Feeding the family in an unfamiliar environment: Food insecurity among recently resettled refugees.

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Abstract

Introduction
Little is known about the prevalence and impact of food insecurity among families resettled in Australia as a part of the humanitarian entrant migration program. This paper reports on the results of a community-based study among recently resettled refugees living in the Fairfield local government area, Sydney (n=76). This study concentrated on seven refugee communities defined by language to include Arabic (Iraq), Arabic (Sudan), Assyrian, Chaldean, Dinka, Kirundi and Swahili. Primary objectives were to quantify the existence of food insecurity in selected refugee communities, and to investigate how aspects of food insecurity differ between refugee communities. The research findings are being used to shape project activities targeting refugee food security and nutrition.

Methods
A semi-structured interview tool was used, based on the model used by Nolan et al\textsuperscript{11} and the single question Australian food security tool,\textsuperscript{18} to investigate four aspects of household food security: availability, access, utilisation and vulnerability or stability.

Results
Up to 8 out of every 10 refugees within some communities were found to be food insecure. It is estimated that African refugees settled in the Fairfield local government area are 8 to 16 times more likely to experience food insecurity than the greater Australian population. Other refugee groups settled in the same local government area report either no food insecurity, or levels similar to the Australian population. A number of factors contributing to poor food security were indentified, including distance from shops, a lack of access to affordable transport, and for some groups the unavailability of culturally preferred foods.

Conclusion
Given the pervasive effects of food insecurity on health and wellbeing and heightened vulnerability of refugee communities, a clear understanding of the prevalence, causes and consequences of food insecurity are essential to address the immediate and long term health of refugee communities resettled in Australia. Although informative for current project activities, the tool implemented in this study may underestimate the existence of food insecurity in some refugee communities. These data suggest further study of food security is warranted among recently resettled refugee groups in Australia, and that action is needed to address this serious health issue. A heightened understanding of the reality of food insecurity among targeted refugee communities has lead to the development and implementation of effective local strategies aimed at the reduction of food insecurity.

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Introduction

Australia accepts around 13 000 people annually through the Humanitarian Program administered by the Department of Immigration and Citizenship. In recent years the majority of refugees have arrived from African countries (71 per cent), Middle Eastern countries and the South West Asian region (24 per cent)\(^1\). Many more people with ‘refugee-like’ experiences settle in Australia through the Family Migration Program. In 2000 one in eight of the 32,000 entrants through this program originated from countries from which Australia currently accepts refugees\(^2\).

Prior to departure, refugees endure conditions of social disconnection, displacement, isolation, famine, war and overcrowding. Such complex humanitarian emergencies are associated with high rates of social, physical, emotional and mental health problems\(^3\). Migration policy which mandates health checks on humanitarian and other entrants requires refugees over the age of 15 years to be screened for HIV, and those over 11 years to have a chest x-ray\(^4\). This policy continues to cull those who are deemed too costly for the Australia Health system. For those others who are granted a visa, recent initiatives have been established to identify those requiring medical attention on arrival. Some pre-existing conditions are diagnosed through this process; however for those who are asymptomatic relatively little is known about their health on arrival.

Upon resettlement, refugees must carry the burdens of the past whilst facing current challenges such as being resettled in the poorest neighbourhoods, trying to obtain suitable housing, having limited English proficiency, having limited financial resources and facing limited economic opportunities\(^5,6\).

‘Food insecurity exists whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain’\(^9\).

Food insecurity, and its more severe form hunger, are associated with poor health and insidiously exacerbate other health inequalities\(^11\). Households experiencing food insecurity are associated with depressive and behavioural disorders, poor dietary practices, overweight and morbidity\(^6\). Research has shown that groups at high risk of food insecurity include those on low incomes (absolute or disposable), and those with other disadvantages such as a result of disabilities, homelessness, mental illness, drug and alcohol dependencies, geographic location, or people living in residential areas not serviced by a supermarket or adequate public transport\(^12-16\). Given the pervasive effects of food insecurity on health and wellbeing and the heightened vulnerability of the refugee communities, a clear understanding of the prevalence, causes and consequences of food insecurity among refugees resettled in Australia is long overdue.
In 1995, the prevalence of overall food insecurity among households in Australia was reported to be 5.2 per cent. Within this study the rate of food insecurity was much higher for the unemployed (11.3%) and those paying rent or board (15.8%). The 2001 Child Health Survey estimated 6.2 per cent of Australian households were food insecure. This same study showed considerable variations by geographic location, with respondents from low-income areas three times more likely to be food insecure than respondents from other areas. Smaller community-based studies also highlight intra-population variations in food security. For instance, using a similar study tool, Nolan et al. found 15.8 per cent of households in three socially disadvantaged suburbs in south western Sydney to be food insecure. In a very different sample, Babbington and Donato-Hunt reported an overall prevalence of food insecurity of 95 per cent and prevalence of child hunger of 22 per cent among Anglicare emergency relief clients residing in Wollongong, New South Wales.

A high prevalence of food insecurity has been observed among refugees resettled in developed countries. Despite growing international evidence, the prevalence of food insecurity among refugees resettled in Australia to date is largely based on anecdotal evidence, and requires more thorough investigation. One study in Perth, Western Australia reports a prevalence of 71 per cent among refugee households. Data from other developed countries also suggest high levels of food insecurity among refugee populations. A study by Sellen et al. reported food insecurity prevalence of 73 per cent, and child hunger at 22 per cent among recently resettled Sudanese refugees in Atlanta, Georgia, USA. In a similar study conducted among a sample of 30 refugee families resettled in London, 100 per cent of households were food insecure, and the prevalence of child hunger was reported at 60 per cent.

Study objectives and hypotheses
This paper reports on the results of a community-based study among recently arrived refugees living in the Fairfield local government area, Sydney. Primary objectives were to quantify the existence of food insecurity in the selected refugee communities, and to investigate how aspects of food insecurity affect different refugee communities. Secondary objectives were to identify potential points of intervention. Specifically, it was hypothesised that the overall multicultural sample of refugee communities would exhibit a higher prevalence of food insecurity than the greater Australian population and that this would differ between refugee groups.

Methods
Survey instrument
A semi-structured interview tool was constructed based on the model used by Nolan et al. and using the single question Australian food security tool. The survey tool contained 53 questions investigating background demographics, measures of infant feeding practices and
four aspects of household food security identified by the United Nations\textsuperscript{22}, namely availability, access, utilisation and vulnerability.

Questions of food availability comprised one issue; whether foods traditionally eaten in their home country were regularly or irregularly available in Australia, and whether these foods were affordable.

Food access addressed several issues. Firstly, preferred places of food purchase of fruit and vegetables, meat, chicken, fish, and dry goods were elicited. Secondly, reasons for store preference were explored. Other issues investigated included difficulties experienced with accessing food, transport use and family responsibilities for the purchase of household food. Changes in behaviours and responsibilities since settling in Australia and the reasons for any change were also elicited.

Food utilisation encompassed responsibility for cooking at home. Comparison between behaviours and responsibilities in Australia and in country of origin were explored; any changes which had occurred since settling in Australia and the reason for changes; and the effect any changes in persons responsible for food cooking had on the household’s eating patterns. Interviewees were also asked to rate their level of skill in cooking healthy meals. Lastly, eight questions assessed adequacy of household food storage and cooking facilities, specifically acquisition, use and reasons for non-use of essential equipment and facilities.

Vulnerability of food insecurity consisted of six questions. The first was adapted from the Australian single-item measure posed as; ‘Since arriving in Australia have there been any times when you felt you did not have enough food to feed your family?’ Households which responded yes were then asked whether they had used any of nine listed coping strategies, adapted from similar research\textsuperscript{11, 18}. Those who answered yes were further asked who in the family ate less if food was not available or limited; the impact food insecurity had on family life; acquiring assistance when food is insufficient or anxiety exists about food becoming insufficient; and lastly reasons for not seeking help when food is insufficient or anxiety exists about food becoming insufficient.

Selection of nationality groups
Settlement data were retrieved from the Department of Immigration and Citizenship for permanent humanitarian arrivals (migration streams: refugees, special humanitarian program, and onshore) with intended settlement in the Fairfield local government area.

Language groups were selected to represent the largest refugee communities settling in the Fairfield local government. These included Arabic (Iraq), Arabic (Sudan), Assyrian (Middle
East), Chaldean (Middle East), Dinka (Southern Sudan), Kirundi (Central/ Eastern Africa) and Swahili (Central/ Eastern Africa).

Training of bilingual community educators (BCEs) to assist with interviews
Bilingual community educators were recruited for each language group. All BCEs recruited were working already for the NSW Refugee Health Service on a sessional basis and were interviewed for suitability. BCEs were trained by the research team around food security, interacting with and engaging community members, and roles and responsibilities of translating for semi-structured interviews. The main reason for using a BCE rather than an interpreter was to establish a relationship between interviewees and the BCEs who would later become part of the community nutrition education team to conduct other project activities.

Contacting refugees for interview
The research team utilised existing community groups and BCE community networks from which a convenience sample of 76 participants was recruited.

Conduct of the interviews
The interviews were carried out by three project staff over the period of March 2007 till May 2007. Each interviewer was accompanied by an appropriate BCE who translated both the questions of the interviewer and the responses of the interviewee, allowing all information to be scrutinised and recorded in English.

The questionnaire usually took between one and a half hours to complete. As described above, a set interview schedule was used; however respondents were also encouraged to give their accounts of life in Australia. Some of these accounts were recorded by project staff for use as a source of illustrative case-study material.

Respondents were asked at the end of the interview how they felt about their participation.

Results
Demographics
Seventy six interviews were completed over a period of seven weeks between January and March 2007. Forty four participants were refugees from African countries (16 Kirundi speaking, 13 Dinka speaking, 8 Sudanese Arabic and 7 Swahili speaking), and 32 were from Middle Eastern countries (12 Middle Eastern Arabic, 12 Assyrian and 8 Chaldean). Eighty one per cent of participants were female, with 70 per cent of all respondents aged between 35 to 64 years. Length of stay in Australia varied between 0 and 5 years, with 46 per cent reporting 1 to 3 years, and 25 per cent reporting 3 to 5 years. Sixty seven per cent (n=51) of households were comprised of a couple with children. Twenty eight per cent (n=21) of
households were single parents. The remaining five per cent (n=4) were households of non-parental carers and children, with one couple reporting no living children. Sixty two per cent of refugees from African countries were single parent households, compared to 22 per cent of refugees from Middle Eastern countries. Household occupancy for the African group ranged between 2 to 13 people, with an average occupancy of 6.1. The Middle Eastern group reported household occupancy of 2 to 7 people, with an average of 4.3 occupants.

Vulnerability to Food Insecurity

Large variations in the prevalence of food insecurity by language group were observed (Chart 1). Eighty five per cent of Dinka speaking participants experienced food insecurity. This was followed by the Kirundi speaking participants recording a prevalence of food insecurity of 69 per cent. The prevalence of food insecurity observed amongst the Sudanese Arabic, Swahili and Assyrian speaking communities were 63, 43 and 17 per cent respectively. The Chaldean and Middle Eastern Arabic speaking community both reported no incidence of food insecurity.

Sixty eight per cent of single parent families reported experiencing food insecurity since arrival in Australia.

The severity of food insecurity was not specifically investigated however 11 per cent of the total sample reported experiencing hunger. Anxiety, stress and worry were the most common impact of food insecurity experienced by 45 per cent of households. Tiredness, irritability, difficulties concentrating, argument and conflict, shame and avoidance of social occasions were also reported impacts of food shortages.

Fifty three per cent of people interviewed indicated they did not ask anyone for help when food was insufficient or anxiety existed about food becoming insufficient. Reasons reported...
for not seeking help included: don’t know anyone who can help (36%); can manage on my own (27%); everyone I know has the same problems (18%); and can not speak English (13%).

Of the 32 per cent who indicated they did seek help when experiencing a shortage of food, help was most often received from the Fairfield Migrant Resource Centre (37%), other charitable organisations (29%), or friends (29%). The remaining 15 per cent declined to answer this question.

Infant feeding practices
Breastfeeding was initiated at birth for 93 per cent of the 270 children for which data were collected. Breastfeeding duration of greater than six months was reported for 88 per cent of these children. However many respondents had difficulty in recalling the exact duration of breastfeeding, due to the turmoil associated with their refugee experience. Inadequate milk supply was nominated as the most common reason for discontinuing breast feeding before a child age of six months.

Complementary feeding was said to occur when the child was receiving solid foods on a regular basis. Fifty seven per cent of children received complementary foods before the age of six months. Ten per cent received complementary foods before the age of three months. There was no apparent variation in complementary feeding practices by language or region of origin.

Regarding the first solid food they introduced their child to, most participants identified more than one food. In descending order these were most likely to be: porridge (iron fortified and other); fruit, vegetables and legumes; eggs and dairy; and soups. Small variations in the type of food introduced by language group were observed, with Iraqi Arabic and Assyrian most likely to first introduce eggs and dairy. Porridge was the most reported first food for the Kirundi, Dinka and Swahili language groups. The Kirundi language group reported fruit, vegetables and legumes as the most common first foods.

Food Availability
Fifty five per cent of refugees from the African countries, and only six per cent of respondents from Middle Eastern countries, indicated traditional foods were irregularly available or were considered too expensive to purchase. Cassava and regional or culture-specific fruit and vegetables were most commonly reported as being difficult to purchase.
Food Access
In eighty one per cent of households, mothers were responsible for the food shopping, with husbands and daughters (where present) sharing this responsibility to varying degrees. Household food purchasing roles did not vary between cultural groups.

Fifty nine per cent of participants reported a change in household food purchasing roles since settling in Australia. The differences were most commonly related to changes in family structure and supports (due to death, separation, marriage or employment), increased feelings of safety here, and past production of own food.

When purchasing food, 56 per cent of those interviewed reported their main mode of transport as walking. Over one third of all respondents experienced some difficulty getting to or from their preferred places to purchase food. The most common difficulties related to carrying shopping long distances, shopping with children and the effects of injury or illness. Transport options limited many participants’ ability to purchase food in bulk and to access cheaper food markets.

Utilisation
Food cooking was a shared responsibility in approximately 30 per cent of households. The remaining 70 per cent of households relied on female heads of household for the majority of all food preparation. Thirty six per cent of respondents reported changes in the persons responsible for cooking since arriving in Australia. Changes were most frequently related to changes in family structure and supports, due to marriage, family separation, death, employment, or availability of utilities increasing the ease of cooking. Changes in food preparation roles did not appear to affect family eating patterns.

Greater than 90 per cent of respondents reported having all the kitchen equipment they required, and over 90 per cent reported this equipment was in working order and that they knew how to use it. Twenty five per cent of respondents reported inadequate space at home for food preparation and storage.

When participants were asked how they felt about being interviewed, the feedback was very positive. They considered the process of consultation to be very important and appreciated the social interaction and opportunity to share their experiences.

Discussion
In this sample of refugees settled in Fairfield, Sydney, large variations were observed in the prevalence of food insecurity. A prevalence of up to 85 per cent among those of African background was starkly contrasted against other communities such as the Assyrian and Arabic communities who reported no food insecurity. For the refugees of African origin
sampled, the prevalence of food insecurity was 8 to 16 times higher than national data of 5.2 per cent and exceeded the prevalence in any subgroup identified as vulnerable in the National Nutrition Survey\textsuperscript{17, 20}. The prevalence of food insecurity reported in this study is comparable to the rates of food insecurity found in refugee populations in other parts of the developed world\textsuperscript{20, 21, 23}. These findings build on existing literature highlighting food insecurity as a significant issue for many refugees, and to our knowledge is the first study to report substantial differences in the prevalence of food insecurity by refugee language or region of origin.

One recent study which quantified the prevalence of food insecurity among refugees resettled in Perth, Western Australia similarly reports a high prevalence of food insecurity. The high prevalence observed however was consistent across all nominated places of birth\textsuperscript{20}. In another study of food insecurity among a multicultural sample of refugees settled in the UK varying degrees of food insecurity are documented. Within that sample, food insecurity was reported by all (100%); however the prevalence of child hunger varied from 40 to 90 per cent by region of origin\textsuperscript{21}. As hunger is the most severe form of food insecurity\textsuperscript{27} this study did highlight the existence of differences in the experience of food insecurity between refugee communities.

Large differences in the prevalence of food insecurity within the study cohort require careful consideration. A discussion of findings collectively would under-represent the impact felt by some communities and fails to recognise the diversity of refugee communities. In the past 60 years, more than 660,000 refugees and displaced people have been resettled in Australia\textsuperscript{28}. Findings of this study are a reminder of the importance not to generalise when researching and providing services to those of refugee background.

A growing pool of literature suggests that refugees are nutritionally compromised on arrival. A study of common health issues diagnosed by general practitioners in newly arrived African refugees settled in Melbourne, Australia found a high incidence of nutrition related conditions\textsuperscript{24}. Alarmingly over 40 per cent of children less than 15 years were Vitamin D deficient and approximately 30 per cent suffered iron deficiency. Twenty five per cent of the sample was also diagnosed with gastrointestinal infections.

Poor health and nutritional status of some refugees on arrival would be further compromised by household food insecurity observed in this and other studies. Being food insecure has serious consequences for both short-term and long-term health\textsuperscript{20}. Nutritionally, food insecurity is linked with lower intakes of micronutrients (vitamins and minerals), dietary fibre, fruit and vegetables.
Paradoxically food insecurity is increasingly associated with high rates of overweight and obesity. This is attributed to a reliance on high fat, high calorie foods which are cheap, filling and for the most part nutritionally depleted\textsuperscript{18}.

Food insecurity also has implications for social and cultural integrity\textsuperscript{20}. The social implications of chronic food insecurity include an intensification of a sense of powerlessness and exclusion as well as an inability to maintain a sense of optimism. Food insecurity also decreases the transfer of knowledge around cultural food practices. It is a major concern that nutritional vulnerability and poor health among refugees has been linked to poverty and social exclusion in the country of settlement over and above experiences before arrival\textsuperscript{21, 25}. Food insecurity increases the magnitude of difficulty involved in the settlement process\textsuperscript{20}.

Several factors which may be contributing to the high prevalence of food insecurity were observed in this study. The unavailability of culturally preferred foods affected only the less established community groups. Maintenance of a culturally appropriate diet is important for health and the preservation of food rituals. For many participants, a limited knowledge of Australian foods and retail practices, limited English proficiency and poor nutrition knowledge would further contribute to dietary restriction and unhealthy food choices. Having limited knowledge and skill in food purchase and preparation is a known contributing factor to food insecurity\textsuperscript{18}.

Distance and transport to shops are key features of access to food. Close to one third of participants reported difficulty related to distance and transport to shops. Refugees are often settled in poorer suburbs\textsuperscript{5}, many of which are serviced poorly by public transport\textsuperscript{29}. Walking to and from local shopping outlets was reported as the main mode of transport and is inherently challenging when considering distance, children and shopping loads. Lack of access to affordable transport also limited the ability to economise by purchasing in bulk or from cheaper outlets. Barriers to food access such as these highlight the important role of local governments and urban planning in health promotion.

In Australia, exclusive breastfeeding until six months of age is recommended. It is further recommended that mothers continue breastfeeding until 12 months of age and thereafter for as long as mutually desired\textsuperscript{30}. Breastfeeding initiation and duration of greater than six months were substantially higher in this population than Australian data. In supporting women of refugee background to breastfeed it is important to address food insecurity to ensure health of the mother and infant.

The Fairfield Refugee Nutrition Project continues to implement strategies aimed at alleviating the impact of food insecurity within these particular groups. These strategies have been shown to be effective in refugee communities elsewhere in Australia:
- Establishing a food cooperative for the sale of cultural foods and goods;
- Cooking classes focussed on healthy traditional styles of cooking for each group, including the men;
- Supermarket tours to increase food literacy and enable participants to visually identify unfamiliar foods;
- Exploring the establishment of community gardens in the local area (farming in many groups is a shared skill).
- Community kitchen - cooking is an effective way to teach nutrition with many refugee groups.

Possible broader interventions include:
- Local and national strategies to monitor the prevalence of food insecurity among vulnerable refugee groups in Australia;
- Specific strategies for increasing access to affordable, nutritious, acceptable and sustainable food sources for newly arrived refugees;
- Consistent guidelines for emergency food provision and a decreased focus on emergency food relief and food banks as a strategy for relieving food insecurity;
- Specific strategies promoting social inclusion of refugee communities.

This study has several limitations which should be considered in interpretation. The relatively small convenience sample was guided by individual community members and may include some personal bias. The use of the single question Australian tool has been shown to be less sensitive than the US 16-item food security tool. The US 16-item tool has been more widely applied to refugee communities. As such the prevalence of food insecurity reported here may be underestimated and should be used with caution.

Conclusion
Given the pervasive effects of food insecurity on health and wellbeing and heightened vulnerability of refugee communities, a clear understanding of the prevalence, causes and consequences of food insecurity are essential to address the immediate and long term health of refugee communities resettled in Australia. Although informative for current project activities, the tool implemented in this study may underestimate the existence of food insecurity in some refugee communities. These data suggest further study of food security is warranted among recently resettled refugee groups in Australia, and that action is needed to address this serious health issue. Discrepancies between refugee communities observed in this and other studies warrant more rigorous investigation and have implications for both national and local settlement policies and service provision. A heightened understanding of the reality of food insecurity among targeted refugee communities has led to the development and implementation of local strategies aimed at the reduction of food insecurity.
Keywords: refugee, nutrition, food insecurity, food security, prevalence.

References


