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Individual mental health, life course events and dynamic neighbourhood change during the transition to adulthood

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ABSTRACT

Using data from the National Longitudinal Study of Adolescent to Adult Health, this study examines the relationship between significant changes in neighbourhood poverty during the transition to adulthood and shifts in depressive symptoms. We found that associations between changes in neighbourhood poverty and mental health disappeared after controlling for contemporaneous life course events, specifically transitions associated with intimate relationship building and human capital formation. The exception is a decrease in depressive symptoms for females moving into lower poverty neighbourhoods across the entire transition to adulthood period. We conclude that the impact of moving into significantly higher or lower poverty neighbourhoods during the transition to adulthood is conditioned on age, period and gender and complicated by the occurrence of other significant life course transitions.

1. Introduction

Neighbourhood effects researchers have devoted significant attention to understanding the influence of the residential environment on depression and other mental health outcomes (Mair et al., 2008). It is hypothesized that the social and material settings of one's neighbourhood - an area of accumulative exposure to both negative socio-economic stressors and positive protective social resources - can affect depressive symptoms above and beyond personal and household characteristics through such mechanisms as safety/violence, local labour market opportunities and social cohesion (Blair et al., 2014). The argument underlying the existence of neighbourhood effects is that when individuals move from poor to less poor neighbourhoods they will incur long term if not short term gains in mental health. In this conceptualization we are asking if the individual benefits from the "context" effects of the new neighbourhood. If they move to, or live in, a low poverty neighbourhood do they improve their lives in some sense by moving* The emphasis on context effects arose originally from public health concerns, that to improve public health, it was important to improve residential conditions such as housing and safety. In this sense, good neighbourhoods promote good health, and improving neighbourhood conditions, whether by moving disadvantaged families into better neighbourhoods or improving the neighbourhoods themselves, would improve health.

The literature on neighbourhood effects is complex and not entirely consistent. Some studies have found positive effects from living in, or moving to advantaged neighbourhoods whereas other studies have concluded, reluctantly, that the neighbourhood plays a minor even no role in individual health and overall well-being (Ludwig et al., 2012; Mair et al., 2008; Schootman et al., 2007; for a thorough review see Oakes et al., 2015). There is an increasingly divided approach whereby some suggest that where you live does matter – certainly an outcome that is consistent with much geographic literature on the role of place, but an equally strong position is that nearly all the so-called neighbourhood outcomes are attributable to household composition.

To address this conflict in the results of a wide range of studies, we used data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) to examine the effects of moving to significantly poorer or wealthier neighbourhoods on mental health during the transition to adulthood. Although we investigated a familiar question, we diverged from the existent research in a number of important ways. First, our operationalization of neighbourhood change is sensitive to shifts across the distribution of neighbourhood poverty. Most longitudinal studies of neighbourhood effects have operationalized change in neighbourhood poverty in one of two ways: (1) Changes in mean poverty, or (2) changes in a dichotomous indicator of a poor neighbourhood (e.g. Leventhal and Brooks-Gunn, 2003; Lippert, 2016; Ross, 2000). The first approach examines whether a one-percentage point change in poverty influences mental health averaged across the entire poverty distribution. The second approach examines whether crossing

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over a single point on the neighbourhood poverty distribution influences mental health. These approaches hide significant heterogeneity in neighbourhood environments following residential mobility and obscure populations that are making the types of changes in neighbourhood environments that are more meaningful, and thus are more likely to exact detectable shifts in mental well-being. In this study, we examined changes in neighbourhood poverty quintiles over time, with a significant change defined as a jump of 2 or more quintiles, which translates to an average change of 16 percentage points in neighbourhood poverty.

Second, we examined the effects of neighbourhood change between the ages of 18–32, a period in the life course commonly referred to as the transition to adulthood (Elder, 1998). An examination of mental health during the transition to adulthood is important for the following reasons. First, significant life course transitions, including attending college, leaving the parental home, entering the labour force, and forming a family, typically occur during this period (Arnett, 2004; Bernard et al., 2014). These life course transitions often signify turning points that can dramatically alter individual life course trajectories, making young adults increasingly susceptible to wide fluctuations in mental health (Elder, 1998; Muntaner et al., 2004; Wheaton, 1990). Second, individuals face developmental tasks during this period that are necessary for the successful assumption of adult roles, including expanding self-concepts, forming stable intimate relationships, educational attainment, job employment, and achieving independence from parents (Arnett, 2000, 2004; Clark and Mulder, 2000; Furstenberg et al., 2005; Furstenberg, 2008; Lareau and Weininger, 2008; Mulder and Clark, 2002). Experiencing major depression may interfere with the acquisition of these skills. Third, prior research has demonstrated that individuals experiencing depression during the transition to adulthood face substantial risk for recurrent depressive episodes in later adulthood (Lewinsohn et al., 1999; Schulenberg et al., 2004). Understanding the factors contributing to depression during this sensitive period such as dramatic changes to the neighbourhood environment can help inform interventions to curb this serious long-term public health problem.

The transition to adulthood is also an important period for examining the effects of neighbourhood change. Previous studies have found that a non-trivial percentage of adolescents exit poor neighbourhoods by adulthood, while others experience downward residential mobility (Sharkey, 2012; Swisher et al., 2013). A potential mechanism explaining neighbourhood change after residential mobility is the radical changes in lifestyle and behaviour resulting from life-altering decisions. In particular, the establishment of socioeconomic position and a new family, processes that are strongly linked to residential attainment, may lead to dramatic fluctuations in neighbourhood environments. For example, Lui et al. (2014) found large groups of adults experiencing significant upward and downward moves in socioeconomic status before their early 30s. According to the locational attainment model, individuals experiencing socioeconomic mobility will convert household SES into higher-status neighbourhoods whereas young adults originating from higher SES parental households but experiencing setbacks or delays in socioeconomic status formation including unemployment or early parenthood may find themselves in poorer residential settings compared to their adolescent neighbourhoods (Alba and Logan, 1993). Significant changes in residential conditions can carry consequences for an individual's health trajectory. For example, in one of the few studies examining the effects of neighbourhood change during the transition to adulthood, Lippert (2016) found that exiting poor neighbourhoods curtails the risk of adult obesity, while entering and remaining in severe neighbourhood poverty increases it. Other measures of individual health and well-being have yet to be examined.

Third, we tested the robustness of our results to the inclusion of important contemporaneous life course transitions including educational attainment, job employment, leaving the parental household, and family formation. A long line of studies has found that these life course events are associated with changes in mental health (e.g. Horwitz et al., 1996; Hunt and Eisenberg, 2010; Pearlin et al., 2005; Wheaton, 1990). Moreover, studies have also shown that life course events are often bundled with residential mobility during the transition to adulthood (Bernard et al., 2014; Clark, 2013). As potential initiators and by-products of residential mobility with direct and indirect effects on mental health, life course events complicate the association between neighbourhood change and mental health. The impact of neighbourhood change may reflect changes in life course status that precede, follow, or are packaged with residential mobility. In this study, we are interested in examining whether neighbourhood change following residential mobility has an effect on mental health above and beyond the impact of concurrent changes to life course status.

This study contains other important methodological features. We tested for differential gender effects given previous evidence showing differences in the ways neighbourhoods affect females and males, particularly on their mental health (Jackson et al., 2009; Meadows et al., 2006). For example, studies of the Moving to Opportunity (MTO) program, which offered housing vouchers to a randomly selected group of public housing families, have found that moving into a lower poverty neighbourhood benefited girls but had detrimental effects on boys (Clampet-Lundquist et al., 2006; Ludwig et al., 2012). Rather than relying on data from single cities or regions, we utilized data on a representative sample of U.S. adolescents, allowing us to make broader claims concerning neighbourhood effects. We also used longitudinal data, allowing us to map changes in mental health to changes in neighbourhood environment. In summary, we relied on these methodological features, along with the innovations described earlier, to answer the following research questions: (1) Do significant changes in neighbourhood poverty following residential mobility during the transition to adulthood influence mental health* (2) Do these effects persist after controlling for life course status* (3) Are there differential effects by gender and age*

2. Material and methods

2.1. Data

Data for the study came from Add Health, a nationally representative school-based longitudinal survey tracking the health and behaviour of adolescents in middle and high school through young adulthood (Harris, 2013). Add Health was an appropriate dataset to use in the current analysis, as the sample was large, nationally representative, contained detailed information on household, personal, and neighbourhood characteristics, and followed respondents from adolescence up through adulthood. From a sampling frame of approximately 26,000 public and private schools in the United States, investigators sampled 80 high schools and 52 middle schools, with 132 (79%) choosing to participate. An in-school survey was completed by 90,118 students, with a random sample of 20,745 students and their caregivers chosen to complete a more detailed in-home survey. These interviews were conducted in 1994–1995 when respondents were enrolled in grades 7–12 (Wave I). Approximately 13,000 respondents were re-interviewed in 2001–2002 when they were between the ages of 18–26 (Wave III) and in 2008 when they were between the ages of 24–32 (Wave IV). Wave II data were collected in 1996 but were not used in this study because they excluded students enrolled in 12th grade in Wave I.

Add Health provides distances between the geocoded point locations of the current and prior residences, allowing us to capture residential mobility across waves. We limited our sample to respondents moving residences in either Wave III or IV (move distance > 0.25 miles[1]). We excluded respondents without valid sampling weights (N=794), GPS or address-based neighbourhood identifiers (N=359),

[1] Move distances less than 1/4th mile were rounded down to zero. Move distances less than 1/4th mile were considered inconsequential and/or attributable to geocoding error.