

A Study on Emotional Intelligence & Empathy in Allied Vision Sciences Students

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Abstract

Objective: To study emotional intelligence and empathy in allied eye care workers.

Methods: After ethical approval of the study Google form was developed which included Schutte's scale and Davis Interpersonal index questions in addition to those related to basic demographic information. The proforma was sent via social media application (WhatsApp) to study participants. Allied vision sciences students enrolled in bachelor's programs at various colleges/universities were included in the study. A total of 150 students were invited to participate in this study out of whom 119 responded. Comparison of emotional intelligence scores based upon gender, year of study, and boarder/non-boarder was done by applying Mann Whitney and one-way ANOVA test.

Results: Female responders were predominant (77.3%) in the survey while the majority (32.8%) of participants were in the first year of study. When compared based upon border versus non-boarder, the sub-scale of "social skills" showed a significant difference ($p=0.017$) with Non-Boarders scoring higher. Also, "emotional regulation" scores were significantly higher ($p=0.050$) among second-year students as compared to other years.

Conclusion: Among allied vision sciences students, emotional intelligence significantly differs in some subscales when measured according to being boarder or not and the year of the degree program.

Keywords: Emotional intelligence, Empathy, Ophthalmology.

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1. Introduction

Positive psychology is a subcategory of psychology that emphasizes the recognition and development of psychological capacities instead of focusing on psychopathology.¹ Its peculiar feature is enhancing positive, measurable behaviors which in turn protect against unfavorable instances. Emotion is a core construct of an individual's personality and personal/professional well-being.² They are an integral aspect of human nature as they drive every behavior. If regulated well, emotions can become strong prompts to provide remedies for day-to-day issues or problems.³

The tendency to recognize, regulate and express one's emotions is called emotional intelligence. Emotional intelligence plays a vital role in developing the capacity to generate emotions when they facilitate thought, understanding and regulate emotions to develop intellectually.⁴ Various study results on emotional intelligence in literature correlate positively with positive mood and negatively with decreasing mental and physical health.⁵ Emotional intelligence is a persistently evolving avenue and is the centre of debate among researchers and medical educationists

on whether it is a vital factor for success in a student's career or not.⁶

Over the years, studying emotional intelligence in different target groups of students has been the focus of educationists.⁷ Kim MS and associates have studied the structural relationships between self-efficacy and clinical performance. They suggested the integration of emotional intelligence sub-scales i.e. self-efficacy problem-solving in teaching and assessment strategies.⁸ Problem solving is a core competency of health care providers as it leads to the development of critical and creative thinking eventually enhancing patient safety in a complex environment.⁹

Increasing focus on patient-centred care and accepting the importance of competencies related to interpersonal and intra-personal skills has led to the recommendation of including emotional intelligence in the medical curriculum.¹⁰

During the literature search, only one local study on the emotional intelligence of Allied health care students was found which included 15% of eye care students.¹¹ Authors conceived this study to evaluate empathy in addition to emotional intelligence in allied eye care students according to their year of study and gender.

2. Materials & Methods

Ethical approval of this study was obtained from the Ethical Review Board of the College of Ophthalmology & Allied Vision Sciences (COAVS), Lahore dated 29 June 2022. A sample size of 19 was calculated by the WHO sample size calculator by taking the level of significance at 5%, power of test at 80%, and global EI score of 0.27.¹²

Allied health sciences students enrolled in Bachelor of Science (BSc) in optometry, Orthoptics, and investigative ophthalmology were included in the study while those who did not give consent to participate were excluded. A Google form was developed which included Schutte's scale and Davis Interpersonal index questions in addition to those related to basic demographic information. The proforma was sent via social media application (WhatsApp) to study participants who fulfilled the inclusion criteria. A total of 150 Allied health sciences students were invited to participate in this study out of which 119 responded.

The study participant's responses were automatically recorded in google forms and tabulated.

Emotional intelligence scores were collected on Schutte's scale which was further divided into nine subscales while empathy score was collected on Davis's interpersonal Index which has four subscales.

One-way ANOVA was applied to compare emotional intelligence scores between four years of study.

Mann Whitney test was applied to compare the emotional intelligence scores according to gender and boarder/Non-Boarder.

Lastly, the Kruskal Wallis test was applied to compare the empathy scores over four years. A p-value of <0.05 was considered significant.

3. Results

The majority of participants were in the first year (32.8%) of the study and were female (77.3%). Tables 2, 3 and 4 depict the comparison of emotional intelligence and empathy scores based on year of study, gender and boarder/non-Boarder.

Table-1 Demographic Details

Variable	Category	N	%
Gender	Male	27	22.7
	Female	92	77.3
Place of Stay	Boarder	84	70.6
	Non-Boarder	35	29.4
Year of Study	1 st Year	39	32.8
	2 nd Year	25	21.0
	3 rd Year	32	26.9
	4 th Year	23	19.3
Total		119	100

5. Discussion

Turan N and associates¹³ studied intuition and emotional intelligence in nursing students at a university in Turkey. Emotional intelligence was found at a normal level however the use of intuition was low among nursing students. Researchers observed a positive correlation between the use of intuition and subscales of emotional intelligence. Saud WI and colleagues¹⁴ studied the relationship of emotional intelligence with the academic performance of Saudi EFL students. They enrolled eighty students who were about to take English achievement tests were enrolled in the study. Schutte's self-report emotional intelligence test was used in our study. The results showed a higher level of emotional intelligence in students which mostly used sub-scale was emotional utilization.

Wolf K¹⁵ studied the impact of short-term instructional methods in improving the emotional intelligence scores of students attending hospitality management classes. Results depicted a significant increase in emotional intelligence scores in students who had low scores initially. However, students with moderate and high initial scores did not show much improvement in scores. Based on these findings it was concluded that short-term intensive training may be useful in individuals with low emotional intelligence scores.

Table-2 Year wise comparison of subcategories of Emotional Intelligence scores on Schutte’s Scale

Sub Scales of EI	Mean (95% Confidence Interval of the difference)				P value (One Way ANOVA)
	1 st Year	2 nd Year	3 rd Year	4 th Year	
Emotional Utilization	54.79 (53.2-56.37)	55.68 (53.92-57.43)	53.34 (51.01-55.66)	55.04 (53.89-56.19)	0.322
Emotional Appraisal	10.74 (9.79- 11.69)	10.68 (9.47-11.88)	10.59 (9.56-11.62)	11.13 (10.31-11.94)	0.905
Emotional Optimization	15.25 (14.08-16.42)	15.96 (14.87-17.04)	14.59 (13.15-16.02)	16.56 (15.78-17.34)	0.137
Emotional Control	10.82 (9.90- 11.73)	11.28 (10.18-12.37)	10.18 (9.12-11.24)	10.56 (9.42-11.70)	0.516
Social Skills	15.23 (14.27-16.18)	16.12 (14.80-17.43)	14.84 (13.40-16.28)	16.13 (15.34-16.91)	0.316
Non-Verbal Communication	7.15 (6.64-7.66)	7.32 (6.61-8.02)	7.25 (6.51-7.98)	7.43 (7.04-7.82)	0.929
Emotional Awareness	7.56 (6.95-8.17)	8.00 (7.31-8.68)	7.62 (6.82-8.42)	7.65 (6.87-8.43)	0.835
Outlook	7.92 (7.18-8.66)	8.20 (7.22-9.17)	7.93 (7.17-8.70)	8.69 (7.93-9.46)	0.534
Emotional Regulation	13.41 (12.50-14.32)	14.92 (13.88-15.95)	12.93 (11.86-14.00)	13.65 (12.66-14.64)	0.050

Table-3 Gender wise comparison of subcategories of Emotional Intelligence scores on Schutte’s Scale

Sub Scales of EI	Mean (95% Confidence Interval of the difference)		P value (Mann-Whitney U Test)	Mean (95% Confidence Interval of the difference)		P Value (Mann-Whitney U test)
	Male	Female		Boarder	Non-Boarder	
Emotional Utilization	53.85 (51.22-56.47)	54.86 (53.97-55.76)	0.992	54.51 (53.44-55.62)	54.88 (53.24-56.52)	0.965
Emotional Appraisal	11.33 (10.22-12.44)	10.59 (10.04-11.15)	0.118	10.52 (9.97-11.09)	11.31 (10.29-12.33)	0.100
Emotional Optimization	15.37 (13.62-17.11)	15.51 (14.90-16.11)	0.275	15.36 (14.64-16.09)	15.74 (14.64-16.83)	0.427
Emotional Control	11.11 (9.91-12.30)	10.57 (10.01-11.13)	0.222	10.46 (9.84-11.08)	11.25 (10.38-12.12)	0.148
Social Skills	14.96 (13.33-16.59)	15.64 (15.05-16.22)	0.708	15.15 (14.48-15.82)	16.28 (15.18-17.38)	0.017
Non-Verbal Communication	7.14 (6.39-7.90)	7.20 (6.98-7.62)	0.781	7.15 (6.80-7.50)	7.54 (6.98-8.10)	0.177
Emotional Awareness	7.59 (6.79-8.39)	7.71 (7.32-8.10)	0.822	7.69 (7.27-8.10)	7.68 (7.01-8.35)	0.943
Outlook	8.51 (7.59-9.43)	8.02 (7.58-8.45)	0.466	8.27 (7.84-8.70)	7.80 (6.91-8.68)	0.174
Emotional Regulation	13.70 (12.42-14.98)	13.63 (13.08-14.17)	0.602	13.64 (13.06-14.21)	13.65 (12.61-14.70)	0.626

Guo M and associates¹⁶ designed a study to explore the relationship between academic procrastination and emotional intelligence among nursing students. Analysis of data after controlling the variates lead to the conclusion that academic procrastination was positively associated with being an only child and negatively associated with emotional intelligence ($p < 0.01$)

Suleman Q and colleagues¹⁷ conducted a study at Kohat University of Science and technology in which they observed the relationship between emotional intelligence and academic success among undergraduate students and found a strong positive correlation between the two. Managing one's self, emotional stability and managing relations turned out to be important predictors of academic success as were the results of our study which showed statistically

significant ($p=0.050$) differences among different years of students.

Foster K et al¹⁸ studied the correlation between emotional intelligence and perceived stress (PS) among final-year students of pharmacy, nursing and dentistry. They found a significantly negative correlation between EI and PS in pharmacy and nursing students. However, dentistry and pharmacy students showed a higher level of perceived stress as compared to nursing students. Emotional Intelligence was measured using the GENOS Emotional Intelligence Inventory (Concise Version) and stress was measured using the Perceived Stress Scale (PSS). Moawed S and colleagues¹⁹ compared the emotional intelligence among nursing students of two institutions from Egypt and Saudi Arabia.

Table-4 Year wise comparison of Empathy based upon Davis Interpersonal Reactivity Index

Sub Scales of Empathy	Mean (95% Confidence Interval of the difference)				P value (Kruskal Wallis)
	1 st Year	2 nd Year	3 rd Year	4 th Year	
Perspective taking	23.74 (21.60-25.88)	21.80 (19.05-24.54)	22.90 (20.71-25.09)	20.82 (17.90-23.75)	0.363
Fantasy	21.74 (19.76-23.72)	19.72 (16.82-22.61)	19.84 (17.61-22.06)	19.30 (16.21-22.39)	0.562
Empathic concern	21.20 (10.40-23.00)	18.72 (16.64-20.79)	20.00 (17.98-22.01)	19.30 (16.39-22.21)	0.317
Personal distress	20.84 (19.07-22.61)	19.48 (17.24-21.71)	20.62 (18.72-22.52)	20.13 (17.11-23.14)	0.715

They found statistically significant differences in emotional intelligence on various items. Similarly, our study also showed statistically significant results when compared to living in a hostel or not. Additionally, a significant positive correlation was found between emotional intelligence scores and the scorer's mother's education and family income ($p = 0.004$ and $p = 0.03$ respectively). Stratton TD and associates²⁰ compared changes in emotional intelligence in medical students at orientation and then at clerkship. It was concluded that the dimensions of attention to feeling and mood repair were significantly lower while personal distress was significantly higher ($p \leq 0.05$).

Biswas S and Invali S²¹ divided Schutte's scale into different subscales based on questions depicting similar

characteristics. They divided the scales into nine subscales ranging from emotional utilization to emotional regulation. Our study results have also been compared and presented according to these nine scales. Our study shows females scoring higher than males in six of the nine sub-scales but the difference was not statistically significant. These results are synonymous with the correlational study conducted by Nasir M and associates.²² Our study limitation is being a survey form-based cross-sectional research with a moderate sample size.

5. Conclusion

Among allied vision sciences students, emotional intelligence significantly differs in some subscales when measured according to being boarder or not and the year

of the degree program. Incorporating empathy training in the allied health science curriculum is the need of the hour as different factors influence this behavioral ability.

CONFLICTS OF INTEREST- None

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Contributions:

M.S - Conception of study

M.S, A.R - Experimentation/Study conduction

M.S, A.R, U.R - Analysis/Interpretation/Discussion

A.R - Manuscript Writing

Z.K.S - Critical Review

Z.K.S, U.R - Facilitation and Material analysis

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