursing students' peer interaction readiness factor influence their readiness for guided reciprocal peer questioning learning?
2. Does nursing students' self-esteem factor influence their readiness for guided reciprocal peer questioning learning?
3. To what extent nursing students' perception of learning environment influence their readiness for guided reciprocal peer questioning learning? **Subjects and methods**

Research design:

A descriptive design had been utilized to meet the aim of study.

Setting:

The current study was conducted at Faculty of Nursing, Benha University which was established in 1992 and got accreditation in 25-8-2014. There are 6 departments in the faculty including; Medical and Surgical Nursing, Obstetric and Woman's Health Nursing, Pediatric Nursing, Psychiatric and Mental Health Nursing, Community Health Nursing and Nursing Administration, It also includes; Quality Assurance Unit, Information Technology Unit, Strategic Planning Unit, Unit of Measurement and Evaluation, Research Unit, Crisis and Disaster Unit, Graduates Unit, Public Service Center and continuous training Center. Moreover, there are four classrooms in the Faculty, seminar rooms discussion rooms, clinical labs and information technology labs.

Subjects:

All fourth year nursing students who were enrolled in the fourth academic year in 2017-2018 at Benha Faculty of Nursing. The fourth year nursing students were (305) students (245) female students and (60) male students.

Tools of data collection

To collect data for this study, the following four tools were used:

1. Guided reciprocal peer questioning readiness questionnaire:

It was developed by *Baker, et al., (2013)* to assess fourth year nursing students' guided reciprocal peer questioning readiness factor. It contained two parts.

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First part: Personal data: This part included data about certain relevant personal characteristics such as (age, sex, previous education, marital status and residence).

Second part: Assess students' guided reciprocal peer questioning readiness factor included (18) items divided into (3) categories (1): *Expectancy*. It contained (3) items, (2): *Participation*. It contained (12) items and (3): *Demeanor*. It contained (3) items.

2. Peer interaction readiness questionnaire:

It was developed by (Yin, Wang and Han, 2016) to assess fourth year nursing students' peer interaction readiness factor, it consisted of (18) items.

3. Rosenberg self -esteem scale:

It was developed by *Rosenberg, (1965)* to assess fourth year nursing students' self-esteem factor, it consisted of 10 items.

4. Perception of learning environment questionnaire:

It was developed by *Ramsden, (1991)* and modified by *Huang, (2008)* to measure the perception of learning environment factor among fourth year nursing students included (35) items divided into (6) categories (1): Learning goals and standards. It contained (5) items, (2): independence. It contained (6) items, (3): quality of learning. It contained (8) items, (4): required work size. It contained (5) items, (5): process of evaluation. It contained (5) items and item (6) learning.

Reliability of the tools:

Tool reliability for guided reciprocal peer questioning readiness questionnaire was (0.786), tool reliability for peer interaction readiness questionnaire was (0.857), tool reliability for Rosenberg self -esteem scale was (0.986) and tool reliability for perception of learning environment questionnaire was (0.946).

Pilot study

The revised questionnaires were piloted with (10 %) from the subject. It was done on (31 fourth year nursing students) from Benha Faculty of Nursing at the last of month September and lasts for 3 days. These students were included in the main subjects, to evaluate the effectiveness of the proposed data, collection tools and to assess the feasibility of the study. In addition to estimate the time needed to fill the form that approximately ranged from (20-30) minutes. The necessary clarification for some statements related to their translation to Arabic was done.

Field work

The data collection took about two months from October 2017 to November 2017. The time needed for filling each questionnaire was 20-30 minutes depending upon understanding and response of subjects. The average number was (ten) fourth year nursing students per day. The data collected by the investigator from students through distribution of the questionnaire to them. The data collected during their study hours about 3 intermittent hours through 4 days/ week between lectures after explaining the aim of the study to them to accept their participation as well as organize and arrange the their participation according to lectures and clinical time.

Statistical design

Data analysis was performed using IBM SPSS statistical software version 22. The data were explored. Descriptive statistics with mean and standard deviation (SD) for continuous variables and frequency for categorical variables were analyzed. Qualitative variables were compared using independent (t) test and mean score between two and more groups, respectively. Correlation coefficient (r) was used to evaluate association between studied variables. The p-value is the degree of significant. A significant level value was considered when $p\text{-value} \leq 0.05$ and a highly significant level value was considered when $p\text{-value} \leq 0.001$, while $p\text{-value} > 0.05$ indicates no significant results.

Ethical consideration:

At the interview with fourth year nursing students to collect data, they were informed about the purpose and benefits of the study and their participation is voluntary and they have the right to refuse to participate in the study without giving any reason. In addition, confidentiality and anonymity of the subjects were assured through coding of all data.

2. RESULTS

Table (1): Displays personal characteristics of fourth year nursing students. This table reveals that, the majority (91.1%) of fourth year nursing students are within age of 22 years old with Mean ± SD (21.09 ± 0.29). As regards to gender of nursing student, the highest percent (80.3%) of students are females, while the majority (84.9%) of students had general school education. Regarding to marital status, the highest percent (91.1%) of students are single and in relation to their residence the majority (95.7%) of students are living with their families.

Figure (1): Illustrates that nearly half (47.5%) of fourth year nursing students have high readiness for guided reciprocal peer questioning learning. while the minority (13.1%) of them have low readiness for guided reciprocal peer questioning learning.

Figure (2): Shows that the majority (85.9%) of fourth year nursing students have high peer interaction readiness. On the other hand, the minority (5%) of students have low peer interaction readiness.

Figure (3): Shows that more than two third (60.4%) of fourth year nursing students have high level self-esteem. while the minority (14.4%) of students have low self-esteem.

Figure (4): Shows that more than three quarter (76.4%) of fourth year nursing students have moderate level perception of learning environment. On the other hand, the minority (9.2%) of students have low perception of learning environment.

Table (2): Illustrates that there is a highly statistical significant correlation between fourth year nursing students' readiness for guided reciprocal peer questioning and students' peer interaction readiness factor. Additionally, there is a highly statistical significant relation between fourth year nursing students' readiness for guided reciprocal peer questioning and student's perception of learning environment factor. The highest factor that affects fourth year nursing student's readiness for guided reciprocal peer questioning is peer interaction readiness (r = 0.399**).

Table (1): Frequency distribution of fourth year nursing students' personal characteristics (n= 305)

Personal characteristics	No	%
Age (years)		
22-23	278	91.1
23-24	27	8.9
Mean ±SD	21.09±0.29	
Gender		
Male	60	19.7
Female	245	80.3
Previous education		
General school	259	84.9
Technical nursing education	46	15.1
Marital status		
Single	278	91.1
Married	27	8.9
Residence		
With family	292	95.7
At university city	13	4.3

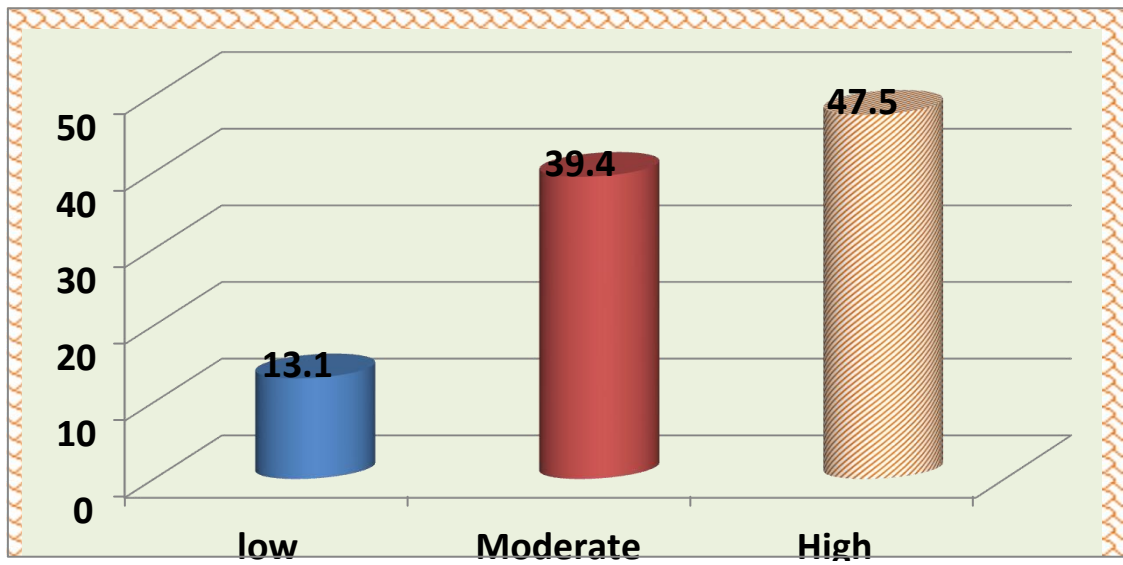


Figure (1): Percentage distribution of total readiness scores for guided reciprocal peer questioning factor among fourth year nursing students.

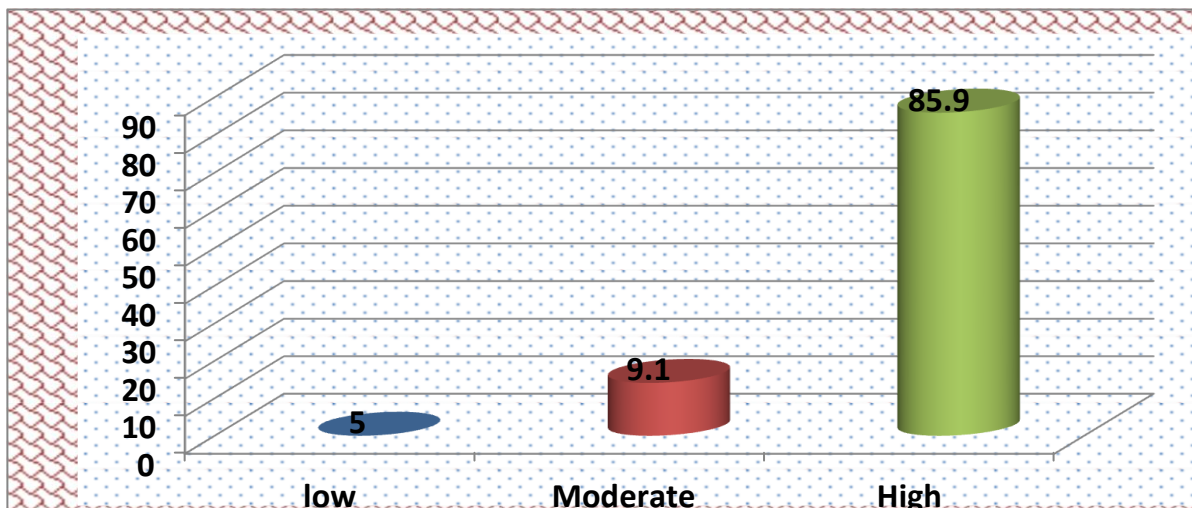


Figure (2): Percentage distribution of total peer interaction readiness scores among fourth year nursing students.

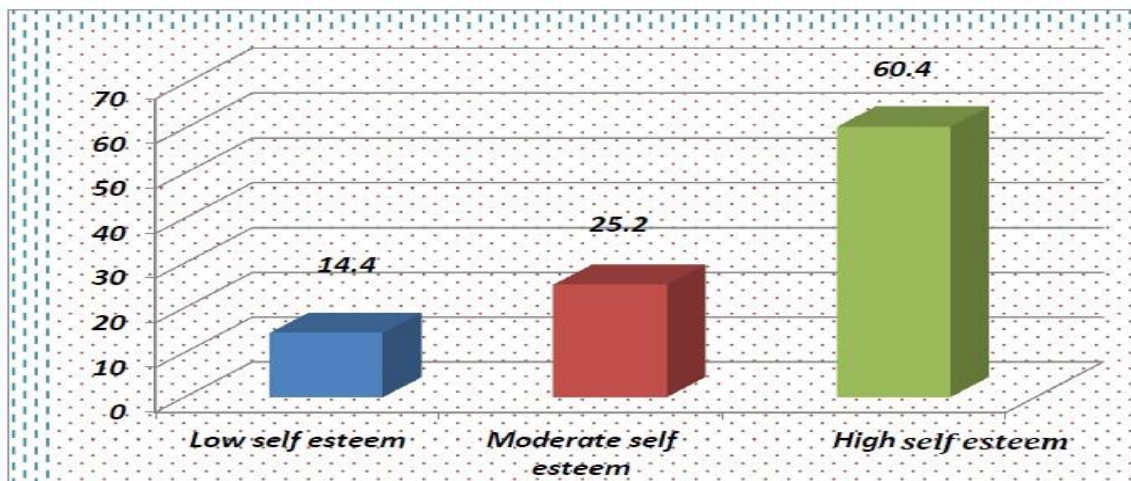


Figure (3): Percentage distribution of total self-esteem scores among fourth year nursing students.

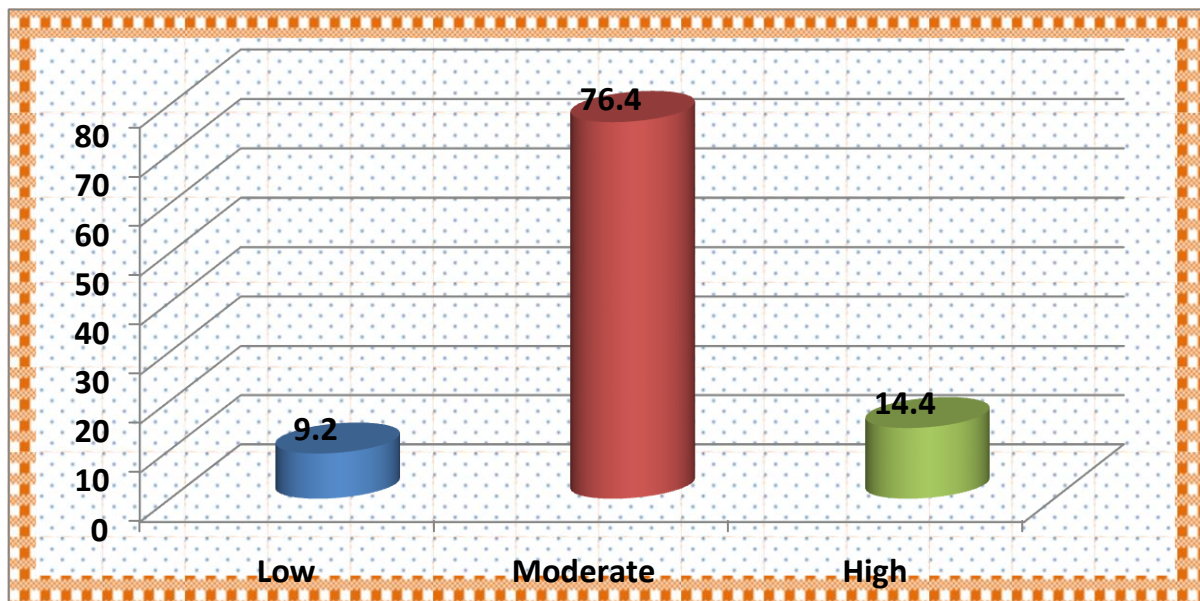


Figure (4): Percentage distribution of total scores of perception of learning environment among fourth year nursing students.

Table (2): Correlation among fourth year nursing students' readiness for guided reciprocal peer questioning and peer interaction readiness factor, self-esteem factor and perception of learning environment factor (n=305)

Variables	Guided reciprocal peer questioning readiness	
	r	p. value
Peer interaction Readiness factor	.399**	.000
Self-esteem factor	.065	.256
Perception of learning environment factor	.224**	.000

3. DISCUSSION

The present study aimed to identify factors influencing on nursing students' readiness for guided reciprocal peer questioning learning at Benha Faculty of Nursing through the following objectives: Assessing fourth year nursing students' readiness for guided reciprocal peer questioning learning, assessing fourth year nursing students' peer interaction readiness factor and its influence on their readiness for guided reciprocal peer questioning learning, assessing fourth year nursing students' self-esteem factor and its influence on their readiness for guided reciprocal peer questioning learning and finally, measuring fourth year nursing students' perception of learning environment factor and its influence on their readiness for guided reciprocal peer questioning learning.

As regarding to distribution of total readiness score for guided reciprocal peer questioning factor among fourth year nursing students, the finding of current study illustrated that nearly half of fourth year nursing students had high readiness for guided reciprocal peer questioning learning. While the minority of them had low readiness for guided reciprocal peer questioning learning (Figure 1).

This might be due to the desire of fourth year nursing student to be participants in the learning process not just recipient in lectures and their tendency for collaborative learning application.

In relation to distribution of total peer interaction readiness score among fourth year nursing students, the findings of the current study revealed that the majority of fourth year nursing students had high peer interaction readiness, while the minority of students had low peer interaction readiness (Figure 2).

This might be because of the maturity of fourth year nursing students which enables them to use their communication skills effectively, interact with their peers, understand their body language and improve their listening skills.

As regarding to distribution of total self-esteem score among fourth year nursing students, the findings of the current study revealed that more than two third of fourth year nursing students had high level self-esteem. On the other hand, the minority of students had low self-esteem (**Figure 3**).

This might be because of the nature of nursing profession especially in clinical areas which demands high self-esteem while dealing with patient and their relatives. So that, nursing students thought that they acquired these skills from their direct contact with patients and their relatives in their clinical areas.

As regarding to distribution of total score of fourth year nursing students' perception of learning environment's related subscales, the finding of the current study revealed that more than three quarter of fourth year nursing students had a moderate level of perception of learning environment. On the other hand, the minority of students had a low level perception of learning environment (**Figure 4**).

This might be due to the high awareness and maturity of nursing students toward their learning environment and the efforts done by the faculty to make all components of learning environment suitable and effective for good learning and teaching process.

Concerning the correlation between fourth year nursing students' readiness for guided reciprocal peer questioning and peer interaction readiness factor, self-esteem factor and perception of learning environment factor. The findings of current study illustrated that there was a highly statistical significant relation between fourth year nursing students' readiness for guided reciprocal peer questioning and students' peer interaction readiness factor. Additionally, there was a highly statistical significant relation between fourth year nursing students' readiness for guided reciprocal peer questioning and student's perception of learning environment factor. The highest factor that affected fourth year nursing student's readiness for guided reciprocal peer questioning was peer interaction readiness (**Table 2**).

From the investigator's point of view, peer interactions readiness factor is a very important factor which affects fourth year nursing students' readiness for guided reciprocal peer questioning learning as it represents the desire and the readiness of students to socialize and work on a group and emphasizes on the possession of nursing students to social, emotional, communication and academic skills which facilitate working at group and considered an essential component for collaborative learning which play an important role in improving social skills, norms, knowledge and self-concept for nursing students. In addition, student's perception of learning environment factor plays an important role which affects fourth year nursing students' readiness for guided reciprocal peer questioning learning as it represents the efforts done by Benha Faculty of Nursing to make all components of learning environment suitable and effective for good learning and teaching process and to meet all quality criteria to keep its accreditation value.

4. CONCLUSION

Nearly half of fourth year nursing students had high readiness for guided reciprocal peer questioning learning, the majority of students had high peer interaction readiness, more than two third of students had high level of self-esteem and more than three quarter them had moderate level perception of learning environment. Moreover, there was a highly statistical significant correlation between fourth year nursing students' readiness for guided reciprocal peer questioning learning and their peer interaction readiness factor and their perception of learning environment factor. The highest factor affected fourth year nursing student's readiness for guided reciprocal peer questioning was peer interaction readiness.

5. RECOMMENDATIONS

In the light of the findings obtained from the present study, some points are recommended such as applying guided reciprocal peer questioning learning approach in educational methods used by the faculty, focusing on measuring students' qualitative learning outcomes rather than measuring only quantitative learning outcomes, conducting training programs for teaching staff about designing and using guided reciprocal peer questioning learning approach in their teaching and finally, training students on critical thinking, interpersonal skills, anxiety reduction and teamwork and leadership skills as the following; know, trust and support each other, communicate accurately and unambiguously, resolve conflicts constructively, learn how to use listening skills and other strategies of communication skills and learn how to cope with the stresses.

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