Emotional Intelligence among Health Science Students at Jimma University

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Abstract

Background: Emotional intelligence has significant effect on the quality of learning and application of the learned knowledge in practice. Its usage is currently being understood as a fundamental requirement of health professional in care provision to patients and helps health professional in managing their own and their patients' emotions. **Objectives**: The main aim of this study is to assess the level of emotional intelligence and associated factor among undergraduate Health Science students at Jimma University South West Ethiopia. **Methods**: Institution based cross-sectional study was conducted among 154 Undergraduate Health Science Students. Structured self- administered questionnaires were used to collect data. The collected data was entered by using Epidata version 3.1. Then the data was exported to IBM SPSS version 20 for analysis for analysis. Descriptive statistics and multivariable linear analysis were done to describe and identify study variables and factors associated with the level of emotional intelligence. P-Value of less than 0.05 was used to declare the statistical significance. **Results**: Among the 154 students who participated in this study, about 88(57.1%) of the students had high and 66(42.9%) had low level of emotional intelligence. The results also revealed that there is statistically significant association between age, educational status of family members, substance use and Career development plan with the level of emotional intelligence among the study participants. **Conclusion**: The study concluded that the overall level of Emotional Intelligence among the study participants is low among 66(42.9%) and high 88(57.1%) among undergraduate health science students. This finding shows the need of improving emotional intelligence among rest of the study participants. Age, educational status of family members, substance use and Career development plans were identified with the level of emotional intelligence.

Keywords: Emotion; Intelligence; Faculty; Health Science

Introduction

Emotional intelligence (EI) is proclaimed as a powerful determinant factor in decision making skills to deal with stressors situations in life. [1-3]

In order to provide compassionate care, health care providers should be able to identify, use, manage and understand emotions not only in themselves but also in others. [4,5]

EI ability is not something that can be taught in a lecture class; it has to be developed through an active listening, engagement, and participation. [6]

Students are required to manage numerous clinical situations, adapt to the different teaching styles and expectations of instructors, work independently, and manage conflicts. In addition, some aspects of academic work such as taking exams and practicing health care procedures in the care settings may be considered highly stressful. [7,8] These situations require high levels of emotional management. Health Science students are expected to appreciate the patients' emotions, and use cognitive information to assess patient's needs, and then demonstrate emotional interventions that convey caring, and empathy toward patients and their families. [9,10]

Assessment of emotional intelligence is an important factor in determining students' adjustment and educational achievements. It is believed that emotional intelligence may explain differences in the quality of intrapersonal and

interpersonal relationships and contribute to job performance and management effectiveness and predict success by creating stress which can influences the wellbeing and academic performance among the student's. [11]

Study findings from developed countries explored the relationship between emotional intelligence and clinical performance, better coping skills, perceived competency, and well-being. [12] Emotionally intelligent individuals have the ability to create, recognize and control emotions in stressful situations. It has a significant effect on the quality of learning and application of the learned knowledge in practice. Its usage is currently being understood as a fundamental requirement of health professional in care provision and helps health professional in managing their own and their patients' emotions. [13-17] So, this study mainly designed to assess the level of emotional intelligence and associated factors.

Method and Materials

Study area and Period

This study was conducted in Jimma University which is a Public University located in Jimma, Ethiopia and situated around 352 kilometers from Addis Ababa. It is ranked first by the federal ministry of education for four successive years (2009-2012). The establishment of University dates back to 1952 when Jimma collage of agriculture was founded. The university got current name in December 1999 following the amalgamation of Jimma collage of agriculture and Jimma institute of health sciences which founded in 1983.

The university is Ethiopian first innovation community oriented educational institution of higher learning. It is a pioneer in public health training. Currently university educates more than 43,000 students in 56 undergraduate and 103 postgraduate programs in regular, summer and distance education. The university consists of the following academic units: school of graduate studies, institute of technology, institute of education and professional development studies, collage of agriculture and veterinary medicine, collage of business and economics, collage of natural science, collage of social science and law, collage of public health and medical science and school of art. Jimma institute of health sciences consists of school of nursing, school of midwifery, school of medicine, school of pharmacy, school of medical laboratory technology and school of environmental health science. The study was conducted from December 2020 to January 2021 GC.

Study Design: Institution based descriptive cross-sectional study was conducted

Sample size and Sampling technique

The sample size was calculated using standard sample size calculation formula for single population and a total of 165 study participants were selected by using simple random sampling method.

Data collection tools and procedure

The data collection tools were adapted from previous similar studies. The first part is socio-demographic characteristics and other associated factors of the studied subjects such as students' age, year of studying, father's education, mother's education, academic performance, social media user any recent stressor in last 6 months, any substance use, any medical illness, career development plan, recreational time and habit and source of financial and other support. The second part consists emotional intelligence sections with 5 subscales: Self-awareness, Self- regulation, Motivation, Empathy & Social Skills subscale., which are rated on a five-point Likert scale that ranges from 1=strongly disagree, 2=disagree, 3=neither disagree nor agree, 4=agree, 5=strongly agree.

Data processing and analysis

The collected data was systematically coded, computed and analyzed with descriptive statistics (mean, median, standard deviation, frequency and percentage). Analysis of the data was done in accordance with the study objectives. A p-value of <0.05 was considered to indicate statistical significance. The analyzed data was arranged in sequential order and different class tabulations was put in single table so as to help in discussing the results using international figures. The result was compared and discussed with international figures. Finally the conclusion and recommendation was forwarded.

Data quality management and control

The validity and reliability of the data collection tools were checked, pre-test was done out of the study are among 5% of the total population prior to the actual study. For consistency, the collected data were checked on daily bases by the supervisors & investigators.

Ethical consideration

Ethical clearance was obtained from Institutional Review Board of Jimma University. The formal letter was written from Jimma University, head office of nursing and midwifery for permission and support for data collection. The respondents were informed clearly about the purpose of the study and consent was asked. For privacy the name of the students was not mentioned. The information obtained from the student was kept secret and the questionnaires were given only for the volunteers.

Results

Among 165 study population to whom the questionnaire was distributed, 154 questionnaires were used in this study which makes 93.33% response rate. As shown on (Table 1) among the total study participants 79(51.3%) were male students and the rest 75(48.7%) were female students. Concerning age distribution, majority of them 89(57.8%) was in between 22 and 23. Regarding their religion, majority of students who participated in this study were Muslim which account 59(38.3%) and the rest 51(33.1%), 40(26%) & 4(2.6%) were

Orthodox, Protestant, Wakefeta respectively. Slightly more than half 83(53.9%) of the study participants came from Oromia region. Seventy Nine (51.3%) of study participants were from urban birth residence and the rest 75(48.7%) are from rural area. Regarding family educational status 53(36.6%) fathers and 34(23.6%) of their mothers were completed graduation & primary school respectively. Concerning occupation of family, around 59(38.8%) was government Employee.

Regarding source of financial and other support, majority of students 134(87%) were supported by their family and the rest 15(9.7) and 5(3.2%) are supported by them self and other source respectively. Regarding department distribution, majority of students 52(33.8%) were nursing students the rest 41(26.6%), 36(23.4%) & 25(16.2%) were Pharmacy, Medical Laboratory, Midwifery student respectively (Figure 1).

Among the total study participants majority of them 87(56.5%) did not encountered any stress in the last 6 month whereas the rest 67(43.5%) have encountered stress. Concerning substance use, majority of the study participants 129(83.8%) did not use any substance in the last 6 month and the rest 25(16.2%) use substance.

Regarding their plan for career development in their profession, most of the student 109(70.8%) have a career development plan and the rest 45(29.2%) don't have a career development plan. As shown in figure 3, 133(86.4) of the students have not had any medical illness whereas 21(13.6%) had a medical illness. As for the recreation time and habit, most of the students 109(70.8%) have a recreation time or habit and the other 39(25.3%) have no any recreation time or habit (Figure 2).

| Table 1: Socio-demographic characteristics of regular faculty of health science students at Jimma University, institution of health science, 2021 G.C (n=154).			
Variables	Category	f	%
Gender	Male	79	51.30%
	Female	75	48.70%
Age	19-24	149	96.80%
	25-29	5	3.20%
Religion	Orthodox	51	33.10%
	Muslim	59	38.30%
	Protestant	40	26.00%
	Wakefeta	4	2.60%
Region	Oromia	83	53.90%
	Amhara	22	14.30%
	SNNP	20	13.00%
	Afar	1	0.60%
	Harari	1	0.60%
	Sidama	4	2.60%
	Addis Ababa	21	13.60%
	Dire Dawa	2	1.30%
Birth residence	Rural	75	48.70%
	Urban	79	51.30%
Educational status of father	Illiterate	12	8.30%
	Secondary	30	20.70%
	Primary	23	15.90%
	High school	18	12.40%
	Graduates	62	42.20%
Educational status of mother	Illiterate	31	21.50%
	Secondary	27	18.80%

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	Primary	34	23.60%
	High school	22	15.30%
	Graduate	30	20.90%
Occupation of Family	Farmer	37	24.30%
	Merchant	23	15.10%
	Government Employee	59	38.80%
	Business man/women	11	7.20%
	Self-Employee	20	13.20%
	Other	2	1.30%
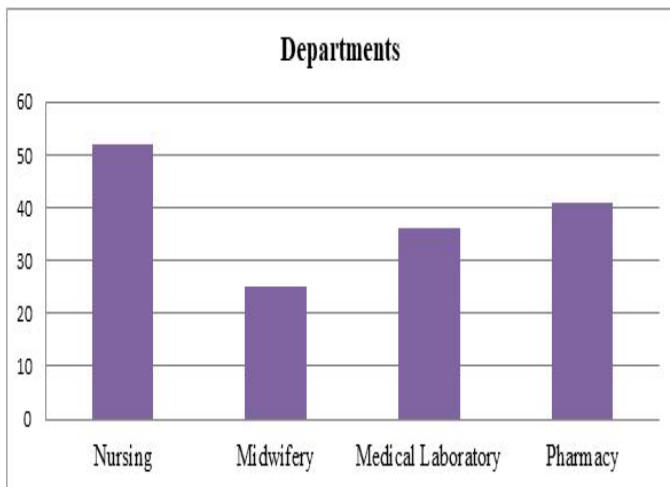
Figure 1: Distribution of department in the study of level of emotional intelligence and associated factor among Health Science students at Jimma University; 2021 G.C

Regarding department distribution, majority of students 52(33.8%) were nursing students the rest 41(26.6%), 36(23.4%) & 25(16.2%) were Pharmacy, Medical Laboratory, Midwifery student respectively (Figure 1).
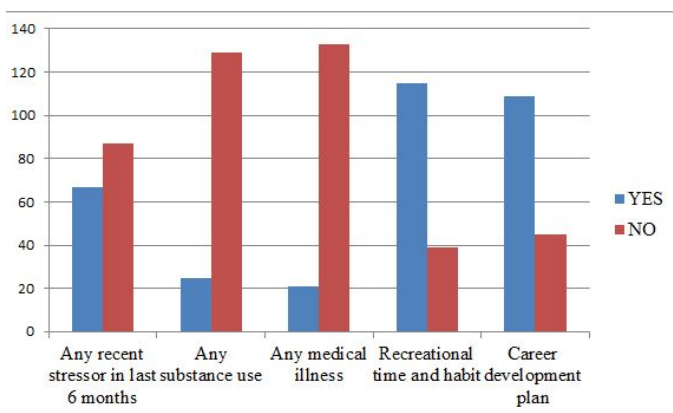
Figure 2: Non-Sociodemographic variables in the study of level of emotional intelligence among graduate Health Science students at Jimma University; 2021 G.C.

Level of Emotional Intelligence
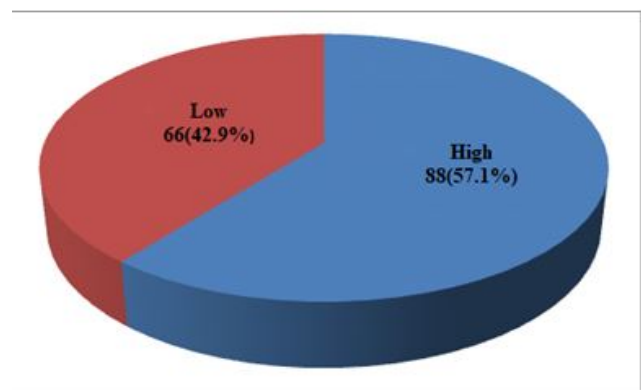
Figure 3: Level of emotional intelligence in the study of level of emotional intelligence and associated factor among faculty of Health Science students at Jimma University; 2021 G.C.

The findings of this study revealed that the overall level of Emotional Intelligence among the study participants is low among 66(42.9%) and high 88(57.1%) respectively (Figure 3).

Multivariable linear regression result showed that four independent variables were significantly associated with emotional intelligence among the study participants. The level of emotional intelligence among the study participants has significant association with age, Educational status of families, substance use and career development plan. Accordingly, an increase in age by one year will increase the level of emotional intelligence 0.8 times keeping the other variables constant (β=0.8, p=0.010). The level of emotional intelligence also significantly and positively associated with Educational status of the family in this study. This clearly indicated that a unit increase in the educational status of mother, father or significant family member will increase the level of emotional intelligence 0.049 times (β=0.049, p=0.041). Those students who use substances reported decreased the level of emotional intelligence (β=0.193, p=0.03). Study participants having career development plan in their profession have better emotional intelligence level (Table 2).

Study Variables	Unstandardized Coefficients		t	P-Value	95.0% CI for β	
	β	S.E			Lower Bound	Upper Bound
(Constant)	-0.304	0.803	-0.378	0.706	-1.893	1.286
Gender	-0.024	0.073	-0.327	0.744	-0.169	0.121
Age	0.080	0.031	2.612	0.010*	0.019	0.140
Religion	0.010	0.042	0.236	0.814	-0.073	0.093
Region	0.015	0.010	1.432	0.155	-0.006	0.035
Birth residence	0.032	0.074	0.439	0.661	-0.114	0.179
Educational status of family	0.049	0.028	-1.743	0.041*	-0.105	0.007
Occupation of Family	-0.005	0.027	-0.186	0.853	-0.058	0.048
Department	-0.022	0.030	-0.742	0.459	-0.082	0.037
Source of financial support	0.007	0.075	0.090	0.928	-0.142	0.156
Social media	0.011	0.208	.051	0.959	-0.402	0.423
Having stressor in last 6 months	0.011	0.077	.139	0.890	-0.142	0.163
Substance use	-0.193	0.094	2.047	0.03*	0.006	0.379
Having medical illness	-0.065	0.097	-.674	0.500	-0.257	0.127
Career development plan	0.165	0.081	2.037	0.044*	0.005	0.325
Recreational time and habit	-0.002	0.081	-.022	0.983	-0.163	0.159

Table 2: Factors associated with the level of Emotional Intelligence among Health Science students at Jimma University; 2021 G.C (n=154).

Dependent Variable: Emotional Intelligence Score, * significantly associated Variables, CI=Confidence Interval and S.E= Standard Error

Discussion

The findings of this study revealed that the overall level of Emotional Intelligence among the study participants is low among 66(42.9%). The result is similar with the results of study conducted in Nepal who studied the emotional intelligence among nursing student's 15). The similarity might be due to educational policy, academic status of the study participants and socio-economic factors. Among the total students who participated in that study nearly more than half 88(57.1%) showed a high level of emotional intelligence. The finding is inconsistent with studies conducted in USA, Saudi Arabia and Egypt. [7,16,18] The difference might be due to psychosocial status of the study participants which can be affected by educational infrastructure, resource, presence and absence of psychosocial support.

The level of emotional intelligence among the study participants has association with age, Educational status of families, substance use and career development plan. A unit increase in age will lead to level of emotional intelligence increase. This finding is consistent with most previously conducted studies at different time in different countries around the globe. [6,7,10,18] The similarity might be related with emotional maturity with age and increased exposure to stressful situations in teaching learning arena. It may also be related with the level of understanding and mental analysis.

The level of emotional intelligence is also significantly and positively associated with Educational status of the family in this study. This clearly indicated that a unit increase in the educational status of mother, father or significant family member will increase the level of emotional intelligence. Using different types of substances decrease the level of emotional intelligence among undergraduate health science students.

Study participants having career development plan in their profession have better emotional intelligence level. The findings are in line with findings of the study done by [14] association between subscales of emotional intelligence, father's educational status and age of the students were significantly associated with self-awareness subscales. [14,16] Those who don't use any substance and form having government employer family have high self-awareness. This could be due to the reason that father with high education are well learned about the role of parents in the emotional development of children.

Conclusion

The study concluded that the overall level of Emotional Intelligence among the study participants is low among 66(42.9%) and high 88(57.1%) among undergraduate health science students. This finding shows the need of improving emotional intelligence among rest of the study participants due to growing complexity of the healthcare environment and increasing expectations of clients in the competitive healthcare industry which demands health professionals who possess a higher level of emotional intelligence and emotion control skills. Age, Educational status of families, substance use and career development plan were identified as factors associated with level of emotional intelligence among the study participants. Thus, these factors should be considered in the future strategies enhancing emotional intelligence among undergraduate regular health science students at each and every educational institution.

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