

# BDI and BAI Analysis Summary

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## Beck Depression Inventory (BDI)

The Beck Depression Inventory is a measure of an individual's level of depression. Here we identify its relationship with various demographic measures, as well as with our measure of COVID-19 skepticism.

One-way ANOVAs were performed between each education group. Those without a college degree were significantly more depressed than those with a college degree or post-college degree.

Table 1: College Education vs Depression

Group 1	Group 2	Estimate	Conf.low	Conf.high	P.adj	Sig
No college degree	College degree	-2.80	-4.63	-0.96	0.00	**
No college degree	Graduate degree	-2.59	-4.85	-0.34	0.02	*
College degree	Graduate degree	0.20	-2.08	2.49	0.98	ns

The same comparison was done between income groups. Those in the lowest income brackets are more depressed than those who are in the higher income brackets.

Table 2: Income vs Depression

Group 1	Group 2	Estimate	Conf.low	Conf.high	P.adj	Sig
Less than \$50,000	\$50,000 to \$100,000	-2.15	-4.05	-0.26	0.02	*
Less than \$50,000	\$100,000 or more	-3.21	-5.46	-0.96	0.00	**
\$50,000 to \$100,000	\$100,000 or more	-1.06	-3.52	1.40	0.57	ns

Race does not appear to significantly impact depression.

Table 3: Race vs Depression

Group 1	Group 2	Estimate	Conf.low	Conf.high	P.adj	Sig
Chinese	Non Chinese Asian	-2.85	-8.55	2.85	0.47	ns
Chinese	White	0.73	-1.03	2.49	0.60	ns
Non Chinese Asian	White	3.58	-2.04	9.19	0.29	ns

A linear regression was performed between the BDI depression index and our measure of Covid Skepticism. No significant correlation was found.

Table 4: COVID-19 Skepticism vs Depression

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	11.6084	0.6131	18.93	0.0000
CovidSkepticism	-0.0111	0.0245	-0.45	0.6515

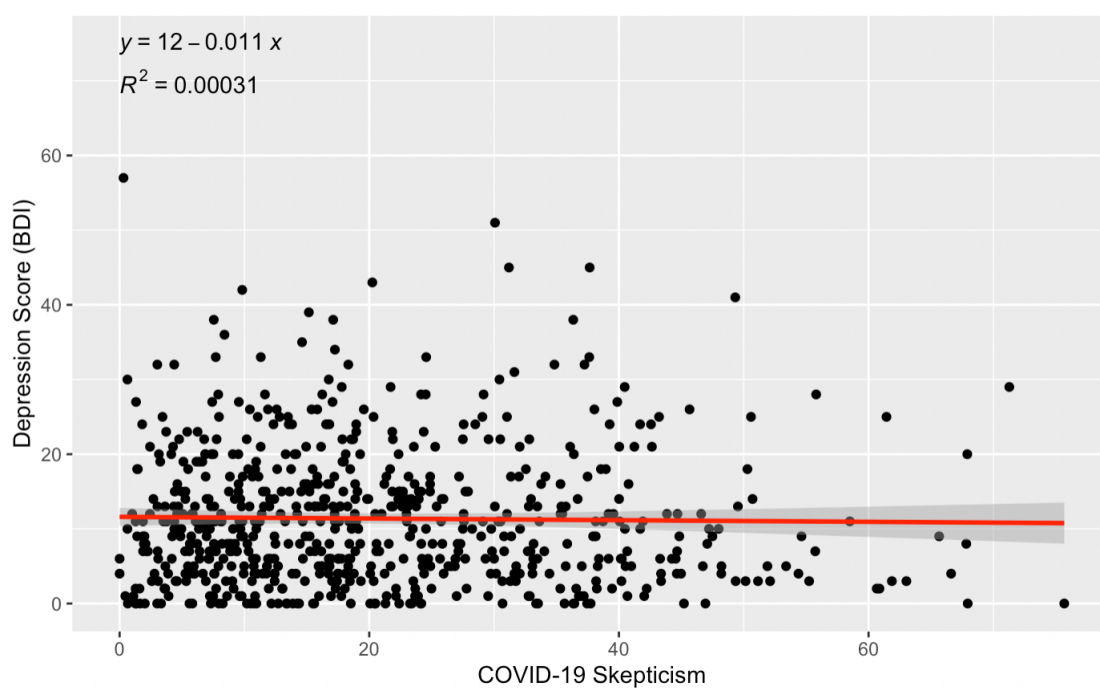


Figure 1: COVID-19 Skepticism vs Depression

Lastly, younger people are more depressed.

Table 5: Age vs Depression				
	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	14.1500	0.2524	56.06	0.0000
DOB_YEAR	-0.0949	0.0081	-11.66	0.0000

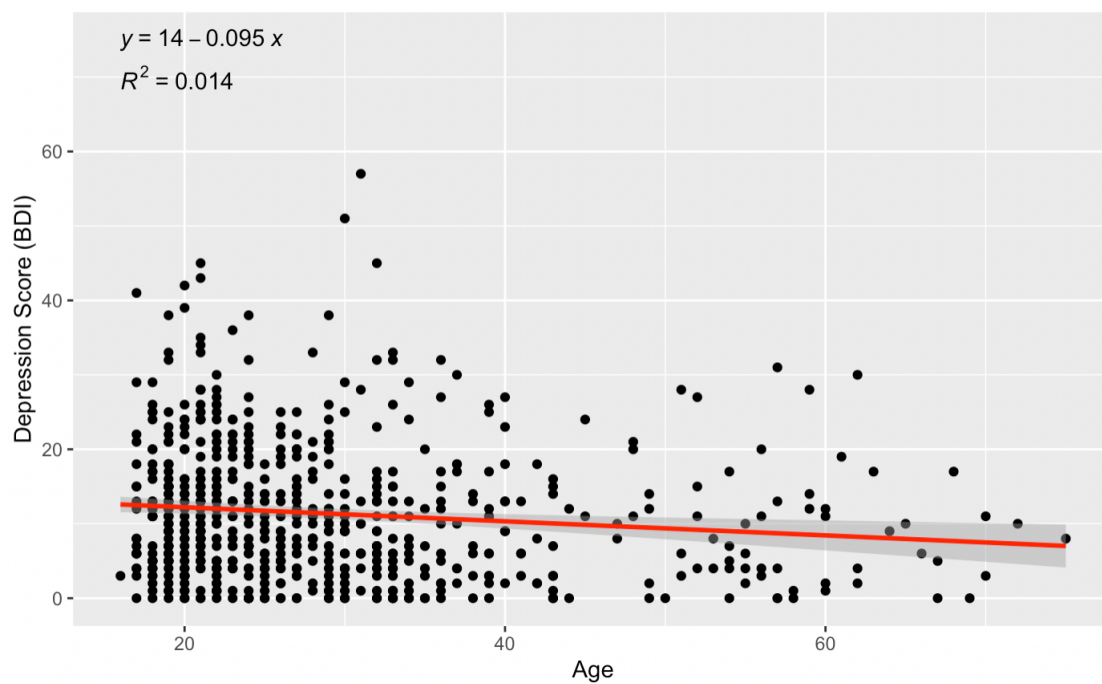


Figure 2: Age vs Depression

## Beck Anxiety Inventory (BAI)

The Beck Anxiety Inventory, similar to BDI, is a measure of an individual's anxiety level. We performed the same comparisons with as above.

One-way ANOVAs were performed between each education group. Unsurprisingly, those without a college degree are more anxious than those with a college degree.

Table 6: Education vs Anxiety

Group 1	Group 2	Estimate	Conf.low	Conf.high	P.adj	Sig
No college degree	College degree	-2.63	-4.79	-0.48	0.01	*
No college degree	Graduate degree	-2.06	-4.71	0.59	0.16	ns
College degree	Graduate degree	0.58	-2.10	3.26	0.87	ns

There was no significant relationship between income and anxiety.

Table 7: Income vs Anxiety

Group 1	Group 2	Estimate	Conf.low	Conf.high	P.adj	Sig
Less than \$50,000	\$50,000 to \$100,000	-1.29	-3.52	0.94	0.36	ns
Less than \$50,000	\$100,000 or more	-1.85	-4.50	0.80	0.23	ns
\$50,000 to \$100,000	\$100,000 or more	-0.56	-3.46	2.34	0.89	ns

White people are significantly more anxious than Chinese people.

Table 8: Race vs Anxiety

Group 1	Group 2	Estimate	Conf.low	Conf.high	P.adj	Sig
Chinese	Non Chinese Asian	-3.28	-9.88	3.33	0.47	ns
Chinese	White	2.59	0.54	4.63	0.01	**
Non Chinese Asian	White	5.86	-0.65	12.37	0.09	ns

Regression analysis suggested that more anxious people were less skeptical about COVID-19, but this relationship did not meet our criteria for significance,  $p < .05$ .

Table 9: COVID-19 Skepticism vs Anxiety

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	12.1827	0.7141	17.06	0.0000
CovidSkepticism	-0.0554	0.0286	-1.94	0.0528

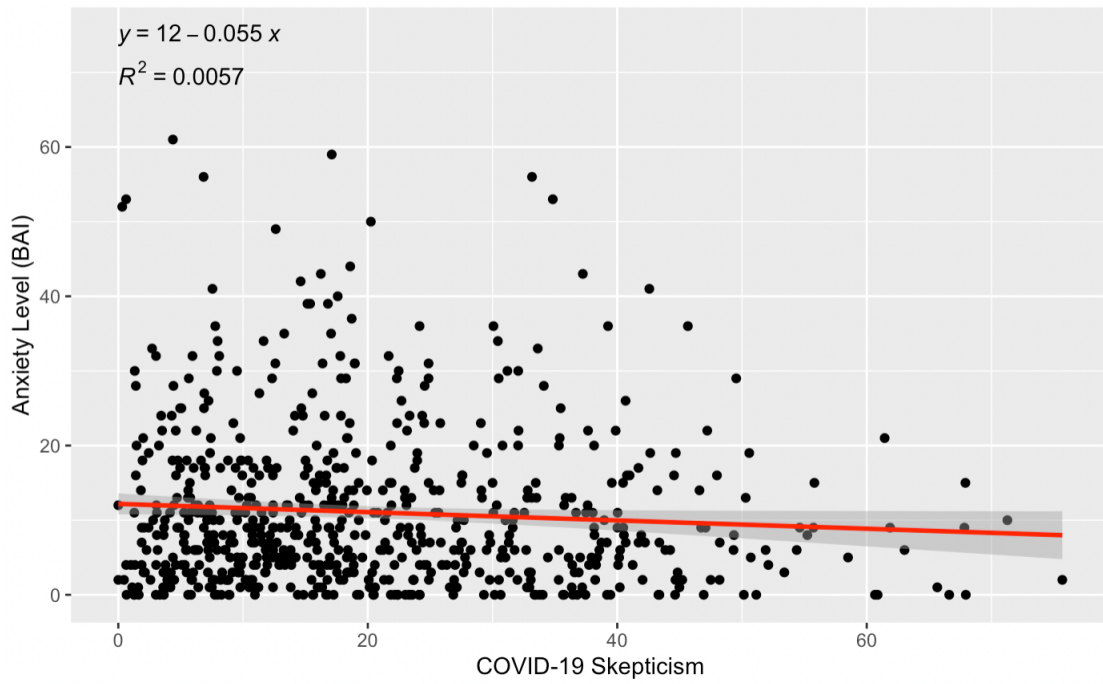


Figure 3: COVID Skepticism vs Anxiety

People become less anxious as they get older.

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	13.9390	1.1211	12.43	0.0000
Age	-0.1002	0.0362	-2.77	0.0058

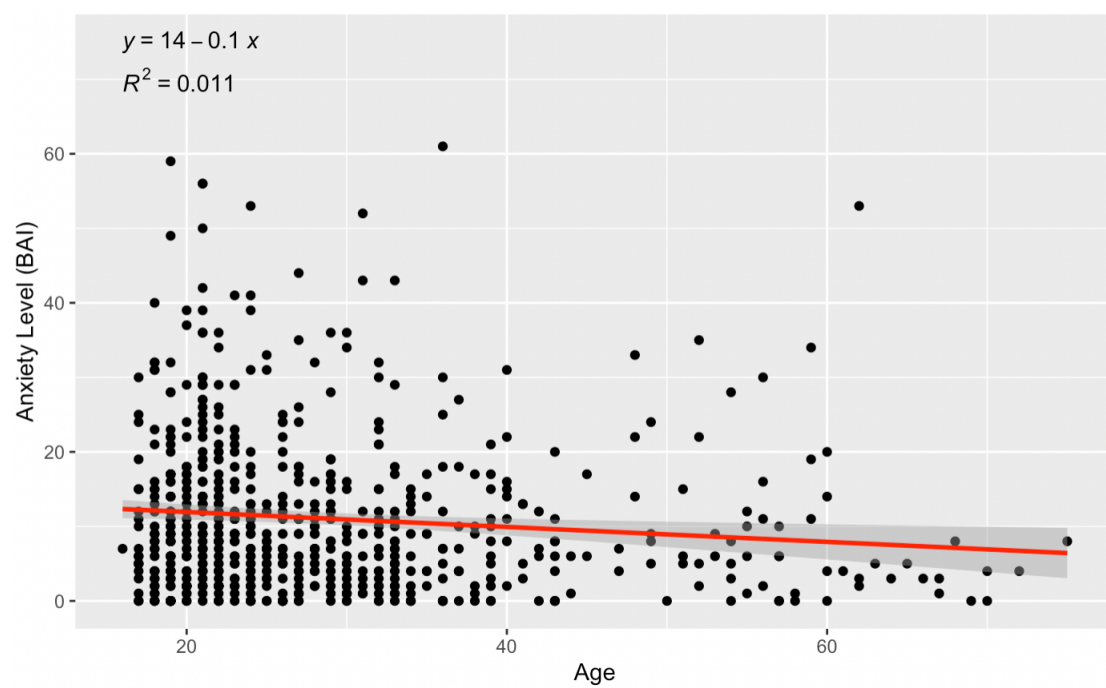


Figure 4: Age vs Anxiety

Finally, our anxiety and depression levels using this sample of participants are confirmed to be significantly correlated,  $R = 0.62$ . This value is surprisingly close to the literature value of  $R = 0.6$ .

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.8323	0.5206	5.44	0.0000
BDI score	0.7221	0.0357	20.21	0.0000

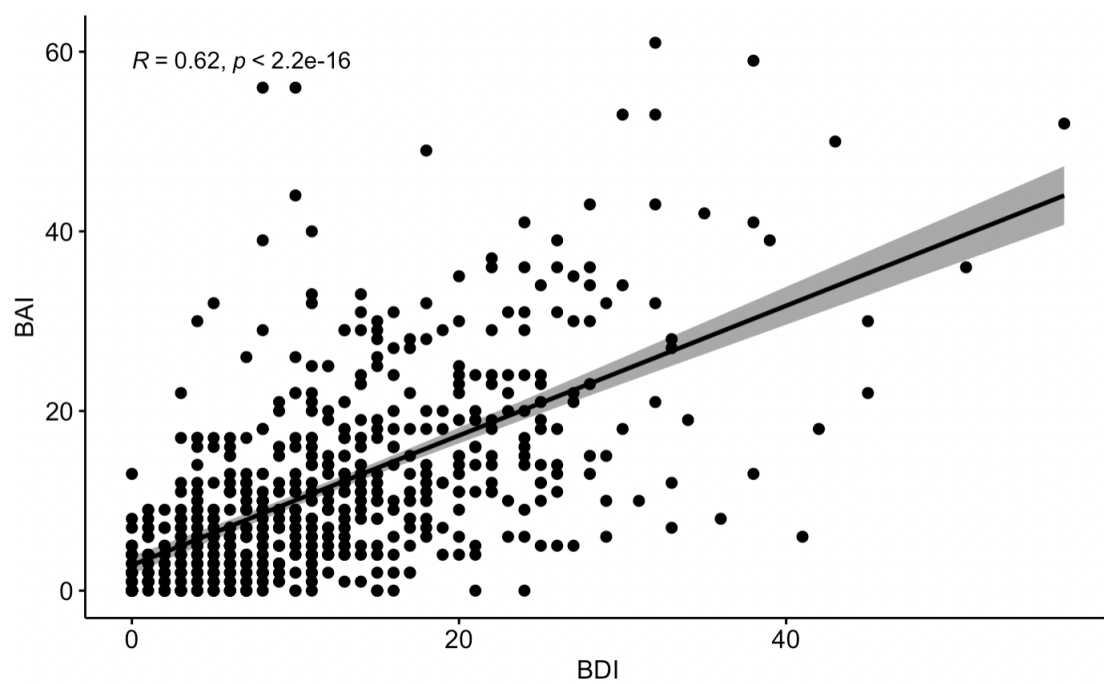


Figure 5: BDI vs BAI