

Article

The Relationship between Emotional Intelligence, Well-Being, and Education Level

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Abstract: Emotional intelligence and educational level are commonly associated with success in life and well-being. While multiple studies have explored these concepts independently, few studies have examined the impact of educational level on emotional intelligence and associated variables, such as well-being. A total of $N = 202$ participants were recruited online. Participants completed measures of emotional intelligence, well-being (i.e., happiness, self-esteem, personal growth). Overall, participants who previously obtained a bachelor's degree displayed higher levels of emotional intelligence, happiness, self-esteem, and personal growth compared to those without an undergraduate degree. However, no differences were observed on any variable between individuals currently enrolled in a university and non-students. The results suggest that, while completing a university degree increases emotional intelligence and well-being, the stress of being a student may negatively impact the benefits obtained from attending university. Limitations and possible directions for future research are discussed.

Keywords: emotional intelligence; happiness; education level; students; general population

1. Introduction

Emotional intelligence (EI) refers to the skill set associated with accurately reasoning about emotions and to use knowledge on emotions to enhance one's thought (Mayer, Roberts, & Barsade, 2008; Miners, Côté, & Lievens, 2018). Although the concept of EI is relatively new, there has been a plethora of scientific and popular literature published in the last three decades (Petrides, 2001). While the concept of EI became widely popular due to the laypeople's expectations of its importance in success, empirical research failed to provide consistent conclusive evidence regarding the relationship between EI and markers of success (Miners et al., 2018). Indeed, although many studies support the association between emotional intelligence and positive characteristics such as satisfaction in life (Palmer et al., 2002; Ruiz-Aranda et al., 2014), happiness (Furnham & Christoforou, 2007; Furnham & Petrides, 2003), positive mood (Schutte et al., 2002), self-esteem (Kong et al., 2012), and personal growth (Landa et al., 2010), findings related to success in life are more mitigated (Føllesdal & Hagtvet, 2013; George, 2000; Howe et al., 2014).

Education is considered a common marker to evaluate success in life (Ryan & Deci, 2020; Tuononen et al., 2019). The benefits of education can be direct or indirect. Education provides better career opportunities, improved financial security, and higher levels of happiness (Stryzhak, 2020). Although multiple studies suggested that the relationship between education and subjective well-being is insignificant, a study by Nikolaev (2018) suggested otherwise. The author noted that multiple studies on the topic used life satisfaction as a measure of subjective well-being and reported a positive association between higher education and multiple measures of well-being (i.e., life satisfaction, meaning in life, positive emotions, satisfaction in multiple domains such as financial, employment opportunities, children at home, etc.).

The relationship between EI and educational level has received attention from multiple researchers. A study by Halimi and colleagues (2020) suggested that college students

displaying higher levels of self-emotion appraisal and usage of emotions had higher levels of academic achievement, as measured by grade point average. This association was not impacted by age, high schooling system, nationality, nor gender. A second study explored the relationship between alexithymia (e.g., difficulty identifying and expression emotions) and educational level. The authors' findings suggest that individuals displaying higher levels of alexithymia (which could be considered the opposite of emotional intelligence) reported lower educational level (Pasini et al., 1992). Another study suggested that the relationship between EI and academic success may be more subtle. In their study, Rode and colleagues (2007) examined the relationship between EI and various measures of performance and success in undergraduate business students. The authors concluded that by itself, higher levels of EI resulted in improved public speaking. However, when combined with conscientiousness, EI can also predict group behavior effectiveness and grade point average. The authors concluded that simply having high levels of EI may not be enough to have academic success and that motivation is necessary to reap the benefits of EI.

Based on the aforementioned literature, it is of interest to explore the potential relationship between education level, EI, and factors commonly associated with EI. More specifically, the purpose of this study is to identify potential differences on EI and variables commonly associated with EI (such as alexithymia, happiness, self-esteem, and personal growth) based on educational level. First, we hypothesize that individuals who have university education will display higher levels of EI, as well as positive characteristics (e.g., happiness, personal growth, self-esteem), while displaying lower levels of alexithymia than individuals without a university degree. Second, we hypothesize that, within individuals who have a university degree, EI and alexithymia will be significant predictors of positive characteristics leading to success.

2. Method

2.1. Participants

Two hundred and two ($N = 202$) participants were recruited online via social media and websites dedicated to psychological research to complete this online study (e.g., reddit.com/r/SampleSize). There was no missing data for any of the responses. Inclusion criteria for the study were to be over 18 years old and be fluent in English. The sample consisted of 97 males and 105 females. Participants were predominantly located in North America (64%), Europe (22%), Oceania (6%), or other (8%). Most participants reported being Caucasian (80%) or Asian (8%). English was the primary language of 78% of the participants. Almost half of the participants (46%) reported being enrolled as a university student. Most participants reported not having receive a bachelor's degree (59%). The mean age of the sample was 24.70 years old ($SD = 7.42$). All participants received informed consent and received a debriefing at the end of the study. The study was approved and given 'exempt' status by the IntegReview Ethical Review Board (Austin, TX, USA), under protocol number 11022016. The datasets generated and analyzed during the current study are available in the Open Science Framework repository. <https://osf.io/9knv2/>

2.2. Measures

Trait emotional intelligence questionnaire – short form (TEIQue - SF; Petrides & Furnham, 2006). The TEIQue-SF is a 30-item self-report instrument providing a global measure of trait emotional intelligence and emotional self-efficacy (e.g. the ability to identify and manage one's own emotions, as well as the emotions of others). The short form is based on the original 153-item TEIQue (Petrides, 2001). Participants provide their agreement to each statement on a 7-point scale. The TEIQue-SF has shown reliable internal consistency in previous studies (Ali et al., 2009).

Personal Growth Initiative Scale (PGIS; Robitschek, 1998). The PGIS is a 9-item self-report instrument measuring one's motivation to change and develop as a person. Each item is rated on a 6-point scale, ranging from Definitely Disagree to Definitely Agree.

The PGIS has shown adequate internal reliability, as well as convergent and discriminant validity (Durand, 2018; Shorey et al., 2007).

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES is a 10-item global measure of self-esteem. Each item is rated on a scale ranging from 1 = Disagree strongly to 4 = Agree strongly. The RSES possess adequate psychometric properties (Crowe et al., 2015).

20-item-Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994). The TAS-20 is a 20-item self-report instrument of alexithymia, a disorder characterized by a difficulty to identify and express emotions (Onur et al., 2013). Items are rated on a 5-point scale from strongly disagree to strongly agree. The TAS-20 has three factors: 1) difficulty describing one's feeling to others, 2) difficulty identifying and modulating feelings, and 3) externally oriented thinking (attention). The TAS-20 has shown adequate validity and reliability and is considered a valid measure of alexithymia (Bagby, Taylor, et al., 1994; Gori et al., 2014).

Subjective Fluctuating Happiness Scale and Subjective Authentic-Durable Happiness Scale (SFHS and SA-DHS; Dambrun et al., 2012). The 10-item SFHS and the 13-item SA-DHS examine two components of happiness: the fluctuation of happiness over time, and one's stable happiness state. Items are rated on a 7-point scale. Psychometric properties of both questionnaires are considered adequate and reliable (Dambrun et al., 2012; Durand, 2018).

3. Results

Examination of the skewness and kurtosis support a normal distribution on all questionnaires used in the present study (all values between -1.00 and +1.00, for total sample and divided by level of education). In order to account for multiple testing, a Bonferroni correction of $\alpha = .05/6 = .008$ was used to establish statistical significance.

Table 1 shows the results of a series of ANOVAs on education level for measures of emotional intelligence, alexithymia, personal growth, self-esteem, stable happiness, and fluctuating happiness. All the results were statistically significant ($p < .001$). Individuals with a bachelor's degree showed higher levels of emotional intelligence, personal growth, self-esteem, and stable happiness, as well as lower levels of alexithymia and fluctuating happiness. Interestingly, this pattern of results was not observed when examining the mean difference on the aforementioned variables by student status, as displayed in Table 2. Indeed, no statistically significant difference were observed on any variables between university students and non-students.

Table 1. ANOVA results for education level.

	Without a bachelor (n = 120)			With a bachelor (n = 82)			<i>F</i>	<i>p</i>	<i>d</i>
	<i>M</i> (<i>SD</i>)	α	Range	<i>M</i> (<i>SD</i>)	α	Range			
TEIQue	123.38 (30.83)	0.93	48-197	150.37 (25.99)	0.92	74-193	42.305	< .001	0.94
TAS	53.04 (13.33)	0.87	24-89	43.89 (11.92)	0.89	24-75	24.991	< .001	0.72
PGIS	30.70 (9.94)	0.90	9-54	37.66 (8.36)	0.90	16-52	27.069	< .001	0.76
RSES	22.83 (7.11)	0.92	10-40	29.45 (6.07)	0.91	13-40	47.405	< .001	1.00
SADHS	41.55 (16.59)	0.95	13-82	56.62 (15.79)	0.96	16-88	41.798	< .001	0.90
SFHS	45.10 (11.58)	0.88	18-69	35.70 (10.80)	0.89	17-65	33.913	< .001	0.84

Note. TEIQue = Trait emotional intelligence questionnaire; TAS = Toronto Alexithymia Scale; PGIS = Personal Growth Initiative Scale; RSES = Rosenberg Self-Esteem Scale; SADHS = Subjective Authentic-Durable Happiness Scale; SFHS = Subjective Fluctuating Happiness Scale.

Table 2. ANOVA results for student status.

	University student (n = 92)			Not a university student (n = 110)			F	p	d
	M (SD)	α	Range	M (SD)	α	Range			
TEIQue	134.47 (33.12)	0.94	68-193	134.22 (30.81)	0.93	48-197	0.003	0.956	0.01
TAS	48.70 (13.43)	0.89	24-74	49.85 (13.63)	0.89	24-89	0.367	0.545	0.08
PGIS	33.79 (10.13)	0.92	10-54	33.30 (9.78)	0.90	9-54	0.123	0.726	0.05
RSES	25.92 (7.70)	0.93	10-40	25.18 (7.24)	0.93	10-40	0.497	0.482	0.10
SADHS	48.90 (18.00)	0.96	13-88	46.64 (17.74)	0.96	13-83	0.807	0.370	0.13
SFHS	42.29 (12.83)	0.91	17-69	40.44 (11.56)	0.88	18-68	1.170	0.281	0.15

Note. TEIQue = Trait emotional intelligence questionnaire; TAS = Toronto Alexithymia Scale; PGIS = Personal Growth Initiative Scale; RSES = Rosenberg Self-Esteem Scale; SADHS = Subjective Authentic-Durable Happiness Scale; SFHS = Subjective Fluctuating Happiness Scale.

Subsequently, a series of regression analyses were performed on individuals with a bachelor's degree. In all cases, a stepwise regression was performed, with TEIQue total score and TAS total score as predictors. For personal growth, the analysis was significant (*Standardized B* = 0.790, $t = 11,509$, $p < .001$, *adjusted R*² = .62), with EI being the only predictor. For self-esteem, the analysis was significant (*Standardized B* = 0.772, $t = 10.862$, $p < .001$, *adjusted R*² = .59), with EI being the only predictor. For durable happiness, the analysis was significant (*Standardized B* = 0.790, $t = 11,539$, $p < .001$, *adjusted R*² = .62), with EI being the only predictor. Finally, for fluctuating happiness, the analysis was significant (*Standardized B* = -0.387, $t = -3.755$, $p < .001$, *adjusted R*² = .14), with EI being the only predictor.

The analyses were repeated on individuals without a bachelor's degree. For personal growth, the analysis was significant (*Standardized B* = 0.761, $t = 12,744$, $p < .001$, *adjusted R*² = .58), with EI being the only predictor. For self-esteem, the analysis was significant (*adjusted R*² = .59) with both EI (*Standardized B* = 0.886, $t = 10,923$, $p < .001$) and alexithymia (*Standardized B* = 0.185, $t = 2,278$, $p < .001$) as predictors. For durable happiness, the analysis was significant (*Standardized B* = 0.743, $t = 12,051$, $p < .001$, *adjusted R*² = .55), with EI being the only predictor. Finally, for fluctuating happiness, the analysis was significant (*Standardized B* = -0.377, $t = -4,419$, $p < .001$, *adjusted R*² = .14), with EI being the only predictor.

4. Discussion & Conclusion

The purpose of this study was to investigate the role of education level on EI and other variables associated with success in life, such as happiness, self-esteem, and personal growth. Our findings suggest that individuals who have obtained a bachelor's degree display higher levels of EI and other important facets for success in life. However, no difference was observed on EI or any other facets when comparing students and non-students at the university level. Overall, these findings are in line with previous studies suggesting an association between EI and academic performances (Costa & Faria, 2015; Song et al., 2010).

Considering that EI levels were higher in individuals who have completed their degree, but not in people working on their degree, it is possible that attending a university program increases one's EI and well-being over a long period of time, possibly until even after graduation. An undergraduate degree provides students multiple opportunities to interact with diverse individuals through group working, group studying, group presentations, and social events. It is possible that continuous exposition to these aspects foster EI in people. This hypothesis is supported by a study from Foster and colleagues (2017) who performed a longitudinal study on a cohort of nursing master students and a cohort

of bachelor students. The authors concluded that EI significantly increased over time during the program, and higher levels of EI was associated with academic performance. The authors also noted that using emotions became more prevalent over time to solve problems. Another study on EI and nursing students arrived at a similar conclusion. In their study, Sharon and Grinberg (2018) explored the relationship between EI and academic success. The authors reported that EI improved after the first year of study and that students with higher levels of EI were more likely to complete their program.

Interestingly, multiple studies reported a decrease in well-being over time within students while they are enrolled in a university program. A study on undergraduate students from the United Kingdom reported that over their first year, academic alienation increased, while self-efficacy decreased (Denovan & Macaskill, 2017). Similar findings were observed in medical students who were followed over a two year period, whereas participants reported lower life satisfaction in their third year of study compared to the beginning of their first year (Duffy et al., 2011). Overall, it is possible that completing a university program increases EI and other characteristics related to success in life, but these effects may only be visible after graduating. Indeed, attending a university may be so stressful for many students that self-reported EI and well-being remains low during the studies.

The present study has several limitations. First, this study only compared the education level as having a bachelor's degree or not having one. It would be interesting to know if EI and well-being vary after completing a college degree, a master's degree, a doctoral degree, and any professional degree. Second, the present study did not distinguish between different fields of study. It is possible that students in programs that are contingent experience significantly lower levels of EI and well-being than others. Lastly, this study did not assess the time since the completion of the bachelor's degree. It would be interesting for a future study to examine when the increase of EI and well-being occurs (e.g., weeks, months, or years after graduation).

Overall, this study explored the differences of EI and well-being based on education level. Individuals who completed a bachelor's degree displayed higher levels of EI and well-being than those without one. However, there was no difference on any variable between students and non-students. Future studies should integrate a longitudinal component in order to assess when this increases of EI and well-being occurs.

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