

The attractiveness of Australia's rural and remote spine for health professionals 2001–11

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Abstract

The purpose of this paper is to examine the characteristics of health professionals who migrated to rural and remote South Australia and the Northern Territory (Australia's 'spine') between 2001 and 2011. Data from the Census of Population and Housing are analysed for evidence of the impact of major events of that period (drought, mining boom, Northern Territory Emergency Response, Global Financial Crisis etc.) on migration patterns and evidence of life course and personality influences on those who migrated into the spine, and where they chose to work. The paper argues that life course and personality are somewhat neglected factors in research into recruitment and retention of rural health professionals, and the evidence from the Census provides some insights into how a more comprehensive life course, personality, and migration model might be constructed and examined.

Introduction

The first decade of the 21st Century was a time of great change in the rural and remote parts of South Australia and the Northern Territory (Australia's 'spine'). The southern parts were affected by one of the worst droughts on record, leading to substantial demographic change as farm labour and many farming families left the land, and rural communities struggled to thrive under intense economic pressure[1]. Some central and northern parts experienced mining booms, bringing large numbers of temporary, fly-in/ fly-out and longer term populations to specific communities[2]. There was an intensification of the focus on Indigenous health particularly in the Northern Territory following the 2007 Northern Territory Emergency Response[3]. Later in the decade, the Global Financial Crisis and the politics of water management led to changes in the economic foundations of many communities.

These events had the cumulative effect of changing the nature of demand for health professional services in the spine. The drought and economic challenges in the south resulted in a great deal of social and personal stress and an associated increase in demand for health services[4]. The mining boom resulted in a substantial redistribution of the population and substantial population growth in some areas, demanding the redeployment of health professionals. The new Indigenous policies included initiatives to increase the presence of health professionals in remote communities in particular[5].

As the spine has experienced substantial demographic, economic and political change over the past decade, policies and incentives designed to attract and retain health professionals in the region have continued in various forms. There have also been decisions made about the locating of various levels of health service infrastructure (hospitals, remote clinics etc) that will have influenced not just who migrates to rural practice, but to where they specifically migrate.

The total number of health professionals (defined as people whose occupation was classified as one of the 'health professions' according to the Australian and New Zealand Standard Classification of Occupations) living in the 'spine' grew by more than 25% between 2006 and 2011 alone, and the number of health professionals who moved in to the spine between 2001 and 2006 (2300 people) and 2006 and 2011 (3000 people) substantially outnumbered those who moved out (1500 and 1900 people). The purpose of this paper is to describe some of the characteristics of the health professionals who moved in to the region (and the specific places they moved to), and to assess whether there are lessons to be learned from this period of relative 'success' in developing recruitment strategies for the spine in future years and for other rural and remote regions generally.

The migration decision is at the heart of the rural and remote workforce recruitment process. Irrespective of the 'push' and 'pull' factors that particular locations exhibit for individuals considering migration, migration models identify a range of 'intervening obstacles' which facilitate or impede the act

of migration[6]. 'Intervening obstacles' are commonly identified in the rural health workforce literature as the barriers to moving to rural practice experienced even by professionals who would like to do so. Lack of work opportunities for the spouse, concerns about children's education, unwillingness to leave family and social networks, and concerns about quality or availability of housing are common 'intervening obstacles' for potential rural and remote recruits[7].

The migration literature recognises that the strength of 'intervening obstacles' for any individual changes throughout their life course, and that some individuals are less likely to be impeded by intervening obstacles than are others[8]. Consequently, in examining the characteristics of health professional migrants to Australia's spine, this research is specifically looking for evidence of migration associated with particular life course stages, and evidence of the 'migration personality'.

Life course is not simply a function of age, but of where a person is positioned within their life narrative. Life course events include leaving the parental home, preparing for a career, family formation, and retirement from work. They can also include returning to the family home, changing a career, and family dissolution (which is particularly important in stimulating mid and late career changes). There are, however, some broad common demographic ('life span') correlates with life course, which means that a standard demographic data set such as the Census can provide some insights into life course precursors for migration to rural and remote areas. Life course events encourage individuals to reconsider their life narratives, and provide a window within which critical life changes (such as migration) might occur[9].

There has been little overt consideration of the life course as a factor in health professional migration to rural or remote practice in the literature, with one recent study relating migration decisions to life course events of graduation from medical education, family formation, and previous migrations[10]. Nevertheless, it is clear from the literature that changes in the nature of the health professional life course overall present opportunities and challenges for recruitment to rural and remote areas. An ageing workforce is often seen as a challenge because historically rural and (particularly) remote areas have attracted professionals in the early stages of their careers ('early career escalator migrants' in the life course literature). However, workforce ageing has also led to the emergence of late career escalator migrants who are looking for increased financial or emotional reward as they approach retirement[11-12]. The increasing participation of women in traditionally 'male' professions and changing perceptions of how health professionals who are partnered or have families manage work and family responsibilities have been seen as presenting both opportunities and challenges for recruitment to rural and remote areas. They present opportunities because communities can more easily recruit health professional 'couples' however they also represent a challenge because of the need to have more flexible work environments and the prominence of concerns about children's education in the selection of practice locations[13].

There is a growing population of overseas born and overseas trained health professionals in Australia which presents opportunities for rural and remote locations (which can offer attractive visa arrangements) and challenges relating to cultural and social distance between health practitioners and the communities they service[14]. The longer periods of time being spent on education and training, and the increasing tendency to specialise have been seen as opportunities to increase exposure of professionals to rural practice during their education and to improve the professional recognition of rural and remote practice[15] and as challenges because of the increased likelihood that people will become embedded in the communities in which they are educated rather than seek new places to commence or continue practice[16].

Life course events do not automatically lead to migration, and many people do not migrate any substantial distance throughout their life course. The migration literature suggests the existence of a 'migrant personality' among people who are likely to choose migration as a mechanism for manipulating their life narrative[17]. The migrant personality is particularly relevant in cases where there are many alternative choices of migration destination, and there are sufficient resources for the

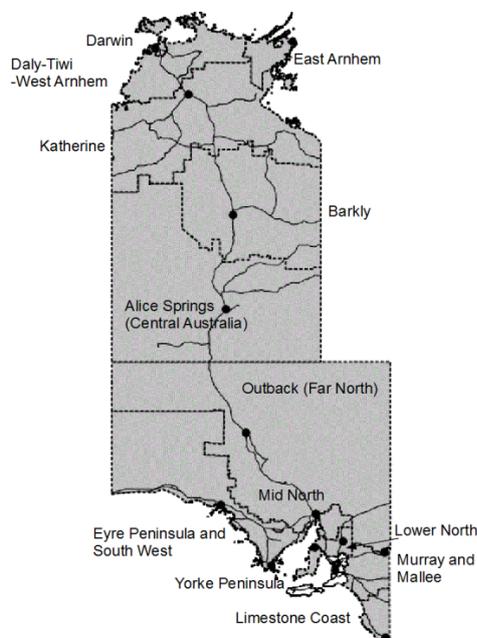
individual to consider migration. The migrant personality is particularly characterised by openness to new experiences, along with extraversion and conscientiousness[18-20]. These traits are largely consistent with what has been found in previous studies on the personality differences between rural and urban general practitioners, for example[21-24], but that research has yet to explicitly link personality traits to migration propensity.

Methods

Census data were used to explore evidence of life course differences in the population of health professional migrants to Australia's spine between 2001 and 2011, and to explore evidence of the presence of migrant personalities among those migrants. Census data do not allow a comprehensive examination of life course, personality, and migration, but they provide potentially valuable insights which can assist in further developing a life course and personality framework within which to improve our understanding of the nature of health professional migration to rural and remote areas.

Migration was examined by comparing the place of usual residence of health professionals five years prior to Census night (2001 for the 2006 Census and 2006 for the 2011 Census) and place of usual residence on Census night. 'Migrants' had changed their place of usual residence from a location outside of the 'spine' of Australia to a location within the spine. The spine was defined as any statistical region (statistical sub-divisions (SSDs) for 2006 Census and statistical area level 3 (SA3s) for 2011 Census) in the Northern Territory and South Australia excluding Adelaide and the immediately neighbouring statistical regions (see Figure 1). This definition excluded the Barossa Valley and the Fleurieu Peninsula and Kangaroo Island, but to include these would also have included parts of Adelaide's outer suburbs. Migration analysis also excluded people who moved from one part of the spine to another. It also excluded people who lived outside the spine, but worked in the spine (nearly 800 health professionals according to the 2011 Census) and included a smaller number (less than 200 health professionals according to the 2011 Census) who lived in the spine but worked elsewhere (mainly in Adelaide or in the north of Western Australia).

Figure 1 Australia's 'Spine' and Sub-Regions at Statistical Area Level 3 (2011)



Source: Created by the authors from data from the Australian Bureau of Statistics

The life course factors that were explored were age, migration from overseas (within ten years leading up to the Census), level of education qualification (as a proxy for career specialisation), and marital status.

Differences in life course impacts on migration were examined for men and women, and (separately) for medical and nursing professionals. Indigenous status was considered for the analysis, but the numbers of Indigenous migrants were very small (29 between 2001 and 2006 and 37 between 2006 and 2011). The research focused on three broad life span (age) categories which correlated to life course categories of 'early career' (between 20 and 34 years of age), 'mid career' (between 35 and 54 years of age) and 'late career' (55 years and older)[12].

The research identified 'highly mobile' people as those who had moved both in to and out of the spine according to the five year, one year, and Census night 'capture points' included in the Census. For the 2006 Census, for example, 'highly mobile' people had lived outside the spine in 2001, lived in the spine in 2005, and lived outside of the spine in 2006. The research analysed whether health professionals who were in the spine at the one year capture point were more likely to be highly mobile than health professionals who were in Greater Sydney (which has the largest population of health professionals in Australia and attracts the largest volume of health professional migrants) at that capture point. This indicator of high mobility is not a perfect one, but within the limitations of Census data provides a basis for comparison of people who moved multiple times in the five year period and those who did not.

The research also included analysis of the pattern of spatial distribution of migrants to the spine (i.e. the locations they selected to migrate to) to see if different sub-regions were more likely to attract professionals at different life course stages. The percentage of migrants to each sub-region in each life course category was compared to the overall percentage of health professional migrants to each sub-region. Sub-regions were favoured if a higher proportion of migrants in a category than of total migrants had moved to that region. This approach nullified the biases that would result from comparing total numbers of migrants which are greater to larger population centres, and to the Northern Territory which experiences much higher workforce turnover than does South Australia[25].

Results

The age distribution of health professional migrants to the spine reveals substantial attractiveness for those in their early career, with around half of all migrants between 2001 and 2006 and between 2006 and 2011 aged under 35 years. Early career workers were just 28% of total Australian health professional population in 2006 and 2011. The propensity of early career workers to migrate to the spine was similar among males and females.

Both mid career and late career professionals were under-represented among health professional migrants to the spine. Nearly 45% of migrants 2001-2006 were mid career, and 37% 2006-2011. In comparison, 56% of the Australian 2006 workforce and 51% of the 2011 workforce were in mid career. Similarly, late career workers were 7% and 11% of migrants to the spine in 2001-2006 and 2006-2011 respectively and 17% and 20% of the national workforce.

Mid career workers in particular became less likely to migrate to the spine during the decade, but migration propensities were only slightly higher among mid career workers who had been divorced, separated or widowed (male or female), or who had achieved post graduate education qualifications. About 17% of mid career health professionals across Australia were separated, widowed or divorced according to the 2006 Census, while 19% of mid career migrants to the spine were separated, widowed or divorced.

There was a small increase in the migration propensity of late career health professionals over the decade, and the increase was consistent for male and female professionals. About 12% of late career health professional migrants to the spine were widowed, separated or divorced, compared with 14% of late career health professionals across Australia generally.

Early career migrants were much more likely than other migrants to select Darwin and Alice Springs as destinations, and less likely to select smaller communities and more remote areas. The difference in

spatial distribution was particularly apparent when comparing early career and late career migrants. For example, between 2006 and 2011, late career migrants were 10% less likely to choose Darwin than were other migrant groups, while early career migrants were 5% more likely to choose Darwin than were other migrant groups. Overall, late career migrants chose a wider variety of destinations (the five most popular destinations accounted for less than 60% of migrants during both time periods) than did early career migrants (the five most popular destinations accounting for around 70% of migrants during both time periods). Mid career migrants were similarly distributed as were late career migrants.

Differences that may exist between male and female life course migration propensities were to some extent clouded by the gender and spatial bias of the various professions. In general, males were more likely to choose the larger urban sub-regions, but this may be related to the nature of their professions, with female medical professionals also favouring Darwin (18% more likely to migrate there) and Alice Springs (4% more likely). Nurses were far more evenly distributed, whether male or female.

Migrants to the spine were much more likely to have migrated to Australia from overseas in the previous ten years than were health professionals across Australia generally. Over 20% of migrants to the spine were recent overseas arrivals at the 2006 Census, and 32% at the 2011 Census. This compared with less than 10% of the total workforce in 2006 and 13% in 2011. Overseas arrivals were about 6% more likely to migrate to Alice Springs than were other migrants in the 2001-2006 period, but otherwise were similarly distributed. In the 2006-2011 period, overseas arrivals were not only more likely to migrate to Alice Springs (8% more likely) but to Darwin (also 8%), and much less likely to migrate to the Eyre Peninsula and the Lower North of South Australia. These differences were exaggerated for the nursing workforce, with overseas arrivals more than 15% more likely to be in Darwin and Alice Springs and about 5% less likely to be in any South Australian region.

Migrants to the spine were equally likely to have post-graduate qualifications as were all health professionals in Australia (about 10%), irrespective of age or gender (when accounting for occupation). Overall, migrants with post graduate qualifications were distributed across the spine similarly to all migrants. However, medical professional migrants with post graduate qualifications were much more likely to be in Darwin (13% more likely than other health professional migrants) and the Limestone Coast region of South Australia (5% more likely). They were less likely to be in the Yorke Peninsula, East Arnhem or Katherine regions (about 4% less likely for each region). Nurses with post graduate qualifications favoured Alice Springs (8% more likely to migrate there), and were less likely to migrate to nearly all South Australian regions except the Outback/ Far North region.

Over 7% of health professionals who were resident in the spine at the one year migration capture point for each Census had not been resident in the spine at the five year capture point or on Census night. This compared with just one per cent of health professionals who were resident in Greater Sydney at any of the capture points. Migrants to the spine were more likely to be highly mobile in each age group than were migrants to Greater Sydney.

Discussion and conclusions

There appeared to be some life course correlates with migration of health professionals to the rural and remote spine of Australia. These correlates were consistent with what Martel and colleagues [12] have observed about the migration of professionals to rural and remote area generally. Migration was particularly favoured by early career health professional workers in the current analysis. The migration of mid career workers to the spine slightly favoured those who were separated, divorced or widowed. Late career migrants were under-represented in the migrant population, but there was some evidence of increasing propensity for late career professional migration over the course of the decade. Late career migration, however, does not appear to be linked to change in marital status even to the small extent apparent for mid career migrants. Attainment of post-graduate education qualifications did not appear to influence propensity to migrate to the spine. The spine received far more than its share of recent overseas migrants to Australia. Finally, migrants to the spine appear to have been generally more mobile than other mobile health professionals.

In summary, the life course stages that 'work' for the spine appear to be early career, recent overseas migrants, and the highly mobile. There is some limited evidence that family dissolution for mid career (but perhaps not late career) professionals may be a life course event prompting consideration of migration to the spine. There is some evidence that the attractiveness of the spine for late career migrants is increasing. Overall, however, the spine struggles to attract its share of mid and late career migrants, irrespective of their experience of life course triggers such as family dissolution and post-graduate education. There is no evidence that different life course stages work for males compared with females, when accounting for the differences in occupational migration to the spine.

Different life course categories were associated with selection of different sub-regions within the spine. Early career migrants and recent overseas arrivals favoured the larger population centres of Darwin and Alice Springs, while mid career and late career migrants and migrants with post-graduate qualifications were more evenly distributed. The life course stages that 'work' therefore appear to have particularly worked for the 'urban spine', which may be a function of these migrants seeking urban locations, and/or a function of the pull of events focused on the Northern Territory (particularly the Northern Territory Emergency Response) rather than South Australia. Urban locations are also likely to have a wider set of health service infrastructure thereby concentrating migration to those locations.

The research has attempted to contextualise the nature of health professional migration to Australia's spine within a framework of life course and personality. This approach was taken to 'ring fence' the range of Census variables used in the analysis, and to demonstrate how rural and remote health workforce research might make better use of migration theory. The Census is obviously an imperfect data source because life course and personality issues are not its main focus, and because it has very specific methods of capturing migration data. Nonetheless, this analysis has revealed some of the key life course stages associated with propensity to migrate to the spine, and it has illuminated the potentially important role of the migrant personality in health workforce recruitment research. The migrant personality in this research was reflected in the relatively large proportion of health professionals who have worked in the spine who were 'highly mobile', and the relatively large proportion of health professionals in the spine who were recent overseas migrant arrivals to Australia (although it is recognised that these people may be influenced by visa conditions). The concept of the migrant personality and its impact on rural and remote health workforce recruitment (and retention) surely warrants further investigation. Such investigation may, for example, help explain the apparent preference for rural practice of those who grew up in rural areas (as a function of their propensity to migrate rather than simply their rural background) and may other 'migrators' who may be attracted to rural or remote practice.

A more comprehensive framework for examination of life course influences on migration to rural and remote areas is also warranted to help identify when people with (or without) migrant personality may be 'primed' for recruitment. The life course stages selected here were necessarily broad both to constrain the detail of analysis that can be presented in a single paper and because of the limitations of access to detailed Census data. The many additional surveys of rural and remote health practitioners carried out under the health workforce research banner are likely to have important information about life course influences, and data from these, along with more detailed Census data could be re-analysed against a life course framework. A comprehensive framework would include consideration of education and career progression events, family and social network related events, and events related to other goals such as wealth generation/ preservation, achievements in hobbies, sports and interests, and realisation of ambitions relating to travel and cultural experiences. Some of these events may be more likely than others to prompt consideration of migration to and from rural and remote areas. Such a framework would help to inform health workforce policy both by better identifying who to target for rural and remote recruitment, and when they might be targeted.

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