

# Examining the roles of neuroticism and extraversion with social support on depression: Potential pathways to enhance mental health

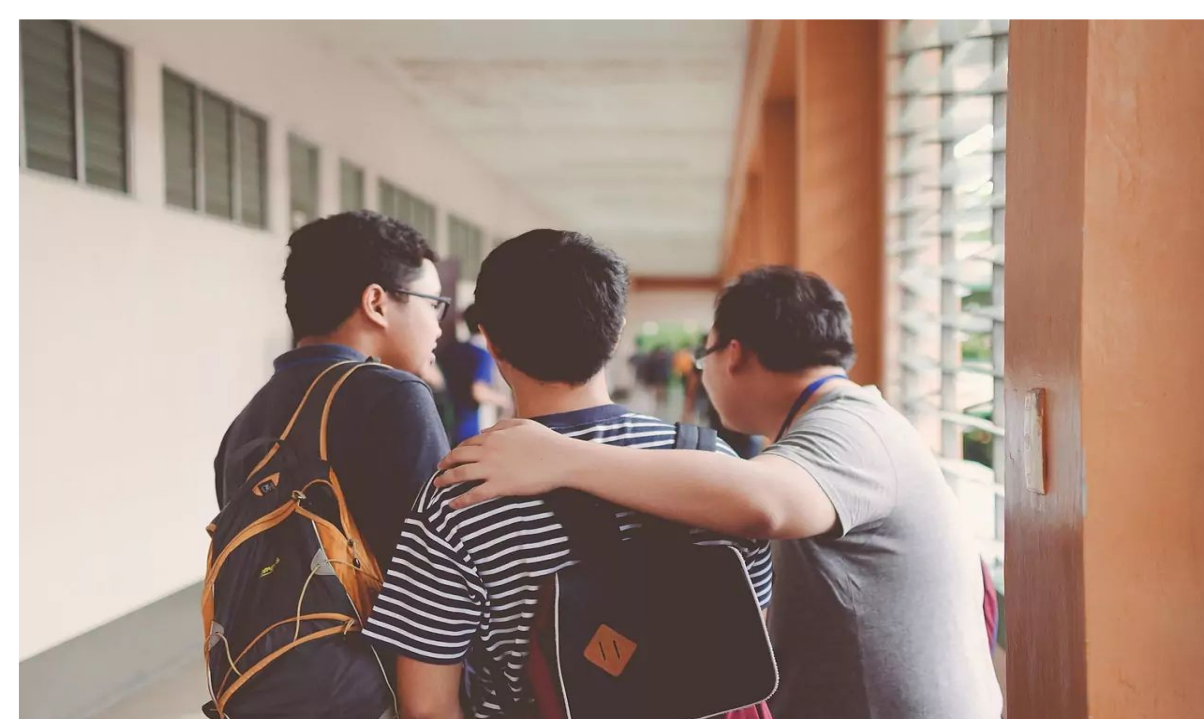


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## INTRODUCTION

- ❖ Depression is a common worldwide illness that affects the quality of life, alters brain structures, and can even lead to suicide (APA, 2020). Over the past few decades, the increase in depression and depressive symptoms among college students has increased (Druckenmiller, 2022). Personality characteristics, like elevated neuroticism or lower extraversion, may influence the development of depressive symptoms or episodes.
- ❖ Additionally, greater social support can prevent the development of and treat depressive symptoms (Marie, 2022). In light of the ongoing pandemic, social support may be especially important for college students as they navigate the transition to adulthood.
- ❖ The purpose of this study is to examine if certain personality traits, along with differences in social support levels, are associated with depression in college students.

Figure 1. *Social Support is a Key Factor to Enhancing Well-Being and Quality of Life*



Source: Kids-youth-young-people-youth-mental-health-crisis-students-K-12-college.jpg (1280x848) (bhbusiness.com)

Figure 2. *Poorer Mental Health Often Presents as Depressive Symptoms in Young Adults*



Source: sad-black-girl.jpeg (2896x1930) (sandiegocountynews.com)

## HYPOTHESIS

- ❖ It is expected that participants reporting lower levels of social support, regardless of their personality type, will have greater depressive symptoms compared to those with higher social support.
- ❖ However, those with higher neuroticism will be particularly sensitive to their level of social support, such that those with lower social support will be linked to the greatest levels of depressive symptoms.

## METHOD

- ❖ College students (n=570) at University of North Carolina at Charlotte completed an online survey about health from Sept 2020 thru July 2021.
- ❖ Psychological self-reports questionnaires included:
  - ❖ Big 5 Personality Inventory to assess both extraversion and neuroticism
  - ❖ MOS Social support capture perceived social support
  - ❖ Center for Epidemiological Studies Depression Scale (CES-D) to assess depressive symptoms
- ❖ Linear regressions were used to examine the relationships among extraversion, neuroticism, social support and depressive symptoms, including all 2-way and 3-way interactions, controlling for gender and minority status.
- ❖ PROCESS model 1 was used to examine the relationships for any significant interactions and create estimates to create graphs.

## RESULTS

Table 1. *Descriptive Statistics [mean (SD) or frequency (%)] and Zero Order Correlations for the Overall Sample*

Variable	Mean (SD) /count (%)	1	2	3	4	5	6
1. Age (years)	20.5 (4.4)	--					
2. Gender (female)	359 (63.0%)	.06	--				
3. Minority Status (yes)	282 (49.5%)	-.04	-.00	--			
4. Social Support	3.9 (1.1)	-.08	.14*	-.12*	--		
5. Extraversion	3.1 (0.8)	-.06	.05	-.12*	.24**	--	
6. Neuroticism	3.2 (0.8)	-.05	.37**	.03	-.13*	-.25**	--
7. Depressive Symptoms	18.4 (6.3)	-.04	.18**	.13*	-.36**	-.23**	.61**

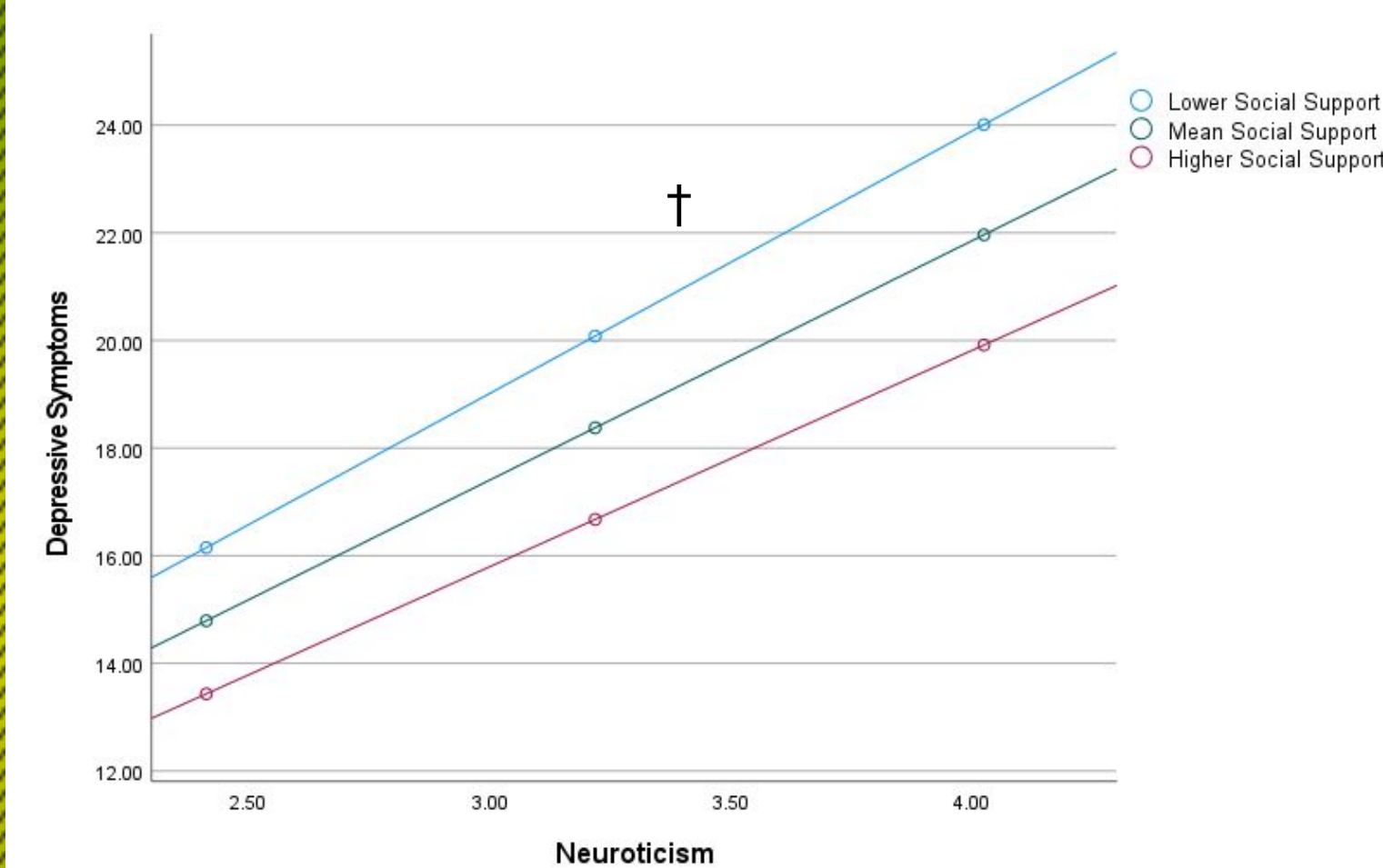
Note. N=570. \*p<.01, \*\*p<.001.

Table 2. *Summary of the Linear Regression Examining the Interactions Among Neuroticism, Extraversion and Social Support on Depressive Symptoms*

Variable	b	S.E.	p
Gender (female)	.012	.444	.979
Minority Status (yes)	.971	.395	.014
Neuroticism (NRT)	12.41	3.14	<.001
Social Support (SS)	3.80	2.77	.172
Extraversion (EXT)	9.07	3.80	.017
NRT*SS	-1.39	.787	.079
NRT*EXT	-2.45	1.09	.026
SS*EXT	-1.61	.903	.075
NRT*SS*EXT	.404	.263	.125

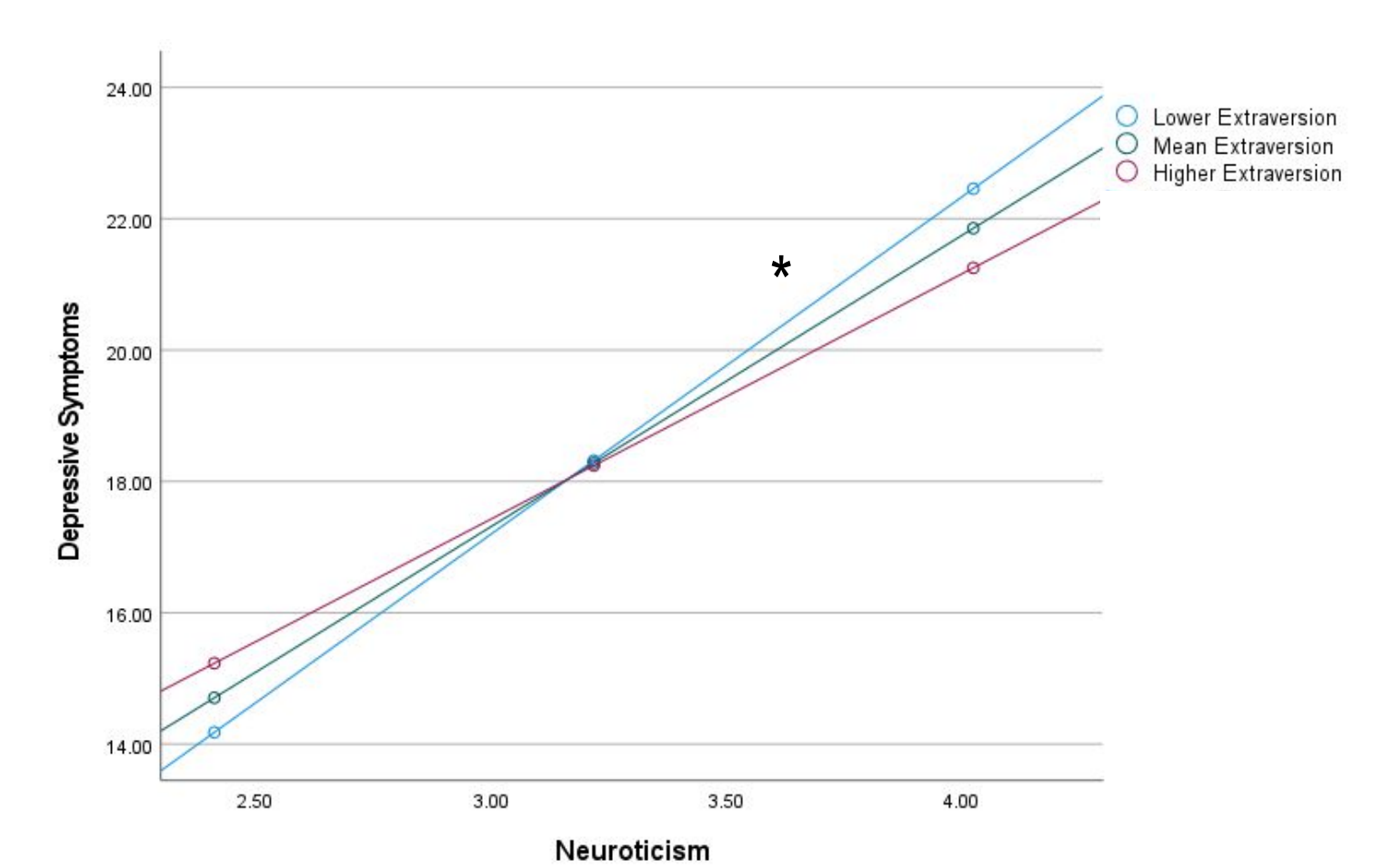
Note. N=570. Upon further examination of the 2-way interactions as independent models, the SS\*EXT interaction was not significant when controlling for NRT; however, the NRT\*SS and NRT\*EXT remained when controlling for the main effect of the factor not included in the interaction, EXT and SS, respectively.

Figure 3. *Social Support Buffers the Effect of Neuroticism on Depressive Symptoms*



† p=.09, Neuroticism by social support interaction. All three lines are significantly different than 0. The slope of line representing higher social support, b=4.0, t(563)= 11.2, p<.001, is smaller than the slope for the lower social support, b=4.9, t(563)= 12.7, p<.001, at trend level.

Figure 4. *Extraversion Buffers the Effects of Neuroticism on Depressive Symptoms*



\* p<.01, Neuroticism by extraversion interaction. All three lines are significantly different than 0. The slope of line representing higher extraversion, b=3.7, t(563)= 10.6, p<.001, is significantly smaller than the slope for the lower extraversion, b=5.1, t(563)= 14.3, p<.001.

## CONCLUSIONS

- ❖ As expected, there was a strong, positive relationship between neuroticism and depressive symptoms.
- ❖ Social support and extraversion appear to both be protective factors by weakening the relationship between neuroticism and depressive symptoms.
- ❖ Thus, potential interventions to address the rising depressive symptoms among college student could focus on strengthening skills in giving and receiving social support and building high quality friendships.
- ❖ Future research questions generated investigate the ability to increase an individual's level of an innate personality characteristic.

## REFERENCES

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