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ORIGINAL RESEARCH

Emotional Intelligence and Clinical Performance of Undergraduate Nursing Students During Obstetrics and Gynecology Nursing Practice; Mizan-Tepi University, South West Ethiopia

Alemayehu Sayih Belay (D) Aychew Kassie

Mizan Tepi-University, College of Medicine and Health Science, Department of Nursing, Mizan Aman, Ethiopia **Background:** Today, one of the most challenging duties of nursing school is achieving clinical practice proficiency. Emotional intelligence correlates with students' clinical practice performance. Such data are scarce in Southwest Ethiopia. Therefore, this study aimed to examine the relationship between emotional intelligence and clinical performance of undergraduate nursing students during obstetrics and gynecology nursing practice.

Methods: A cross-sectional study was employed. All registered 186 fourth-year undergraduate nursing students of Mizan-Tepi University were included in the study. The data were collected using the self-administered structured questionnaires after briefly explaining the objective of the study. The Schutte Self Report Emotional Intelligence Test (SSEIT) was used to collect the data associated with emotional intelligence. Independent *t*-test, Pearson correlation, linear regression, and ANOVA were computed as appropriate after checking all necessary assumptions and statistical significance was declared at p<0.05.

Results: Emotional intelligence was strongly correlated with clinical practice performance [r (186) =0.767, p<0.0001]. There was a statistically significant difference in the mean clinical practice performance by sex, where males were performed better [t(186)=3.27, p<0.0001]. Linear regression analysis showed that emotional intelligence was the only predictor of clinical practice performance (β =0.219, p<0.0001). In one way ANOVA, the Welch test [F_W (3,182) = 218.18, *p* <0.0001] and the Brown-Forsythe test [F_{BF} (3,182) = 150.73, *p* <0.0001)] revealed that there were statistically significant differences in the mean clinical practice performance among levels of emotional intelligence.

Conclusion: This study confirmed that the emotional intelligence of nursing students had significantly affected their clinical performance. This finding poses important questions for the educators responsible for nursing education in both academic and clinical settings. Further investigation is required to assess the factors that increase or decrease EI in nursing students is warranted.

Keywords: emotional intelligence, clinical performance, practice, obstetrics and gynecology, nursing, Ethiopia

Correspondence: Aychew Kassie Mizan-Tepi University, College of Health Science, Department of Nursing, P.O. Box: 260, Mizan Aman, Ethiopia Tel +251-922460461

Email aychewkassie055@gmail.com

Introduction

The psychologists Salovey and Mayer first described the word emotional intelligence (EI) in 1990.¹ They defined it as "the ability to process emotion-laden information competently and to use it to direct cognitive behavior as problemsolving".² In other words, EI refers to "the one's capability to recognize and

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manage owns and others emotions effectively".³ It also involves possessing the capability for motivation, creativity, and the ability to perform at an optimal level to accomplish tasks.⁴

All of the theories and models in the conceptualization of EI are under the umbrella of the following models of EI: Goleman's EI mixed model, Petrides KV, and Furnham A,'s EI trait model, Bar-On's EI competencies model, and Mayer, Salovey, and Caruso's EI ability model resulted from decades of research and scientific investigations.⁵ First, Goleman, 1995 viewed EI as an array of skills and personal competencies that contribute to the performance of managers and leaders in the workplace, focusing on; self-awareness, relationship management, selfmanagement, and social awareness.^{6,7} Second, Petrides and Furnham, defined EI as "a constellation of emotional self-perceptions in which all EI measures are based on self-report items not based on maximal performance items".⁸ Third, Mayer et al. 2003 defined EI as "an ability of understanding, and managing emotions, and using that information to facilitate thinking, and guide our decisions".9 Fourth, Bar-On, 2006 conceptualizes EI as "an arrangement of interconnected behavior driven by emotional and social competencies that influence performance and behavior".¹⁰

The Schutte Self Report Emotional Intelligence Scale (SSREI) is also an established measure of Trait EI. The SSREI Scale is based on Salovey and Mayer's (1990) conceptualization of EI and is widely used in different studies including this research due to good reliability and validity, briefness, ease of scoring, and availability in the public domain. Moreover, this model measures an individuals' current level of emotional intelligence. The Schutte et al, 1998 trait measure has proposed an EI scale that contains three main categories; namely, appraisal and expression of emotions, regulation of emotion and utilization of emotional information in thinking and acting.¹¹

EI is likely to influence academic and clinical practice performance across a variety of fields in health.^{12–15} The nursing students learn and staff nurses work in a stressful environment created due to different factors like work overloads, long duration of working hours, and having to interact with different personnel ranging from patients to healthcare teams.¹⁶ Studies have shown that higher EI is associated with lower levels of stress and better coping ability among students and other health care workers.¹⁷ Therefore, trait EI questionnaires measure typical

behaviors in emotion-relevant situations (eg, when an individual is confronted with a stressful environment).¹⁸

As part of continuing professional development, EI plays a substantial role in the health care practitioner's interactions with clients and colleagues. In nursing, EI is considered as one of the main components of proficiency of care, which both affect their official work and the relationship with clients.¹⁹

A study conducted in USA identified EI as an essential student characteristic which is highly related with clinical performance that further clarifies their professional behaviors for practice.²⁰ Due to its nature, the obstetrics and gynecology nursing care practice is often uncomfortable for many women as well as for many maternity nurse practitioners. In this case, higher EI also enables nurses to be more competent in certain skills that can help them to develop a trustful relationship with clients.²¹ In general, EI enables nurses during clinical practice and professional work to make better decisions, manage their patients more effectively, improve relationships, and positively impact the quality of care received by patients and families.^{22,23}

The relationship between emotional intelligence and clinical practice performance is two-directional; the students need EI to perform better in clinical practice or acquire better EI from the practical experience along with good supervisors and different training events.^{24,25} Studies have shown positive correlations between EI and clinical performance of nursing students.^{12,14,26–29}

Clinical practice training provides students with distinctive teaching opportunities in which theoretical knowledge is applied in the real-life conditions. It has unlimited roles; improving students' learning, increasing their sense of responsibility, minimizing the theory-practice gap, and providing them with a great chance to demonstrate nursing skills.³⁰ The clinical practice performance evaluation must include; professional and ethical conduct, good relationship with clients, have the basic knowledge about clinical practice procedures, identify and prioritize clients' problems, perform nursing skills correctly, and apply critical thinking skills.³¹

The studies revealed that the academic achievement and clinical practice performance of nursing students remained low^{32,33} due to different factors like long working hours of part-time employment,^{34,35} poor performance of prerequisite courses,^{36,37} clinical practice stress,³⁸ and poor communication skills.³⁹

Even though many factors like; age, gender, students' prior academic achievement, students' interest in clinical

practice, and EI affect the clinical practice performance of students,^{19,40–43} recently nursing scholars have stressed the importance of emotional intelligence in improving students' clinical practice performance.⁴⁴

In spite of the importance of emotional intelligence as a prerequisite for appropriate and quality nursing care performance, there is no study on the emotional intelligence of nursing students and its relationship with clinical performance in our country. Therefore, this study aimed to assess the relationship between emotional intelligence and clinical practice performance of nursing students during obstetrics and gynecology nursing practice, Southwest Ethiopia.

Methods and Materials

Study Setting

Mizan-Tepi University (MTU) is one of the higher education institution in Ethiopia which was inaugurated in 2006 G.C. It is found in the Southern Nation, Nationality and Peoples Region (SNNPR) 585 km away from Addis Ababa, the capital city of Ethiopia. Currently, Mizan-Tepi University has a total of more than 10,000 students in regular and extension programs. Nursing is one of the departments in the College of medicine and health sciences, in which the nursing program was started in 2009 GC. Currently, there are 243 regular and 283 extension students in all batches. From which 186 are fourthyear undergraduate students in 2021.

Study Design and Period

A cross-sectional study was employed to assess the relationship between EI and clinical practice performance of MTU Bachelor of Science degree in nursing students during obstetrics and gynecology nursing practice training from February 15th- March 30th, 2021.

Study Population

All undergraduate fourth-year nursing students of 2021 who met the inclusion criteria were the study population.

Inclusion Criteria

All undergraduate fourth-year regular and extension nursing students of 2021 who had completed all prerequisite courses for clinical practice. Both male and female students whose age above 18 were included.

Sample Size and Sampling Procedure

All registered fourth-year undergraduate nursing students in 2021 who met the inclusion criteria were included. There were the total of 186 nursing students registered for the fourth-year undergraduate class. Accordingly, to increase the generalizability of the study, all eligible students; 186 (143 regular and 43 extension) were employed.

Measurement

Emotional Intelligence (EI)

EI was measured by the Schutte Self Report Emotional Intelligence Test (SSEIT). It consists of 33 items with a five-point Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree). SSEIT includes three categories which are appraisal and expression of emotions (13 items), regulation of emotions (10 items), and utilization of emotions (10 items). The scale items were randomly distributed in order to avoid leading sentences. The total SSEIT score ranged from 33 to 165.¹¹ The total EI scores of the students were categorized into low EI (33 to 77), moderate EI (78 to 121), and high EI (122–165).^{12,45–48}

Clinical Practice Performance

The clinical practice performance was an official grade point each student scored out of 100 in obstetrics and gynecology nursing practice. Based on national harmonized nursing curriculum, the clinical practice performance was considered as excellent, very good, good, satisfactory, unsatisfactory, very poor, and fail, where they score 80–100, 70–79, 60–69, 50–59, 45–49, 40–44, and below 40, respectively.^{49.}

Data Collection Tool and Procedure

The data collection tool was adopted and developed from reviewing different relevant literatures.^{11,12,49–52} The data collection tool has three parts. Part one is about the sociodemographic characteristics of students. Part two is about the emotional intelligence (EI) of students and part three is about the clinical practice performance of students. The emotional intelligence assessment tool has a reliability coefficient (Cronbach's alpha=0.90) and validity (CVI=0.88).¹¹ In our study, the cronbach's alpha was 0.96.

Data on the socio-demographic characteristics (residence, background, sex, age of respondents, marital status, ethnicity, parent educational status and others) and emotional intelligence (EI) of the students were collected by using selfadministered structured questionnaires (English version) before obstetrics and gynecology nursing practice training, whereas data on students' clinical practice performance were taken from nursing department upon completion of the practical training. The tool was pretested on Aman health science college nursing students before the actual data collection. Then, during the actual data collection, students were informed about the purpose of the study and asked to fill the questioners after written consent was taken from all students. Four technical assistants and two assistant lecturers were recruited as data collectors and supervisors, respectively. The one-day training was given for data collectors about the purpose of the study, the techniques of the data collection process, ways of approaching study participants (students) and clarification was given about the data collection tool itself.

Data Analysis Procedure

The collected data were entered into the Epi-Data Manager 4.2 and imported into R 3.5.0 for analysis after the appropriate package (foreign) was added to R-studio. Descriptive statistics (frequency, percentage, mean and standard deviation) were used and correlation coefficients were used to see the relationship of emotional intelligence with clinical practice performance. Independent *T*-test, One way ANOVA and Linear regression were used to determine the mean differences and predictor variables for the clinical practice performance. Finally, the statistically significant difference in the mean of clinical performance and significant predictor variables were determined at a p-value of <0.05 and CI of 95%.

Result

Socio-Demographic Characteristics of Students

A total of 186 undergraduate year students, were participated in the study yielding a response rate of 100%. The median (IQR) age of the participants was 24 (22, 26) years. More than half 105 (56.5%) of the participants had rural resident backgrounds, and 121 (65.1%) were males. Of the total participants, most 113 (60.8%) of them were currently single. Concerning the parental educational status, more than one-third 72 (38.7%) of them had no formal education. The majority, 169 (90.9%) of the participants had an interest in the field of choice (Table 1).

Emotional Intelligence (EI), Clinical Practice Performance and Their Correlation

The mean and SD of emotional intelligence and clinical practice performance were 99.94 (SD±25.40), and 74.97 (SD± 7.49), respectively. The mean and SD of appraisal, regulation, Table ISocio-Demographic Characteristics of UndergraduateNursing Students of Mizan Tepi University, South West Ethiopia,2021

Variables	Frequency	%
Residence background		
Urban	81	43.5
Rural	105	56.5
Sex		
Male	121	65.I
Female	65	34.9
Age of respondents		
Median(IQ3R) in years	24 (22, 26)	
Marital status		
Single	113	60.8
Married	53	28.5
Divorced	13	7.0
Widowed	7	3.8
Ethnicity		
Amhara	58	31.2
Oromo	44	23.7
Tigre	33	17.7
Kaffa	25	13.4
Wolayita	15	8.1
Other **	11	5.9
Respondent's parent educational status		
No formal education	72	38.7
Primary	57	30.6
Secondary	43	23.1
Certificate and above	14	7.5
Type of admission		
Regular	143	76.9
Extension	43	23.1
Interest in field of choice		
Yes	169	90.9
No	17	9.1
Clinical work experience		
Yes	74	39.8
No	112	60.2

Note: **Gurage, Gambella, Bench.

Abbreviation: IQR, Interquartile Range

and utilization were 39.73 (SD± 10.66), 29.80 (SD± 8.84), and 30.56 (SD± 8.37), respectively. The Pearson correlation test result indicated a significant and strong positive relationship between emotional intelligence and clinical practice performance among regular students (r (143) = 0.788, p<0.001). Similarly, strong correlation among extension students were also seen (r (43) = 0.637, p<0.001). Overall, there was a strong correlation between emotional intelligence and clinical

practice performance of all undergraduate students (r (186) = 0.767, p<0.0001) (Table 2).

Clinical Practice Performance and Emotional Intelligence Related to Socio-Demographic Characteristics

Undergraduate students whose sex was male (M=76.26, SD=7.14), were performed better achievements than females (M=52.58, SD=7.62). The mean difference in clinical practice performance 3.67, 95% CI [1.46, 5.89] was statistically significant [t(184)=3.274, p<0.001] between males and females. Slight improvement with the mean clinical practice performance was seen among those students with rural resident background (M=75.35, SD=7.87), admission type of extension (M=76.51, SD=5.92), who had an interest in field choice (M=75.00, SD=7.41), and who had clinical work experience (M=75.37, SD=7.03) compared with students with urban resident background (M=74.49, SD=6.99), admission type of regular (M=74.51, SD=7.87), who had no interest in the field of choice (M=74.76, SD=8.51), and who had no clinical work experience (M=74.71, SD=7.80), respectively. However, these variables remained statistically insignificant.

Regarding emotional intelligence, undergraduate students whose sex was male (M=103.68, SD=22.83), had better emotional intelligence than females (M=92.98, SD=28.49). This difference 10.70, 95% CI [2.57, 18.82] was statistically significant [t(184)=2.611, p<0.01]. Similarly, undergraduate students whose admission type was extension (M=108.23, SD=21.69), had better emotional intelligence than regular (M=97.45, SD=25.97). This mean difference in emotional intelligence -10.77, 95% CI [-19.37, -2.17] was statistically significant [t (184)=-2.47, p<0.014] between regular and extension students. But there was no statistically significant difference in the mean of emotional intelligence between students with both residence background, interest in field choice, and history of clinical work experience (Table 3).

Predictors of Clinical Practice Performance

The simple linear regression analysis revealed that sex, parent educational status, and emotional intelligence were significantly associated with clinical practice performance (p<0.05). Those variables were included in the multiple regression models.

In order to adjust for possible confounding factors, multiple linear regression analysis was applied after confirming that all assumptions were met. Finally, emotional intelligence was remained the strongest predictor of clinical practice performance (p<0.0001). This study finding indicated that about 60.1% of the variation in clinical practice performance was explained by our model [F (5,180)=54.21, P < 0.0001, R² = 0.601]. For each increment of score of emotional intelligence, the clinical practice performance was increased by 0.219 score [β =0.219, 95% CI (0.191, 0.248)] (*p*<0.0001) (Table 4).

Mean of Clinical Practice Performance Among Different Groups of Variables

As it was determined by one-way ANOVA, there was no statistically significant difference in the mean clinical practice performance between the different parental educational status [F(3,182) = 2.094, p = 0.103)], whereas, according to the

Variables		Minimum	Maximum	Mean	SD	Internal Reliability (Cronbach's Alpha
Emotional Intelliger	nce	50.00	151.00	99.94	25.40	0.96
Subscales of El	Appraisal Regulation Utilization	18.00 13.00 14.00	63.00 48.00 49.00	39.73 29.80 30.56	10.66 8.84 8.37	0.935 0.943 0.899
Variables		Pearson Correlation		Sig. (2 Tailed)		Interpretation
Admission Type	Regular (n=143) Extension (n=43) Overall (n=186)	0.788 0.637 0.767		0.000* 0.000* 0.000*		Strong Strong Strong

Table 2 Emotional Intelligence (EI) and Its Correlation with Clinical Practice Performance Among Undergraduate Nursing Students ofMizan Tepi University, South West Ethiopia, 2021

Note: *Significant at p-value of <0.05.

Abbreviations: M, Mean; SD, Standard Deviation; n, Sample size.

Variable		Mean	SD	df	Clinical Practice Performance				
					Levene's Test	T-test	Mean Difference	95% Confidence Interval	P-value
					F	t			
Sex	Male Female	76.26 72.58	7.14 7.62	184	1.424	3.274	3.67	1.46, 5.89	0.001*
Residence	Urban Rural	74.49 75.35	6.99 7.87	184	2.44	-0.773	-0.85	-3.04, 1.33	0.44
Admission type	Regular Extension	74.51 76.51	7.87 5.92	184	8.99	-1.78	-1.99	-4.21, 0.22	0.078
Interest in Field choice	Yes No	75 74.76	7.41 8.51	184	0.909	0.123	0.23	-3.53, 4.00	0.902
Clinical Work experience	Yes No	75.37 74.71	7.03 7.8	184	2.131	0.59	0.66	-1.55, 2.88	0.556
Variable	Mean	SD	df	Emotional intelligence					
					Levene's	T-test	Mean Difference	95% Confidence	P-value
					Test		Difference	incervai	
					F	t			
Sex	Male Female	103.68 92.98	22.83 28.49	184	F 7.017	t 2.611	10.7	2.57, 18.82	0.010*
Sex Residence	Male Female Urban Rural	103.68 92.98 101.5 98.74	22.83 28.49 25.49 25.38	184	F 7.017 0.034 0.034	t 2.611 0.735	10.7 2.76	2.57, 18.82 -4.65, 10.18	0.010*
Sex Residence Admission type	Male Female Urban Rural Regular Extension	103.68 92.98 101.5 98.74 97.45 108.23	22.83 28.49 25.49 25.38 25.97 21.69	184 184 184	F 7.017 0.034 2.82	t 2.611 0.735 -2.47	10.7 2.76 -10.77	2.57, 18.82 -4.65, 10.18 -19.37, -2.17	0.010*
Sex Residence Admission type Interest in Field choice	Male Female Urban Rural Regular Extension Yes No	103.68 92.98 101.5 98.74 97.45 108.23 100.37 95.64	22.83 28.49 25.49 25.38 25.97 21.69 25.33 26.48	184 184 184 184	F 7.017 0.034 2.82 0.044	t 2.611 0.735 -2.47 0.731	10.7 2.76 -10.77 4.73	-4.65, 10.18 -19.37, -2.17 -8.03, 17.50	0.010* 0.463 0.014* 0.466

Table 3 Clinical Practice Performance and Emotional Intelligence Related to Socio-Demographic Characteristics AmongUndergraduate Nursing Students of Mizan-Tepi University, South West Ethiopia, 2021

Note: *Significant at p-value of <0.05.

Abbreviations: SD, Standard Deviation; df, degree of freedom.

Welch test $[F_W(3,182) = 218.18, p < 0.0001)]$ and the Brown-Forsythe test $[F_{BF}(3,182) = 150.73, p < 0.0001)]$, there was statistically significant difference in the mean clinical practice performance among the different levels of emotional intelligence. In this study model, about 55.61% of variability in clinical practice performance was attributed to emotional intelligence (Table 5).

Discussion

Nursing is a stressful profession which needs a high degree of emotional intelligence (EI) particularly when health care is delivered for women during the perinatal period. Hence, EI is essential to help them to control their emotions; as loss of ability to control emotions will increase fear, stress, and inhibit the quality of care to be delivered.⁵⁰ This study aimed to assess the relationship between EI and clinical practice performance of undergraduate nursing students during obstetrics and gynecology nursing practice training.

This study revealed that there was a strong positive correlation between emotional intelligence and clinical practice performance of students. Other studies also showed that there was a positive correlation between students' EI and clinical practice performance.^{12,14,27,28,53,54} These findings

Variables	No (%)	Simple Linear Regression Analysis		Multiple Linear Regression Analysis					
		Unstandardized B Coefficient	95% CI for B	P-value	Unstandardized B Coefficient	Standardized B Coefficient	95% CI for B	t-value	P-value
Sex									
Male	121(65.1)	R			R				
Female	65(34.9)	-3.680	-5.89, -1.46	0.001*	-1.320	-0.084	-2.81, 0.169	-1.749	0.082
Parent Educational Status									
No formal education	72(38.7)	R			R				
Primary	57(30.6)	1.900	-0.70, 4.50		-0.035	-0.002	-I.73, I.66	-0.04 I	0.967
Secondary	43(23.1)	2.421	-0.41, 5.25		0.791	0.045	-I.05, 2.63	0.849	0.397
Certificate and above	14(7.5)	4.657	0.37, 8.94	0.033*	2.082	0.073	-0.71, 4.87	1.474	0.142
Emotional intelligence		0.226	0.199, 0.254	0.000*	0.219	0.743	0.191, 0.248	15.22	0.000*
Model Summary									
R Square df (regression, Residual))	F		P value		
0.601		(5, 180)				54.21		0.000*	

Table 4Independent Factors Associated with Clinical Practice Performance of Obstetrics and Gynecology Nursing AmongUndergraduate Nursing Students of Mizan-Tepi University, South West Ethiopia, 2021

Note: *Significant at (p <0.05).

Abbreviation: R, Reference category.

 Table 5 One Way ANOVA and Robust Tests of Equality of Means of Students' Clinical Practice Performance of Obstetrics and

 Gynecology Nursing Among Undergraduate Nursing Students of Mizan-Tepi University, South West Ethiopia, 2021

Variables	Clinical Practice Performance- One Way Anova									
Parent educational status		Sum of Squares	df	Mean Square	F	Sig.				
	Between Groups Within Groups Total	347.07 10,056.83 10,403.91	3 182 185	115.69 55.25	2.09	0.103				
	Levens' Test	[t(3,182)=2.111, p<0.100]								
	Clinical practice performance-Robust Tests of Equality of Means									
Emotional intelligence		Statistic	dfl	df2	Sig.	Eta Square				
	Welch test Brown-Forsythe	218.178 150.727	2 2	105.312 159.504	0.000* 0.000*	0.5561				
	Levens' Test	[t(3,182)=7.483, p< 0.00]							

Note: *Significant at p-value of <0.05.

Abbreviation: df, degree of freedom.

give evidence to the idea that EI is fundamental for enhancing the clinical practice performance of nursing students. Therefore, members of the faculty of nursing (clinical supervisors) must help students to develop higher EI in the accomplishment of the nursing program so as to increase the students' clinical performance.

The mean clinical practice performance of undergraduate fourth-year nursing students found in this study was highly consistent with the study finding in North Jordan.⁵⁵ However, it was lower than the study finding in Egypt.¹² The discrepancy might be due to tool differences used to measure clinical practice performance between the two studies. Another possible explanation might be the study in Egypt include only female students because male students were not allowed to have actual practical training due to culture and religious aspects of maternal care services but in our study, both males and females were participated.

This study also showed that there was a statistically significant difference in the mean clinical practice performance between males and females, where males were performed better achievement than females. This finding was in contrast with a study finding, reported in North Jordan, where females performed better.⁵⁵ This discrepancy might be due to the differences in number of male and female participants between the two studies. However, other study showed that males and females performed similarly despite the negative experiences male students faced during maternal and child health care practice.⁵⁶

In this study, multiple linear regression analysis showed that EI was the only predictor of clinical practice performance. This finding was consistent with a study finding in Korea where EI was reported as predictor of clinical practice performance.⁵⁴ Another study also reported EI as a significant predictor of clinical practice performance of nursing students.¹⁹ This may indicate that students EI play a better role in determining their clinical practice performance.

To the best of our knowledge, this is the first study in Ethiopia to investigate the relationship between EI and clinical practice performance of nursing students. However, the limitations of this study need to be considered. First, the selfreporting EI tool used in the study could introduce social desirability bias. Second, this study was conducted only on fourth year nursing students so that the generalizability of this finding could be limited to a single batch of students. The study participants were informed about the confidentiality and anonymity of the study report to minimize the social desirability bias. Therefore, we proposed for future studies to overcome the above mentioned limitations.

Conclusion

This study confirmed that emotional intelligence of nursing students had significantly affected their clinical performance during obstetrics and gynecology nursing practice. These findings pose important questions for the educators responsible for nursing education in both the academic and clinical settings. Further investigation is required to assess the factors that increase or decrease EI in nursing students is warranted. Therefore, the findings of this study could contribute to the growing body of evidence on the role of EI in clinical practice education.

Abbreviations

ANOVA, Analysis of Variance; CI, Confidence Interval; EI, Emotional Intelligence; IQR, Inter Quartile Range; MTU, Mizan-Tepi University; SD, Standard Deviation; SPSS, Statistical Package for Social Science; SSEIT, Schutte Self Report Emotional Intelligence Test.

Data Sharing Statement

All pertinent data are included within the manuscript; and data analyzed and used in this manuscript can be accessed from the primary author upon request, Mr Alemayehu Sayih Belay, Email: Alex.sayihalem2018@gmail.com.

Ethical Approval and Consent to Participate

This study was conducted in accordance with the Declaration of Helsinki and after ethical clearance was obtained from the research directorate office of the Mizan Tepi University (Ref No: MTU/CHS/56/488/27/13). Written consent was obtained from each study participant after explaining the purpose and objectives of the study. The data collection was conducted using self-administered questioner and their response was kept with strict privacy and confidentiality.

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Author Contributions

Both authors had significant contribution to the work reported starting from the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the manuscript; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors report no conflicts of interest in this work.

References

- 1. Salovey P, Mayer JD. Emotional intelligence. *Imagin Cogn Pers*. 1990;9(3):185–211. doi:10.2190/DUGG-P24E-52WK-6CDG
- Salovey P, Mayer JD, Caruso D, Yoo SH. The Positive Psychology of Emotional Intelligence. New York, NY: Oxford University Press; 2009.
- Poplin GS, Roe DJ, Peate W, Harris RB, Burgess JL. The association of aerobic fitness with injuries in the fire service. *Am J Epidemiol*. 2014;179(2):149–155. doi:10.1093/aje/kwt213
- 4. Görgens-Ekermans G, Brand T. Emotional intelligence as a moderator in the stress-burnout relationship: a questionnaire study on nurses. *J Clin Nurs*. 2012;21(15-16):2275–2285. doi:10.1111/j.1365-2702.2012.04171.x
- Faltas I. Three models of emotional intelligence; 2017. Available from: https://patimes.org/models-emotional-intelligence/. Accessed July 21, 2021.
- Goleman D. *Emotional Intelligence*. New York: Scientific American Inc; 1995.
- 7. Goleman D. *Emotional Intelligence: Why It Can Matter More Than IQ.* Bantam Books; 2012.
- Petrides KV, Furnham A. Trait emotional intelligence: psychometric investigation with reference to established trait taxonomies. *Eur J Pers*. 2001;15(6):425–448. doi:10.1002/per.416
- Mayer JD, Salovey P, Caruso DR, Sitarenios G. Measuring emotional intelligence with the MSCEIT V2. 0. *Emotion*. 2003;3(1):97. doi:10.1037/1528-3542.3.1.97
- Bar-On R. The bar-on model of emotional-social intelligence (ESI) 1. Psicothema. 2006;31;13–25.
- Schutte NS, Malouff JM, Hall LE, et al. Development and validation of a measure of emotional intelligence. *Pers Individ Dif.* 1998;25 (2):167–177. doi:10.1016/S0191-8869(98)00001-4
- Ibrahim HA-F, Elgzar WTI, Mohamed RE, Salem GMM. Relationship between nursing students' emotional intelligence and their clinical performance during obstetrics and gynaecologic nursing practical training. *Am J Nurs Sci.* 2016;5(6):240–250. doi:10.11648/j. ajns.20160506.12
- Victoroff KZ, Boyatzis RE. What is the relationship between emotional intelligence and dental student clinical performance? *J Dent Educ.* 2013;77(4):416–426. doi:10.1002/j.0022-0337.2013.77.4. tb05487.x
- 14. Tafazoli M, Hosseini S, Aghamohammadian Sharbaf H, Makarem A, Ebrahim Zadeh S. A study of relationship between emotional intelligence and clinical performance in training field in midwifery students of nursing and midwifery school. *Future Med Educ J.* 2012;2 (2):13–18.
- 15. Gordon-Handler L, Masaracchio M, Hassan L, Waldman-Levi A. Emotional intelligence and clinical performance across practice areas: implications for health professions educators and practitioners. *Asian Pac J Health Sci.* 2018;5(3):271–279. doi:10.21276/apjhs.2018.5.3.39
- Koubova V, Buchko AA. Life-work balance: emotional intelligence as a crucial component of achieving both personal life and work performance. *Manage Res Rev.* 2013;36(7):700–719. doi:10.1108/ MRR-05-2012-0115
- Pau A, Rowland ML, Naidoo S, et al. Emotional intelligence and perceived stress in dental undergraduates: a multinational survey. *J Dent Educ*. 2007;71(2):197–204. doi:10.1002/j.0022-0337.2007.71.2.tb04266.x
- Pérez J, Petrides K, Furnham A. Measuring trait emotional intelligence. In: Schulze R, Roberts RD, editors. *Emotional Intelligence: An International Handbook.* Cambridge, MA: Hogrefe & Huber; 2005:181–201.

- Yang S-Y. The effect of emotional intelligence and self-efficacy on clinical competence of the nursing students. *J Korea Contents Assoc*. 2015;15(6):370–378. doi:10.5392/JKCA.2015.15.06.370
- Campbell MK, Corpus K, Wussow TM, Plummer T, Gibbs D, Hix S. Fieldwork educators' perspectives: professional behavior attributes of level II fieldwork students. *Open J Occup Ther.* 2015;3(4):7. doi:10.15453/2168-6408.1146
- 21. Jin J, Joseph DL, Newman DA, O'Boyle EH. Why does self-reported emotional intelligence predict job performance? Paper presented at: Academy of Management Proceedings; 2012.
- Pisanos DE. Emotional intelligence: it's more than IQ. J Cont Educ Nurs. 2011;42(10):439–440. doi:10.3928/00220124-20110921-03
- Renaud MT, Rutledge C, Shepherd L. Preparing emotionally intelligent doctor of nursing practice leaders. J Nurs Educ. 2012;51 (8):454–460. doi:10.3928/01484834-20120523-03
- Rankin B. Emotional intelligence: enhancing values-based practice and compassionate care in nursing. J Adv Nurs. 2013;69 (12):2717–2725. doi:10.1111/jan.12161
- 25. Snowden A, Stenhouse R, Young J, Carver H, Carver F, Brown N. The relationship between emotional intelligence, previous caring experience and mindfulness in student nurses and midwives: a cross sectional analysis. *Nurse Educ Today.* 2015;35(1):152–158. doi:10.1016/j.nedt.2014.09.004
- Allen DE, Ploeg J, Kaasalainen S. The relationship between emotional intelligence and clinical teaching effectiveness in nursing faculty. J Prof Nurs. 2012;28(4):231–240. doi:10.1016/j. profnurs.2011.11.018
- Farshi MR, Vahidi M, Jabraeili M. Relationship between emotional intelligence and clinical competencies of nursing students in Tabriz Nursing and Midwifery School. *Res Devel Med Educ.* 2014;4 (1):91–95. doi:10.15171/rdme.2015.015
- Lee OS, Gu MO. The relationship between emotional intelligence and communication skill, clinical competence & clinical practice stress in nursing students. *J Korea Acad Ind Cooperation Soc.* 2013;14(6):2749–2759. doi:10.5762/KAIS.2013.14.6.2749
- Marvos C, Hale FB. Emotional intelligence and clinical performance/ retention of nursing students. *Asia Pac J Oncol Nurs*. 2015;2(2):63. doi:10.4103/2347-5625.157569
- 30. Pazargadi M, Ashktorab T, Khosravi S. Nursing students' experiences on the evaluating role of their clinical educators: a Qualitative Study. *Asian J Nurs Educ Res.* 2012;2(3):6.
- 31. Khosravi S, Pazargadi M, Ashktorab T. Nursing studentsviewpoints on challenges of student assessment in clinical settings: a qualitative study. *Iran J Med Educ.* 2012;11(7):735–749.
- Valizadeh S, Mohammadpour Y, Parvan K, Lakdizaji S. The effect of outcome-based education on nursing students' clinical competency. *Iranian J Med Educ.* 2009;9(2):157–166.
- 33. Kim Y, Chun N, Lee EH, et al. Student experience and satisfaction with clinical nursing practice in women's health nursing. *Korean J Women Health Nurs.* 2011;17(3):225–242. doi:10.4069/ kjwhn.2011.17.3.225
- 34. Salamonson Y, Andrew S, Everett B. Academic Engagement and Disengagement as Predictors of Performance in Pathophysiology Among Nursing Students. Taylor & Francis; 2009.
- Dante A, Valoppi G, Saiani L, Palese A. Factors associated with nursing students' academic success or failure: a retrospective Italian multicenter study. *Nurse Educ Today*. 2011;31(1):59–64. doi:10.1016/ j.nedt.2010.03.016
- Shirrell D. Critical thinking as a predictor of success in an associate degree nursing program. *Teaching Learn Nurs*. 2008;3(4):131–136. doi:10.1016/j.teln.2008.05.001
- Gilmore M. Predictors of success in associate degree nursing programs. *Teaching Learn Nurs*. 2008;3(4):121–124. doi:10.1016/j. teln.2008.04.004

- Cheung RY-M, TK-f A. Nursing students' anxiety and clinical performance. J Nurs Educ. 2011;50(5):286–289. doi:10.3928/01484834-20110131-08
- Luhanga F, Yonge O, Myrick F. Precepting an unsafe student: the role of the faculty. *Nurse Educ Today*. 2008;28(2):227–231. doi:10.1016/j. nedt.2007.04.001
- 40. Seo B-M, Park H-J. Factors affecting clinical competence among nursing students. *Korean J Health Serv Manage*. 2014;8 (4):149–161. doi:10.12811/kshsm.2014.8.4.149
- 41. Jeong Y-J, Koh C-K. Effects of personality and coping behavior on clinical practice stress among one college nursing students. *Korean J Stress Res.* 2016;24(4):296–302. doi:10.17547/kjsr.2016.24.4.296
- Blackman I, Hall M, Darmawan I. Undergraduate nurse variables that predict academic achievement and clinical competence in nursing. *Int Educ J.* 2007;8(2):222–236.
- 43. Pitt V, Powis D, Levett-Jones T, Hunter S. Factors influencing nursing students' academic and clinical performance and attrition: an integrative literature review. *Nurse Educ Today*. 2012;32(8):903–913. doi:10.1016/j.nedt.2012.04.011
- 44. Beauvais AM, Brady N, O'Shea ER, Griffin MTQ. Emotional intelligence and nursing performance among nursing students. *Nurse Educ Today*. 2011;31(4):396–401. doi:10.1016/j.nedt.2010.07.013
- 45. Bhaskaran Unnikrishnan D, Kulkarni V, Thapar R, Mithra P, Rai S, Najiza H. Association of emotional intelligence with academic performance among medical students in South India. *Asian J Pharm Clin Res.* 2015;8(2):300–302.
- 46. Taneja N, Gupta S, Chellaiyan VG, Awasthi AA, Sachdeva S. Personality traits as a predictor of emotional intelligence among medical students. *J Educ Health Promot.* 2020;9.
- 47. Omoronyia FR, Oyama LE, Obande EI. Psychiatric Nurses' Level of Emotional Intelligence in a Developing Country: A Survey in Neuropsychiatric Hospitals in The Niger-Delta Region, Nigeria. *EAS Journal of Nursing and Midwifery*. 2020;2(3).

- 48. Ramadan EN, Abdel-Sattar SA-L, Abozeid AM, El Sayed HAE. The effect of emotional intelligence program on nursing students' clinical performance during community health nursing practical training. *Am J Nurs Res.* 2020;8(3):361–371.
- Education EMo. National harmonized nursing curriculum; 2014. Available from: https://www.scribd.com/document/392985891/ National-Harmonized-Nursing-Curr-March-2014. Accessed April 22, 2021.
- Por J, Barriball L, Fitzpatrick J, Roberts J. Emotional intelligence: its relationship to stress, coping, well-being and professional performance in nursing students. *Nurse Educ Today*. 2011;31(8):855–860. doi:10.1016/j.nedt.2010.12.023
- Barkhordari M, Rostambeygi P. Emotional Intelligence in Nursing Students. J. Adv. Med&Prof. 2013;1(2):46–50.
- Cerit E, Beser NG. Levels of emotional intelligence of nursing students. *Int J Caring Sci.* 2014;7(3):936–945.
- Jones A. Emotional Intelligence and Clinical Performance in Senior Undergraduate Nursing Students [Thesis]. San Marcos: California State University; 2013.
- 54. Kim MS. The mediating effect of self-efficacy in the relationship between emotional intelligence and clinical performance among nursing students. *J Korean Acad Soc Nurs Educ.* 2016;22(4):504–513. doi:10.5977/jkasne.2016.22.4.504
- 55. Akhu-Zaheya LM, Shaban IA, Khater WA. Nursing students' perceived stress and influences in clinical performance. *Int J Advanc Nurs Stud.* 2015;4(2):44. doi:10.14419/ijans.v4i2.4311
- 56. Chan ZC, Chan Y-T, Lui C-W, et al. Gender differences in the academic and clinical performances of undergraduate nursing students: a systematic review. *Nurse Educ Today*. 2014;34(3):377–388. doi:10.1016/j.nedt.2013.06.011

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