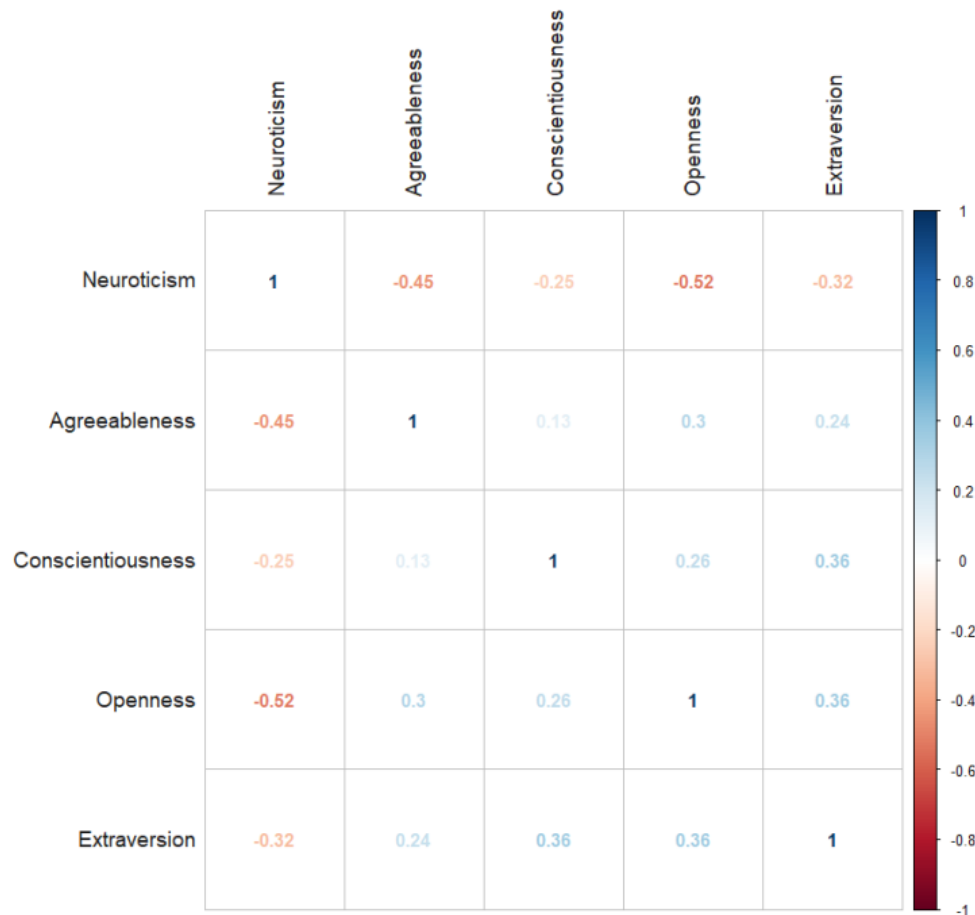


Results

Reliability of model is checked using Cronbach alpha which is obtained around 0.61 which shows that model have sufficient internal consistency and suitable for study population.

Correlation among the factors is calculated and obtained a lowest correlation between agreeableness and conscientiousness i.e., 0.13 and highest correlation is obtained for extraversion and openness i.e., 0.36.



Linear regression for individual personality trait related to EQ is obtained. Multiple R^2 for each factor is as per below.

Table 1: Linear regression analysis indicating extraversion as the predictor of EI.

Model	b	SE	t	p
(Intercept)	55.943	2.594	21.562	<2e-16
Extraversion	31.550	3.837	8.222	2.88e-14
$R^2 = 0.25$				

Table 2: Linear regression analysis indicating conscientiousness as the predictor of EI.

Model	b	SE	t	P
(Intercept)	49.038	4.931	9.945	<2e-16
Conscientiousness	41.950	7.487	5.603	7.2e-08
$R^2 = 0.14$				

Table 3: Linear regression analysis indicating openness to experience as the predictor of EI.

Model	b	SE	t	p
(Intercept)	19.365	4.275	4.53	1.03e-05
Openness to experience	80.043	5.943	13.47	<2e-16
$R^2 = 0.48$				

Table 4: Linear regression analysis indicating agreeableness as the predictor of EI.

Model	b	SE	t	P
(Intercept)	66.448	3.599	18.461	<2e-16
Agreeableness	14.599	5.193	2.811	0.00544
$R^2 = 0.04$				

Table 5: Linear regression analysis indicating neuroticism as the predictor of EI.

Model	b	SE	t	p
(Intercept)	105.368	3.801	27.719	<2e-16
Neuroticism	-42.494	5.419	-7.842	2.4e-13
$R^2 = 0.24$				

Above results shows that openness to experience is highly useful for the prediction of EQ and agreeableness can be ignored for regression study. Overall linear regression is calculated using openness, extraversion, conscientiousness and neuroticism.

Table 6: Linear regression analysis indicating personality traits as the predictor of EI.

Model	b	SE	t	p
(Intercept)	21.688	7.548	2.873	0.00452
Openness	59.533	6.494	9.170	<2e-16
Neuroticism	-9.702	4.812	-2.016	0.04519
Conscientiousness	14.089	5.681	2.480	0.01401
Extraversion	15.158	3.259	4.651	6.17e-06
$R^2 = 0.5873$				
$\Delta R^2 = .0.5786$				

As per the linear regression model showed nearly 58% accuracy on EQ prediction level having certain study constraints. Many psychological terminologies are studied based on other factors as quantifying every factor is sometimes rigorous task. As suggested in procedure low, medium and high chances of depression is predicted using classification algorithms such as naïve bayes algorithm and decision tree algorithm.

Results obtained from trained data in naïve bayes algorithm.

	High	Low	Medium
High	28	4	9
Low	2	47	11
Medium	15	10	30
Accuracy = 0.6730			

Similar model was applied on test data for naïve bayes algorithm.

	High	Low	Medium
High	6	3	4
Low	1	12	3
Medium	4	0	6
Accuracy = 0.6153			

Classification problem was repeated for decision tree too for improving the accuracy in prediction of chances in depression.

	High	Low	Medium
High	39	2	12
Low	2	47	10
Medium	4	12	28
Accuracy = 0.7307			

Test dataset for decision tree is obtained as below.

	High	Low	Medium
High	7	1	0
Low	4	11	3
Medium	0	3	1
Accuracy = 0.7179			

Conclusion

Serial No.	Hypotheses	Outcomes
1	Openness to experience	Significant
2	Agreeableness	Non-significant
3	Conscientiousness	Significant
4	Neuroticism	Significant
5	Extraversion	Significant

- As per results obtained and using hypothesis testing major factors emerged who played a vital role in regression analysis were openness to experience, conscientiousness, neuroticism and extraversion.
- Emotional intelligence is an important factor for young people because it able to identify and understand their psychological conditions and its affected due to change in human behaviour.
- Openness to experience found the most important factor affecting the person's emotional intelligence of a particular age group on which study was focused.
- Study can help the students to keep the control at and check their positioning at an emotional level and using various techniques can try to improve for high success chances.
- As certain study shows that EQ and depression are inversely related than it helped to study the chances of depression in a person which can easily be predicted using the predictive analytics.
- Naïve bayes and decision tree have provided a sufficient amount of accuracy in predicting the chances of depression and similar type of model can be implemented at a college level or offices for knowing the whereabouts of their emotional status.