Health & Place 30 (2014) 226–233

Contents lists available at ScienceDirect

Health & Place

journal homepage: www.elsevier.com/locate/healthplace

Rural–urban area of residence and trajectories of children's behavior in England

Emily Midouhas [a,*], Lucinda Platt [b]

[a] Department of Psychology and Human Development, Institute of Education, 25 Woburn Square, WC1H 0AA, UK
[b] Department of Social Policy, London School of Economics and Political Science, Old Building, Houghton Street, WC2A 2AE, UK

ARTICLE INFO

Article history:
Received 17 April 2014
Received in revised form
24 August 2014
Accepted 4 September 2014

Keywords:
Child behavior
Millennium Cohort Study
Neighborhoods
Rural
Urban

ABSTRACT

Despite extensive studies of neighborhood effects on children's outcomes, there is little evidence on rural–urban impacts on child mental health. We modeled trajectories of emotional–behavioral problems of white majority children at ages 3, 5, and 7 in England in areas with varying levels of rural and urban settlement, using the Millennium Cohort Study. After adjusting for area selection, children in less sparse rural areas had fewer conduct and peer problems, and children in areas with a mix of rural and urban settlement had fewer emotional symptoms, explained by the quality of their schools. Area differences remained in emotional problems.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

Despite a wealth of literature on neighborhood effects on children's outcomes, there is little evidence on the role of rural–urban impacts on child mental health. The literature has instead tended to focus on deprivation in urban contexts (Leventhal and Brooks-Gunn, 2000). However, there are good theoretical reasons to expect that differences in the rural–urban makeup of an area will impact young children's behavioral development. First, the composition of those living in areas of different levels of rurality is likely to differ (Pateman, 2011), thus selection into particular sorts of areas by those with different family characteristics will result in indirect effects of an area's rurality. Secondly, the characteristics of the area may have effects over and above family-level characteristics, due to differences in social environment (Coleman, 1988; Putnam, 2000), access to quality education and services (Leventhal and Brooks-Gunn, 2000; Lupton, 2003), and the presence of others who can act as role models and help to enforce social control (Sampson et al., 1999). Third, it is possible that the intrinsic qualities of different areas, whether peaceful countryside, bustling town or densely populated inner city may directly impact children's wellbeing and behavior over and above the resources they offer (Lupton, 2003).

However, previous discussions of the rural 'idyll' have typically confounded the differential socio-economic status of those living in areas of varying levels of urbanity with desirable characteristics of rural areas themselves. Moreover, when exploring rural–urban effects it is important to identify the potential mechanisms through which differential effects operate. In this paper, we investigate, first, whether there are rural–urban differences in children's behavior using four emotional–behavioral measures; second, whether these are driven by selection of more or less advantaged families into particular areas; and third, whether any residual differences can be accounted for by two specific mechanisms, discussed further below: the presence of high status adults and school quality. Any remaining differences may then suggest some role played by intrinsic properties of different sorts of area.

A small body of research has explored differences in adolescent and children's child cognitive ability in rural compared with urban areas of the US, UK, and Australia, producing mixed results (Gibbons and Silva, 2008; Midouhas and Flouri, 2013; National Centre for Social Research, 2009). One reason may be that the nature of 'rural' and 'urban' differs by country. For example, UK rural areas are closer to metropolitan areas than their US counterparts. Poverty is also more likely in US rural areas whereas it is disproportionately found in UK urban areas (Pateman, 2011). Another factor may be different rural–urban definitions. In the UK, some are based on population density whilst others capture occupational structure or the presence of services (Lupton, 2003). The UK Government Rural–Urban Definition for England and Wales focuses on settlement type of small areas

* Corresponding author. Tel.: +44 02076126279; fax: +44 02076126304.
E-mail addresses: e.midouhas@ioe.ac.uk (E. Midouhas), l.platt@lse.ac.uk (L. Platt).

http://dx.doi.org/10.1016/j.healthplace.2014.09.003
1353-8292/© 2014 Elsevier Ltd. All rights reserved.

(leaving out social, economic and cultural elements which change more with time), thus allowing for a reasonably stable definition of rural–urban area.

Using this definition, analysis of English National Pupil Database and other large-scale data on adolescent children's attainment shows that rural children on average have higher school attainment than their urban counterparts, though differences depend on settlement type and sparseness of area (Commission for Rural Communities, 2010; National Centre for Social Research, 2009). However, selection bias, caused by lack of independence between the selection mechanism into areas and child outcomes, may explain rural–urban area differences. National Centre for Social Research (2009) found that rural English children's higher attainment was primarily due to the higher social position of their parents. Differences in younger children's cognitive outcomes in England at higher geographies have also been identified. Midouhas and Flouri (2013) found that selective sorting of families into areas explained most rural–urban differences in ability according to a local authority classification. However, children in areas with a mix of rural and urban settlement had higher ability after accounting for selection, explained by the higher level of human capital in these areas.

It remains possible that developmental differences also exist in rural and urban children's behavior. Research into neighborhood effects on behavioral outcomes has found that young children in deprived areas in the US (Duncan et al., 1994) and UK (McCulloch, 2006) have greater emotional and behavioral problems than their counterparts in less deprived areas, even after controlling for area selection. However, other UK research found that family characteristics explained the variation in children's behavioral problems according to area deprivation (e.g. Flouri et al., 2010).

Notwithstanding the problem of area selection, theories of neighborhood effects point towards potential pathways from rural–urban areas to children's psychological difficulties (Leventhal and Brooks-Gunn, 2000). Jencks and Mayer's (1990) *collective socialization/social control* model and *institutional model* emphasize the potential benefits of 'high status' adults (those of higher socioeconomic position) in a neighborhood, who may act as positive role models, provide economic, social and educational resources, and help to maintain social control, thereby promoting opportunities and minimizing bad behavior. Children in rural areas are more likely to be exposed to such 'high status' adults than urban children (Commission for Rural Communities, 2010; Pateman, 2011).

Another pathway may be the characteristics of local institutions, particularly schools, theorized to offer ways for parents to stimulate learning and healthy development in their children (Leventhal and Brooks-Gunn, 2000). School characteristics such as pupil socioeconomic composition, attainment levels and school climate, have been shown to differ by rural–urban area type (Commission for Rural Communities, 2010). Leventhal and Brooks-Gunn's (2000) *norms/collective efficacy model* also sees such resources as contributing to the supervision and monitoring of children. Additionally, school rather than neighborhood composition may explain 'area effects' (Owens, 2010). For example, attending school with high achieving students may expose less advantaged students to norms about both achievement and behavior (Gaviria and Raphael, 2001). Yet school achievement, often perceived as school 'quality', is related to parents' decisions to live in particular areas and might capture area selection rather than act as a pathway to child behavior (Browne and Goldstein, 2010).

The present study examines the association between rural and urban area of residence and children's emotional and behavioral problem trajectories from ages 3 to 7. We attempt to account for selection bias caused by families' selective sorting into rural–urban areas by adjusting for mother's education level and social class, and income. In England, the percentage of people working in higher managerial or professional occupations or qualified to at least degree level is higher than average in rural areas, but average or below average in sparse rural areas (Pateman, 2011). Similarly, people in urban areas and sparse rural areas are more likely than those in other areas to have no qualifications or to have low incomes (Rural Evidence Research Centre, 2004; Pateman, 2011). We further adjust for parental involvement (reading to the child), a potentially important influence on children's behavior (Flouri et al., 2010). In the presence of rural–urban effects that persist after reducing selection bias through these controls, we attempt to identify whether rural–urban effects are mediated by the achievement level of children's schools or the local presence of high status adults.

Given previous work into area differences in young children's adjustment (Leventhal and Brooks-Gunn, 2000), and rural–urban differences in their cognitive ability (Midouhas and Flouri, 2013), we hypothesized that living in more rural, but not isolated, areas would be associated with more positive child behavioral outcomes. However, we also expected that accounting for selection of families into areas would attenuate the majority of these differences.

2. Method

2.1. Participants

We used data from the first four sweeps (at children's ages 9 months, 3, 5 and 7 years) of the Millennium Cohort Study (MCS), a large-scale longitudinal study of children born in the four UK countries in 2000–2002 (Plewis, 2007). The MCS employed a stratified, clustered sample design, with oversampling from disadvantaged areas, areas with high ethnic minority populations and the smaller UK countries.

Our analytic sample comprised singleton children of white majority ethnic background living in England at all four sweeps of MCS who did not change area type. We focus on families in England because the DEFRA classification of rural–urban we used applies to England only. We excluded children who changed area type at least once between the sweeps, as there is evidence that a true effect of an area's conditions on individuals' outcomes is not detected until they have been living in that area for several years (e.g. Sampson et al., 2007). We excluded ethnic minorities for two reasons. First, they tend to be relatively geographically concentrated, and predominantly resident in metropolitan areas (National Statistics, 2004). This renders comparison across different types of rural–urban area problematic, due to out of sample predictions. The second reason is that the relationships between area type and behavior may differ between groups, given distinctive patterns of behavior across ethnic groups, and that ethnic minorities who live in less urban areas are likely to be distinctive in possibly unobserved ways. Therefore, of 19,518 children who ever participated in MCS across all four countries, we focused on the 7414 in England in all four sweeps. Of these, 7224 were singletons. A further 825 were excluded because they made at least one move and 1556 were from an ethnic minority background resulting in our final analytic sample ($n=4843$).

2.2. Measures

Emotional and behavioral difficulties were assessed from parental report on 20 items from the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) at sweeps 2, 3, and 4 (ages 3, 5 and 7). The SDQ measures conduct problems, hyperactivity, emotional symptoms, and peer problems using five items for each domain. Responses ranged from 0 (*not true*) to 2 (*certainly true*) and were summed to provide a total score for each dimension ranging from zero to ten.

Download English Version:

https://daneshyari.com/en/article/7458511

Download Persian Version:

https://daneshyari.com/article/7458511

Daneshyari.com