

Young Carers: Location, Education and Employment Disadvantage

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Abstract

Research and official inquiries in Australia have identified young people with caring responsibilities as a potentially vulnerable population group with respect to education and employment participation but locational differences in the 'young carer disadvantage' are yet to be fully explored. This paper examines theoretical issues about why location might have a significant impact on young carers' participation and what methods might be used to explore this question. Using the ABS 2006 Census of Population and Housing, the paper maps young carer disadvantage in education, unemployment and non-participation in Australia and conducts exploratory analysis of area characteristics associated with higher young carer disadvantage. The results suggest that local area characteristics might matter to young carers' life chances and that further research needs to explore the possibilities and limits of spatial policy to assist young carers in maintaining their education and employment participation.

JEL classification: J010; R100; R580

1. Introduction

Over the past two decades the characteristics and circumstances of children and young people with caring responsibilities for family members and friends have been well documented. Many young people derive a sense of satisfaction and develop essential life skills from their caring responsibilities, but other aspects of their lives may be adversely affected.

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Young carers carry out an array of tasks, such as housework, personal care and emotional support (Becker and Becker, 2008a; Carers Australia, 2009; Cass *et al.*, 2009; Hill *et al.*, 2009). Time spent providing care can be substantial (Becker and Becker, 2008a; Cass *et al.*, 2009) with some young carers providing up to 30 hours of care per week (Carers Australia, 2009). The nature and extent of caring responsibilities can negatively impact on health and well-being, educational attainment and employment opportunities. Overall, young carers have lower rates of participation in both education and employment, and they are at a higher risk of failing to transition successfully from education to employment, compromising their opportunities to gain independence and long-term financial security (Cass *et al.*, 2009; Becker and Becker, 2008b; Moore, McArthur and Morrow, 2009).

It is estimated that in Australia in 2009 there were around 305,000 children and young people aged up to 24 years with caring responsibilities for family members or friends with disabilities, long-term health conditions or alcohol or other drug problems (ABS, 2010). Over a third of young carers live in rural and remote locations (Carers Australia, 2009), and may have limited access to services and infrastructure to support their caring role and social and economic participation (Edwards *et al.*, 2009). Within cities, research has demonstrated a clear 'social gradient of disability' (AIHW, 2009), whereby higher concentrations of disability, and thus most likely caring, are located in more disadvantaged areas. Such disadvantaged areas within cities may also lack significant service and infrastructure support for young carers' participation.

The extent to which education and labour market outcomes for young carers compared with their non-carer peers vary according to location and the reasons for such differences have yet to be systematically explored in Australia. The identification of variations in young carer outcomes by location could have implications for policy designed to support young carers. Such variations raise the question of whether local social processes affect young carer outcomes and thus whether some spatially-targeted policies for young carers should be considered. This paper addresses these gaps by first reviewing relevant theories and existing evidence about the significance of location and the potential influence of local social processes on outcomes for young people and how these might specifically affect young carers. The following section undertakes exploratory analysis of the association between area and young carers' disadvantage, based on the ABS Census of Population and Housing 2006. The analysis first examines the spatial distribution of young carers and local area variations in young carer disadvantage in outcomes. It then explores associations with local area factors that may be related to specific local processes: socio-economic status and human capital, cultural diversity, household composition, unemployment rates and time use. The final section discusses possible policy responses and future research in view of the findings.

2. Background and Context

In Australia, educational and employment outcomes for young people are known to vary by geographical locations distinguished by remoteness and by socio-economic status of inhabitants of an area (Muir *et al.*, 2009; Kelly and Lewis, 2000; Andrews *et al.*, 2002). For example, the educational attainment, performance and participation of

young people living in rural and remote areas in Australia are lower when compared to that of their peers in urban areas. Year 12 completion rates are highest in metropolitan areas (70 per cent) followed by regional (63 per cent) and remote areas (54 per cent) (Muir, *et al.*, 2009). Using the Australian Youth Survey, Andrews *et al.* find evidence of inequality between young people's outcomes based on the neighbourhood income levels of adults over 18 years. Young people aged 21 living in neighbourhoods in the lowest two income deciles had lower rates of Year 12 completion, participation in full time study, and completion of a degree than the highest two deciles and higher rates of unemployment and completion of trades qualifications (2002, p. 10, table 3.1).

However, the causes of inequalities in young people's outcomes are unclear. One explanation could be that these outcomes are due to area compositional factors, whereby people with similar personal and familial characteristics tend to cluster together in similar geographical areas, possibly due to housing costs (Daly, 2006). Research in Australia has shown that spatial inequalities in income and a range of other characteristics exist, with concentrations of disadvantage in particular areas (Gregory and Hunter, 1995; Hunter, 1996; McNamara *et al.*, 2009; Tanton *et al.*, 2009; Vinson, 2007, 2009). Another explanation is that there may be contextual factors affecting young people's outcomes in these disadvantaged areas; factors that operate through particular local social processes that affect young people's attitudes, aspirations, norms, behaviours and outcomes (eg. Atkinson and Kintrea, 2001; Buck, 2001; Brannstrom, 2008; Dietz, 2002). These contextual factors, or 'neighbourhood effects', may be considered to have effects that are additional to compositional factors.

The literature on neighbourhood effects hypothesises that such effects operate through a number of mechanisms or social processes. The literature also suggests that some aspects of neighbourhoods support the achievement of outcomes whereas other aspects undermine them. For example, Atkinson and Kintrea note that the stigma of one address may have its counterpart in the high status associated with another (2001, p. 2278). Table 1 outlines one typology of such effects drawn from the work of Atkinson and Kintrea (2001) with an additional column indicating how such effects might impact on young people with caring responsibilities.

The direction of the hypothesised effect of some of these processes on young people's and young carers' educational and employment outcomes would generally be regarded as negative. For example, concentration of disadvantage leading to stigma attached to the local area and stress on services may lead to employers having negative perceptions of individuals from particular areas and young people lacking adequate support from services to facilitate participation in education.

However, as Buck (2001) cautions, theoretically it cannot always be assumed that these processes mean that outcomes for young people or young carers will be worse in poorer areas. As Buck (2001) describes, some theories might suggest that young carers will do worse in poorer areas due to: a lack of opportunities and services, role models, and networks; reduced expectations; and physical isolation. However, other perspectives suggest that young carers will fare worse in more affluent areas because they are ranked lower in competition for scarce jobs and experience relative deprivation; that is, perceiving themselves to be worse off than their peers in assessments of their situation and therefore more likely to drop out (Buck, 2001).

Table 1 - How Contextual Factors Might Operate

<i>Type of Area Effect</i>	<i>Mechanisms</i>	<i>Primary Outcomes</i>	<i>How Area Might Affect Young Carers</i>
Concentration effects	Many relatively homogenous households living together Stress on services	Stigmatisation of area Crowding of resources Restricted social networks	Reduced opportunities because of stigma Lack of services Lack of educational and employment options Lack of social support
Location	Labour and housing markets Geographical isolation	Poor quality housing Spatial and skills mismatch	Poor housing environment Lack of local opportunities Lack of transport in area
Milieu	Social networks Associational activity Patterns of daily life	Weak social capital	Lack of contacts and social networks to assist with jobs and with caring roles
Socialisation	Education Childrearing Friendship Isolation Separation Socialisation	Learning about the outside world Dependence on social networks	Social Isolation Lack of time with friends
Physical	Built environment Housing quality Physical amenities quality Lack of access to services –	Health effects Area reputation Area morale	Lack of infrastructure – may affect access and opportunities for person with disability Lower aspirations Lack of access to services for people with disabilities
Services	Poor quality services Service providers regarding clients as “problem people” Lack of services	Low expectations of young people	Lack of recognition and support in caring role Low expectations of young caring role Lack of information about services Lack of appropriate, affordable services for people with disabilities

Source: (Adapted from Atkinson and Kintrea, 2001)

The literature on neighbourhood effects also cautions that disentangling the compositional and contextual effects is a challenging empirical task for a range of reasons, including selection effects and omitted variable bias (Buck, 2001). Related to omitted variables are the other contexts that may affect outcomes, such as peer groups, school and work (institutional), environmental and service contexts (Brannstrom, 2008; Buck, 2001). Another complicating factor is the issue of the interaction between individuals' multiple identities and social networks based on these differing identities and contexts (Dietz, 2002).

A major challenge in this field lies in defining the ‘neighbourhood’ that may affect outcomes. This challenge raises a number of questions including how to delineate

the size and scale of the area that might be considered to generate social processes affecting outcomes (Dietz, 2002); whether one should use geospatial and administrative boundaries as compared with the subjective perceptions of neighbourhood boundaries (eg. Coulton, 2005); and the extent to which the impact of neighbourhood on individuals is affected by the region within which it is situated and the characteristics of its boundary neighbourhoods (Dietz, 2002; Kearns and Parkinson, 2001).

While in many studies, a geospatial definition of 'neighbourhood' based on census or administrative boundaries has been used, subjective perceptions of neighbourhood, and the interaction between geographical and subjective perceptions of neighbourhood are important elements to consider, as they may constrain perceptions of opportunities (White and Green, 2011).

International and Australian literature has adopted a range of techniques to examine the question of whether neighbourhood effects exist with regard to young people's educational and employment outcomes. Studies identifying neighbourhood effects suggest that various mechanisms or processes at the local level, such as availability of information (Kintrea, 2009), labour market opportunities (Baum and Mitchell, 2008; White and Green, 2011), neighbourhood human capital (Overman, 2001), neighbourhood income levels (Andrews *et al.*, 2002); informal networks and role models (Kelly and Lewis, 2000); social networks (Baum and Mitchell, 2008; White and Green, 2011), employment conditions (Kintrea, 2009) and neighbourhood cohesion (Kintrea, 2009) can influence the development and maintenance of aspirations in young people (Kintrea, 2009), their school achievement outcomes (Gordon and Monastiriotis, 2006; Overman, 2001), the types of education they complete (Kauppinen, 2006), youth unemployment rates (Andrews *et al.*, 2002; Kelly and Lewis, 2000) and their perceptions of employment and training opportunities (White and Green, 2011). Studies also suggest that the impact of neighbourhood processes may commence early in life, with Edwards and Bromfield (2009, 2010) finding that perceptions of neighbourhood safety and neighbourhood belonging had an impact on the outcomes of children aged four to five years.

Against such findings are studies that suggest that neighbourhood effects, if they exist at all, are relatively small and perhaps subordinate to other contexts, such as school characteristics (eg. Brannstrom, 2008). Other studies have employed a range of techniques to consider whether there is a causal relationship between neighbourhood characteristics and young people's outcomes, and find associations but no causality (eg. Gibbons, Silva and Weinhardt, 2010). Thus the extent and nature of neighbourhood effects on young people is unresolved. However, there are a number of reasons why it is still important to consider whether neighbourhoods or local areas might affect young carers' outcomes.

First, young carers are known to face specific challenges in education and employment participation, which may be more susceptible to being affected by local area characteristics. Research shows that young people with caring responsibilities often experience difficulties at school, such as missing days, completing assignments, and a lack of concentration due to fatigue associated caring responsibilities (Cass *et al.*, 2009; Dearden and Becker, 2002; Hill *et al.*, 2009; Moore, McArthur and Morrow, 2009). These elements culminate in overall lower levels of educational attainment compared to their peers (Dearden and Becker, 2000; Hill *et al.*, 2009). The combined effect of a lack of educational qualifications and continuing caring responsibilities often results in disadvantage in the labour market (Dearden and Becker, 2000; Dearden

and Becker, 2002; Yeandle and Buckner, 2007). Young carers, especially those with the main responsibilities for support, are less likely to be engaged in employment in comparison to other young people, especially young women carers (Cass, *et al.*, 2009; Becker and Becker, 2008; Yeandle and Buckner, 2007; Hill *et al.*, 2009). Carers are also more likely than their peers to be non-participants in either employment or education (Hill *et al.*, 2009).

Second, the existing research on young carers has highlighted inequalities in young carers' outcomes based on broad geographical divisions and a number of key local factors that may be influencing participation, such as access to transport and services. Young carers in regional and remote areas had lower rates of Year 12 completion, higher rates of non-participation in study or employment, than young carers in the cities, especially female carers (Dearden and Becker, 2002; Hill *et al.*, 2009). Edwards *et al.*, (2009) also identifies that young people make up a greater proportion of carers in very remote areas of Australia and that carers in these regions will have greater difficulty accessing services. UK research investigating the experiences of young carers living in rural locations also found that young people had difficulties accessing appropriate services and support due to transport and isolation (Becker and Becker, 2008b; CRC, 2010).

Third, the nature of local social processes may have specific impacts on young carers. For example, previous research has suggested that stigma related to the caring role, such as fear of being perceived as different from their peers and concerns about bullying, particularly at school, are factors preventing young carers from self-identifying and receiving formal supports (Becker and Becker, 2008a; Hill *et al.*, 2009). In turn, the lack of services and support may prevent young carers from participating in employment and education (Becker and Becker, 2008a; Hill *et al.*, 2009). This raises the questions of whether the experience of stigma related to caring is likely to be different for young carers in different types of areas and whether such factors then differentially affect employment and education outcomes.

Fourth, perceptions and experiences of neighbourhood may be different for young people and young carers living in the same area. Guo and Bhat define neighbourhood characteristics as 'the things that matter to people over the area that really matters to people' (2007, p. 31). This highlights the question of whether young carers' sense of neighbourhood may be different and possibly more constrained than other young people. For example, services that support young carers may be an important part of their local landscape, and this will not be the case for other young people, but young carers may also be constrained by lack of transport and so have a limited sense of spatial horizons for social and economic participation.

Fifth, recent policy concerns over young people's non-participation in education or employment have gained a high priority within the Australian Social Inclusion Agenda (Australian Government, 2009). However, Australian analyses of young people who are not in education, employment or training have not to date specifically referred to informal care as a reason for non-participation. An analysis of the main activities of young people aged 15-24 years who were outside the labour force and not in full-time education over the period 1999-2003, using data from the Longitudinal Surveys of Australian Youth (LSAY), shows that in 2003, home duties or childcare accounted for 80 per cent of activities identified for young women and 20 per cent for young men (Hillman, 2005).

The research to date is suggestive of a number of important theoretical and empirical gaps in our knowledge that have implications for policies for young carers. Research is yet to explore the distribution of young carers by local areas, such as Local Government Areas (LGAs), and particularly local areas of different characteristics within the major cities. Research is still to consider the implications of the spatial distribution of young caring for young carers' education and transitions into further study or employment and whether there are spatial inequalities in young carers' educational and employment outcomes vis a vis their non-carer peers.

We are yet to identify any studies of local area effects on young carers in the literature, of either the specific nature of social processes that affect young carers or the extent of such effects. General local area factors might affect all young people and their education and employment participation. In addition, there may be specific social processes involved in the caring role that may also be affected by area characteristics. The approach in this paper aims to address a number of gaps in the existing literature and provide the foundations for future research. The analysis adopts a geographical spatial definition of neighbourhood or local area, using Local Government Areas (LGAs) as the unit of analysis. This approach is employed as we are examining existing data from the Census and LGAs that could be considered to map administrative boundaries which are indicative of local service provision. In addition, they are used as a proxy for local educational opportunities and local labour markets. Drawing on the mechanisms outlined in table 1, the analysis that follows proposes a number of local area factors that might affect young carers' outcomes and conducts exploratory tests of association.

3. Census Data and Limitations

The data used for this analysis is the ABS Census of Population and Housing 2006. Young carers were young people aged between 15 and 24 years who responded positively to the question about the provision of unpaid care, help or assistance on the Census form which was:

In the last two weeks did the person spend time providing unpaid care, help or assistance to family members or others because of a disability, a long-term illness or problems relating to old age?

There are a number of limitations and caveats that must be borne in mind when interpreting Census data. Maps generated from Census data are not perfect representations of the situations for the populations of young people and young carers in the regions. There are a number of reasons for this including:

- The undercount of young carers in the Census compared with the ABS Survey of Disability Ageing and Carers (SDAC), which is due to differences in survey data collection methodology and the questions used to define carers.
- Second – as a predominantly self-completion survey the Census has higher levels of non-response than other surveys and to the carer question.
- Third, cells which have small numbers are likely to be unreliable due to the randomizing that the ABS undertakes to ensure confidentiality. LGAs with 20 cases or less have been removed from the analysis.
- Finally there is the issue of interpreting Census data from remote communities and important questions about the relevance of the Census process and categories to

the circumstances of Indigenous populations in remote communities (see Morphy, 2007a, 2007b; and Morphy, Sanders and Taylor, 2007). Thus data from remote areas should be interpreted with caution.

Characteristics of Young Carers

Across Australia, the Census identifies around 120,000 young carers aged 15-24 years or around 4.6 per cent of young people, which is significantly lower than the estimate by the SDAC.

At the aggregate Australian level the data show that young carers:

- are less likely to complete Year 12 or non-school qualification than non-carers;
- have lower rates of labour force participation and higher unemployment rates; and
- are more likely to be not participating in either education or employment.

However, spatial analysis of the young carer disadvantage in education and employment outcomes is yet to be undertaken.

Measures of Disadvantage

In examining geographical variations of young carer disadvantage in areas we have chosen to identify 'gaps' between young carers and non-carers rates of participation in each area rather than simply young carers' rates of participation. This is because maps identifying rates of participation will show areas where young carers are worse off compared with other young carers in other areas, but would not identify areas where they were relatively worse off compared with other young people in their area.

The variables we examine are:

- Gaps in the rates of participation in study between carers and non-carers – which has important implications for young carers' future chances in employment and their preferred careers.
- Gaps in unemployment rates – which are important indicators of the extent to which young carers may wish to work but may not be able to do so. This may be due to restricted job choices because of a lack of flexibility of jobs and also constraints due to lack of support in their caring role.
- Gaps in the level of non-participation in either education or employment – which may have serious implications for the young carers' future prospects and transitions into adult roles in the labour market.

Analytical Approach

The analysis has two components: First we undertake descriptive spatial mapping by LGAs for the whole of Australia, to enable broad comparisons between remote, regional and urban areas, and then to identify differences within a major city to look at the impact of differing area characteristics for young carers in urban populations. The descriptive analysis explores the location of young carers by mapping the rates of caring in the young person population for Australia and Sydney, which is used as an urban case study. Maps of the urban prevalence of young carers in Sydney are compared with the socio-economic status of those areas to highlight the association between young carers and economic disadvantage or what might be regarded as evidence of a 'social gradient of caring' similar to the 'social gradient of disability' described by AIHW (2009). This section then proceeds by mapping the young carer disadvantage on the three variables for the whole of Australia and the Sydney region.

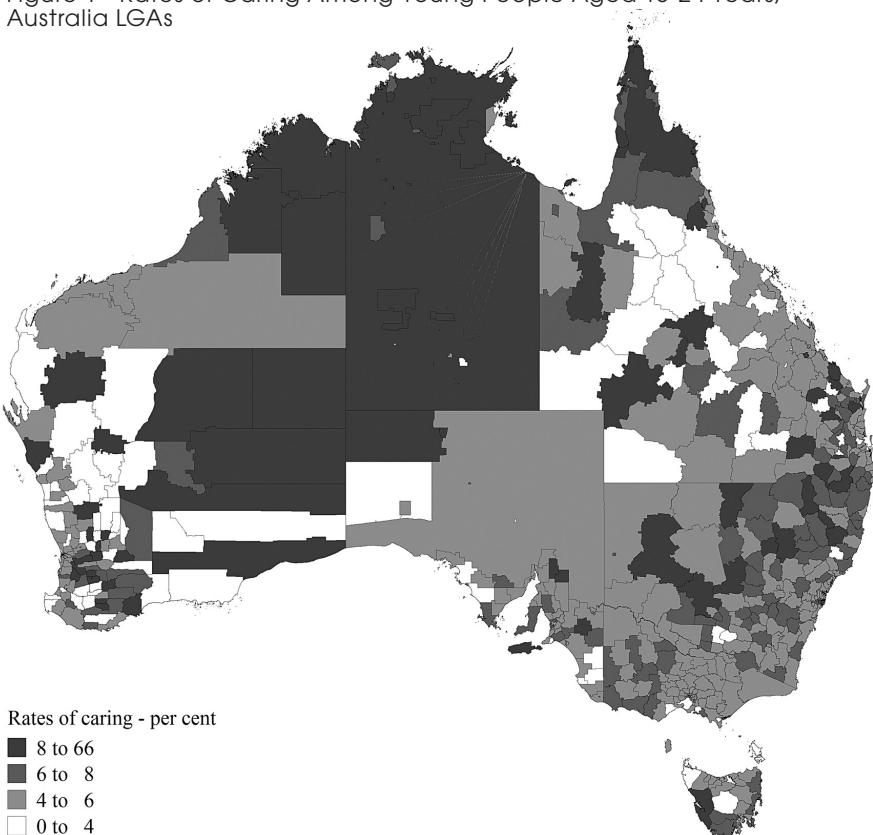
In the second component we conduct exploratory analysis of the variations in young carers' disadvantage across the whole of Australia on our key outcome variables compared with a number of area characteristics that could be considered to relate to mechanisms or social processes outlined in table 1. This analysis aims to identify whether there are any associations with area characteristics and greater disadvantage on our outcome measures.

5. Results

Where Do Young Carers Live?

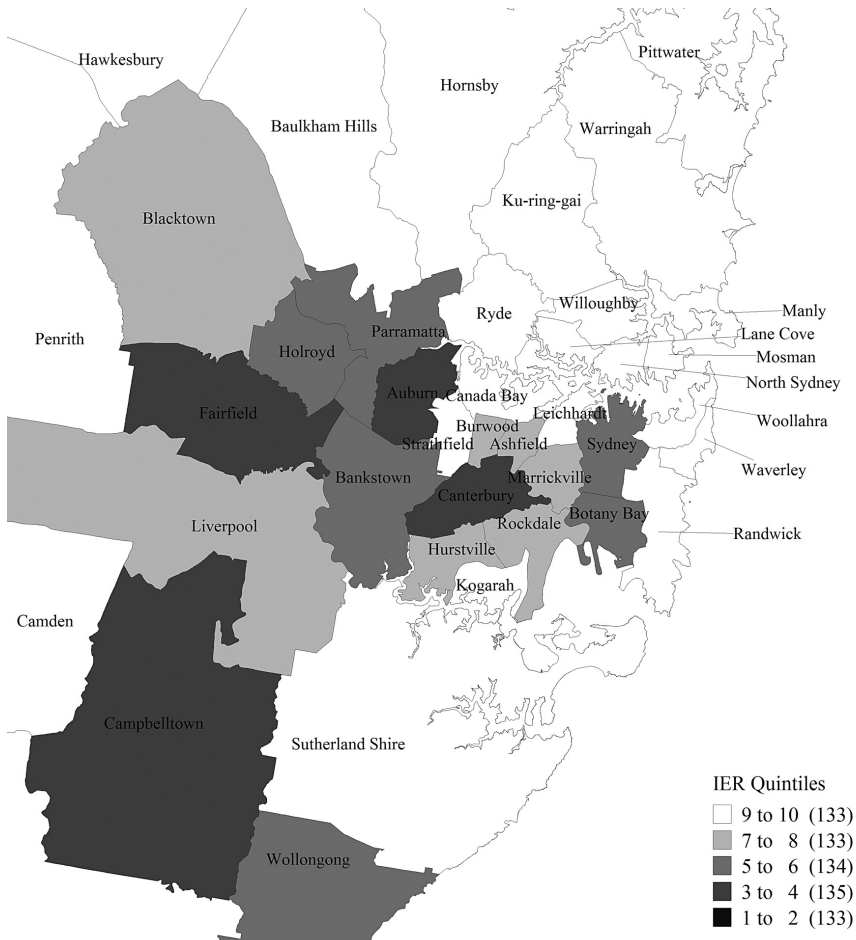
Figure 1 shows the distribution of young carers across Australia by LGAs. The proportion of young people who provide care in the LGAs across Australia ranges from zero to over 20 per cent of young people in other areas, although some rates must be regarded with caution given the randomising that occurs with Census data. Broadly speaking the LGAs with relatively higher rates of young people caring (over eight per cent) are in the regional and remote areas. None of the major cities have LGAs where more than eight per cent of young people are carers.

Figure 1 - Rates of Caring Among Young People Aged 15-24 Years, Australia LGAs



Source: ABS Census of Population and Housing 2006, Authors' calculations

Figure 2 (continued) - Where Do Young Carers Live in the Economic Landscape of a Major City?



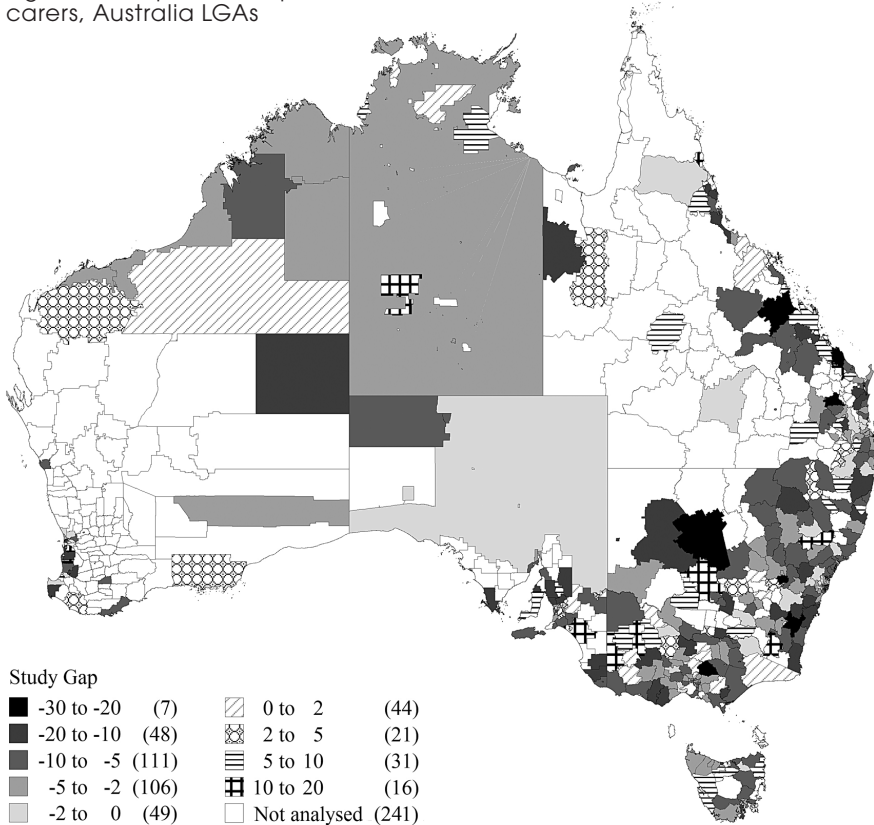
Sources: ABS Census of Population and Housing 2006, Authors' calculations, ABS Socio-Economic Indexes for Areas (SEIFA), Data cube, 2006, catalogue 2033.0.55.001

Education Disadvantage

Figure 3 investigates our first measure of young carer disadvantage. It shows the gaps in participation in education for young carers compared with non-carers by LGAs across Australia. The gap is calculated by subtracting the education participation rate for young carers from the education participation rate for non-carers, so that larger negative numbers are indicative of greater carer disadvantage. In all the maps that follow, shaded areas indicate where young carers were disadvantaged, with darker areas showing a higher degree of disadvantage, while patterned areas indicate where young carers were more advantaged than their non-carer peers. There were mixed findings with respect

to this measure of disadvantage, with young carers having higher rates of participation than their non-carers peers in some areas. However, in the majority of LGAs under consideration (74 per cent) young carers had lower rates of participation in education. Across Australia, no clear patterns of disadvantage or advantage for young carers emerged when comparing the city LGAs with those in the regions. However, Australia wide, the regions of most disadvantage (young carers with a 20 to 30 percentage point lower rate of participation in education) were outside of major cities.

Figure 3 - Gap in Participation in Education Between Carers and Non-carers, Australia LGAs

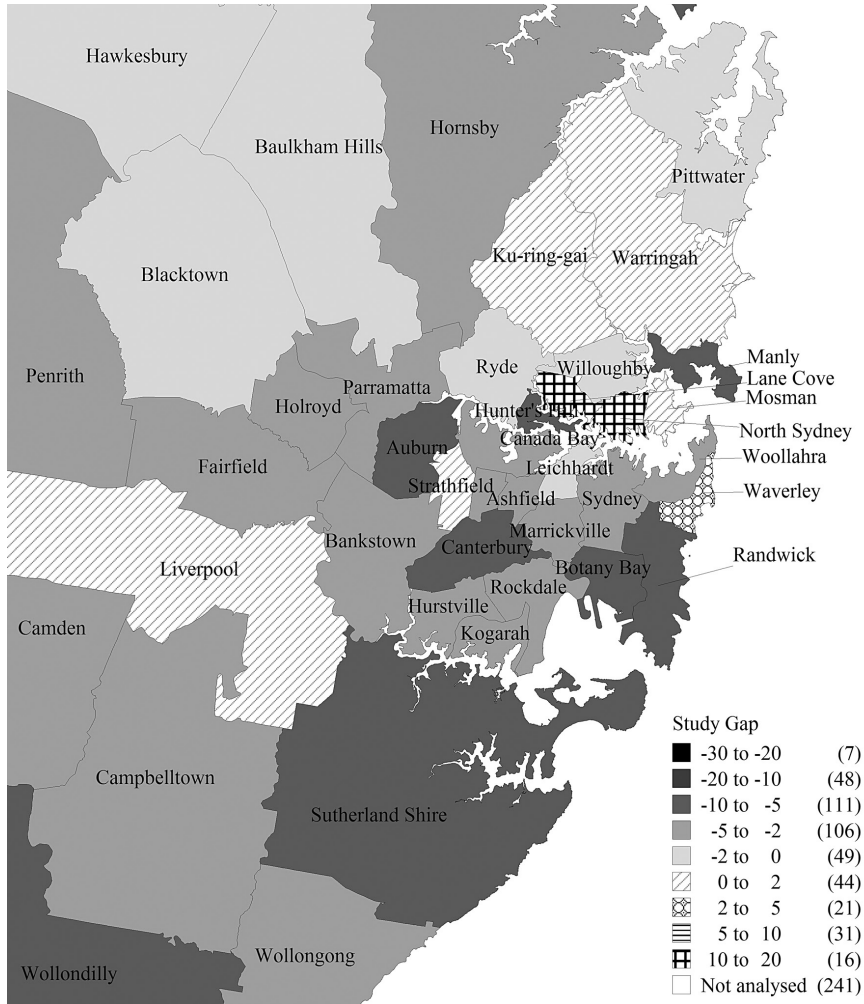


Source: ABS Census of Population and Housing 2006, Authors' calculations

Figure 4 provides a closer examination of the education participation gap in LGAs in the Sydney region. In this region, no LGAs had a young carer disadvantage over 10 per cent, although a number had a five to 10 percentage point disadvantage (Auburn, Canterbury, Botany Bay, Hunter's Hill, Randwick, Manly and Sutherland Shire). The education disadvantage for young carers did not readily map to the economic disadvantage of regions described by the IER in figure 2. In a number of LGAs in Sydney in the more economically affluent areas, young carers were more likely to participate in education than their non-carer peers (10 to 20 percentage points North Sydney, one to five percentage points Warringah, Mosman, and Waverley).

However, in one other less economically affluent area, Liverpool, young carers had rates of study participation slightly higher than their non-carer peers. In some other less affluent areas (eg. Blacktown) the rates of young carer disadvantage were relatively low. Therefore no clear patterns related to local area emerge at this point.

Figure 4 - Gap in Participation in Education Between Carers and Non-Carers, Sydney LGAs



Source: ABS Census of Population and Housing 2006, Authors' calculations

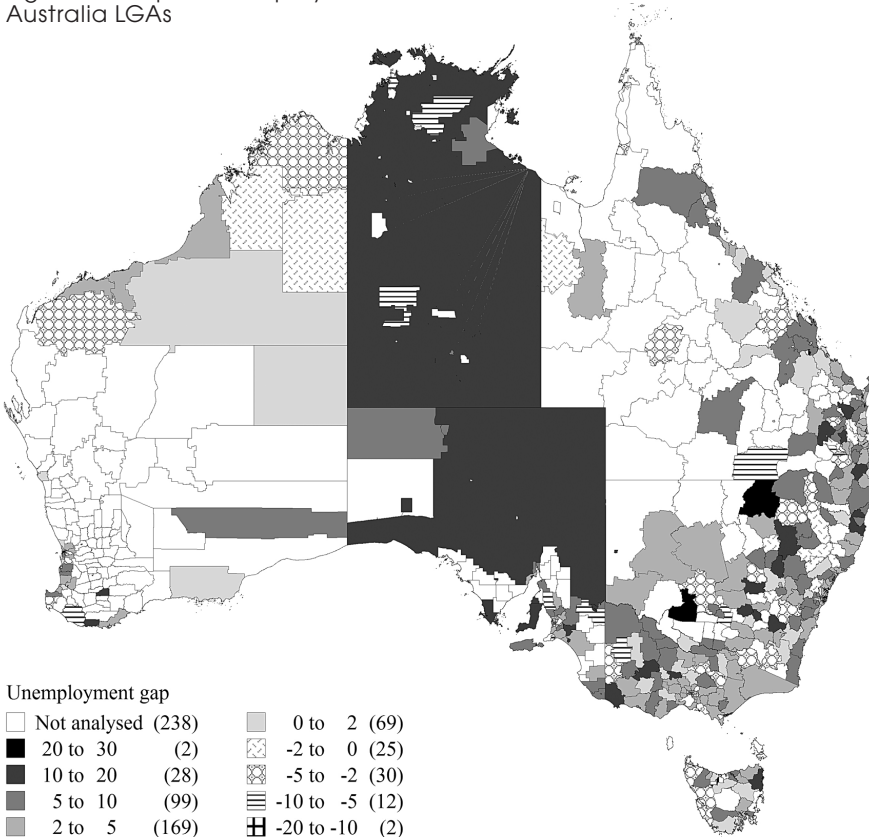
Unemployment Rates

Unemployment rates reflect the extent to which young people wish to engage in paid work and are looking for work but unable to find suitable employment. There may be a number of reasons for unemployment to be a particular feature of young carers'

circumstances when compared to the non-carers in their area. Young carers may have lower levels of human capital due to interrupted schooling or work histories due to care responsibilities. Higher unemployment rates among young carers could reflect difficulties in finding appropriately flexible employment in order to manage care responsibilities. Care responsibilities may also restrict young people's job choice due to the need to find paid work in relatively close proximity to their home.

Figure 5 shows the variations in gaps in unemployment between young carers and non-carers for LGAs in Australia. Gaps are calculated by subtracting the unemployment rates of non-carers from the unemployment rates of young carers. Advantage and disadvantage for young carers on this measure occurred in both the regional and metropolitan areas, although in 84 per cent of the LGAs considered in the analysis young carers had higher unemployment rates than their non-carer peers. Few metropolitan areas had unemployment gaps for young carers that were over 20 percentage points, indicating that nearly all the areas where young carers were most disadvantaged with respect to wanting to be in paid work but being unable to find suitable employment were outside of major cities.

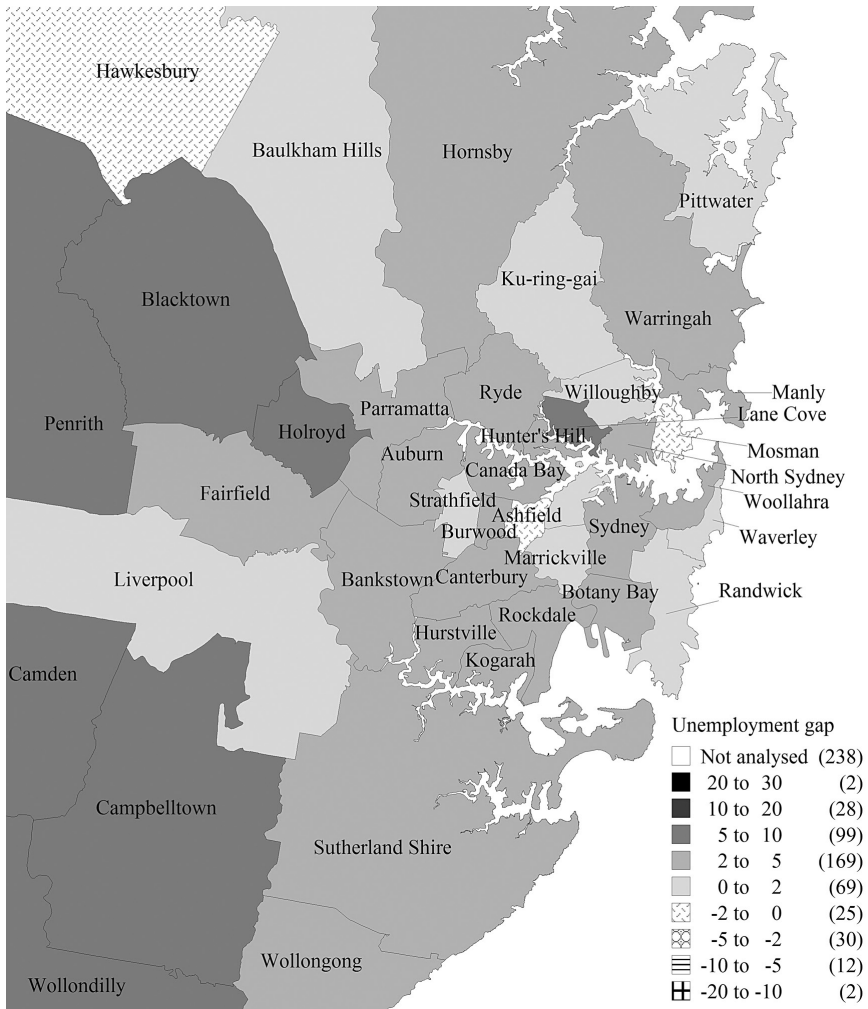
Figure 5 - Gap in Unemployment Rates Between Carers and Non-Carers, Australia LGAs



Source: ABS Census of Population and Housing 2006, Authors' calculations

Employment possibilities for young people and young carers are likely to vary within major cities due to variations in demand in local labour markets. In Sydney, young carers had unemployment rates that were higher than their non-carer peers in nearly all LGAs, particularly more economically disadvantaged areas (figure 6). In only three LGAs in Sydney, Mosman, Hawkesbury and Ashfield, did young carers have lower unemployment rates. The two LGAs where young carers were most disadvantaged were Blacktown, Campbelltown, Penrith, Camden, Holroyd and Lane Cove, where young carers had unemployment rates that were five to 10 percentage points higher than their non-carer peers.

Figure 6 - Gap in Unemployment Rates Between Carers and Non-Carers, Sydney LGAs

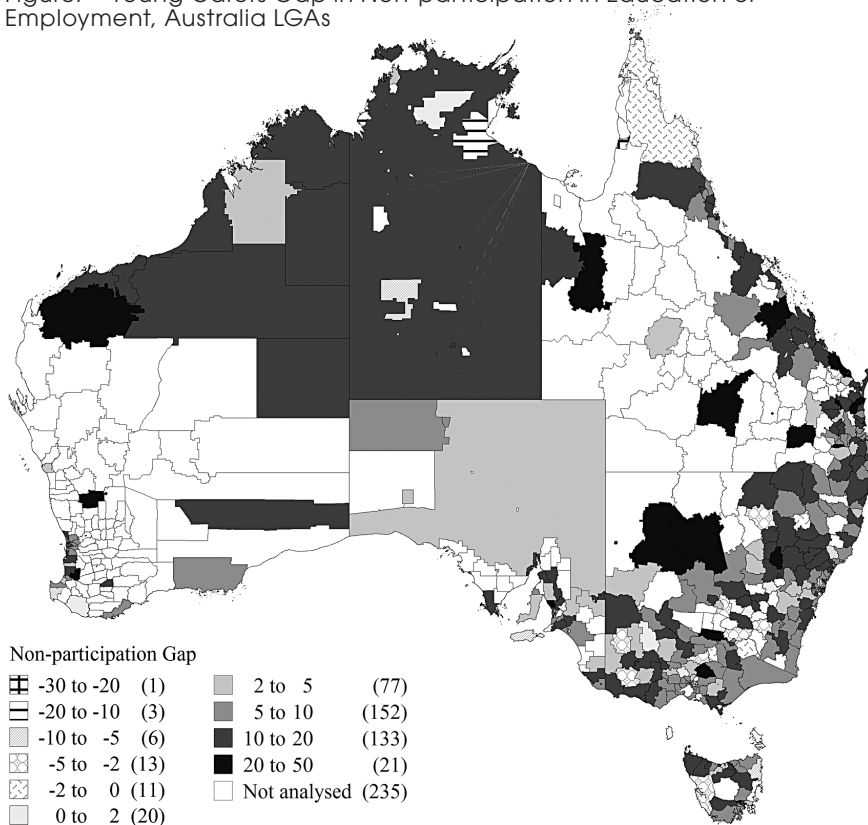


Source: ABS Census of Population and Housing 2006, Authors' calculations

Non-participation in Education or Employment

The impact of informal care on young people's futures may be most profound if they are unable to participate in either education or employment at the crucial stage of transition from high school to adulthood. Figure 7 shows the gaps in rates of non-participation in either employment or education for young carers compared with their non-carer counterparts. In the majority of LGAs in Australia, young carers had higher rates of non-participation than their non-carers peers (92 per cent of LGAs). While advantage and disadvantage for young carers were distributed in both metropolitan and regional areas, once again, most of the LGAs with higher rates of disadvantage for young carers were in the regional areas rather than the cities.

Figure7 - Young Carers Gap in Non-participation in Education or Employment, Australia LGAs

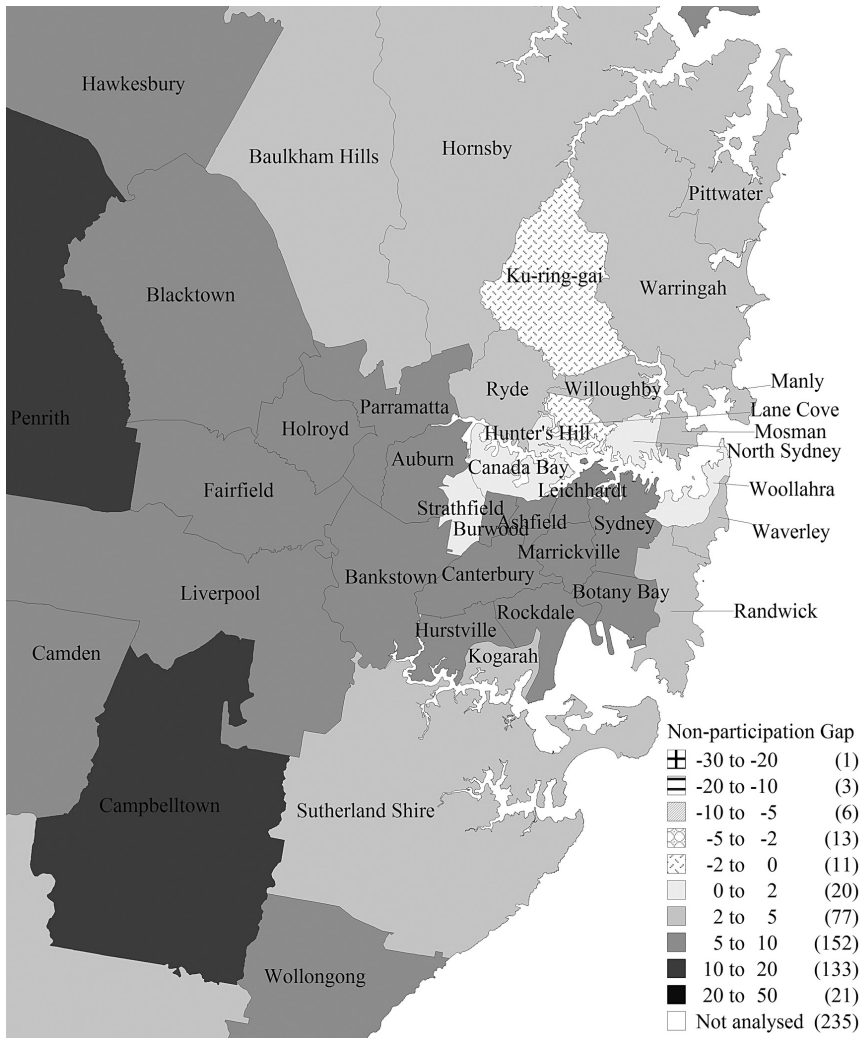


Source: ABS Census of Population and Housing 2006, Authors' calculations

In Sydney, young carers had lower rates of participation in education or employment than their non-carer peers in all areas except the LGAs of Lane Cove and Ku-ring-gai (figure 8). Young carers were most disadvantaged in the LGAs of Penrith and Campbelltown where they had rates of non-participation which were 10 to 20 percentage points higher than their non-carer counterparts.

These maps of young carers disadvantage with respect to education, unemployment and non-participation in education or employment suggest that there are local area variations in the degree of disadvantage experienced by young carers vis a vis their non-carer counterparts. Across Australia it is evident that young carers in regional and remote areas experience greater disadvantage than their urban counterparts, and yet within a major city such as Sydney significant differences also exist. The next section undertakes some exploratory analysis to consider whether some local area characteristics might be associated with the outcomes for young carers.

Figure 8 - Young Carers: Gap in Non-participation in Education and Employment, Sydney LGAs



Source: ABS Census of Population and Housing 2006, Authors' calculations

Neighbourhood Area Characteristics and Young Carer Disadvantage

Census data provides the opportunity to explore characteristics of local areas that might affect young carers' outcomes in education and employment. Six aspects of areas which may be related to some of the social processes discussed in table 1 are considered. The ABS employs Census data to construct a number of indices of socio-economic status. The ABS IER (mapped for Sydney in figure 2) is developed from 15 variables relating to access to economic resources of people within areas, such as household income and home ownership, (ABS, 2008a). The index ranks areas by relative advantage/disadvantage across percentiles with higher percentiles indicating higher advantage on this measure. Within the framework of local area processes outlined in table 1, the IER identifies a concentration effect – identifying areas with higher proportions of households with low access to economic resources. Concentration effects may operate through stigmatisation of areas to affect employment prospects, crowd out opportunities for particular types of jobs and training, and restrict access to diverse social networks.

A second important measure to consider is the average human capital of the local area, which may affect social norms and expectations about education and career and may indicate the types of role models in the area. The measure used in this case is the ABS Index of Education and Occupation (IEO) of an area which ranks areas according to average educational achievement and occupational levels. The IEO could be regarded as a proxy measure for a socialisation effect in that it may represent norms and values about educational and occupational achievement in an area. It could also be considered indicative of a milieu effect by possibly foregrounding different types of social capital and social networks associated with higher proportions of people in an area engaged in different occupations and with different educational achievements.

A third area characteristic to consider is local unemployment rates which may provide an indication of local area employment demand, a possible location effect, and employment norms, which could be regarded as a concentration effect. Higher general local unemployment rates may be experienced by young carers in particular ways if jobs in near proximity or with more flexible hours are scarce or more sought after.

Previous research has indicated that young carers in lone parent households may face additional caring roles in the absence of other adults (Hill *et al.*, 2009). The patterns of household composition in an area may also indicate patterns of disruption and stability in household formations, which may influence patterns of caring for young people. Thus a fourth element to consider is the proportion of households in an area which are lone parent households. This element may be regarded as a concentration effect in relation to the average level of within-household support a young person and young carers may receive and also the average level of resources available to such households, where only one adult is available for employment. Such support and resources may be crucial to the capacity of young carers to remain in education or employment.

The cultural diversity of an area is a factor that may affect the support and practices of caring within households and the ability to combine education or employment with care for young people. In this regard it is salient to note that analysis of the 2006 Census shows that a higher proportion of young people who spoke languages other than English at home provided informal care compared with

young people of non-Indigenous English-speaking backgrounds (Hill *et al.*, 2009). Researchers have also suggested that young carers from culturally diverse (CALD) backgrounds face additional challenges in accessing appropriate services (Cass *et al.* 2009), however, little is known about the support that might be available for young people of CALD backgrounds within their own extended family and local networks. A measure of the proportion of all young people in the area who speak a language other than English at home is used to consider if this characteristic influences young carer outcomes. This factor relates to both concentration and service effects by indicating the proportion of household who may have limited access to services due to lack of culturally appropriate services. It also possibly relates to socialisation effects if cultural norms about caring, education and employment differ within CALD communities.

Finally, a key element in supporting young carers in their caring role will be their access to services for themselves and the person they care for within their local area. The availability and quality of these services may reduce the time required for young people to provide care. As services are an element for which no local area measures exist in the Census, we employ an experimental proxy measure of the proportion of young carers who report relatively higher level of domestic work in their households in each area. This indicator functions as a loose proxy for the average intensity of caring required and level of support available for the caring role and the person with disability. Previous Australian research has indicated that an increased contribution to domestic work is a marker or the 'time signature' of carers or the time effort required in the caring role (Bittman *et al.*, 2004). While this is far from ideal as a measure, we reiterate the exploratory nature of this exercise.

Table 2 reports on the associations between the young carer outcomes for the area and the local area (LGA) characteristics. Significant associations, although weak, are found for most of these factors and the degree of young carer disadvantage. Higher economic resources (ABS IER) in the area were associated with lower average levels of disadvantage for young carers with respect to unemployment and non-participation in education and employment, but not related to participation in education, reiterating the mixed findings in the maps in the previous section. This finding suggests that economically disadvantaged areas are those in which young carers are most disadvantaged with respect to employment. Thus concentration effects with respect to resources may be most strongly related to employment, rather than education, participation for young carers.

Higher levels of human capital within an area – measured by education and occupational levels – were negatively related to participation in both education and employment disadvantage for young carers. This finding may be suggestive of socialisation and milieu effects, with the concomitant social capital effects, having an influence on young carers' participation in education and employment through social networks and values and norms.

Higher local unemployment rates were associated with greater young carer disadvantage highlighting possible location effects through lack of local opportunity structures or possibly a lack of social networks to facilitate access to jobs. A higher proportion of lone parent households in an LGA were also relatively weakly associated with higher carer disadvantage in all outcome measures, perhaps indicative of

concentration effects leading to an overall relative lack of social and familial support for young carers in specific areas.

Table 2 - Associations between Local Area Young Carer Disadvantage and Local Area Characteristics

	<i>Study Gap</i>	<i>Unemployment Gap</i>	<i>Not in Education or Employment Gap</i>
ABS Index of Economic resources	-.09	-.17*	-.19*
ABS Index of Education and Occupation	-.16*	-.16*	-.34*
Unemployment rate	.18*	.25*	.17*
Proportion of lone parent households	.16*	.19*	.24*
Proportion of young people speaking a language other than English at home	-.16*	-.14*	-.21*
Proportion of young carers taking on more than 15 hours per week in domestic work	.21*	.12*	.46*
Number of Areas considered	432	435	438

Sources: ABS Census of Population and Housing 2006

ABS Socio-Economic Indexes for Areas (SEIFA), Data cube, 2006, catalogue 2033.0.55.001

Notes: * denotes significant association $p < 0.05$ Spearman correlation coefficient. Gaps are measured so that higher values are indicative of more disadvantage

Perhaps counter-intuitively, a higher proportion of young people in the areas of CALD background was associated with lower levels of young carer disadvantage. This finding may suggest that young carers in these communities have greater familial, community or formal service support, both for their caring roles alongside their education and employment participation. Or it may be indicative of norms and values about education and employment within some CALD communities.

The broad brush time use measure for young carers had generally stronger with education and employment participation than the other measures and suggested that areas where a higher proportion of young carers contributed relatively long hours of domestic work were associated with greater young carer disadvantage on all measures. This measure was proposed as indicative of access to local support services for the caring role and the person with disability. Thus a lack of service supports may be one explanation for this association. However, the time spent in domestic work may also be indicative of the intensity of care required, a factor not controlled for in these analyses, but which could be explored in future analyses.

The data analysis in this paper has provided descriptions of patterns of geographical variation in young carers' outcomes and explored some local area factors that might be associated with the average levels of education and employment disadvantage for young carers. These preliminary explorations must be treated with significant caution as the findings are associations that may be confounded by the presence of other unmeasured mediating factors. Thus a fuller analysis of compositional (individual, family, household) and the contextual (local area) factors

would be required to identify potential causal relationships between local area factors and young carers' outcomes. However, the results are suggestive that area characteristics matter for young carers and that further research is warranted.

The existing research and these findings also suggest a need to consider and explore how opportunity structures for young people and young carers may be differently constructed within communities. Witten *et al.* (2003) have developed indicators of locational access to community resources in which they draw on a notion of 'spatiotemporal' accessibility. This notion refers to 'spatial and temporal constraints on an individual' (Witten *et al.*, 2003, p. 167). In the case of young carers, this concept may provide useful insights into how, given their time constraints due to caring, they are able to use their local and surrounding areas for social and economic participation. For example, a young carer who is given respite support for a couple of hours may or may not be able to use this time to take part in a sporting match or undertake some part-time work depending on the efficiency of local transport infrastructure. In these ways, the characteristics of local areas may make crucial differences to young carers' lives. Such concerns have motivated this investigation into the specific ways in which neighbourhoods might matter for young carers.

Ideally, research on the impact of neighbourhood or local area on young people and young carers would address both geographical and subjective perceptions of boundaries and would employ quantitative and qualitative mapping techniques. Quantitative mapping techniques would encompass identification of characteristics of the areas based on Census and administrative data on available services and facilities. Quantitative approaches would also use spatiotemporal accessibility mapping techniques that identify the capacity of individuals to engage in specific activities in and out of their local area (Witten *et al.*, 2003). Qualitative mapping techniques would explore factors such as the subjective perceptions of areas, access, use and experiences of infrastructure and services and perceptions of safety. For example, Coulton (2005) describes a range of approaches to generating 'socially meaningful' definitions of neighbourhood by asking residents to draw on a map their view of their neighbourhood and by examining patterns of intersecting pathways or streets that may provide opportunities for social interaction. Other approaches could draw upon links between young people's biographies and the everyday experiences of their lives to understand connections to place and the daily experience of constraints, exploring what White and Green refer to as the 'local geography of ... everyday life' (2011, p. 49).

6. Conclusion

This paper has explored the issue of whether local areas or neighbourhoods are likely to be associated with young carers' education and employment outcomes. Research evidence exists on the impact of caring on outcomes for young people who provide support to a person with disability or a long term health condition and the impact of location on young peoples' participation in education and employment.

This study described the geospatial distribution of young carers and the spatial variation in young carers' outcomes across Australia and within Sydney, as an urban case study. The results indicate a higher rate of caring amongst young people living outside major cities and suggest that young carers in regional and remote areas may be especially disadvantaged compared to their peers. Spatial inequalities across Sydney suggest that, within major cities, the experience of young carers may vary significantly

with regard to the relationship between their caring roles and their participation in education and employment. The analysis found cross-sectional associations between greater young carer disadvantage and a range of local area factors, including lower economic resources in the area, lower human capital in the area, higher unemployment rates in the area, higher rates of lone parent households and average time spent caring. However, further quantitative and qualitative research, encompassing multilevel modelling and research documenting subjective perceptions of neighbourhood and neighbourhood processes, and the other contexts – school, work and social networks – would enhance the capacity to identify if local area factors have a causal relationship to the disadvantage experienced by young carers.

This study has explored theoretical issues about why local areas or neighbourhoods might matter for young carers. Key aspects of the caring role identified in previous research – reduced time for school, work, friendships, leisure and other activities, social isolation, need for support from formal services and lowered access to transport and economic resources – suggest that where neighbourhood effects exist, they may have both a greater and different impact on young carers compared to other young people.

The Australian Government's Social Inclusion statement *A Stronger Fairer Australia* (Australian Government, 2009) emphasises the importance of developing policies to address 'disengagement' and non-participation in education and employment by young people, but does not identify family caregiving as one of the possible reasons for non-participation. This current study suggests that providing informal care may be an important component of non-participation in education, employment or training and therefore young carers may require specific and locationally targeted policies and support for education and training re-entry, labour force participation and employment support, which take account of their caring responsibilities.

As Andrews *et al.* (2002) note, for spatially targeted policies to be effective requires an understanding of the mechanisms or social processes that underpin disadvantage and thus addressing such issues as alternate role models, lack of information, neighbourhood services and infrastructure and overall spatial inequalities. For example, if lack of human capital in an area leads to a lack of role models, then programs which link young carers to mentors who provide support for increasing young carers' aspiration and goals could be one approach. If lack of information and networks to support entry into jobs is identified as a problem, programs could target schools to support young people to be brokered into employment. If a lack of transport for young carers is identified as a problem then it is possible that services attending to the person receiving care could also identify and aim to meet such needs of the young carer. In addition, governments could review the adequacy of infrastructure supports in meeting young carers' transport needs for their employment and social participation. Policies aiming to reduce spatial inequalities more generally will also help prevent location from over-determining young carers' outcomes. Overall, a key element will be to identify the ways in which services and local infrastructure can support young carers to balance their multiple responsibilities, improve their education, training and employment opportunities and participation, irrespective of where they live.

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