

## The Relationship among Emotional Intelligence, Optimistic Personality, and Intern Students' Academic Achievement

Lamiaa Abd El Hakeem Ali Ahmed <sup>(1)</sup>, Soheir Mohammed Ahmed Ali <sup>(2)</sup>, Manal El-Sayed Abdelkareem Ali <sup>(3)</sup>  
(1&3) Lecturers of Psychiatric Mental Health Nursing, Faculty of Nursing, Cairo University, Egypt.  
(2) Lecturer of Nursing Administration Department, Faculty of Nursing, Cairo University, Egypt.

### Abstract

**Background:** The demand and changes in the healthcare environment raised the bar for nursing competency in the clinical setting, which affected the standard of nursing education. Therefore, emotional intelligence in conjunction with an optimistic personality significantly affects healthcare workers' mental function and capabilities to face the increasing workplace turbulence that consequently influences their academic achievement. **Aim:** The present study aimed to explore the relationship between emotional intelligence, optimistic personality, and intern nursing students' academic achievement. **Design:** A descriptive-correlational design was used in this study. **Setting:** This study was conducted at the Faculty of Nursing – Cairo University, Egypt. **Sample:** A convenience sample of 202 intern nursing students participated in the research study. **Tools:** three tools were utilized during the study; the first tool was a demographic and academic datasheet; The second tool was The Schutte Self Report Emotional Intelligence Test (SSEIT) and the third tool was The Life Orientation Test-Revised Scheier and Carver (LOT-R). **Results:** The current study results showed that there was a positive correlation between emotional intelligence, optimistic personality, and academic achievement. **Conclusion:** The study concluded that the majority of intern nursing students had high EI, optimism, and academic achievement. There is a positive significant correlation between EI, optimism, and academic achievement. **Recommendations:** This study recommended the initiation and sustaining of the improvement of the students' emotional intelligence and optimism within the scientific and community environment through proper strategies acting as a basic section of undergraduate and graduate nursing curricula to be essential in transitioning the students into the business world.

**Keywords:** Emotional Intelligence, Optimistic Personality, Intern Students, Academic Achievement.

### Introduction

The university stage is one of the life periods that suggests significant transformations through increased accountability for alternatives and healthy practices (Makvana & Patel, 2019). Being an excellent graduate shows that a person did well in the few subjects they studied, but it does not necessarily translate such an excellent graduate into success in life (Wekke et al., 2023). Intelligence or individual cognitive capacities are been the subject of recent observed studies in education about the predictors of academic achievement. Furthermore, scholastic achievement may be impacted by various personal skills that deviate from typical cognitive competence (Herrera & Mohamed, 2020).

Academic performance is the quantitative and qualitative assessment of one's academic progress made during the learning process (Herrera & Mohamed, 2020). Several research lines examine non-cognitive elements that improve forecasting of academic achievement including attitude, enthusiasm, personality traits, resilience, self-

control, social and emotional competencies all of which contribute to effective performance (Sánchez-Álvarez, Berrios-Martos, and Extremera, 2020).

Emotional intelligence (EI) is a sort of intrapersonal intelligence that has gained prominence in scientific and academic circles with a growing recognition of its significance in shaping the personal and professional development of the students (Al-Qadri, & Zhao, 2021). The student could grow intellectually, socially, and emotionally through the process of control, regulation, and adaptation (Tang and He 2023). EI is an indicator of health, happiness, and satisfaction (Alberto Quílez-Robres, et al., 2023). In the context of nursing students, emotional intelligence (EI) serves as a buffer against the strain of professional obligations and clinical practice based on rigorous academic demands (Hwang, & Kim, 2023). Emotional intelligence is essential for practicing nursing as both an art and a science (Abdelmohsen et al. 2021).

College nursing students exhibit better emotional intelligence which leads to more favourable social functioning during social interactions, not only in interpersonal relationships and interaction but also correlates with enhanced communication skills and empathetic patient care (Ukey, Ujwala Uttamrao, et al., 2020). Emotional intelligence is associated with a general disposition toward optimism (Gaballah, Zahran, Berma, & Aldiasty 2021) and positive attitudes toward integrative patient care (Currie, & Currie, 2022).

Optimism is another crucial tool for students, which is defined as having an optimistic view and anticipating beneficial outcomes that facilitate intellectual and cognitive growth. Optimism influences behaviour related to health both now and in the future (Gad, bakr, & Sherief., 2021). Optimism is the overall capacity to anticipate favourable results from a person, such as increased motivation and output. Optimists overcome short and long-term challenges with greater persistence and approach focus contributing to overcoming academic stress or pressure (Agarwal and Malhotra, 2019 & Alberto Quílez-Robres, et al, 2023).

Optimistic students, who employ flexible coping mechanisms, and demonstrate greater levels of academic self-efficacy also have better levels of self-concept, self-esteem, and assertiveness. To put it briefly, optimism is a critical factor in how students approach their daily academic obligations (Usan, Salevera & Quílez-Robres, 2022). Consequently, nursing students with optimistic personalities have the potential to stimulate, influence, and induce positive well-being both in themselves and in patients' care (Gad, bakr, & Sherief., 2021).

It is of interest to note that, intern nursing students who represent the future of communities, and countries navigate the complexities of their educational process, emotional intelligence and optimistic personalities come to the forefront, shaping not only their individual experiences but also influencing overall academic goals (Ansari, & Stock, 2020). So, the current research is necessary to explore the relation between emotional intelligence and optimistic personality and if it correlates to the academic achievement of intern nursing students.

### Significance:

Obviously, within the scientific literature, the predominant metrics utilized to evaluate students' academic performance are grades, which are quantitative evaluation, and intrapersonal skills which are more qualitative evaluation (Usan, Salevera & Quílez-Robres, 2022). Along with this, the results of numerous recent studies showed that IQ is not a valid indicator of a student's academic success on its own. There is influence evidence that students who possess emotional intelligence and an optimistic outlook could thrive during life transitions, beginning in college and continuing into the workforce (Soheel & Ghoti, 2021). Consequently, given the numerous assertions on the effect of emotional intelligence and its positive outlook on academic achievement (Hasan & Zhao, 2021), this study aims to find out the relation between emotional intelligence, optimistic personality, and academic achievement among intern nursing students. It would also be interesting to determine their emotional intelligence level and whether their optimistic personality contributes to their academic success.

### Aim of the Study

This study aims to explore the relationship between emotional intelligence, optimistic personality, and academic achievement among intern nursing students.

### Research questions:

The following research questions were formulated to guide this research aim:

- Q1: What are the levels of emotional intelligence among intern nursing students?
- Q 2: What are the levels of optimism among intern nursing students?
- Q 3: What are the levels of academic achievement among intern nursing students?
- Q 4: What is the relation between intern nursing students' emotional intelligence, optimism, and academic achievement?

### Subjects and Methods

#### Research Design:

A descriptive-correlational design was used in this study to achieve its aim.

#### Study Sample

The study sample comprised a convenience sample of 202 participants out of 419 intern nursing students.

### **Setting:**

This study was conducted at the Faculty of Nursing – Cairo University, Egypt. The data was collected by the students during the end of their scientific day in the clinical training areas on 30-9-2023 at the faculty of nursing's classroom.

### **Inclusion criteria**

- 1) Age 20 years old up to 30 years old.
- 2) Both genders

### **Tools of Data Collection:**

Data were collected using three self-administered questionnaires.

**First tool: Demographic and academic datasheet:** It was developed by the researchers to elicit data about intern nursing students and encompass items such as age, gender, marital status, educational level before enrolment in the faculty, and cumulative grade.

**Second tool:** The Schutte Self Report Emotional Intelligence Test (SSEIT): A structured scale was developed by (Schutte et al., 1998). It includes 33-items as a self-report inventory focuses on typical emotional intelligence; it addresses (4) dimensions described as the following: The first dimension: includes ten items that describe how emotions are perceived; the second: includes nine items that describe how to manage emotions in oneself; the third: includes eight items that describe social skills or how to manage the emotions of others; and the fourth: includes six items that describe how to use emotions. The items are rated by respondents using a 5-point Likert scale. On a scale of 1 to 5, 1 representing strongly disagree, 2 disagree, 3 neither disagree nor agree, 4 agree, and 5 representing strongly agree. Scoring levels; < 65% is considered low emotional intelligence,  $65 \leq 75\%$  is considered moderate emotional intelligence, and > 75% is considered high emotional intelligence.

**Validity and Reliability:** (SSEIT) has been found to have good psychometric properties, including content validity and reliability regarding reliability Cronbach's alpha coefficients typically were 0.935.

**Third tool:** The Life Orientation Test-Revised by Scheier, Carver, and Bridges in 1994, (LOT-R) is a common scale used for measuring optimism. It consisted of 10 items that assess an individual's generalized expectations about the future. The LOT-R is a revised version of the original Life Orientation Test (LOT). Each item is rated on a 5-point Likert scale, and the responses on the LOT-R are scored by assigning values from 0 to 4. Items are scored from 0 (strongly disagree) to 4 (strongly agree).

The scores range from 0 to 24. 0-13, Low Optimism (High Pessimism), 14-18, Moderate Optimism, 19-24 High Optimism (Low Pessimism)

**Validity and Reliability:** The LOT-R has been found to have good psychometric properties, including content validity and reliability. It demonstrates good construct validity, meaning that it effectively measures the construct of optimism. Regarding reliability, the LOT-R had good internal consistency, with Cronbach's alpha coefficients typically from 0.70 to 0.80.

### **Procedure**

To achieve the current study's aim official approval was obtained from the Vice Dean for Education and Student Affairs at the Faculty of Nursing- Cairo University. Then interviews were conducted with the study participants to clarify the purpose, importance, and benefits of the study to seek their cooperation, and how to complete the questionnaires, and guaranteed the respondents that the information used for scientific research only and kept entirely confidential. The data was collected by the students during the beginning term of the scientific day on the last day of their orientation program. Additionally, the interns were encouraged to actively participate and ask questions throughout the interview. Following the orientation.

### **Ethical Consideration**

A written ethical approval from the "Ethics of Scientific Research Committee" at the Faculty of Nursing - Cairo University. In addition, official permission from the Vice Dean for Education and Student Affairs of the Faculty of Nursing- Cairo University was obtained to carry out the study. All subjects were given a thorough explanation of the study's purpose and nature, advised that participation in it is completely voluntary and that their informed written consent was obtained. Confidentiality and anonymity were preserved by coding the data. The participant was assured that participation in the study didn't have any risk.

### **Statistical Design**

The Statistical Package for Social Studies (SPSS) Version 26 was used for data input and statistical analysis. Appropriate descriptive statistics such as frequencies, means, and standard deviations were utilized for quantitative variables. The relationship between Emotional Intelligence, Optimistic Personality, and Academic Achievement was identified using Spearman correlation.

### **Results**

Regarding internship demographic data, table (1) revealed that most of the studied sample were female (70.8 %) on the other hand more than two-thirds of them were aged from 20 to 25 years old (94 %). Regarding the marital status of the internship students most of them were single (86.6 %). Concerning GPA, more than half of intern students obtained good performance (59.9%). According to educational level, more than two-thirds of them graduated from high secondary school before enrolment in the faculty (79.7 %) and almost all of the intern students were from Cairo University (96 %).

Regarding the relation between the gender and the variables of the study, table (2)

indicated that there were no statistically significant differences between males and females in responses to the optimism scale, academic achievement scale, and emotional intelligence with  $t = 0.507$   $p$  value = 0.613 ( $> 0.05$ ),  $t$  value = 0.46  $p$  value = 0.646 ( $> 0.05$ ),  $t$  value = 0.35  $p$  value = 0.728 ( $> 0.05$ ) respectively.

Representing the relation between the marital status and the variables of the study, table (3) revealed that there were no statistically significant differences between responses of these two marital categories concerning the optimism scale and emotional intelligence scale, with  $t$  value = 0.11 and  $p$ -value = 0.91 which is  $> 0.05$ , and  $t$  value = 0.02 with  $p$ -value = 0.998 which is  $> 0.05$  respectively. Meanwhile, there were statistically significant differences between single and married students regarding the academic achievement scale as  $t$  value = 1.99 and  $p$  value 0.047\* which is  $< 0.05$ .

Concerning the distribution of the studied sample to the total score of the emotional intelligence scale, optimism scale, and academic achievement scale: table (4) clarified that less than half of the intern students (42.1%) recorded high emotional intelligence scores. Regarding the optimism scale, almost all of them (99.5 %) were characterized by a high level of optimism. Reflecting on their academic achievement scale scores more than half of them (55.9%) had good performance.

Regarding the correlation between the study variables, table (5) showed a strong positive correlation coefficient ( $P < 0.05$ ) for the relation between optimism and academic achievement with ( $r = 0.556$ ,  $P = 0.000$ ). Also, optimism and emotional intelligence give the same trend ( $r = 0.592$ ,  $P = 0.000$ ), as well as the relation between academic achievement and emotional intelligence ( $r = 0.705$ ,  $P = 0.000$ ).

**Table (1):** Personal characteristic data of the study participants (n=202)

Personal characteristic data	No.	Percentage	
Gender	Male	59	29.2
	Female	143	70.8
Age	20-25	190	94
	>25	12	6
Marital status	Single	175	86.6
	Married	27	13.4
GPA	Excellent	50	24.7
	Good	121	59.9
	moderate	28	13.9
	Low	3	1.5
Educational level before enrollment in nursing faculty	Bachelor's degree in science	24	11.9
	High Secondary School	161	79.7
	Technical Associate Nursing Diploma	13	6.4
	Others	4	2
University of graduation	Cairo University	194	96
	Assiut University	3	1.5
	South Valley University	1	.5
	Others	4	2

**Table (2):** Relation between gender, emotional intelligence, optimism, and academic achievement.

Variable	Gender				t value	P value
	Male		Female			
	M	SD	M	SD		
Optimism	35.20	4.93	34.78	5.65	<b>0.507</b>	<b>0.613</b>
Academic achievement	29.15	5.05	29.50	4.88	<b>0.46</b>	<b>0.646</b>
Emotional intelligence	119.03	17.59	118.14	16.18	<b>0.35</b>	<b>0.728</b>

**Table (3):** Relation between marital status and emotional intelligence, optimism, and academic achievement N= (202):

Variable	Marital status				t value	P value
	Single		Married			
	M	SD	M	SD		
Optimism	34.91	5.46	34.81	5.39	<b>0.11</b>	<b>0.91</b>
Academic achievement	29.13	4.95	31.15	4.45	<b>1.99</b>	<b>0.047*</b>
Emotional intelligence	118.40	16.88	118.41	14.64	<b>0.02</b>	<b>0.998</b>

**Table (4):** Distribution of the studied sample to the total score of the emotional intelligence scale, optimism scale and academic achievement scale N= (202):

Total scores of the scales	N (202)	%
<b>Emotional intelligence scale</b>		
(Low) < 65%	68	33.7
(Moderate) 65 ≤ 75%	49	24.2
(High) ≥ 75%	85	42.1
<b>Optimism scale</b>		
(Moderate)	1	0.5
(High)	201	99.5
<b>Academics achievement scale</b>		
(Poor performance)	1	0.5
(Moderate Performance)	42	20.8
(Good Performance)	113	55.9
(Excellent Performance)	46	22.8

**Table (5):** Correlation between the study variables N= (202)

Variables		Optimism	Academic achievement
Academic achievement	R	.556**	
	P value	0.000	
Emotional intelligence	R	.592**	705**
	P value	0.000	0.000

## Discussion

Emotional intelligence and an optimistic personality had a significant impact on cognitive functions involving attention, management, self-control, making the right decisions, best solving problems, coping with change, and succeeding in situations reflecting their academic performance (**Alberto Quilez-Robres, et al, 2023**). The changeover from theoretical student to skilled competent nurse is a stressful experience due to the accountability and responsibilities of the recently graduated nurse (**Gad, bakr, & Sherief, 2021**). Therefore, intern nursing students need to develop their ability to control emotions and channel their moods in a beneficial way that applies to the nursing practice (**Mohamed, Mostafa & Abdel-Azeem, 2022**). Thus, this paper attempts to advance the empirical study of linking intern nursing students' emotional intelligence, and optimistic personalities to academic achievement through answering the research questions.

The current study found that approximately half of the intern nursing students sample possess high levels of emotional intelligence, most of them have high levels of optimism and more than half of them have good achievement performance regardless of significant differences in their gender. It could be explained by the fact that nursing students perform better academically because of their positive personality traits, which are based on their levels of self-understanding and self-regulation. Along with this, they need to adjust to the demanding and tense workplace and be able to cope with the duty of patient education. However, significant differences were found between academic achievement, and marriage states which single students explains how married intern students face marital responsibilities and personal commitments to academic outcomes.

The current investigation had been undertaken in collaboration with several other studies. As the finding of a study done by **Ali, (2016)** who found positive correlation between the scores of self-emotional intelligence and academic success with no significant difference between males and females in a sample consisting of 121 students at Minia University in Egypt. And explained the result that academic success requires a significant deal of pressure and self-regulation and most academic work at university is self-directed and demands strong self-control. In addition, in a study done by **Abdelmohsen et al. (2021)** who surveyed 2340 medical students aged 17–24 years old from Saudi Arabia and Egypt found that the Egyptian students had notably high overall EI scores and concluded that emotional intelligence relates significantly to academic achievements. Also, a study done by (**Gaballah, Zahran, Berma, & Aldiasty 2021**) who added that a study comprising (317) nursing students at Pore Said University demonstrated high emotional intelligence overall and a high percentage of personal competencies. Moreover, in a study done by **Omidi et al., (2012)** who stated that academic success is predicted by emotional intelligence and an optimistic personality. Thus, to guarantee the greatest advances in achievement, attention to these issues among students, is required to revise the findings of a study done by. **Hojat et al 2015**, who perform a study including 265 medical students confirmed that an association exists between positive personality and training in practice, claiming that higher optimism scores were discovered and higher personal success scores.

As well in a study done by (**Wekke et al., 2023**) they mentioned that, in the educational system, both male and female students should learn how to control and regulate their emotions and be good role models for them and others, indicating that optimism and emotional

intelligence were critical components of the educational process and could have a long-term favourable impact on academic performance. Moreover, (Mohamed, et al., 2022) in the study sample of 200 nursing students, found half of them had strong emotional intelligence and high problem-solving skills.

It is noteworthy that among the findings of the current study, which addressed the fourth study question, there was a positive significant correlation between EI and optimistic personality and achievement. The study emphasizes how important optimistic traits are for students because they are associated with the capacity to plan as mental flexibility, see ahead as temporal orientation, and modify plans on the fly by using cognitive methods. Despite the pressure of this time, these are the qualities that enabled students to succeed in terms of multiple exam outcomes and grades attained. Additionally, students with greater EI would be more adaptive in their daily lives, more perceptive of others and their emotional cues, as well as able to understand the causes of their own and others' emotions.

This finding is in alignment with the finding of a cross-sectional study conducted on 150 medical students by Radfar et al (2012) who claimed that there was a significant correlation between academic achievement and emotional intelligence and that students' claims of success in university-level learning are not exclusively based on their IQ. However, emotional intelligence (EI) traits and abilities such as the desire to learn, the capacity to be patient, and the ability to control one's environment and accept instructions, may have an impact on the academic success.

In addition, Checa-Domene et al (2022) who investigated a sample of 798 university students revealed a statistically significant positive correlation between optimism and emotional intelligence. Also mention that, premonitory optimism students had greater well-being and could face challenges which seen as a strong indicator to improve academic achievement and personal development. Moreover, in a study done by Dong et al., (2022) who showed that students' academic performance at different universities is significantly improved by emotional

intelligence. In contrast, the finding of a study done by Akram, & Suneel (2023), who found that there was no evidence of a significant correlation between optimism and academic success among 286 medical university Students and interpreted that nonsignificant results might be due to Pakistan's collectivistic culture.

### Conclusion

In summary, our research finding revealed a statistically positive significant correlation between academic achievements, optimistic personality, and emotional intelligence (EI). This is conducive to a relation that confirms that EI and optimistic personality in a larger picture of intern nursing students had an implication for enhancing academic achievement in training and practice in the health field.

### Recommendation

The recommendation of the current study suggests that educators should boost proper intervention strategies that are necessary for educating the students' emotional intelligence and optimism in the scientific and community environment through proper counselling and guidance with personality-related issues and hence could influence positively on the academic performance transforming into the business world.

### References

- Agarwal, N., & Malhotra, M., (2019). Relationship Between Optimism, Resilience and Psychological Well-Being In Young Adults. *International Journal of Social Science and Economic Research* ISSN: 2455-8834 Volume: 04, Issue: 09 "September 2019".
- Ansari, W., & Stock, C. (2020). Is the health and wellbeing of university students associated with their academic performance? Cross sectional findings from the United Kingdom. *International Journal of Environmental Research. Public Health*. 7, 509-527.
- Hasan, A. A., Zhao, W., (2021). Emotional Intelligence and Students' Academic Achievement, June 2021 *Problems of Education in the 21st Century* 79(3):360-380, DOI: 10.33225/pec/21.79.360.

- Makvana,S., & Patel, A., (2019). Relationship between Emotional Intelligence and Psychological Well Being among Young Adults. Special Issue, The International Journal of Indian Psychology (IJIP) ISSN: 2348-5396 (Online) | ISSN 2349-3429 (Print) © Ramya S © 2019Cover page REDSHINE Studios. Inc.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25(2), 167–177. [https://doi.org/10.1016/S0191-8869\(98\)00001-4](https://doi.org/10.1016/S0191-8869(98)00001-4)
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 67(6), 1063-1078. <http://dx.doi.org/10.1037/0022-3514.67.6.1063>
- Usan, P., Salevera, C., Quilez-Robres, A., (2022). Self-Efficacy, Optimism, and Academic Performance as Psychoeducational Variables: Mediation Approach in Students. *Children (Basel)*. 2022 Mar; 9(3): 420. Published online 2022 Mar 15. doi: 10.3390/children9030420.
- Alberto Quilez-Robres, Pablo Usán, Raquel Lozano-Blasco, Carlos Salavera, (2023), Emotional intelligence and academic performance: A systematic review and meta-analysis, *Thinking Skills and Creativity*, Volume 49, 2023, 101355, ISSN 1871-1871, <https://doi.org/10.1016/j.tsc.2023.101355>.
- Wekke IS, Iswanto AH, Abed AM, Ali MH, Samal A, Talib HA, et al. (2023 ).The Relationship between Emotional Intelligence and Academic Achievement among the Students of Trisakti University, Indonesia. *Int J Body Mind Culture* 2023; 10(1): 90-8.
- Checa-Domene, L.; Luque de la Rosa, A.; Gavín-Chocano, Ó.; Torrado, J.J. Students at Risk: Self-Esteem, (2022). Optimism and Emotional Intelligence in Post-Pandemic Times? *Int. J. Environ. Res. Public Health* 2022, 19, 12499. <https://doi.org/10.3390/ijerph191912499>
- Mohamed Ragab, S., Mostafa Shazly, M., & Abdel-Azceem Mostafa, H. (2022). The relationship between Emotional Intelligence and Problem Solving Skills on Nursing Students. *Egyptian Journal of Health Care*, 13(4), 188-196. doi: 10.21608/ejhc.2022.259950
- Radfar S, Aghaie M, Motashaker-Arani M, Noohi S, Saburi A. Evaluation of Emotional Intelligence and Its Relation to the Academic Achievement in Medical Students. *Thrita J Med Sci*.2012;1(4): 113-9. DOI: 10.5812/thrita.8605
- Dong X, Kalugina OA, Vasbieva DG and Rafi A (2022) Emotional Intelligence and Personality Traits Based on Academic Performance. *Front. Psychol*. 13:894570. doi: 10.3389/fpsyg.2022.894570
- Gad, H., bakr, M., & Sherief, N. (2021). Decision Making Ability: A key for Internship Student's Self- Esteem at Selected Hospitals. *Menoufia Nursing Journal*, 6(2), 19-34. doi: 10.21608/menj.2021.206095
- Ali, M . (2016). The Relationship between Emotional Intelligence and Academic Achievements in Males and Females in Egyptian Context. *Psychology Research*, 6(10), 567-578. DOI: 10.17265/2159-5542/2016.10.002
- Abdelmohsen S, Khired Z, Soliman A et al 2021,. Emotional Intelligence and Academic Performance Among Egyptian and Saudi Arabian Undergraduate Medical Students: A Cross Sectional Study, 07 July 2021, PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-671729/v1>]
- Omidi A, Mohammadi A, Zargar F, Akkashe G, Akbari H. Personality Types and Emotional Intelligence as Predictors of Academic Achievement in Students at Kashan University of Medical Sciences. *Nurs Midwifery Stud*. 2012; 1(2): 72-6. DOI: 10.5812/nms.8304

- Hojat M, Vergare M, Isenberg G, Cohen M, Spandorfer J. Underlying construct of empathy, optimism, and burnout in medical students. *Int J Med Educ.* 2015 Jan 29;6:12-6. doi: 10.5116/ijme.54c3.60cd. PMID: 25633650; PMCID: PMC4332366.
- Currie J, Currie GM. Emotional Intelligence and Productive Relationships with Patients and Colleagues. *J Nucl Med Technol.* 2022 May 24;jnmt.122.264052. doi: 10.2967/jnmt.122.264052. Epub ahead of print. PMID: 35610041.
- Al-Qadri, A. B., & Zhao, W. (2021). Emotional intelligence and students' academic achievement. *Problems of Education in the 21st Century*, 79(3), 360-380. <https://doi.org/10.33225/pec/21.79.360>
- Gaballah, S., Zahran, S., Berma, A., & Aldiasty, N. (2021). Nursing Student' Emotional Intelligence and Their Self-Determination in Faculty of Nursing at Port Said University. *Port Said Scientific Journal of Nursing*, 8(3), 46-67. doi: 10.21608/pssjn.2021.68475.1097
- Hwang EH, Kim KH. 2023 Relationship between optimism, emotional intelligence, and academic resilience of nursing students: the mediating effect of self-directed learning competency. *Front Public Health.* 2023 May 18;11:1182689. doi: 10.3389/fpubh.2023.1182689. PMID: 37275498; PMCID: PMC10234118.
- Tang YX and He WG (2023) Relationship between emotional intelligence and learning motivation among college students during the COVID-19 pandemic: A serial mediation model. *Front. Psychol.* 14:1109569. doi: 10.3389/fpsyg.2023.1109569.
- Ukey, Ujwala Uttamrao, et al. "Emotional Intelligence and Academic Performance of Final Year (7th Semester) Medical Students." *Journal of Evolution of Medical and Dental Sciences*, vol. 9, no. 40, 5 Oct. 2020, pp. 2955+. Gale Academic OneFile, [link.gale.com/apps/doc/A639158194/AONE?u=google scholar & sid=google scholar & xid=0db883ea](http://link.gale.com/apps/doc/A639158194/AONE?u=google scholar & sid=google scholar & xid=0db883ea). Accessed 25 Jan. 2024.
- Soheel, S. J., & Ghoti, R. M., (2021). The Influence of Emotional Intelligence on Academic Achievement. *International Journal of Social Impact*, ISSN: 2455-670X, Volume 6, Issue 2, DIP: 18.02.002/20210602 DOI: 10.25215/2455/0602002 [www.ijsi.in](http://www.ijsi.in) |April- June, 2021|Received: April 20, 2021; Revision Received: June 03, 2021; Accepted: June 12, 2021.
- Herrera, L., Al-Lal, M., & Mohamed, L. (2020). Academic achievement, self-concept, personality and emotional intelligence in primary education. analysis by gender and cultural group. *Front. Psychol.* 10:3075. doi: 10.3389/fpsyg.2019.03075.
- Sánchez-Álvarez, N., & Berrios-Martos, M., Extremera, M. (2020). A Meta-Analysis of the Relationship Between Emotional Intelligence and Academic Performance in Secondary Education: A Multi-Stream Comparison. *Front. Psychol.*, 21 July 2020 *Sec. Educational Psychology* Volume 11 - 2020 | <https://doi.org/10.3389/fpsyg.2020.01517>
- Akram, B., & Suneel, I. . (2023). The Relationship between Optimism and Academic Achievement among University Students in Pakistan. *Pakistan Journal of Social Sciences*, 43(2), 283-294. Retrieved from <https://pjs.s.bzu.edu.pk/index.php/pjss/article/view/1173>