

The Effects of Neighborhood Deprivation and Perceived Neighborhood Problems on Depressive Symptoms

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INTRODUCTION

Neighborhoods have been linked with mental health in adulthood, but there is variation in measurement across studies. Studies have examined the independent associations between either objective or subjective measures of neighborhoods, but few have examined both in one study. We assessed the independent and joint effects of both objective (Area Deprivation Index; ADI) and subjective (or perceived) neighborhood characteristics on depressive symptoms among adults in early midlife.

METHODS

Data: Colorado Adoption/Twin Study of Lifespan behavioral development and cognitive aging (CATSLife)

Sample: Participants aged 28 to 51 who provided data on neighborhood variables and depressive symptoms ($N = 1191$).

Measures: Area Deprivation Index (ADI): The ADI is a widely used area-based measure that represents the multidimensional characterization of a neighborhood's socioeconomic deprivation based on multiple Census indices. Addresses were geocoded and linked with 2010 Census data, and we created a standardized ADI composite ($M = 0$, $SD = 1$). Perceived Neighborhood Problems: Participants answered a total of twenty-one questions related to a list of neighborhood problems (i.e., safety, crime, disorder, aesthetics, services) on a three-point scale. One question related to neighborhood safety was also included from the PhenX Activity toolkit (e.g., "The crime rate in my neighborhood makes it unsafe to go on walks at night"). This question was rated from a four-point scale ranging from 1 = *strongly disagree* to 4 = *strongly agree*. Higher scores indicated higher neighborhood problems. Depressive Symptoms: Participants rated how much they have felt or experienced a list of symptoms of depression during the past week on a scale from 1 = *very slightly* or not at all to 5 = *extremely* (MASQ; Watson & Clark, 1991).

Covariates: Age, gender, education, employment status, marital status, and race and ethnicity.

Approach: Multilevel models to account for subject non-independence were used to test (a) the associations between ADI and perceived neighborhood problems on depressive symptoms, respectively; (b) the interaction effects between ADI and perceived neighborhood problems on depressive symptoms. All models controlled for age, gender, education, employment status, marital status, and race and ethnicity.

- Higher Area Deprivation Index was associated with greater depressive symptoms, but its effect was no longer significant after accounting for subjective neighborhood domains.
- Perceived neighborhood disorder had the largest effect on depressive symptoms.



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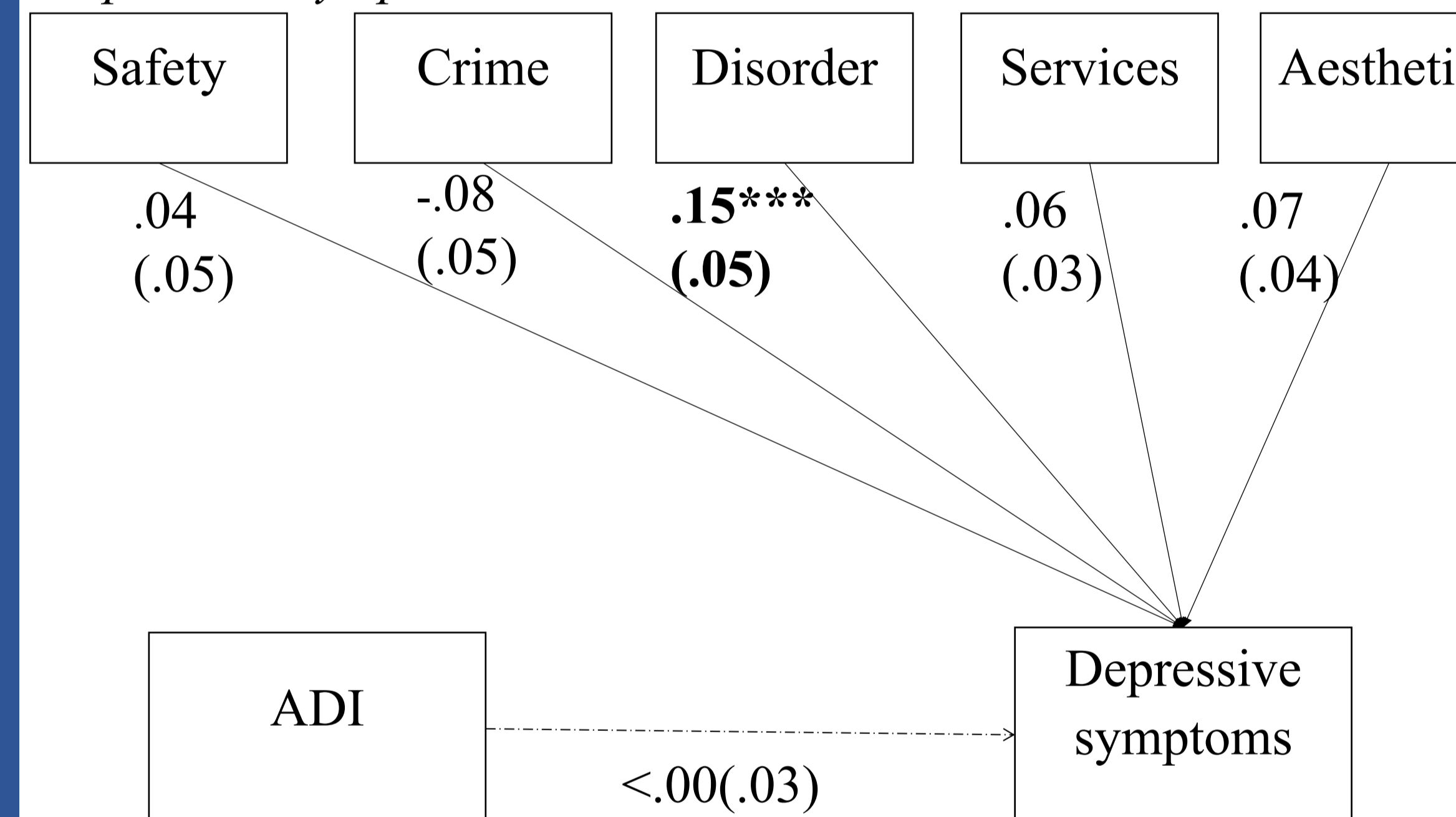
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Table 1
Sample Descriptives ($N = 1191$)

	<i>M</i>	<i>SD</i>	Range
Age	33.51	5.07	28–51
Depressive symptoms	6.84	3.16	3–20
ADI ^a	4.43	2.02	0–9
Perceived Neighborhood Problems^b			
Safety	-0.01	3.72	-2.95–15.35
Crime	-0.04	5.22	-2.25–37.49
Disorder	-0.05	3.78	-3.07–13.94
Aesthetics	-0.00	1.77	-0.81–8.89
Services	0.00	2.38	-1.32–11.31
Education	15.65	2.13	11–20
Proportions			
Female	.53		
Non-Hispanic White	.92		
Hispanic	.07		
Married	.53		
Employed	.89		

Notes. ^aArea Deprivation Index. ^bSum of standardized items.

Figure 1
Model Results for ADI and Perceived Neighborhood Problems on Depressive Symptoms



RESULTS

Higher ADI was linked with greater depressive symptoms ($d = .08$), but the effect of ADI was no longer significant after accounting for subjective neighborhood domains (see Figure 1). Perceived neighborhood disorder had the largest effect ($d = .15$) and remained the sole predictor of depressive symptoms when all perceived domains were included in one model. The interaction effects between ADI and perceived neighborhood problems on depressive symptoms were not significant.

DISCUSSION

The nonsignificant interactions between ADI and perceived neighborhood problems indicate that the effects of perceived neighborhood contexts on depression may be invariant across objective assessment of neighborhood deprivation. Findings revealed a potential pathway through which objective neighborhoods affect depression. Results highlight the need for future longitudinal studies to examine the dynamic nature of objective and subjective neighborhood processes and their effects of mental health.