

# A Review of Evidence on the Relationship Between Neighbourhood Stressors and Depressive Symptoms

**Seungjong Cho**

Texas Tech University, Texas, USA

**Kayla R. Branch**

Texas Tech University, Texas, USA

**CORRESPONDENCE:**

*Seungjong Cho*

e-mail: seungjong.cho@ttu.edu

## *Abstract*

*This study aims to synthesise the most recent literature about the relationship between neighbourhood stressors and depressive symptoms. An update on previous knowledge is necessary as there has been a recent peak in interest in this topic, and more research has been developed. A total of 40 empirical studies were determined to be relevant and then included in this review. Most studies included in this review worked with adults as their population, with a few using adolescents or adolescents and their parents. Also, most studies used the Center for Epidemiological Studies-Depression scale. Neighbourhood-level socioeconomic status was the most prevalent in portraying depressive symptoms. To alter the occurrence of depressive symptoms, neighbourhoods may benefit from addressing poverty, investing in violence prevention, targeting, and reducing other neighbourhood stressors, and increasing social support. Perception and cultural factors must also be addressed for specific needs in neighbourhoods.*

## *Keywords*

*Depressive symptoms, neighbourhood stressors, social support, systematic review.*

The primary aim of this review is to synthesise the most recent literature about the relationship between neighbourhood stressors and depressive symptoms. This review can contribute to professional practice and research by providing «thorough and unbiased summaries of empirical research» (Littell et al., 2008, p. 27). With much research on neighbourhood stressors and depressive symptoms, comparing the findings of the varying studies in more recent years is essential. Additionally, addressing these similarities and

differences can allow comparisons to future research and neighbourhood stressors that have become a current concern.

This review is based on the most recent research articles, all focusing on the idea that an individual's neighbourhood potentially plays a role in their mental health. Previous empirical studies support this theoretical perspective by showing that one's neighbourhood of residence is an important determinant of their mental health, including depressive symptoms (theoretical review: Cho, 2022; empirical review: Ellen & Turner, 1997). However, the current knowledge of the relationship between neighbourhood stressors and depressive symptoms requires an update. This is necessary because of heightened academic attention on this topic, including social determinants of mental health (e.g., Allen et al., 2014; WHO, 2014) and multilevel analysis of neighbourhood effects (e.g., Bryk & Raudenbush, 1992; Wight et al., 2011). Furthermore, scholars selected numerous neighbourhood stressors and reported mixed results. Therefore, increased cohesiveness can be beneficial towards valuable implications for future research and practice.

Before summarising and critiquing the empirical literature, it is necessary to clearly define the key constructs of interest, given the discrepancies in the empirical literature. In this review, neighbourhood stressors are defined as conditions that psychologically and emotionally affect residents within a neighbourhood. While it is often common for attention to fall on individual-level stressors, it is also important to address stressors from the neighbourhood perspective. Previous research shows that neighbourhood stressors do have the potential to cause struggles with mental health. According to the stress process theory (Aneshensel, 2010; Pearlin et al., 1981), neighbourhood stressors can be viewed as chronic strains (repeated or enduring life problems) because they affect daily life in a recurring and chronic fashion (Pearlin, 1989; Thoits, 2010). The stressors that can often be seen in neighbourhoods may affect people differently based on many socioeconomic aspects such as age, gender, income, wealth, etc.; therefore, it is important to study these stressors while still addressing the individual differences in neighbourhood residents. The current study defines depressive symptoms as negative emotions accompanied by physiological malaise (Mirowsky & Ross, 1986). According to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5), depressive symptoms consist of mood, cognitive, and physical symptoms (American Psychiatric Association, 2013). Although this study does not define depressive symptoms on a clinical level of depressive disorders and rather as a combination of the symptoms previously stated, some previous studies dealing with depression (i.e., major depressive disorder) were included to increase the comprehensiveness of the review.

## Methods

Articles for this review were identified using the databases PsycINFO and PubMed. Most empirical studies on neighbourhood effects on mental health have focused on de-

pressive symptoms (or depression) as the key outcome. These studies were filtered with specific search terms to include «depressive symptoms» and «depression» associated with «neighbourhood deprivation» and «neighbourhood stressors». These specific search terms were chosen to filter out articles that did not specifically address the identified topic of the relationship between neighbourhood stressors and depressive symptoms.

Due to the identified need for an update on recent data, date limitations were also placed. Articles selected for this review were mostly published between 2016 and 2022. As exceptions, this review included four studies (Cutrona, Wallace, & Wesner, 2006; Mair, Diez Roux & Galea, 2008; Mair, Diez Roux & Morenoff, 2010; Glymour et al., 2010) published before 2016. These four papers were only included as they offer crucial information necessary in this area of study. These four studies provide a point of comparison in which to further evaluate the relationship between neighbourhood stressors and depressive symptoms. Further explained, their findings and implications have been examined and accumulated over time relevant to this topic and well-rounded, so they should not be excluded.

Using the criteria and search parameters stated above, 70 articles were retrieved and reviewed from PsycINFO, and 164 studies were retrieved and reviewed from PubMed. Articles retrieved included empirical (e.g., longitudinal, cross-sectional, randomised controlled trials, meta-analysis, qualitative, and systematic review) and theoretical (e.g., theoretical review) research. Several non-empirical studies were included intentionally to broaden the understanding of this topic. The 234 initially retrieved articles were screened and refined by two reviewers independently by assessing abstracts for further consideration and verifying results with one another. Screening of these 234 articles included limiting the inclusion of too similar methods and results as well as too many articles over one population. As a result of this comprehensive search, a total of 40 studies focused on neighbourhood stressors and depressive symptoms and with widespread methods and populations were selected for this review.

## Results

The study populations, measures of depressive symptoms, neighbourhood stressors, and key results of the 40 studies are described here and summarised in Table 1.

<b>Author</b>	Baranyi et al., 2020
<b>Sample</b>	32,531 adults aged 50 years or older; Data from the English Longitudinal Study of Ageing, the Health and Retirement Study, and the Survey of Health, Ageing and Retirement in Europe

<b>Outcome</b>	Depressive symptoms (self-report with <i>CES-D Scale and the EURO-D Scale</i> )
<b>Predictors</b>	Perceived neighborhood disorder, social cohesion
<b>Covariates</b>	Gender, age, immigration, educational attainment, total equalized household net wealth, and economic activity, household non-pension net wealth, working, partnership, current smoking, and physician-diagnosed chronic conditions
<b>Findings</b>	There is a link between depressive symptoms in adults over the age of 50 and perceived neighborhood disorder and a lack of social cohesion. Additionally, analyses were conducted on individuals who were retired and it was shown that the risk of depression was even higher.
<b>Implications</b>	The social, environmental, and economic context of a country could modify the neighborhood characteristics and depression association.
<b>Author</b>	Barr, 2018
<b>Sample</b>	20,745 Adolescents; Data from the National Longitudinal Study of Adolescent to Adult Health
<b>Outcome</b>	Depressive symptoms (9 item version of CES-D)
<b>Predictors</b>	Neighborhood disadvantage, neighborhood disorder
<b>Covariates</b>	Neighborhood social cohesion/stability, foreign-born status, self-rated health, low weight birth, urbanicity, years the respondent lived at their address, family SES
<b>Findings</b>	When accounting for family SES and race/ethnicity, the relationship between neighborhood disorder and depression remained. Depressive symptoms peak in adolescence, drop off out of college, and increase in early 30s.
<b>Implications</b>	The differences in age and cohort related to depression symptoms could be related to timing of data collection.
<b>Author</b>	Beck et al., 2017
<b>Sample</b>	165,600 Patients over the age of 18; Data from Virtual Data Warehouse of Kaiser Permanente (KP) of Colorado and Denver Health (DH)
<b>Outcome</b>	Depression (individuals with at least one depression diagnosis code recorded during an outpatient visit)

<b>Predictors</b>	Neighborhood-level data, neighborhood deprivation
<b>Covariates</b>	Age, gender, race/ethnicity, chronic conditions, CCI, median household income, unemployment rate, crime rate, residential stability, foreign born residents, high school diploma, public assistance, poverty, households led by a single mother, and housing units that are owner-occupied
<b>Findings</b>	The Denver Health population was significantly more disadvantaged than the population of Kaiser Permanente. There was an association between greater age, female gender, the White race, lower rates of home owner occupancy, residential stability, and education, and medical comorbidities with higher depression rates.
<b>Implications</b>	The strongest association with depressive symptoms was individual factors. There may be a link between cultural barriers and the recognition of depression in the healthcare setting.
<b>Author</b>	Bolstad et al., 2020
<b>Sample</b>	1,000 adults over the age of 65 who receive Medicare; Data from the University of Alabama at Birmingham Study of Aging (SOA) in central Alabama
<b>Outcome</b>	Depressive Symptomatology ( <i>Geriatric Depression Scale, Verified Diagnosis</i> )
<b>Predictors</b>	Neighborhood disadvantage-conceptualized using the NDI
<b>Covariates</b>	Perceived neighborhood disorder, poverty, age, gender, race, education, and physical functioning
<b>Findings</b>	Symptoms of depression were prominent in mid/high disadvantaged neighborhoods. Those living below the poverty line were more likely to report both a diagnosis as well as symptoms.
<b>Implications</b>	Those who live in disadvantaged neighborhoods feel their depressive symptoms as routine and do not seek or have access to professional assistance.
<b>Author</b>	Choi et al., 2021
<b>Sample</b>	4,898 Children; Data from Fragile Families and Child Wellbeing Study
<b>Outcome</b>	Adolescent depressive symptoms (five questions derived from CES-D)

<b>Predictors</b>	Neighborhood structural disadvantage, neighborhood collective efficacy
<b>Covariates</b>	ACEs, socio-emotional problems, peer bullying, race, age, education, marital status, and gender
<b>Findings</b>	Neither neighborhood structural disadvantage nor collective efficacy was shown to be directly linked to adolescent depression. Children who live in a socioeconomically disorganized neighborhood are more likely to show poor socio-emotional development.
<b>Implications</b>	Implications are shown for interventions to promote support systems and neighborhood resources, bullying prevention, and childhood adversity screenings.
<b>Author</b>	Cohen-Cline et al., 2018
<b>Sample</b>	7,476 Same-gender twins; Data from the Washington State Twin Registry
<b>Outcome</b>	Depression (PHQ-2)
<b>Predictors</b>	Neighborhood socioeconomic deprivation
<b>Covariates</b>	Income, gender, education, marital status, and population density
<b>Findings</b>	Greater neighborhood socioeconomic deprivation is associated with depression. Eight percent of the twins studied presented with depression. All neighborhood exposures showed significance with depression in the phenotypic model. No significance between neighborhood deprivation and age or gender was shown.
<b>Implications</b>	Lack of racial diversity could play a role in the results of studies that do not resemble the population properly. Studies could work to assess depression over time and test theories over the span of the study.
<b>Author</b>	Coley et al., 2018
<b>Sample</b>	13,179 High School Students; Data from the National Longitudinal Study of Adolescent Health
<b>Outcome</b>	Youth mental and behavioral health (CESD)
<b>Predictors</b>	Family income, neighborhood income, school income

<b>Covariates</b>	Youth age, race and ethnicity, number of household members, parent age, education, marital status, immigrant status, indicators reflecting parents' primary reason for living in their current neighborhood, and school urbanicity
<b>Findings</b>	Schoolmate income had the most consistent correlation with mental and behavioral health outcomes. The effects of schools and peers on expectations and mental health are highlighted.
<b>Implications</b>	Using a large national sample allowed the opportunity to consider diverse youth across the United States.
<b>Author</b>	Dawson et al., 2019
<b>Sample</b>	12,105 Adolescents and their Parents; Data from the National Longitudinal Study of Adolescent to Adult Health
<b>Outcome</b>	Adolescent depressive symptoms (CES-D)
<b>Predictors</b>	Neighborhood structural disadvantage, parental-perceived neighborhood informal social control and neighborhood disorder
<b>Covariates</b>	Age, gender, race/ethnicity, family income, family structure, parent education, and parent occupation
<b>Findings</b>	Depressive scores in adolescents showed significance with all neighborhood level variables as well as parental-perceived neighborhood disorder. Higher parental perceptions of neighborhood disorder and cocentrated poverty were associated with depressive symptoms.
<b>Implications</b>	There may not be as strong of a link between family income and adolescent poverty as previously thought or between neighborhood structural environments on mental health as there is with concentrated poverty.
<b>Author</b>	Do et al., 2019
<b>Sample</b>	Over 16,000 African Americans and 56,000 Whites residing in approximately 200 metro areas aged 25 and over; Data from the National Health Interview Survey merged with U.S. Census data
<b>Outcome</b>	Psychological distress (Kessler 6)
<b>Predictors</b>	Segregation measures- D- and P-indices, neighborhood poverty-census tract

<b>Covariates</b>	Gender, age, marital status, employment status, family income to poverty ratio, education level, number of children in the household, total population, percent African Americans, and percent poor, and region of the country.
<b>Findings</b>	Neighborhood poverty levels do differ when associated with segregation and mental health. Higher segregation when adjusted for neighborhood poverty is shown to be associated with a higher chance of showing psychological symptoms in African Americans.
<b>Implications</b>	There is a salutatory association in the estimates. The impacts of concentrated poverty on psychological health as segregation increases for African Americans and not Whites. The level of disadvantage in poor neighborhoods and if it is more severe across those that are highly segregated is questioned.
<b>Author</b>	Dowdall et al., 2017
<b>Sample</b>	11,955 Individuals aged 15 years and up; Data from South African National Income Dynamics Study and Indices of Multiple Deprivation
<b>Outcome</b>	Depression (CES-D 10)
<b>Predictors</b>	Area-level deprivation
<b>Covariates</b>	Age, gender, marital status, employment status, education level and income
<b>Findings</b>	Those individuals living in more deprived neighborhoods showed higher levels of depression. Deprivation in the living environment and employment were shown to have the most noticeable relationship with depression.
<b>Implications</b>	Assessing and controlling poverty can result in less prevalence of depression in the community.
<b>Author</b>	Erdem et al., 2016
<b>Sample</b>	18,173 People aged 16 years or older in the four largest cities in the Netherlands; Data from web-based questionnaire or personal interview
<b>Outcome</b>	Psychological distress (Kessler 10)
<b>Predictors</b>	Neighborhood social cohesion



<b>Covariates</b>	Neighborhood deprivation, gender, age, ethnicity, marital status and years of residence in their current city, socioeconomic position, employment status, and financial deprivation
<b>Findings</b>	Neighborhood social cohesion modified the association between financial deprivation/employment status and psychological distress. Higher social cohesion in neighborhoods was associated with lower psychological stress with those struggling financially, disabled, or unemployed and offered mental health benefits.
<b>Implications</b>	There is a need to gather more information on the different parts of social cohesion and its role in mental health.
<b>Author</b>	Gepty et al., 2019
<b>Sample</b>	309 adolescents aged 12 to 13; Participants drawn from the Adolescent Cognition and Emotion (ACE) project
<b>Outcome</b>	Depressive symptoms (CDI)
<b>Predictors</b>	Crime statistics
<b>Covariates</b>	Rumination, initial depressive symptoms, gender, race, age, and lunch status
<b>Findings</b>	Adolescents who are living in areas with higher violent crime rates were more likely to show symptoms of depression as long as there was higher rumination levels. Higher crime areas put adolescents at risk for showing symptoms of depression, and adolescents who ruminate are even more likely to show symptoms.
<b>Implications</b>	Violent crimes could be most impactful for adolescents who tend to ruminate their feelings. The results of this study are consistent with previous research on rumination and stressors.
<b>Author</b>	Glymour et al., 2010
<b>Sample</b>	4,515 Noninstitutionalized U.S adults aged 55 to 65; Data from the Health and Retirement Study
<b>Outcome</b>	Depressive symptoms (CES-D8); ADLs disability; Self-rated health
<b>Predictors</b>	Neighborhood socioeconomic status: Census tract of residence; neighborhood poverty
<b>Covariates</b>	Age, race, ethnicity, gender, education, immediate recall of a 20-word list, wealth, employment, marital status, and self-reported diagnoses of hypertension and diabetes

<b>Findings</b>	The neighborhood socioeconomic status of adults transitioning from late middle age to early old age did not predict onset of depressive symptoms or ADLs disability. However, residents of disadvantaged neighborhoods were at higher odds of onset of lower self-rated health.
<b>Implications</b>	Characteristics of the immediate residential neighborhood are particularly important for older adults. This study may fail to identify a short-term effect on depressive symptoms.
<b>Author</b>	Goldstein et al., 2019
<b>Sample</b>	2,786 Students; Data from the NEXT Generation Health Study
<b>Outcome</b>	Depressive symptoms (Wave 1- MDS, Waves 2-6, using PROMIS)
<b>Predictors</b>	Neighborhood characteristics, social fragmentation
<b>Covariates</b>	Gender, race/ethnicity, and family socioeconomic status
<b>Findings</b>	There was no evidence showing association between social fragmentation, income inequality, or median household income and levels of symptoms of depression. The distribution of symptoms of depression was very similar across quartiles for social fragmentation, median income, and income inequality.
<b>Implications</b>	There is some doubt on the existence of a relationship between social and economic disadvantage in the neighborhood and depression. Future studies could benefit from considering objective and subjective neighborhood measures.
<b>Author</b>	Graif et al., 2016
<b>Sample</b>	4,248 adults in Boston, Chicago, New York, Los Angeles, and Baltimore; Data from the Moving to Opportunity Experiment
<b>Outcome</b>	Mental Health (six symptoms, and <i>WHO's Composite Diagnostic Interview Major Depressive Episode Scale</i> )
<b>Predictors</b>	Neighborhood measures (immediate and surrounding neighborhood)
<b>Covariates</b>	Age, gender, site, race, employment, education, and household characteristics

<b>Findings</b>	Lower mental health scores were prevalent in more disadvantaged, immediate neighborhoods. Descriptive statistics in this analysis showed evidence that better mental health conditions were shown in more affluent residential contexts.
<b>Implications</b>	The effect of immediate poverty on mental health is affected by the surrounding poverty.
<b>Author</b>	Han et al., 2021
<b>Sample</b>	6,614 Dyads; Data from the Health and Retirement Study (HRS)
<b>Outcome</b>	Depressive Symptoms (eight-item version of the CES-D)
<b>Predictors</b>	Receipt and provision of spousal care, activity limitations
<b>Covariates</b>	Age, race-ethnic status, education, marital status and duration, labor force status, memory-related disease, household income, number in household, and number of children living within 10 miles
<b>Findings</b>	One's own activity limitation is shown to be associated with depressive symptoms in spouses. However, activity limitation in one's spouse only showed association with depressive symptoms for wives.
<b>Implications</b>	There is a need for disability to be conceptualized as family-level and that it can have health implications for not only the person with the disability, but also those who are caring for and around them.
<b>Author</b>	Hastings & Snowden, 2019
<b>Sample</b>	5,109 African Americans and Caribbean Blacks aged 18 years and older; Data from NSAL Survey
<b>Outcome</b>	Depression (survey interviewers trained to diagnose disorders based on the DSM-5)
<b>Predictors</b>	Neighborhood disadvantage
<b>Covariates</b>	Age, education, household income, marital status, employment status, and immigration status

<b>Findings</b>	Caribbean Blacks showed higher prevalence, but not statistical significance, of past-year depression. A significant amount of Caribbean Blacks lived in neighborhoods with higher amenities. Perceived neighborhood social disorder and past year depression were statistically significant for low-middle SES.
<b>Implications</b>	There could be a difference in cultural understandings of resources which could alter results in studies. There is also an indication that neighborhoods are hard to measure.
<b>Author</b>	Huang et al., 2018
<b>Sample</b>	2481 Mostly Low- Income Urban Mothers; Data from the Fragile Families and Child Wellbeing Study
<b>Outcome</b>	Health-related outcomes, depression (CIDI-SF)
<b>Predictors</b>	Neighborhood level and social measures
<b>Covariates</b>	Race, income, mother age, mother relationship to father, mother education, employment, and housing
<b>Findings</b>	Statistical significance was shown between exposure to violence and health outcomes. When known to be exposed to violence, mothers were 70% more likely to develop depression. The association between violence exposure and health problems became insignificant after adjusting for individual-level characteristics.
<b>Implications</b>	The relationship between violence exposure and health is confounded by neighborhood context.
<b>Author</b>	James et al., 2017
<b>Sample</b>	73,225 Low-Income, Racially Diverse Individuals across the Southeastern U.S.; Data from the Southern Community Cohort Study
<b>Outcome</b>	Depression symptoms (CES-D)
<b>Predictors</b>	Neighborhood walkability
<b>Covariates</b>	Age, gender, race, household income, marital status, smoking, and employment status

<b>Findings</b>	Participants who had higher odds of having depression that was doctor diagnosed as well as antidepressant use, lived in more walkable neighborhoods. An association between neighborhood walkability and increased depressive symptoms in areas with higher deprivation levels was seen.
<b>Implications</b>	Depression is affected by socioeconomic status when assessing neighborhood walkability.
<b>Author</b>	Joshi et al., 2017
<b>Sample</b>	3,497 adults aged 65-75; Data from the New York City Neighborhood and Mental Health in the Elderly Study II
<b>Outcome</b>	Depressive symptoms (PHQ-9)
<b>Predictors</b>	Neighborhood-level poverty
<b>Covariates</b>	Age, gender, education, race, neuroticism, and stressful life events to include recent divorce and illness
<b>Findings</b>	Neighborhood violence played a role in shaping neighborhood poverty, which increased the risk of depression in older adults. There was a positive association with neighborhood poverty and depression symptoms. Older adults lived in areas with higher homicide rates if they had experienced a higher number of stressful life events.
<b>Implications</b>	Investing in violence prevention in neighborhoods with higher poverty levels can reduce the violence and would have a secondary benefit of reducing depressive symptoms.
<b>Author</b>	Kemp et al., 2016
<b>Sample</b>	156 Dyads (children and mothers) in Massachusetts; Data collected from a longitudinal study looking at child mental health outcomes for children of depressed and not depressed mothers
<b>Outcome</b>	Child behavior problems, Childhood depression symptoms, Maternal depression symptoms/diagnosis
<b>Predictors</b>	Neighborhood indicators- criminal activity, poverty, residential instability
<b>Covariates</b>	Child age, gender, and maternal age, Maternal functioning-Global Assessment of Functioning (GAF), and family environment
<b>Findings</b>	A significant predictor of child mental health problems was neighborhood strain. Symptoms changed at similar rates regardless of neighborhood strain. Maternal functioning was shown to fully mediate neighborhood strain and child mental health problems.

<b>Implications</b>	It is possible that only some neighborhood factors have an association with depressive symptoms. It is also implied that neighborhood strain may impede maternal functioning.
<b>Author</b>	Kim et al., 2020
<b>Sample</b>	12,998 adults over the age of 50; Data from the Health and Retirement Study
<b>Outcome</b>	Physical health factors, health behaviors, psychological well-being, and social factors
<b>Predictors</b>	Perceived neighborhood social cohesion
<b>Covariates</b>	Sociodemographic factors, ethnicity, marital status, income, total wealth, educational attainment, employment, health insurance, and geographic region
<b>Findings</b>	Little evidence of an association between perceived neighborhood social cohesion and most physical health outcomes was shown. Perceived social cohesion did show to be associated with all factors associated with psychological well-being, psychological distress, and social well-being.
<b>Implications</b>	Perceived neighborhood social cohesion can influence health and well-being in positive and negative ways. Further research could benefit from assessing policy interventions on social infrastructure.
<b>Author</b>	Kim et al., 2019
<b>Sample</b>	1,908 Mothers and Children; Data from the Fragile Families and Child Wellbeing Study (FFCWS)
<b>Outcome</b>	Internalizing/externalizing problems (depressed behaviors)
<b>Predictors</b>	Neighborhood poverty
<b>Covariates</b>	Child's gender and mother's age, race/ethnicity, relationship status, education level, parental stress, whether or not mothers met depression criteria, and whether or not mothers moved between Waves 3 and 4
<b>Findings</b>	Internalizing/externalizing problems were prominent among children with poverty in the family. Negative correlations with low poverty neighborhoods, internalizing/ externalizing problems and neighborhood social cohesion and safety were shown. High poverty neighborhoods were associated with lower neighborhood social cohesion and safety.

<b>Implications</b>	Interventions should target child behavioral problems in families who are in poverty and neighborhood poverty. Neighborhood based interventions may be able to improve neighborhood social environment and reduce behavioral problems in children.
<b>Author</b>	Klijs et al., 2016
<b>Sample</b>	71,058 adults; Data from baseline subsample of the Dutch LifeLines Cohort Study
<b>Outcome</b>	The current episode of major depressive disorder
<b>Predictors</b>	Neighborhood income and individual equalized income, social participation
<b>Covariates</b>	Level of education, age, gender, marital status, chronic diseases, and lifestyle factors, and acute and long-term stress
<b>Findings</b>	Low neighborhood income and low individual income are associated with episodes of major depression. This association was lowered by adjustments for diseases, lifestyle factors, stress, and social participation.
<b>Implications</b>	Kim's Conceptual Model of Absolute Poverty cannot fully explain the distribution of depressive episodes across neighborhoods by income.
<b>Author</b>	Kowitz et al., 2020
<b>Sample</b>	1558 older adults in rural area; Data collected from a population-based prospective cohort of knee and hip osteoarthritis
<b>Outcome</b>	Depressive symptoms (CES-D)
<b>Predictors</b>	Neighborhood characteristics, perceived: neighborhood social cohesion, resources for physical activity, neighborhood safety
<b>Covariates</b>	Race/ethnicity, education, BMI, gender, age, health insurance status, and number of comorbidities, knee OA status, mediators, physical activity, loneliness, and perceived individual control
<b>Findings</b>	Several neighborhood characteristics were associated with symptoms of depression. Physical activity, loneliness, and perceived individual control acted as a mediator for the effects of perceived neighborhood environment on symptoms of depression. Loneliness was shown to be the strongest pathway through which neighborhood characteristics influenced symptoms of depression.

<b>Implications</b>	Individual and neighborhood-level characteristics could be important for interventions in the future that are looking to improve outcomes of mental health. Interventions could benefit from putting a focus on modifiable factors that mediate relationships.
<b>Author</b>	Mair et al., 2010
<b>Sample</b>	3,105 adults in the Chicago community
<b>Outcome</b>	Depressive symptoms (CES-D11)
<b>Predictors</b>	Neighborhood stressors, social support
<b>Covariates</b>	Age, gender, race/ethnicity, income, marital status, and education
<b>Findings</b>	Most social support variables were associated with lower depressive symptoms in women. In contrast, perceived violence and physical disorder were moderately associated with higher depressive symptoms in all subjects.
<b>Implications</b>	Lowering neighborhood stressors and adding social support would likely reduce the depressive symptoms of this population.
<b>Author</b>	Miao et al., 2019
<b>Sample</b>	2,167 older adults aged 60 and up from 172 neighborhoods; Data from Shanghai Urban Neighborhood Survey
<b>Outcome</b>	Depression ( <i>Hopkins Symptom Checklist</i> )
<b>Predictors</b>	Neighborhood characteristics, social cohesion, and social engagement
<b>Covariates</b>	Demographic characteristics, educational attainment, permanent residency, and Chinese Communist Party membership
<b>Findings</b>	There is a significant association between increased social cohesion and interaction with neighbors as well as volunteering. Lower SES neighborhoods had residents that reported higher social cohesion.
<b>Implications</b>	Having a sense of social connectedness is impacted crucially by having an extensive social network. The result of China being strikingly different from western countries is implied to be due to housing policy evolution.



<b>Author</b>	Mondi et al., 2017
<b>Sample</b>	1,142 individuals (94% African American) who grew up in urban poverty; Data drawn from the CLS
<b>Outcome</b>	Depressive symptoms (five-item modified version of the <i>Brief Symptom Inventory</i> )
<b>Predictors</b>	Program and demographic predictors, childhood/ adolescence behavior, socioemotional adjustment
<b>Covariates</b>	Gender, race, CPC preschool, and school-age program participation, family risk index, and ACE score
<b>Findings</b>	Gender, ACE score, socio-emotional adjustment in the classroom, juvenile arrest, and high school graduation were significant predictors of depression. Gender differences were shown as the male sample in the final model fit more appropriately. There was a significant association between gender and adult depression.
<b>Implications</b>	Different racial and ethnic minorities may have different significant predictors for depressive symptoms.
<b>Author</b>	Moore et al., 2016
<b>Sample</b>	5,475 adults; Data from Multi-Ethnic Study of Atherosclerosis (MESA)
<b>Outcome</b>	Depressive symptoms using the (CES-D)
<b>Predictors</b>	Neighborhood characteristics
<b>Covariates</b>	Age, gender, race/ethnicity, education, duration of residence in the neighborhood and study site, time-varying measures of household income, marital status, and neighborhood SES
<b>Findings</b>	An increase in depressive symptoms is shown over time. There was an association between higher safety and social cohesion with lower depressive symptoms scores at baseline for both individual perception and neighborhood aggregate and greater destination density and lower depressive scores for females.
<b>Implications</b>	The way a person perceives their neighborhood could affect their score on the CES-D scale. Further research should assess time frames and pathways in relation to neighborhood social environment and mental health.

<b>Author</b>	Orstad et al., 2017
<b>Sample</b>	2,969 adults; Data from Chicago Community Adult Health Study
<b>Outcome</b>	Minutes of walking physical activity moderated by depression symptoms (CES-D)
<b>Predictors</b>	Observed neighborhood environment, perceived neighborhood environment
<b>Covariates</b>	Age, education, gender, race/ethnicity, and marital status
<b>Findings</b>	The neighborhood environment is associated with physical activity levels through environmental perception and is mediated by depressive symptoms. Individuals with depressive symptoms are shown to occasionally use public spaces but use them differently.
<b>Implications</b>	Limitations include the idea that depressive symptoms are assumed to occur outside of the neighborhood but that exposure to high poverty neighborhoods can lead to stress and depression.
<b>Author</b>	Osyuk et al., 2019
<b>Sample</b>	4248 Adult Household Heads; Data from Moving to Opportunity (MTO) for Fair Housing Demonstration project
<b>Outcome</b>	Psychological distress (Kessler 6)
<b>Predictors</b>	Neighborhood poverty
<b>Covariates</b>	Demographic, socioeconomic, and housing preference variables, and housing discrimination
<b>Findings</b>	The effects of living in a low poverty neighborhood are more detrimental to mental health when there is more discrimination. No association was shown between variables and the treatment groups. Higher neighborhood poverty was shown to be associated with higher psychological distress and higher MDD.
<b>Implications</b>	Interpersonal racism research can result in a better understanding of the correlation between health and place/ neighborhood. This study aligns with studies that are showing that social and economic policies align with health.

Author	Panaite et al., 2019
Sample	4,269 Patients with a unipolar depressive disorder diagnosis and an initial Patient Health Questionnaire (PHQ-9) score $\geq 10$ ; Data from the VA Corporate Data Warehouse
Outcome	Depression (PHQ-9)
Predictors	Neighborhood characteristics
Covariates	Age, gender, race, Hispanic ethnicity, census tract of home residence, and marital status
Findings	Greater neighborhood poverty did have an association with less likelihood of depressive symptoms. Percent poverty and percent home ownership were the neighborhood socioeconomic characteristics that showed statistical significance.
Implications	Neighborhood poverty is important to consider when assessing depression improvement.
Author	Rabinowitz et al., 2016
Sample	775 Adolescents ages 10-12 years old; self-report questionnaires
Outcome	Anxiety/Depressive symptoms ( <i>Mixed Anxiety &amp; Depression subscale from youth self-report inventory</i> )
Predictors	Neighborhood social cohesion and neighborhood crime
Covariates	Paternal diagnostic status, temperamental withdrawal, age, gender, ethnicity
Findings	Higher neighborhood social cohesion is associated with lower depression/anxiety symptoms. Adolescents who were experiencing higher withdrawal symptoms showed higher internalizing symptoms when associated with lower neighborhood crime and lower neighborhood social cohesion.
Implications	In communities with higher crime rates, parents may fear that boys are more likely than girls to engage in criminal activity and subsequently allow them out less.
Author	Ruiz et al., 2018

<b>Sample</b>	11,391 adults aged 50 and up; Data from The English Longitudinal Study of Ageing
<b>Outcome</b>	Depressive symptomatology (8 item version of the CES-D)
<b>Predictors</b>	Perceived neighborhood social cohesion
<b>Covariates</b>	Age, gender, White/non-White, diagnosis of depression from doctor, socio-economic and physical health indicators
<b>Findings</b>	There were differences in depressive symptoms at baseline and over 12-years when following for neighborhood social cohesion. There was shown to be a significant interaction between age on neighborhood social cohesion and symptoms of depression.
<b>Implications</b>	Self-reported measurements could lead to spurious association and attrition in participants over the course of the study.
<b>Author</b>	Snedker & Herting, 2016
<b>Sample</b>	2,006 Adolescents; Data from three RY study sources that included adolescents from schools in the Seattle metropolitan area
<b>Outcome</b>	General mental health of the youth (measuring psychological distress)
<b>Predictors</b>	Neighborhood characteristics
<b>Covariates</b>	Race/ethnicity, gender, age, household/parent structure, and measures of SES
<b>Findings</b>	Neighborhood context plays a role in the mental health of adolescents. A significant association is shown between emotional distress in adolescents and neighborhood disadvantage/advantage, instability, and heterogeneity. This association stays significant even when controlling for factors at the individual level.
<b>Implications</b>	There are limitations in the measurement of a neighborhood. Timing and location of data should be taken into consideration.
<b>Author</b>	Solmi et al., 2017
<b>Sample</b>	14,062 Mothers; Data from The Avon Longitudinal Study of Parents and Children (ALSPAC)

<b>Outcome</b>	Psychotic experiences and depressive symptoms (clinical assessments and postal questionnaires)
<b>Predictors</b>	Maternally reported trajectories of neighborhood social cohesion, discord, and stress
<b>Covariates</b>	Child gender/ethnicity, flu infection during pregnancy, parent age, maternal social class, academic qualification, marital status, house moves before pregnancy, childhood exposure to stressful life events, and maternal depression
<b>Findings</b>	Children exposed to greater social adversity had a higher chance of reporting psychotic experiences/ depressive symptoms at 13 and 18 years. Neighborhood stress was shown to be the strongest predictor of experience and symptoms. At 18 years, lower social cohesion and higher neighborhood stress were more strongly associated.
<b>Implications</b>	Psychological symptoms at 13 years might have less specificity than in adulthood towards clinical phenotypes. Families may have a role in buffering negative effects within the neighborhood in adolescence.
<b>Author</b>	Stahl et al., 2017
<b>Sample</b>	1,049 adults aged 55 to 98 who lived in Allegheny County, Pittsburgh, PA, US in 2014
<b>Outcome</b>	Depressive symptoms ( <i>Patient Health Questionnaire</i> )
<b>Predictors</b>	Neighborhood variables (physical quality and social quality)
<b>Covariates</b>	Living arrangements, age, gender, race, education, and disability
<b>Findings</b>	Those who live alone experience higher levels of symptoms of depression and that lower perceived social quality correlated with higher symptoms as well. Higher neighborhood social quality was associated with fewer symptoms of depression.
<b>Implications</b>	It could be important for older adults that are living alone to live in neighborhoods that they see as being close-knit.
<b>Author</b>	Tamura et al., 2020
<b>Sample</b>	2,209 African American adults; Data from the a study of African American adults from the tri-county area of the Jackson, Mississippi metropolitan area

<b>Outcome</b>	Depressive symptoms (CES-D)
<b>Predictors</b>	Perceived neighborhood social environment
<b>Covariates</b>	Age in years, gender, high school graduation status, household income, BMI, alcohol use, smoking status, walking limitation, medical condition history, discrimination, stress, and physical activity
<b>Findings</b>	There was no significant relationship in the fully-adjusted model between neighborhood social cohesion and symptoms of depression. Having a high school degree and higher physical activity showed a negative association with symptoms of depression. Neighborhood violence/problems were shown to be related to symptoms of depression directly.
<b>Implications</b>	Further research should focus on neighborhood level interventions that could address features of the social and built environments that can alter neighborhood violence and alleviate the burden of depression.
<b>Author</b>	Topalian, 2020
<b>Sample</b>	8,909 parents who reported for their child aged 12 to 17; Data from 2017 National Survey on Children's Health
<b>Outcome</b>	<i>Lifetime Depression Questionnaire</i>
<b>Predictors</b>	Structural neighborhood factors-sidewalks, parks, community center, library, litter, rundown houses, vandalism
<b>Covariates</b>	Gender, age, and race
<b>Findings</b>	9.4% of this study had reported depression. Females were more likely to have reported lifetime depression. Those who were at a higher risk for depression did not have a recreation center or community center in their neighborhood, had a litter on the street, had poorly kept neighborhoods, and had vandalism in the neighborhood.
<b>Implications</b>	There may be a relationship between neighborhood structural disadvantage and depression. As children become more independent, they should be assessed as their parents may have differing opinions or ideas.
<b>Author</b>	Traoré et al., 2020
<b>Sample</b>	3,006 Individuals; Data from the SIRS study (a French acronym for «health, inequalities and social ruptures»)

<b>Outcome</b>	Depression ( <i>Mini-International Neuropsychiatric Interview module</i> )
<b>Predictors</b>	Neighborhood characteristics, neighborhood income level
<b>Covariates</b>	Sociodemographic characteristics, social support, and difficult life events
<b>Findings</b>	Depression was more prevalent in deprived neighborhoods. An association was also shown between depression and negative perception of one's body weight and feeling unsafe/perception of a deprived neighborhood.
<b>Implications</b>	Taking a cumulative approach to studying socioeconomic diversity can be beneficial when addressing multiple contextual characterizations of individuals.

Table 1 Summary of Key Information of Reviewed Studies

## Study Populations

Of the 40 studies selected for this review, the majority were seen to focus on adults. Among the 40 articles, 14 articles (35.0%) used data from adults over the age of 18, one used data from adults over 15, and two used specifically African American adults. In addition, nine studies (22.5%) focused on older adults. In these nine studies, the older adults were defined to include specifications between 55 to 65 years and 65 to 75 years. Respectively, three of these nine specified older adults as 50 and over, 55-98 years, and 60 and over. In contrast, seven studies (17.5%) focused on adolescents, while four (10.0%) focused on parents and their children. In addition, one study specifically focused on twins.

## Measures of Depressive Symptoms

After a thorough synthesis of the measures of depressive symptoms in the 40 studies included in this review, 25 studies (62.5%) selected depressive symptoms, while 10 studies (25.0%) chose depression (i.e., major depressive disorders). The remaining five studies (12.5%) used psychological distress as their outcome measure.

Of the 25 studies that specifically selected depressive symptoms as their outcome, 15 used the *Center for Epidemiological Studies-Depression (CES-D) Scale* or a shorter version. Other measures used to assess depressive symptoms in the ten remaining studies were the two versions of the *Patient Health Questionnaire (PHQ-2 and PHQ-9)* and

the *Children's Depression Inventory* (CDI). Also, major depression was measured mostly through the Mini International Neuropsychiatric Interview (MINI) as well as verified diagnoses of major depression. Lastly, psychological distress was identified as being measured mostly through the two versions of the *Kessler Psychological Distress Scale* (K-6 and K-10). After a complete assessment of outcome measures in the 40 studies included and evaluated for this review, it was determined that self-reporting was common across the board on the topic of depressive symptoms and psychological distress. Major depression was seen to be included more as medical professional-diagnosed; however, it was still often self-reported that the major depression was diagnosed by their doctors and other health professionals.

## Measures of Neighbourhood Stressors

This study only reviewed the predictors at the neighbourhood level. Following the theoretical framework of the stress process theory, these neighbourhood-level predictors were labelled as neighbourhood stressors. The neighbourhood stressors investigated in this review include neighbourhood-level socioeconomic status (e.g., proportions of households in poverty, female-headed households with children, unemployment, etc.), walkability, perceived neighbourhood disorder, social cohesion, safety, built environment, resources, and crime. Among these measures, the neighbourhood socioeconomic status was the most prevalent measure to predict depressive symptoms. More specifically, neighbourhood socioeconomic status was identified as being used in 14 out of the 40 studies (35.0%). Throughout these 14 studies, scholars used slightly different expressions, such as neighbourhood poverty, neighbourhood disadvantage, and neighbourhood deprivation, in relation to neighbourhood socioeconomic status. Social cohesion was also commonly used as a neighbourhood predictor as it was used to address the interconnectedness and support of neighbours that otherwise would not be evaluated. Out of the 40 studies reviewed, 15 studies (37.5%) used only one neighbourhood-level predictor (e.g., neighbourhood poverty), while 25 studies (62.5%) used multiple neighbourhood stressors.

## Key Results

After an extensive review of the 40 studies, it can be determined that neighbourhood stressors did play a role in the portrayal of depressive symptoms in neighbourhood residents. Overall, a positive correlation was shown between neighbourhood stressors and depressive symptoms. All previously reported measures of neighbourhood stressors (neighbourhood socioeconomic status, walkability, neighbourhood disorder, social



cohesion, safety, built environment, and crime) were seen to have effects on depressive symptoms, with neighbourhood socioeconomic status being the most recurring and relevant predictor of depressive symptoms (Cohen-Cline et al., 2018; Erdem et al., 2016; Glymour et al., 2010; Goldstein et al., 2019). The neighbourhoods with a relatively lower socioeconomic status tended to exhibit higher levels of depressive symptomatology, which strongly emphasises financial strain as an important determinant in exacerbating depressive symptoms (Osypuk et al., 2019; Dowdall, Ward, & Lund, 2017).

In addition to neighbourhood socioeconomic status, higher levels of neighbourhood-level violence played a role in shaping neighbourhoods and increased the risk of depressive symptoms, especially for older adults (Huang, King, & McAtee, 2018; Joshi et al., 2017; Mair, Diez Roux & Galea, 2010; Tamura et al., 2020).

Further analysis showed that perceived social cohesion was associated with all the factors related to psychological well-being, psychological distress, and social well-being (Kim et al., 2020). Based on the reviewed studies, high neighbourhood social cohesion was shown to offer mental health benefits to those in groups considered to be economically deprived. Research also shows a link between depressive symptoms in adults over 50 and perceived neighbourhood disorder and a lack of social cohesion (Baranyi et al., 2020).

Referring back to neighbourhood socioeconomic status, studies showed that those living below the poverty line were more likely to report both a diagnosis of major depression and depressive symptoms (Bolstad et al., 2020). In addition, research showed that those at a higher risk for depression did not have a recreation centre or community centre in their neighbourhoods. These neighbourhoods tended to have litter on the street, be poorly kept, and have higher vandalism rates (Topalian, 2020).

While most of the articles reviewed in this study addressed depressive symptoms as a sole outcome, one study used them as a moderator (Orstad et al., 2017). In contrast, three other studies included evaluations of a different moderator, including youth withdrawal, spousal care, and neighbourhood social cohesion (Rabinowitz, Drabick, & Reynolds, 2016; Han, Kim, & Burr, 2021; Erdem et al., 2016). Of the 40 studies reviewed, 32 (80%) were performed with data from the United States. Studies included outside of the United States varied in results slightly from the others (Baranyi et al., 2020; Dowdall, Ward, & Lund, 2017; Erdem et al., 2016; Klijs et al., 2016; Miao, Wu, & Sun, 2019; Ruiz, Scholes, & Bobak, 2018; Solmi et al., 2017; Traoré et al., 2020).

Recurring covariates in the 40 analysed studies included: age, gender, race/ethnicity, income, marital status, education, and employment. Additional covariates often included but not as prevalent as previously stated were BMI, history of medical conditions and disabilities, stress, and socioeconomic status. Another covariate that showed some rising importance throughout this analysis is discrimination (Osypuk et al., 2019; Tamura et al., 2020).

## Discussion

### *Key Implications*

After reviewing the 40 studies included, characteristics of neighbourhoods were shown to be especially relevant in the study of depressive symptoms and exceptionally important for older adults. Based on the included research, it can be determined that neighbourhood stressors did play a role in the portrayal of depressive symptoms in neighbourhood residents. Neighbourhood factors that were shown to be related to depressive symptoms include sociodemographic features, provision of social services, poverty rates, educational attainment, violence, and unstable housing. Violence in neighbourhoods may also cause residents to be uncomfortable and feel unsafe in their environment, potentially leading to mental health struggles.

Regarding the neighbourhood factors previously stated, there is potential for the reduction of depressive symptoms that can be seen in (a) assessing and addressing poverty, (b) investing in violence prevention and other related programs, (c) lowering neighbourhood stressors, and (d) increasing social support. It is important to consider that those who live in disadvantaged neighbourhoods may feel their depressive symptoms as routine and may not seek or have access to professional assistance. Symptoms may be seen as regular, and there is a potential that individuals may not realise the need to reduce depressive symptoms in neighbourhoods.

In addition, links between cultural barriers (e.g., body language, gestures, and values) and the portrayal of depressive symptoms can be seen. For instance, a country's social, environmental, and economic context could affect the associations between neighbourhood characteristics and depression as different countries show interest in different values and morals. This could vary standards that would alter the characteristics that drive depressive symptoms in these individuals and change the portrayal of depressive symptoms. Furthermore, an individual's perception of their neighbourhood may affect their depressive symptoms, leading back to potentially varying recognition of depressive symptoms, leading to biased reporting of these symptoms and potentially lower identification in specific populations or groups.

It could also be important to assess the diagnosis of major depression as well as the development of depressive symptoms when living in poverty, as more research is needed to fully address these differences in associations with depressive symptoms and major depression, respectively. Strong emphasis is required on how money could reduce depressive symptoms based on the evidence from the 40 articles that display that family poverty and socioeconomic status were associated with depressive symptoms and neighbourhood stressors.

## Study Limitations

One documentable limitation of this review is the publication dates used to narrow down the research. Other than the four previously stated articles (Cutrona, Wallace, & Wesner, 2006; Mair, Diez Roux, & Galea, 2008; Mair, Diez Roux, & Morenoff, 2010; Glymour et al., 2010), this research was limited to articles published in 2016 and after and therefore may have excluded some beneficial research that was published before the cutoff year. Research data before 2016 gives the articles used in this review a strong foundation; therefore, limiting its inclusion may result in a less strong analysis. However, as other similar review papers analyse many articles published before 2016 that focus on neighbourhood stressors and depressive symptoms, this review was completed with more recent research. Another limitation of this study is the inclusion of multiple countries, which can hinder the analysis based on various considerations to include different ethics, values, and cultural differences.

In addition, although research is continuously being performed, there are still limitations on the amount of knowledge and understanding of the relationship between neighbourhood stressors and depressive symptoms.

Further limitations include the inability to use the entire collection of articles to discuss the relationship between neighbourhood stressors and depressive symptoms. This research was limited to 40 articles that pertained to the topic; however, although limited, reviewer bias could be possible due to the reduction from 234 articles to 40.

This review is meant to bring some of these effects to the surface as neighbourhood stressors, and depressive symptoms are addressed in the 40 articles included. However, further research could benefit from filling the gaps in understanding these effects.

## References

- Allen, J., Balfour, R., Bell, R., & Marmot, M. (2014). Social determinants of mental health. *International Review of Psychiatry*, 26(4), 392-407.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Washington, DC: American Psychiatric Association Publishing.
- Aneshensel, C. S. (2010). Neighbourhood as a social context of the stress process. In W. R. Avison, C. S. Aneshensel, S. Schieman & B. Wheaton (Eds.), *Advances in the conceptualisation of the stress process: Essays in honor of Leonard I. Pearlin* (pp. 35-52). London: Springer.
- Baranyi, G., Sieber, S., Cullati, S., Pearce, J. R., Dibben, C. J., & Courvoisier, D. S. (2020). The longitudinal associations of perceived neighbourhood disorder and lack of social cohesion with depression among adults aged 50 years or older: An individual-participant-data meta-analysis from 16 high-income countries. *American Journal of Epidemiology*, 189(4), 343-353.
- Barr, P. B. (2018). Early neighbourhood conditions and trajectories of depressive symptoms across adolescence and into adulthood. *Advances in Life Course Research*, 35, 57-68.
- Beck, A., Davidson, A. J., Xu, S., Durfee, M. J., Oronce, C. I. A., Steiner, J. F., & Havranek, E. (2017). A multilevel analysis of individual, health system, and neighbourhood factors associated with depression within a large metropolitan area. *Journal of Urban Health*, 94(6), 780-790.

- Bolstad, C. J., Moak, R., Brown, C. J., Kennedy, R. E., & Buys, D. R. (2020). Neighbourhood disadvantage is associated with depressive symptoms but not depression diagnosis in older adults. *International Journal of Environmental Research and Public Health*, 17(16), 57-45. Available online DOI: 10.3390/ijerph17165745.
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models*. New York: Sage.
- Cho, S. (2022). Theories explaining the relationship between neighbourhood stressors and depressive symptoms. *Humanities and Social Sciences Communications*, 9(10), 1-6.
- Choi, J. K., Teshome, T., & Smith, J. (2021). Neighbourhood disadvantage, childhood adversity, bullying victimisation, and adolescent depression: A multiple mediational analysis. *Journal of Affective Disorders*, 279, 554-562.
- Cohen-Cline, H., Beresford, S. A., Barrington, W. E., Matsueda, R. L., Wakefield, J., & Duncan, G. E. (2018). Associations between neighbourhood characteristics and depression: A twin study. *Journal of Epidemiology & Community Health*, 72(3), 202-207.
- Coley, R. L., Sims, J., Dearing, E., & Spielvogel, B. (2018). Locating economic risks for adolescent mental and behavioral health: Poverty and affluence in families, neighbourhoods, and schools. *Child Development*, 89(2), 360-369.
- Cutrona, C. E., Wallace, G., & Wesner, K. A. (2006). Neighbourhood characteristics and depression: An examination of stress processes. *Current Directions in Psychological Science*, 15(4), 188-192.
- Dawson, C. T., Wu, W., Fennie, K. P., Ibañez, G., Cano, M. Á., Pettit, J. W., & Trepka, M. J. (2019). Parental-perceived neighbourhood characteristics and adolescent depressive symptoms: A multilevel moderation analysis. *Journal of Community Psychology*, 47(7), 1568-1590.
- Do, D. P., Locklar, L. R., & Florsheim, P. (2019). Triple jeopardy: The joint impact of racial segregation and neighbourhood poverty on the mental health of black Americans. *Social Psychiatry and Psychiatric Epidemiology*, 54(5), 533-541.
- Dowdall, N., Ward, C. L., & Lund, C. (2017). The association between neighbourhood-level deprivation and depression: Evidence from the South African National Income Dynamics Study. *BMC Psychiatry*, 17(1), 1-10.
- Ellen, I. G., & Turner, M. A. (1997). Does neighbourhood matter? Assessing recent evidence. *Housing Policy Debate*, 8(4), 833-866.
- Erdem, Ö., Van Lenthe, F. J., Prins, R. G., Voorham, T. A., & Burdorf, A. (2016). Socioeconomic inequalities in psychological distress among urban adults: The moderating role of neighbourhood social cohesion. *PLoS One*, 11(6), e0157119. Available online DOI: 10.1371/journal.pone.0157119.
- Gepty, A. A., Hamilton, J. L., Abramson, L. Y., & Alloy, L. B. (2019). The combination of living in high crime neighbourhoods and high rumination predicts depressive symptoms among adolescents. *Journal of Youth and Adolescence*, 48(11), 2141-2151.
- Glymour, M. M., Mujahid, M., Wu, Q., White, K., & Tchetgen Tchetgen, E. J. (2010). Neighbourhood disadvantage and self-assessed health, disability, and depressive symptoms: Longitudinal results from the Health and Retirement Study. *Annals of Epidemiology*, 20(11), 856-861.
- Goldstein, R. B., Lee, A. K., Haynie, D. L., Luk, J. W., Fairman, B. J., Liu, D., Jeffers, J. S., Simons-Morton, B. G., & Gilman, S. E. (2019). Neighbourhood disadvantage and depressive symptoms among adolescents followed into emerging adulthood. *Journal of Epidemiology & Community Health*, 73(7), 590-597.
- Graif, C., Arcaya, M. C., & Roux, A. V. D. (2016). Moving to opportunity and mental health: Exploring the spatial context of neighbourhood effects. *Social Science & Medicine*, 162, 50-58.
- Han, S. H., Kim, K., & Burr, J. A. (2021). Activity limitations and depressive symptoms among older couples: The moderating role of spousal care. *The Journals of Gerontology: Series B*, 76(2), 360-369.
- Hastings, J. F., & Snowden, L. R. (2019). African Americans and Caribbean Blacks: Perceived neighbourhood disadvantage and depression. *Journal of Community Psychology*, 47(2), 227-237.
- Huang, X., King, C., & McAttee, J. (2018). Exposure to violence, neighbourhood context, and health-related outcomes in low-income urban mothers. *Health & Place*, 54, 138-148.
- James, P., Hart, J. E., Banay, R. F., Laden, F., & Signorello, L. B. (2017). Built environment and depression in low-income African Americans and Whites. *American Journal of Preventive Medicine*, 52(1), 74-84.

- Joshi, S., Mooney, S. J., Rundle, A. G., Quinn, J. W., Beard, J. R., & Cerdá, M. (2017). Pathways from neighbourhood poverty to depression among older adults. *Health & Place, 43*, 138-143.
- Kemp, G. N., Langer, D. A., & Tompson, M. C. (2016). Childhood mental health: An ecological analysis of the effects of neighbourhood characteristics. *Journal of Community Psychology, 44*(8), 962-979.
- Kim, E. S., Chen, Y., Kawachi, I., & VanderWeele, T. J. (2020). Perceived neighbourhood social cohesion and subsequent health and well-being in older adults: An outcome-wide longitudinal approach. *Health & Place, 66*, 102-420. Available online DOI: 10.1016/j.healthplace.2020.102420.
- Kim, Y., Lee, S., Jung, H., Jaime, J., & Cubbin, C. (2019). Is neighbourhood poverty harmful to every child? Neighbourhood poverty, family poverty, and behavioral problems among young children. *Journal of Community Psychology, 47*(3), 594-610.
- Klijs, B., Kibele, E. U., Ellwardt, L., Zuidersma, M., Stolk, R. P., Wittek, R. P., Mendes de Leon, C. M., & Smidt, N. (2016). Neighbourhood income and major depressive disorder in a large Dutch population: Results from the LifeLines Cohort Study. *BMC Public Health, 16*(1), 1-13.
- Kowitt, S. D., Aiello, A. E., Callahan, L. F., Fisher, E. B., Gottfredson, N. C., Jordan, J. M., & Muessig, K. E. (2020). Associations among neighbourhood poverty, perceived neighbourhood environment, and depressed mood are mediated by physical activity, perceived individual control, and loneliness. *Health & Place, 62*, 102-278. Available online DOI: 10.1016/j.healthplace.2019.102278.
- Litell, J. H., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analysis*. London: Oxford University Press.
- Mair, C., Diez Roux, A. V., & Galea, S. (2008). Are neighbourhood characteristics associated with depressive symptoms? A review of evidence. *Journal of Epidemiology & Community Health, 62*(11), 940-946.
- Mair, C., Diez Roux, A. V., & Morenoff, J. D. (2010). Neighbourhood stressors and social support as predictors of depressive symptoms in the Chicago community adult health study. *Health & Place, 16*(5), 811-819.
- Miao, J., Wu, X., & Sun, X. (2019). Neighbourhood, social cohesion, and the elderly's depression in Shanghai. *Social Science & Medicine, 229*, 134-143.
- Mirowsky, J., & Ross, C. E. (1986). Social patterns of distress. *Annual Review of Sociology, 12*, 23-45.
- Mondi, C. F., Reynolds, A. J., & Ou, S. R. (2017). Predictors of depressive symptoms in emerging adulthood in a low-income urban cohort. *Journal of Applied Developmental Psychology, 50*, 45-59.
- Moore, K. A., Hirsch, J. A., August, C., Mair, C., Sanchez, B. N., & Roux, A. V. D. (2016). Neighbourhood social resources and depressive symptoms: longitudinal results from the Multi-Ethnic Study of Atherosclerosis. *Journal of Urban Health, 93*(3), 572-588.
- Orstad, S. L., McDonough, M. H., Klenosky, D. B., Mattson, M., & Troped, P. J. (2017). The observed and perceived neighbourhood environment and physical activity among urban-dwelling adults: The moderating role of depressive symptoms. *Social Science & Medicine, 190*, 57-66.
- Ospuk, T. L., Schmidt, N. M., Kehm, R. D., Tchetgen, E. J. T., & Glymour, M. M. (2019). The price of admission: Does moving to a low-poverty neighbourhood increase discriminatory experiences and influence mental health? *Social Psychiatry and Psychiatric Epidemiology, 54*(2), 181-190.
- Panaite, V., Bowersox, N. W., Zivin, K., Ganoczy, D., Kim, H. M., & Pfeiffer, P. N. (2019). Individual and neighbourhood characteristics as predictors of depression symptom response. *Health Services Research, 54*, 586-591.
- Pearlin, L. I. (1989). The sociological study of stress. *Journal of Health and Social Behavior, 30*(3), 241-256.
- Pearlin, L. I., Menaghan, E. G., Lieberman, M. A., & Mullan, J. T. (1981). The stress process. *Journal of Health and Social Behavior, 22*(4), 337-356.
- Rabinowitz, J. A., Drabick, D. A., & Reynolds, M. D. (2016). Youth withdrawal moderates the relationship between neighbourhood factors and internalising symptoms in adolescence. *Journal of Youth and Adolescence, 45*(3), 427-439.
- Ross, C. E. (2000). Neighbourhood disadvantage and adult depression. *Journal of Health and Social Behavior, 41*(2), 177-187.
- Ruiz, M., Scholes, S., & Bobak, M. (2018). Perceived neighbourhood social cohesion and depressive symptom trajectories in older adults: A 12-year prospective cohort study. *Social Psychiatry and Psychiatric Epidemiology, 53*(10), 1081-1090.

- Snedker, K. A., & Herting, J. R. (2016). Adolescent mental health: Neighbourhood stress and emotional distress. *Youth & Society, 48*(5), 695-719.
- Solmi, F., Colman, I., Weeks, M., Lewis, G., & Kirkbride, J. B. (2017). Trajectories of neighbourhood cohesion in childhood, and psychotic and depressive symptoms at age 13 and 18 years. *Journal of the American Academy of Child & Adolescent Psychiatry, 56*(7), 570-577.
- Stahl, S. T., Beach, S. R., Musa, D., & Schulz, R. (2017). Living alone and depression: The modifying role of the perceived neighbourhood environment. *Aging & Mental Health, 21*(10), 1065-1071.
- Tamura, K., Langerman, S. D., Orstad, S. L., Neally, S. J., Andrews, M. R., Ceasar, J. N., Sims, M., Lee, J. E., & Powell-Wiley, T. M. (2020). Physical activity-mediated associations between perceived neighbourhood social environment and depressive symptoms among Jackson Heart Study participants. *International Journal of Behavioral Nutrition and Physical Activity, 17*(1), 1-13.
- Thoits, P. A. (2010). Sociological approaches to mental illness. In T. L. Scheid & T. N. Brown (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (2nd ed.; pp. 106-124). London: Cambridge University Press.
- Topalian, A. G. (2020). *Neighbourhood factors and adolescent depression: A national representative study* [Doctoral dissertation, University of Cincinnati]. OhioLink, [https://rave.ohiolink.edu/etdc/view?acc\\_num=ucin1593170405001069](https://rave.ohiolink.edu/etdc/view?acc_num=ucin1593170405001069)
- Traoré, M., Vuillermoz, C., Chauvin, P., & Deguen, S. (2020). Influence of individual and contextual perceptions and of multiple neighbourhoods on depression. *International Journal of Environmental Research and Public Health, 17*(6), 1958. Available online DOI: 10.3390/ijerph17061958.
- Wight, R.G., Ko, M. J., & Aneshensel, C. S. (2011). Urban neighbourhoods and depressive symptoms in late middle age. *Research on Aging, 33*(1), 28-50.
- World Health Organization (2014). *Social determinants of mental health*. Geneva: World Health Organization.

Cho, S. & Branch, K. R. (2023). A Review of Evidence on the Relationship Between Neighbourhood Stressors and Depressive Symptoms. *Relational Social Work, 7*(2), 31-60, doi: 10.14605/RSW722303.



Relational Social Work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License