Local crime and substance use disorders: A comparison of midlife adults in the 1990s and 2000s☆

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A B S T R A C T

This study investigated how sociopolitical changes in the United States between the 1990s and 2000s may explain the increase in substance use disorders and reduced longevity in more recent cohorts of US midlife adults. The 2008 recession which drastically increased unemployment rates across the country may have had negative implications for downstream contextual and individual processes, including both local crime rates and substance use disorders. The Midlife in the United States Survey cohort (1995; $n = 6148$; 20–75 years) and the MIDUS Refresher cohort (2011; $n = 3543$; 23–76 years) reported on substance use disorders. These data were linked to Uniform Crime Reporting violent crime rates to determine whether associations between local crime and substance use disorders changed among two separate cohorts of US midlife adults assessed before or after the 2008 recession. In 1995, despite higher local crime rates, substance use disorders were not associated with local crime. The comparatively lower crime rates of 2011, however, associated with greater prevalence of substance use disorders. Considering unemployment rates from the Decennial Census and American Community Survey, which were substantially higher in 2011 relative to 1995, completely diminished the local crime rate-substance use disorder association. The increased prevalence of substance use disorders observed in the more recent cohort of midlife adults assessed in the current study may represent maladaptive coping to local crime after the 2008 recession.

1. Introduction

In the United States, socio-environmental factors such as unemployment may contribute to the development of poor health behaviors including substance use disorders (National Center for Chronic Disease Prevention and Health Promotion, 2023). In addition to the associations with health behaviors, high unemployment rates may further associate with social features of the environments in which people are embedded, including increased local crime rates (Jawadi, Mallick, Cheffou, & Augustine, 2021). Evidence has suggested that local crime, like unemployment, is associated with reduced well-being and increased prevalence of substance use disorders (Lorenc et al., 2012; Simning, van Wijngaarden, & Conwell, 2012). Taken together, local unemployment and, in turn, local crime may have increased the prevalences of substance use disorders in the US.

Most of the work on associations of local crime has focused on youth development and chronic disease in older adults (Baranyi, Di Marco, Russ, Dibben, & Pearce, 2021), however, with little emphasis on midlife adults. More recent cohorts of midlife adults in the US have endured multiple sociopolitical changes, including a growing mistrust of police and the 2008 recession, that have coincided with increased unemployment and significant health consequences (Burgard & Kalousova, 2015; Xie, Solis, & Chauhan, 2023). These macro-level changes may have had implications for midlife health and well-being for multiple reasons. First, recent cohorts of midlife adults, particularly in the US, have been displaying greater prevalence of substance use disorders relative to comparably aged adults in the past (Glei, 2022). Second, midlife is a stage of life when individuals typically carry out demanding roles across

multiple domains including caregiving for young children and aging parents (Infurna, Gerstorf, & Lachman, 2020). Recent research has demonstrated that macro-level changes such as increased unemployment have modified the downstream interplay among more proximal features of people's circumstances and their health, such as increased benefits of educational attainment on indices of metabolic health (Jiang, Boylan, & Zilioli, 2022). To date, there have been no investigations of how these macro-level changes may also have enhanced associations between contextual stressors on midlife health, such as increasing the detrimental associations of local crime on health and health-related behaviors. As such, the current study investigated associations between local crime and substance use disorders among two cohorts of US midlife adults who were assessed in 1995 and 2011. These two cohorts allowed for an investigation of period effects on health behaviors related to recent declines in US longevity, namely substance use disorders, as the first cohort was assessed before the recession and the second after the recession (Harris, Majmundar, & BeckerEds., 2021; Ryff et al., 2017).

1.1. Unique challenges in midlife adulthood

The greater prevalence of substance use disorders among more recent cohorts of midlife adults has resulted in reduced longevity due to deaths associated with substance use disorders or suicide (Case & Deaton, 2015; Glei, 2022; Harris et al., 2021). Until recently, the study of substance use disorders has not received as much research in midlife as other life stages. Yet, midlife represents a span of the human life course when individuals are managing the challenges of both their personal and community environments (Infurna et al., 2020). These roles have often resulted in a neglect of personal health, despite midlife representing the span of age during which evidence of chronic disease first emerges (Infurna et al., 2020). Recent trends suggesting reduced longevity in the US have highlighted the centrality of social historical context when interpreting the health of midlife adults (Harris et al., 2021).

Midlife adults are susceptible to sociopolitical processes that can either hinder or facilitate their ability to carry out multiple roles and manage their own well-being (Infurna et al., 2020). The experience of role composition during midlife has been uniquely toxic in the US compared to other countries, likely due to challenges in the delivery and cost of healthcare, changes in the employment landscape (e.g., the 2008 recession), and changing patterns of family composition (Burgard & Kalousova, 2015; Infurna, Staben, Lachman, & Gerstorf, 2021). Another aspect that has set the US apart has been the unique features of residential context on healthy aging linked to current and historical trends of segregation by race, class, and other identities (Arcaya et al., 2017). Even more proximal to the individual than these macro-level socio-political environments, local crime rates can create a situation of chronic stress with negative health associations (Lorenc et al., 2012). Higher local crime rates may be particularly threatening to midlife adults who fear not only for themselves, but for their younger and older family members.

1.2. Crime, well-being, and health behaviors

Given the unique challenges faced by midlife adults, local crime may be a more potent factor in association with substance use disorders for this subgroup of the US population. The fear of local violent crime can have a contagious effect; even those not directly involved but who nevertheless feel unsafe in their surroundings can suffer from adverse mental health outcomes (Lorenc et al., 2012). In Baltimore, Maryland, greater local violent crime was associated with symptoms of depression, for example (Curry, Latkin, & Davey-Rothwell, 2008; Weisburd et al., 2018). A recent review of two decades of research suggested that measured and perceived local crime increased risk for a myriad of mental health outcomes (Baranyi et al., 2021). Though, of the 63 studies included, about half included investigations in the US, and of those, only

eight surveyed respondents from multiple US locations, and only two examined midlife adults.

In addition to the increased depression discussed above, at least one study has documented more prevalent substance use disorders in areas with more local crime (Jawadi et al., 2021). A logical assumption is that residents of higher crime areas exhibit elevated risk for substance use disorders. Across neighborhoods in Detroit, drug use was linked to neighborhood poverty because of increased exposure to stress, for example (Boardman, Finch, Ellison, Williams, & Jackson, 2001). A review, however, demonstrated heightened local crime rates that resulted from substance use disorders, the availability of local alcohol outlets, or more relaxed alcohol policies, but not the reverse (Bondurant, Lindo, & Swensen, 2018; De Vocht et al., 2017; Wheeler, 2019). This paucity of research represents an important topic, as local crime may add to the constellation of stressors unique to midlife, a portion of the life span when substance use disorders are somewhat prevalent and contribute to poor health (Infurna et al., 2020; Schulenberg et al., 2015). Moreover, limited coping resources among members of the same community can create a social context in which unhealthy behaviors became more common (Mollborn & Lawrence, 2018).

An increasingly important health challenge in midlife is the onset of chronic diseases, or their biopsychosocial correlates (Infurna et al., 2020). Trends in the US have illustrated that cardiovascular-related outcomes, such as obesity and diabetes, are diagnosed earlier in the lifespan than in the past (Nguyen et al., 2014; Yang et al., 2021). Moreover, obesity and diabetes are illustrative outcomes with lifestyle and social determinants (Cockerham, 2022; Hill-Briggs et al., 2021). These trends necessitate attention to individual-level, contextual, and macro-level risks that may have contributed to recent declines in life expectancy in the US, declines that were predominantly driven by poor health behaviors in midlife (Harris et al., 2021).

1.3. The present study

The present study tested associations between local violent crime and substance use disorders using two national samples of midlife adults in the Midlife in the United States Survey (MIDUS). MIDUS researchers collected data from these two samples in 1995 and 2011 to investigate health and health-related behaviors at two distinct periods, before and after the 2008 recession (Ryff et al., 2017). Members of our research team linked MIDUS health to a wide array of contextual indicators, allowing for among the first investigations of substance use disorders in the context of local crime rates and unemployment rates among US midlife adults. Critically, our investigation compared the hypothesized local crime-substance use disorder association among midlife adults assessed in 1995 (pre-recession) and 2011 (post-recession), representing two distinct periods during which crime rates declined, but unemployment increased. The aim of these analyses was to determine whether higher unemployment rates post-2008 recession have increased reactivity to local crime which may have, in turn, fueled the increased prevalence of substance use disorders and reduced longevity in more recent cohorts of midlife adults (Harris et al., 2021).

2. Materials and methods

2.1. Participants and procedure

Data from the Midlife in the United States (MIDUS) survey were used in this study. Participants were recruited via random-digit dialing (RDD) procedures, metropolitan city oversamples, and some siblings of the RDD participants were recruited (Brim et al., 2017; Brim et al., 2017a). MIDUS assessed the biopsychosocial, cognitive, and physical health of midlife-older US adults. The first wave (MIDUS I; $n = 7108$) was conducted in 1995 and involved a telephone interview and self-administered questionnaire that asked participants aged 25–75 years about their sociodemographic background, psychosocial and

behavioral functioning, and health. A Refresher Cohort was recruited in 2011 (*n* = 4065; age 25–74 years) that replenished the original sample and created an opportunity to investigate midlife health and well-being during a different historical period (e.g., after the 2008 recession) relative to the original MIDUS sample (Ryff et al., 2017). All participants self-reported on their substance use disorders. Data collection procedures were approved by the Institutional Review Board of the University of Wisconsin, Madison (ID: 2016–1051).

Participant-level MIDUS data was linked to county-level indicators via geographic identifiers. County-level crime rates from the Uniform Crime Reporting program and sociodemographic characteristics from the US Census Bureau's decennial census and the American Community Survey (ACS) were linked to MIDUS participant records (Manson et al., 2023; United States Department of Justice, 1995). These data linkages were completed via a data use agreement between the MIDUS Administrative Core and the first author. In short, the Administrative Core was provided with crime and sociodemographic data for all US counties along with federal information processing system (FIPS)-based geographic identifiers. The MIDUS Administrative Core linked these contextual data sources to MIDUS participant records. The data returned by the Administrative Core contained MIDUS health information and contextual information with geographic identifiers removed to protect participant identities.

2.2. Measures

The overarching purpose of the analyses in the present study was to investigate associations between local crime and individual-level substance use disorders in midlife. This hypothesized association was compared at two periods (1995 and 2011) during which unemployment in the US increased due to the 2008 recession. As such, in the sections that follow, the primary predictor (e.g., local crime) and primary outcome (e.g., substance use disorders) are described along with the unemployment rate of participants' counties that was hypothesized to modify the local crime-substance use disorder association.

Predictor: county crime rates. The US Federal Bureau of Investigation has collected crime statistics since 1930 via the Uniform Crime Reporting Program. Law enforcement agencies have submitted crime data to the program which has provided publicly available aggregated, county-level data annually. Data files include arrests for multiple types of violent crimes over a 12-month period (United States Department of Justice, 1995). These crime data were linked to MIDUS health information via five-digit FIPS-based county identifiers. For the current analyses, all murders, rapes, robberies, and aggravated assaults were summed and adjusted for total county population such that values represented violent crimes per 100,000 county residents. Separate crime composites were created for each sample (e.g., 1995 for MIDUS I and 2011 for the Refresher). The local crime variables were standardized to interpret change in the risk of substance abuse per standard deviation increase in local violent crime.

Outcomes: substance use disorders. One question on the self-administered questionnaire asked whether in the past year participants had experienced or been treated for alcohol or drug problems. Response options were 'yes' or 'no.'

Alcohol problems. Four questions on the self-administered questionnaire asked participants about their problems with alcohol (Selzer, 1971). These questions included, 'Did you ever, during the past 12 months, have any emotional or psychological problems from using alcohol – such as feeling depressed, being suspicious of people, or having strange ideas?' 'Did you ever, during the past 12 months, have such a strong desire or urge to use alcohol that you could not resist it or could not think of anything else?' 'Did you have a period of a month or more during the past 12 months when you spent a great deal of time using alcohol or getting over its effects?' and 'Did you ever, during the past 12 months, find that you had to use more alcohol than usual to get the same effect or that the same amount had less effect on you than before?'

Response options were 'yes' (1) or 'no' (0). A dichotomous variable was constructed for which participants received a score of 0 if none of the problems were reported or 1 if any problems were reported.

Unemployment Rates. Data from the National Historical Geographic Information System (NHGIS; IPUMS) were used to characterize the socioeconomic context that was hypothesized to distinguish the MIDUS I sample (pre-recession) from the MIDUS Refresher sample (post-recession). The US Census Bureau 1990 decennial census files were linked to MIDUS I. The 2007–2011 five-year estimate files from the ACS were linked to the Refresher (Manson et al., 2023). These linkages were conducted using five-digit FIPS-based county identifiers. County-level percent unemployed was used as a proxy to capture the different (pre- and post-recession) socioeconomic contexts during which these two cohorts were assessed. County-level unemployment was constructed by dividing the total population of the county who were unemployed by the total population of the county aged 16 years or more, as this is considered the legal working age in the US at which restrictions on the number of hours an individual can work are lifted (United States Department of Labor, 2024).

Covariates. Age was coded in five-year increments, and sex was coded as male (0) or female (1) as these were the categories available in MIDUS. Highest education was originally coded in 12 levels from no school/some grade school through doctorate/medical degree. Education was used as a proxy for individual-level SES given that it is relatively more stable than income and typically completed by midlife to older age (as are the participants in MIDUS). To make meaningful educational comparisons in the current study, a new education variable was constructed as 0 = less than a four-year degree (levels 1–8), 1 = four-year degree of higher (levels 9 and above). Race/ethnicity was originally coded as 1 = White, 2 = Black, 3 = Native American or Alaskan Native, 4 = Asian, 5 = Native Hawaiian or Pacific Islander, 6 = Other. However, given than roughly only 10 percent of the MIDUS I and Refresher samples fell into non-White categories, it was not possible to make meaningful all possible comparisons. For the purposes of this study, race was coded as White (0) and non-White (1).

2.3. Statistical analyses

All statistical analyses were conducted using Stata 17. Multivariate post-stratification weights were applied to analyses to compensate for unequal probabilities of being selected, to adjust for non-response, and to ensure that results were consistent with Current Population Survey estimates, the latter of which ensured the representativeness of the sample and results of the current analyses (Brim et al., 2017a). The samples were described separately (MIDUS I and Refresher) by showing weighted means and standard deviations for continuous variables and weighted proportions for categorical variables.

Next, we tested our key hypotheses that participants residing in counties with higher violent crime rates would be more likely to report substance use disorders. In separate models (MIDUS I and Refresher), standardized local violent crime rates predicted the single item asking participants about substance use disorders in weighted logistic regressions. Model 1 adjusted for participant age, sex, race, and highest educational. To determine the degree to which county-level unemployment rates might modify the hypothesized local crime-substance use disorder associations, Model 2 further included county-level unemployment rate. Models 1 and 2 were repeated in a separate set of weighted logistic regressions predicting the probability of alcohol problems as assessed on the alcohol screening test (Selzer, 1971). The purpose of stratifying both sets of models by sample (MIDUS I and Refresher) was to compare the local crime-substance use disorder association among midlife adults assessed before and after the 2008 recession (Ryff et al., 2017).

3. Results

3.1. Participant description

A weighted description of the comparatively-aged participants can be found in Table 1. Substance use disorders were reported at greater prevalence among the Refresher sample when compared to the MIDUS I sample. Alcohol problems (scores on the alcohol screening test) were similar between the samples. Local violent crime rates were higher in 1995 when the original MIDUS I sample was assessed (574.50 crimes per 100,000 people in the population) compared to 2011 when the Refresher sample was assessed (349.49 crimes per 100,000 people in the population), reflecting national trends (Xie et al., 2023). Unemployment rates were lower in 1995 when MIDUS I was assessed (3.97 percent) than in 2011 when Refresher participants were assessed (5.48 percent), representing the increased unemployment after the 2008 recession (Burgard & Kalousova, 2015). The proportion of women was slightly larger than that of men in both cohorts, around a third of participants in both cohorts had a four-year degree or higher, and both the MIDUS I and Refresher cohort were primarily non-Hispanic White.

3.2. Associations with crime

The first set of logistic regressions investigated the hypothesized association between local violent crime and substance use disorders in MIDUS I and the MIDUS Refresher (Table 2). Results of Model 1 suggested that local violent crime rates were not significantly associated with substance use disorders in 1995 when MIDUS I participants were assessed. In 2011 when MIDUS Refresher participants were assessed, higher local violent crime was statistically significantly associated with a greater likelihood of reporting substance use disorders. This pattern suggested that, despite a reduction in overall crime rates, the association between local violent crime and substance use disorders increased from 1995 to 2011.

The second set of logistic regressions investigated the degree to which county-level unemployment rates, which increased from 1995 to 2011, modified the hypothesized local crime-substance use disorder association. After including the unemployment rate to Model 2, local crime was still not significantly associated with substance use disorders in 1995 (MIDUS I). In 2011, however, the local crime-substance use disorder association was no longer statistically significant after including unemployment rate to Model 2. This pattern suggested that participants in the more recent cohort of US midlife adults living in counties with higher unemployment rates may have been more reactive to local crime rates regarding substance use disorders.

The final set of weighted logistic regressions evaluated problems on an alcohol screening test. Results of these models were similar to those

reported above (see Table 3). Among MIDUS I participants, local crime was not significantly associated with scores on the alcohol screening test before or after considering county unemployment. Among Refresher participants, however, higher local crime rates were significantly associated with more alcohol problems as measured on the alcohol screening test (OR = 1.24, $p = 0.012$). Finally, this local crime-alcohol problem association among Refresher participants was reduced substantially (OR = 1.20, $p = 0.053$) after considering county unemployment.

4. Discussion

The purpose of this study was to evaluate whether the increased unemployment in the US after the 2008 recession may have increased people's vigilance to local crime, and in particular, among midlife adults who are concerned for their own welfare and that of those to whom they provide care. To this aim, the current study investigated substance use disorders and alcohol problems, often considered maladaptive coping mechanisms and behaviors that are contributing to cardiovascular disease and reduced longevity in the US, among midlife adults assessed before and after the 2008 recession (Harris et al., 2021; Metzger et al.,

Table 1
Weighted sample statistics of Midlife in the United States Survey participants (percentages unless otherwise noted).

	MIDUS I, 1995 (n = 6129)	Refresher, 2011 (n = 2573)
County Unemployment Rate	3.97	5.48
County Violent Crime Rate (crimes per 100,000)	574.50	349.49
Presence of Substance Use Disorders	2.60	6.40
Presence of Alcohol Problems (alcohol screen test)	6.73	5.61
White Participants	89.80	83.57
Age (years)	46.18 (13.13)	50.57 (13.64)
Men	46.96	45.87
Educational Degree		
Less than 4-Year College Degree	70.14	64.82
4-Year College Degree or Higher	29.86	35.18

Note. MIDUS I = Midlife in the United States Wave 1; Refresher = Refresher Cohort.

Table 2
Weighted logistic regressions predicting substance use disorders in the Midlife in the United States Survey, 1995; 2011, OR (95% CI).

	MIDUS I (1995)		Refresher (2011)	
	Model 1 (n = 6129)	Model 2 (n = 6129)	Model 1 (n = 2573)	Model 2 (n = 2573)
Standardized Local Violent Crime Rate	1.07 (0.91,1.25)	1.11 (0.93,1.31)	1.22 (1.04,1.44)	1.19 (0.99,1.43)
Age (five-year increments)	0.87 (0.81,0.93)	0.87 (0.82,0.93)	0.84 (0.79,0.89)	0.84 (0.79,0.89)
Women[a]	0.37 (0.26,0.52)	0.37 (0.26,0.52)	0.76[b] (0.55,1.05)	0.76 (0.55,1.05)
4-Year Degree or Higher[b]	0.63 (0.44,0.92)	0.62 (0.43,0.91)	0.74 (0.52,1.05)	0.75 (0.53,1.06)[b]
Non-White[c]	1.00 (0.59,1.68)[a]	1.02 (0.61,1.73)	0.85 (0.55,1.32)	0.85 (0.55,1.32)
County Percent Unemployment		0.91 (0.77,1.07)		1.04 (0.92,1.19)
R^2	0.04	0.04	0.04	0.04

[a] Compared to men.
[b] Compared to less than a 4-year degree.
[c] Compared to White.

Table 3
Weighted logistic regressions predicting alcohol problems in the Midlife in the United States Survey, 1995; 2011, coefficient (95% CI).

	MIDUS I (1995)		Refresher (2011)	
	Model 1 (n = 6059)	Model 2 (n = 6059)	Model 1 (n = 2568)	Model 2 (n = 2568)
Standardized Local Violent Crime Rate	0.98 (0.88,1.09)	0.98 (0.87,1.09)	1.24 (1.05,1.46)	1.20 (1.00,1.44)
Age (five-year increments)	0.82 (0.79,0.86)	0.82 (0.79,0.86)	0.97 (0.95,0.98)	0.97 (0.95,0.98)
Women[a]	0.50 (0.41,0.62)	0.50 (0.41,0.62)	0.75 (0.54,1.03)	0.74 (0.54,1.03)
4-Year Degree or Higher[b]	0.90 (0.72,1.12)	0.90 (0.72,1.12)	0.74 (0.52,1.06)	0.75 (0.53,1.07)
Non-White[c]	0.99 (0.71,1.39)	0.99 (0.71,1.39)	0.87 (0.56,1.35)	0.86 (0.55,1.34)
County Percent Unemployment		1.01 (0.91,1.11)		1.05 (0.93,1.20)
R^2	0.04	0.04	0.04	0.04

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
[a] Compared to men.
[b] Compared to less than a 4-year degree.
[c] Compared to White.

2017; Whitman et al., 2017). This report contributes new knowledge by documenting significant associations between local violent crime and substance use disorders and alcohol problems in the latter sample of US midlife adults whose data were collected 3 years after the 2008 recession (2011), but not in the former sample (1995). The increased vigilance to local crime from 1995 to 2011 in this comparison is particularly compelling given that, between these two periods, the US population increased, yet the average local crime rates decreased (Mather, 2018; Xie et al., 2023). The differential associations between local violent crime and substance use disorders at these two historical periods may represent the development of maladaptive coping strategies in the wake of the 2008 recession, and thus contribute to poorer health in the more current cohort of US midlife adults (Harris et al., 2021).

4.1. Unique challenges in midlife

Midlife captures a segment of the life course that often demands substantial caregiving effort, especially those with aging parents and young children (Infurna et al., 2020). Concerns about the safety of one's residential environment may thus be particularly burdensome for midlife adults. Mothers often refuse to allow their children to play outdoors when they perceive their neighborhoods as unsafe (Kimbro & Schachter, 2011). The present study adds to this literature by documenting associations between local crime and indicators of substance use disorders among midlife adults who often carry out multiple simultaneous roles.

Importantly, we compared associations between local violent crime rates and substance use disorders among midlife adults assessed at two distinct periods in the US, 1995; 2011, to evaluate potentially greater behavioral dysregulation among more recent cohorts of US midlife adults. Unlike MIDUS I participants, Refresher participants were assessed after the 2008 recession, which led to a constellation of mental and physical health consequences that permeated the county and have persisted for over a decade since its occurrence (Burgard & Kalousova, 2015). Results of the current analyses demonstrate that maintaining residence in counties with more murders, rapes, robberies, and aggravated assaults is more strongly related to substance use disorders and alcohol problems among Refresher than MIDUS I participants. These associations were no longer observed after considering county-level unemployment level, however. This finding suggests that the greater sensitivity to local crime amongst Refresher participants relative to MIDUS I participants may be explained by a myriad of sociopolitical changes. Factors worth investigating in future research are whether increased mistrust of police or vigilance to potential crime as noted by other researchers may also be driving the pattern of findings in the present analyses (Burgard & Kalousova, 2015; Xie et al., 2023).

4.2. Limitations and future directions

A few limitations point to next steps. The outcomes included in this report were self-reported and may not serve as reliable estimates of functioning. Behavioral observations, physician reports, or other medical statistical data sets linked to local crime data would assist with furthering these preliminary findings. Relatedly, a single item asked participants about drug and alcohol use disorders, and these behaviors are likely to have disparate etiology and prognosis. Additionally, although the MIDUS project recruits a national sample of midlife adults, and when analyzed with sampling weights the sample is representative of US midlife adults, there are insufficient numbers of participants from various racial/ethnic groups to compare our models by race or ethnicity. This is an important limitation given racial/ethnic disparities in exposure to crime and health-related outcomes (De la Roca, Ellen, & O'Regan, 2014; Dwyer-Lindgren et al., 2023), and differential associations between residential-contextual hazards and health across race/ethnicity (Velasquez, Douglas, Guo, & Robinette, 2022; Yu et al., 2023). Finally, data from the Uniform Crime Reporting Program were used to evaluate

substance use disorders in the context of local crime. Although these data represent annual county-level local violent crime, submission of crime data from local law enforcement agencies is voluntary, some crimes may not have been reported, and it is possible that some residents may be unaware of crimes committed or reported in their counties.

4.3. Conclusions and broader impacts

Despite these limitations, we believe the findings from this study provide important information about the biopsychosocial functioning of midlife adults in the US. Midlife can be a time for growth, generativity, and productivity, but this segment of the population nevertheless includes the languishing individuals that are contributing to declining life expectancy and reduced longevity in the US (Harris et al., 2021; Infurna et al., 2020). This devastating trend necessitated serious attention to the correlates of poor lifestyles and substance use disorders so prevalent in this population. Although such correlates are likely numerous and diverse, this report suggests that local crime and socioeconomic characteristics are among the factors worth investigating further. Our research shows that lack of safety and security in one's local environment, here in the context of high crime, is associated with coping strategies that are detrimental to health, but only when other environmental risks are present, such as job and economic insecurity in the form of rising unemployment rates. This study advances the field by demonstrating that individuals are especially responsive to risks in their local contexts when risks in other domains of well-being are present, encouraging researchers to examine the intersection of multiple contextual factors in examining their associations with social and behavioral outcomes.

CRediT authorship contribution statement

Jennifer W. Robinette: Writing – original draft, Formal analysis, Conceptualization. **Jason D. Boardman:** Writing – review & editing, Conceptualization. **Kathleen Mullan Harris:** Writing – review & editing, Conceptualization.

Ethical statement

Although much of the Health and Retirement Study health data are publicly available, contextual data are available to researchers with approved restricted data use agreements. Participants signed consent forms prior to any data collection and research procedures were approved by the University of Michigan's Institutional Review Board. The authors declare no competing interests or have any financial declarations to make. The authors confirm they have written entirely original work. This manuscript has not been submitted, nor is it being considered for publication elsewhere.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

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