Residents from non-English speaking countries of birth in Australian aged care facilities

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Abstract

Objectives: To describe activity of daily living, behavioural and complex care needs of residents born in non-English speaking countries in Australian aged care facilities, .

Methods: De-identified cross-sectional data were provided by the Australian Institute of Health and Welfare for all residents in government funded facilities at 30 June 2015. Analyses included t-tests, chi-squared tests and logistic regressions.

Results: 33168 (19%) of residents were born in one of 188 non-English speaking countries. Compared to residents born in English speaking countries, they were significantly younger, lived in larger facilities, were more likely to be male and live in an urban area. Their care requirements were greater for activities of daily living, behavioural and complex care. Residents

from non-English speaking countries living in ethno-specific facilities had higher levels of these needs.

Conclusion: The needs of residents born in non-English speaking countries should be considered when planning aged care services.

In 2011, almost 20% of Australians aged over 50 were born in a non-English speaking country. In 2012-13, three in 10 aged care clients (i.e. about 70,000) were born overseas (1). There is considerable variation in the use of aged care services by type of service (home vs residential care) and region of birth. For those living in Australia, people born in Australia utilize the highest rate of aged care services, followed by those born in northwest Europe and UK/Ireland, with lowest rates of use by those born in Northeast and South-east Asia. People born in Australia use residential care at more than twice the rate than those born in Southeast Asia and Northeast Asia (1). The international literature also suggests differential rates of use of residential aged care by racial and ethnic minorities - such as low utilization of residential aged care by Hispanics in the USA (2, 3). The reasons for the low use of residential aged care are many, including a combination of reluctance to use this kind of service for cultural reasons, difficulty accessing services, and inability to access culturally appropriate services (4). For example the value of 'filial piety' in Chinese culture sees use of residential care services as a last resort when families are not able to fulfill their duty of care (5). Hence, low rates of use may reflect delayed entry to care, despite relatively high care needs of migrants compared to Australian born residents.

Residential aged care facilities can be described as ethno-specific (i.e. catering for people from a specific non-Australian cultural background, or country of birth), multicultural (i.e. catering generally for residents from culturally and linguistically diverse backgrounds) or mainstream (i.e. not catering specifically for culturally and linguistically diverse backgrounds). There are no

Australian data on the number of ethno-specific aged care facilities in Australia. Italians and Chinese living in Australian ethno-specific facilities are observed to communicate more frequently with staff, and are prescribed lower rates of anti-psychotic medications compared to Italians and Chinese in mainstream facilities (6, 7). Families of Greeks and Italians living in Australian ethno-specific facility were more satisfied with their care than those living in mainstream facilities (8). Residents in mainstream facilities from non-English speaking backgrounds may receive less person-centred care than native English speakers - a survey of Victorian facilities found that one quarter of facilities did not use any specific service for residents who spoke non-English languages, and that most residents did not have access to staff who spoke their language (9).

It has been proposed that behavioural and psychological symptoms in dementia occur as a response to unmet needs (10). Mainstream facilities may find it more difficult to meet the needs of residents from non-English speaking backgrounds, hence behavioural symptoms may be higher in people from non-English speaking backgrounds living in mainstream facilities. However a small study of Chinese in Australian ethno-specific nursing homes ($n = 42$) showed they had similar rates of behavioural symptoms of dementia with residents from English speaking backgrounds in mainstream facilities ($n = 51$) (11). We could locate no research on whether multicultural residential aged care facilities better meet the care needs of residents from non-English speaking backgrounds than mainstream facilities.

The aim of this paper is to describe residents born in non-English speaking countries compared to those born in English speaking countries in Australian residential aged care facilities, including their care needs as described using the aged care funding instrument (ACFI).

We hypothesise that

- 1) Residents from non-English speaking backgrounds will have higher activity of daily living and complex care needs compared to those from English-speaking backgrounds

- 2) Residents from non-English speaking backgrounds will have higher levels of behavioural care needs compared to those from English-speaking backgrounds
- 3) Residents from non-English speaking backgrounds in ethno-specific nursing homes will have similar levels of behavior needs to English speaking residents in mainstream facilities.

Methods

The University of Sydney human ethics committee confirmed that we did not require ethical approval for this study as the project is considered negligible risk research, involved the use of existing records that contain only non-identifiable data.

Data

De-identified cross-sectional data were provided by the Australian Institute of Health and Welfare for all aged care residents in Australian government funded facilities at 30 June 2015. The data set included: age, gender, country of birth, indigenous status, aged care funding instrument (ACFI) activity of daily living (ADL), ACFI behavioural care needs and ACFI complex care needs scores, and randomly generated provider ID.

The ACFI is the instrument used to obtain Australian federal government funding for residents and is completed by residential aged care facility staff when residents are admitted and as care needs change. Care needs for ADL, behavior and complex care are each scored as 0 = nil, 1 = low, 2 = medium and 3 = high, more funding is allocated for higher needs. The ACFI ADL score is based on items on nutrition, mobility, personal hygiene, and toileting (each rated as independent, requiring supervision or requiring physical assistance), and continence (rated on frequency of incontinence). The ACFI behavioural care needs score is based on items for cognitive skills and depression (rated as none, mild, moderate or severe), and wandering, verbal behavior (i.e. verbal refusal of care, verbal disruption, paranoid ideation that disrupts others or verbal sexually inappropriate advances – rated on frequency) and physical behaviour (i.e. threatening behavior that has the potential to be harmful, socially inappropriate behavior that impacts on other residents, being constantly physically agitated - rated on frequency). The

ACFI complex care needs score is based on items on medication (rated on complexity, frequency and assessment time) and complex health care procedures (rated on complexity and frequency) (12).

English speaking countries were based on the grouping previously used by the Australian Bureau of Statistics and comprised Australia, Canada, Republic of Ireland, New Zealand, South Africa, England, Scotland, Wales, Northern Ireland, United States of America (13)

There are no formal criteria for defining ethno-specific facilities or multicultural facilities. Multicultural facilities were defined as those where 70% or more residents were born in non-English speaking countries. Ethno-specific facilities defined as were a subset of multicultural facilities where 70% or more residents were born in the same non-English speaking country (i.e. >70% residents born in Italy, or >70% residents born in China).

Analyses

The following tests were used to examine demographic differences between residents born in English-speaking and non-English speaking countries: t –t test for continuous data and chi-squared tests for categorical data. To address hypotheses one and two, logistic regressions were undertaken to examine the relationship between English and non-English speaking countries of birth and levels of care needs after controlling for covariates (age, gender, remoteness and facility size). To address hypothesis three chi-squared tests were undertaken to test the differences on care needs between residents born in non-English speaking countries living in multicultural facilities, and residents born in English-speaking countries living in non-multicultural facilities; and residents born in the dominant country of birth of ethno-specific facilities compared to residents born in English-speaking countries living in non-ethno-specific facilities. We have calculated effect sizes to help describe the magnitude of the differences

between groups. We have applied the following interpretations to effect sizes – Cohen’s d small = 0.2, medium = 0.5, large = 0.8, r or Cramer’s V small = 0.1, medium = 0.3, large = 0.5 (14).

Results

Care needs of residents born in non-English speaking countries

There were 172,798 residents in permanent aged care as at 30 June 2015. Of these, 54,611 (31.6%) were men and 118,187 (68.42%) were women. Their average age was 84.6 ± 9.1 years and ranged between 20 and 115 years. Residents lived in 2679 facilities with an average of 64.5 ± 36.5 beds (range 1 to 317).

Country of birth data are shown in table 1. Australia was the most common country of birth followed by England and Italy, and country of birth data were unavailable for 774 residents. There were 1478 people who identified as being from Aboriginal or Torres Strait descent, of these 1249 (96.7%) were born in Australia with the remainder born across a wide range of countries. All residents identified as Aboriginal or Torres Strait were excluded from further analyses, as culturally they are different from those from English-speaking backgrounds it was beyond the scope of this paper to articulate and explore their care needs.

Nineteen percent of residents ($n = 33,468$) were born in non-English speaking countries (see table 2), from 188 different countries of birth. Compared to those born in English speaking countries, people born in non-English speaking countries were significantly younger more likely to be male, live in more urban areas and on average lived in larger aged care facilities. Residents born in non-English speaking countries had significantly higher activity of daily living, behavioural and complex care needs. All differences were small effects.

Ordinal logistic regressions found higher levels of activity of daily living, behavioural and complex care needs remained in residents born in non-English speaking countries after controlling for age, gender, remoteness and facility size (see table 3).

Ethno-specific and mainstream facilities

The number of residents born in non-English speaking countries ranged from 0 to 197, the mean was 12.5 ± 16.9 . The proportion of residents born in non-English speaking countries ranged from 0% to 100%, the mean was $18.4\% \pm 19.6$.

For the 18,217 residents born in the top 10 non-English speaking countries of birth, between 0% to 100% of their co-residents were born in the same country of birth (the median was 5.00, and mean was 19.32, SD = 27.23).

There were 108 multicultural facilities where over 70% of residents were born in non-English speaking countries. Of these, 39 were ethno-specific with over 70% of residents from one non-English speaking country of birth. The number of ethno-specific facilities for the top 10 non-English speaking countries of birth are shown in table 4.

Residents born in non-English speaking countries living in multicultural facilities had higher reported levels of ACFI activity of daily living, behavior and complex care needs compared to residents born in English speaking countries (see table 5). Similarly, residents born in non-English countries living in ethno-specific facilities congruent with their country of birth, had higher levels of activity of daily living, behavior and complex care needs compared to residents born in English speaking countries in mainstream facilities. These effect sizes were small.

Discussion

Our findings confirmed hypotheses one and two - residents from non-English speaking backgrounds had slightly higher care requirements for activity of daily living, behavior and complex care needs compared to residents born in English speaking countries. Although we have no data to support these differences, previous researchers have suggested that people born in non-English speaking countries may have higher care needs when in aged care facilities because they are reluctant to or have difficulty accessing residential aged care, and therefore enter care later in the progression of disease or frailty (4). This is reflected in average higher care needs than those from English speaking backgrounds.

Contrary to hypothesis three, residents born in non-English speaking countries in ethno-specific facilities had higher levels of behavioural needs than residents born in English speaking countries in mainstream facilities. According to the theory of unmet needs, behavioural symptoms in dementia are an expression of distress or discomfort due to unmet needs. We hypothesized that multicultural or ethno-specific facilities would be better able to understand and meet the needs of residents from non-English speaking backgrounds, resulting in lower levels of behavioural care needs. However the assumed culturally and language-appropriate care provided by multicultural or ethno-specific facilities is not associated with lower levels of behavioural care needs of residents. This may be because behavioural needs are higher on entering the facility, consistent with their higher levels of ADL and complex care needs. Alternatively it may be because ethno-specific care does not result in a reduction in behavioural symptoms.

There was variability in the number of ethno-specific facilities available for specific countries of birth. This may reflect the migration history from various countries, the geographical clustering of migrants from that country or the extent of differences between that culture and mainstream Australian culture. Well-established geographically densely located migrant communities may be more likely to be able to resource an ethno-specific facility. Cultures more similar to English-speaking countries may perceive less need for ethno-specific facilities. The demographic profile of Australians are changing (15) with the majority of recent migrants coming from China rather than Europe, the needs of these communities needs to be considered in planning residential care.

This study is limited by the characteristics of the dataset. Only country of birth was available to characterise residents - languages spoken and ethnicity were not taken into account. The ACFI data only had four levels so there was not much variation in care needs. Further, care need data may have been biased if ACFI assessors wanted to maximize scores in order to maximize facility income (16). There were only a few demographic and other variables available to include in these analyses. We did not have formal descriptions of whether facilities were ethno-specific or multicultural and made assumptions in our classifications into these categories. We excluded

people from Aboriginal and Torres Strait Islander backgrounds, these results do not apply to them. Study strengths are that we had all data for all Australian aged care residents, and were able to examine the influence of some facility-level characteristics.

In conclusion, 19% of Australian aged care residents are born in a wide number of non-English speaking countries. They have higher behavioural and complex care needs, even when living in multicultural or ethno-specific facilities. This challenges the assumption that culturally-specific care is better able to meet the behavioural care needs of residents from non-English countries. Aged care policy makers should consider these factors when planning services (particularly access), quality improvement and policy standards.

Policy impact statement (50 words): This paper highlights the high proportion, diversity of backgrounds and higher care needs of people from non-English speaking countries in Australian residential aged care. Access to residential care and provision of culturally appropriate care should be considered as part of policy development.

Practice impact statement (50 words): All residential aged care providers should be aware that people born in non-English speaking countries have higher care functional, behavioural and complex care needs. It is unclear whether multicultural or ethno-specific care better meets the needs of people from non-English backgrounds than mainstream care.

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Table 1. Countries of birth of Australian aged care residents

Country	Frequency	Percentage
Australia		
Indigenous	1478	0.9
Non-indigenous	118447	68.5
not born in Australia	52097	30.1
Missing data on country of birth	774	0.4
Most common countries of birth outside Australia:		
England	13225	7.7
Italy	5814	3.4
Scotland	2562	1.5
Germany	2425	1.4
Greece	2317	1.3
Netherlands	2017	1.2
New Zealand	1742	1.0
Poland	1622	0.9
China (excludes SARs and Taiwan)	1434	0.8
Ireland	1027	0.6
India	1024	0.6

Croatia	986	0.6
Malta	904	0.5
Hungary	801	0.5
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Born in English speaking country	137852	79.8
Born in non-English speaking country	33468	19.4
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Table 2. Comparison between residents born in English-speaking and non-English speaking countries

	English speaking country (n = 137852)	Non-English speaking country (n = 33468)	Stats (English vs non- English speaking)
Age (mean, SD)	84.69 ± 9.22	84.59 ± 8.214	t = -0.074, p = 0.038, Cohen's d = 0.126
Gender – Female	95426 (69.2%)	21908 (64.5%)	X ² = 176.782, p <
Male	42426 (30.8%)	11560 (35.5%)	0.001, Phi = -0.032
ADL			X ² = 342.34, p < 0.001
Nil	1414 (1.0%)	291 (0.9%)	Phi = 0.045
Low	25426 (17.9%)	5949 (14.9%)	
Medium	42320 (30.9%)	9498 (28.6%)	
High	68693 (50.2%)	18453 (55.6%)	
Behaviour needs			X ² = 1606.045, p <
Nil	8458 (5.2%)	935 (2.8%)	0.001,
Low	18560 (11.3%)	2957 (8.9%)	Cramer's V = 0.0097
Medium	31688 (19.3%)	6785 (20.4%)	
High	78247 (57.1%)	22524 (67.8%)	
Complex care needs			X ² = 274.251, p <
Nil	5999 (4.3%)	1167 (3.5%)	0.001,
Low	25360 (18.5%)	5357 (16.1%)	Cramer's V = 0.040
Medium	36113 (26.4%)	8244 (24.8%)	
High	69481 (50.7%)	18433 (55.5%)	
Number of residents in facility (mean, SD)	84.79 ± 40.78	87.92 ± 43.38	t = -11.974, p < 0.001, Cohen's d = 0.0743
Beds per 1000 65+ in the Aged Care Planning Region	55.19 ± 7.92	56.81 ± 7.55	t = -34.00, p < 0.001, Cohen's d = 0.209
% persons from non- English speaking countries	14.55 ± 12.41	39.57 ± 29.53	t = -239.31, p < 0.001, Cohen's d =

s in facility			1.104426
Remoteness			
Major Cities	58.4 (58.7%)	29341 (87.7%)	$\chi^2 = 6240.01$, $p <$
Inner regional	34454 (25.0%)	2861 (8.5%)	0.001,
Outer Regional	12181 (8.8%)	1172 (3.5%)	Cramer's V = 0.191
Remote Australia	639 (0.5%)	82 (0.2%)	
Very remote Australia	126 (0.01%)	12 (0.04%)	

Table 3 Ordinal logistic regressions examining differences between people born in English speaking countries on activities of daily living, behavioural care needs and complex care needs compared to those born in non-English speaking countries after controlling for age, gender, remoteness and facility size

Variable	Beta	SE Beta	p
Activities of daily living			
Non-English vs non English speaking country	-.175	.012	<0.001
Age	.006	.001	<0.001
Sex	.188	.010	<0.001
Remoteness	-.147	.007	<0.001
Facility size	.003	.000	<0.001
Behavioural care needs			
Non-English vs non English speaking country	-.417	.013	<0.001
Age	-.022	.001	<0.001
Sex	.078	.011	<0.001

Remoteness	-.261	.007	<0.001
Facility size	.001	.000	<0.001

Complex care needs

Non-English vs non English speaking country	-.125	.012	<0.001
Age	.005	.001	<0.001
Sex	.143	.010	<0.001
Remoteness	-.234	.007	<0.001
Facility size	.003	.000	<0.001

Table 4. Number of facilities ethno-specific facilities for top 10 countries of birth

Country	# ethno-specific facilities
Italy	11
Germany	0
Greece	9
Netherlands	4
Poland	3
China (excludes SARs and Taiwan)	10
India	0
Croatia	1
Malta	0
Hungary	1

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Table 5 Differences on care needs between residents born in non-English speaking countries living in multicultural facilities or ethnospecific facilities, and born in English-speaking countries living in non-multicultural or ethnospecific facilities

	Non-English speaking country of birth living in multicultural facility (n = 108)	English-speaking country of birth living in non-multicultural facility (n = 2571)	Statistics	Born in dominant country of birth of ethno-specific facility they are living in (n = 39)	English-speaking country of birth living in non- Ethno-specific facility (n = 2640)	Statistics
Number of residents	7485	136095		2000	136095	
Activities of daily living			$\chi^2 =$ 33.851p <			$\chi^2 =$ 15.386, p
Nil	78 (1.0%)	1408 (1.0%)	0.001	20 (1.0%)	1408 (1.0%)	< 0.001
Low	1234 (14.9%)	24383 (17.9%)		297 (14.9%)	24383 (17.9%)	
Medium	2165 (30.5%)	42086 (30.9%)		610 (30.5%)	42086 (30.9%)	
High	4008 (53.7%)	68218 (50.1%)		1073 (53.7%)	68218 (50.1%)	
Behavioural care needs			$\chi^2 =$ 362.557, p < 0.001			$\chi^2 =$ 130.715, p < 0.001
Nil	45 (2.5%)	8425 (6.2%)		45 (2.2%)	8425 (6.2%)	
Low	176 (9.2%)	18487 (13.6%)		176 (8.8%)	18487 (13.6%)	
Medium	415 (22.3%)	31496 (23.1%)		415 (20.8%)	31496 (23.1%)	
High	1364 (66.0%)	77687 (57.1%)		1364 (68.2%)	77687 (57.1%)	

Complex care needs			$\chi^2 =$				$\chi^2 =$
			34.376,				27.978,
Nil	279 (3.7%)	5963 (4.4%)	p < 0.001	76 (3.8%)	5963 (4.4%)	p < 0.001	
Low	1261 (16.8%)	25224 (18.5%)		296 (14.8%)	25224 (18.5)		
Medium	1909 (25.5%)	35897 (26.4%)		508 (25.4%)	35897 (26.4%)		
High	4036 (53.9%)	69011 (50.7%)		1120 (56.0%)	69011 (50.7%)

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