

Title: Exploring the diet and lifestyle changes contributing to weight gain among Australian West African women following migration: A qualitative study

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ABSTRACT

Aims and objectives: Drawn from a larger study, that sought to understand Australian West African migrant women's experiences of migration to Australia, this paper reports on women's experiences of weight gain and obesity as they became acculturated to the Australian diet and lifestyle.

Background: Obesity is a global epidemic. Migrants from sub-Saharan Africa have a much higher risk of obesity than the native population when settling in industrialised countries. There have been very few studies into the effect of migration on African migrants and rarely have researchers focused on obesity and obesity related health concerns.

Method: Twenty West African women living in Australia voluntarily participated in the study. A qualitative storytelling methodology was employed and data were thematically analysed. This paper reports on the study drawing upon the COREQ checklist.

Results: Women in this study reported their weight increasing post-migration to Australia. Weight gain was attributed to increased access to a wide variety of food including take-away food and more sedentary lifestyles.

Conclusions: Obesity has long-term consequences for health and wellbeing. Given the dearth of research and conflicting results in research on African migrants from different African countries, further research is needed to support a healthy transition to life in Australia.

Relevance to clinical practice: Given the strong established links between obesity in early life and obesity related conditions in later life, the high prevalence of obesity among West African immigrants

is a major health concern. Gaining insight into the underlying reasons that West African immigrants to Australia become obese could contribute to assisting health professionals design culturally appropriate interventions and health education programs to support new arrivals.

Background

Obesity is a global epidemic that increases the risk for chronic diseases such as hypertension, diabetes and cardiovascular diseases (Renzaho et al, 2011; Seidell & Halberstadt, 2015; Williams et al, 2015). Migration plays a significant role in general health due to the economic, physical and mental burden of moving to a new home and may shape risks of becoming overweight and obese (Murphy et al, 2017). Despite an initial advantage that migrants have over the native population known as the “healthy immigration effect”, unhealthy weight gain increases considerably with length of residence and within 10-15 years post-migration rates of obesity in the migrant population match or overtake those of the native population (Goulao et al, 2015; Murphy et al, 2017). Residency of 15 or more years and arriving as a child or young adolescent significantly increased BMI amongst the immigrant population through factors related to acculturation (Menigo et al, 2016). Acculturation also affects the health of children, with children of acculturated immigrants having higher prevalence of being overweight or obese compared to the children of new immigrants (Kaufman-Shriqui et al, 2013).

According to findings from the United Nations Food and Agriculture Organisations, between 2010-2012, 26.8% of people in sub-Saharan Africa were undernourished (Renzaho et al, 2015). However, migrants from sub-Saharan Africa have a much higher risk of obesity than the native population when settling in industrialised countries (Renzaho et al, 2015). There have been very few studies into the effect of migration on African migrants and rarely have researchers focused on obesity and obesity related health concerns. The few research findings available suggest that African migrants have worse health outcomes than the host population, a higher risk of becoming overweight and

obese and a higher risk of obesity-related concerns when migrating to industrialised countries (Rechel et al, 2013; Renzaho et al, 2014; Rhodes et al, 2016).

This higher risk is associated with factors such as significant dietary acculturation, change in family roles and dynamics and a reduction in physical activity (Flynn et al, 2006; Renzaho et al, 2014). Toselli et al. (2014) suggests that the adoption of the Western Lifestyle is an important factor in increased weight gain and subsequent obesity related conditions such as diabetes and cardiovascular disease. In their native countries many migrants have had a mostly grain based diet, lots of fruit and vegetables and a high level of physical activity, compared to the Western diet including high proportion of animal fat and protein, less dietary fibre and a more sedentary lifestyle (Caperchione et al, 2009; Hosper et al, 2007; Roshania et al, 2008). These changes, as well as difficulties obtaining work, different cultural, economic and social barriers and the increased risks of anxiety, depression and isolation, may contribute to poor physical and mental health of migrants living in industrialised Western societies (Janzon & Bolmsjo, 2013; Popovic-Lipovac & Strasser, 2015).

The literature suggests links between the level at which a migrant acculturates to the host society and prevalence of obesity (Alidu & Grunfeld, 2017; Novoa & Kimbro, 2016; Renzaho, 2007), and there is evidence that when migrants maintain more of their traditional cultural practices they are at significantly lower risk of becoming obese compared to migrants that completely adopt cultural patterns of the host society (Renzaho et al, 2015). Sudanese refugees on arrival in Australia were typically under-nourished and obesity was nearly non-existent. However, after an average stay of 3.1 years, there was a prevalence of 51% of obesity (Renzaho, 2014). In a study of Ghanaian African adult migrants living in Sydney, Australia, Saleh et al (2002) found that women had an average increase in BMI of 4.0kg/m^2 , over an average of 7.8 years. When compared to Australians of the same age group, African women had a prevalence of type 2 diabetes that was 4.4% higher than the native population. Drummond et al. (2011) found 80% of the African refugee women in their study were overweight or obese compared with 49% of the Australian women in the same sample. Beune et al.'s

(2006) study on the attitudes of Ghanaian immigrants in the Netherlands suggested participants attributed hypertension to the stress of migration with no recognition of the relationship between obesity and hypertension.

Abubakari et al. (2008) undertook a meta-analysis to examine distribution and trends of obesity in adult West African populations. This time trend analysis showed that prevalence of obesity in the urban, West African population more than doubled (114%) in a 15-year period and this growth markedly affected women. Furthermore, national and international studies have also reported numbers of African immigrant children as being overweight or obese (Magnusson et al, 2005; Renzaho et al. 2006; Renzaho et al, 2008; Renzaho, 2017).

Despite evidence suggesting obesity is an issue of concern to African migrants, little is known about African migrant women's understanding of the factors surrounding their weight gain, and their concerns around this issue. This paper is drawn from a larger qualitative study in which we sought to understand Australian West African migrant women's experiences of migration to Australia, and to gain insights into their health-related concerns as they settled into their new country. Previously we have published findings pertaining to experiences of establishing home and family (blinded for peer review). In this current paper, we present findings related to post-migration weight-gain, the attribution of that weight-gain, the lifestyle changes participants perceived had led to their weight-gain and concerns for their children in relation to weight-gain.

Study design

A storytelling approach was used to gather narratives for this study (Carter, 2008; Power et al, 2011). Each storytelling session lasted approximately 60 minutes and these were conducted face to face. Open ended questions were used to prompt women to begin their stories, and to probe for further information. All narratives were audio-recorded and transcribed verbatim by the first author, a health professional, and herself a West-African woman migrant. Data analysis was guided by Braun

and Clarke's (2006) six phases of qualitative analysis. In this paper we present the findings related to weight gain and diet. Initial key informants were recruited through Australian-based African organizations and migrant resource centres. Additional participants were recruited into the study using snowball sampling. Snowballing involves research participants extending the invitation to participate in the study to other women who fit the inclusion criteria (Kvale & Brinkmann, 2009). The snowballing process is especially useful for accessing potential participants in close-knit communities (Chotiga et al, 2010; Gholizadeh et al, 2009). All of the women in this study were residents of New South Wales, Australia.

Inclusion requirements stated that participants must be: women who had moved to Australia from West African countries; 18 years or over; living in Australia for over 6 months; fluent in English for ease of communication; and willing and able to participate in the study interviews. The criterion helped address the research objectives for this study.

Recruitment continued until data saturation occurred (Silverman, 2013). There were no pre-existing relationships between the participants and research team. Interviews occurred only once. Member checking was not employed. The women who contributed their story to this study were met at their choice of location, and most women chose to be interviewed in their own homes. In several cases the children of participant's were present.

As a West African migrant woman herself, the first author shared many characteristics with the participants. Attention to rigour was therefore paramount. In this study, rigour was established through the use of a reflective journal completed after each interview, supervisor de-briefing, investigator triangulation, clear description of all phases of the project, and the provision of excerpts of participant narrative. Ethics approval for the study was sought and obtained from the relevant institutional ethics committee. The study is presented in accordance with the COREQ guidelines.

Findings.

The women were aged between 26-55 years of age; predominately married (n=11), were skilled migrants (n=1), family or spouse migrants (n=8) or refugees (n=11) who had lived in Australia between 1 and 38 years. All of the women in the study reported weight gain of 10 – 44 kg since migration to Australia. They described their concerns about their weight and generally recognised the accompanying health risks such as diabetes, high blood pressure and heart disease.

My general concern right now as I speak with you is to cut down my weight because I've ballooned... I think my height is 5.7 and my current weight is well over 90kg even though I'm supposed to weigh 70kg to be in a healthy weight category. If I stand on the scale and they calculate my BMI they would say I'm obese... (Jasmine).

The women reported the eating patterns in Australia being significantly different to what they were used to in Africa. The food was more plentiful and affordable in Australia. In their countries of birth, the women stated that they grew up with healthy homemade foods which were consumed in the home. However, the hectic Australian lifestyle caused them to embrace the readily available fast foods and packaged meals.

...It is the availability and easy access that I am talking about and perhaps been expensive as well (in Africa). But in Australia, it's readily available, cheap and affordable (Favour).

Although some of the women recognised that fast food was not a good choice nutritionally, the affordability, easy access and convenience meant it was included in their diets. They understood fast food as being a contributory factor to their weight gain. However, they not only viewed the manner of cooking as being a factor, the way the food was grown and preserved was also considered suspect.

... more fast foods like chips. They are not really cooked or prepared well so they can contribute to some of the illness such as obesity; also because the food is not nutritious and there is no balanced diet in the food. There is too much of chemical to preserve the Australian food unlike back in Africa where we eat the food more naturally. The crops in Africa are grown without being treated with

chemicals or preservation processes as it is in Australia. Everything there mostly is eaten fresh and at their natural form... It depends where I am; if I become hungry I just buy whatever is around to eat (here in Australia) (Verity).

Several of the women were studying and so rushed between classes and paid work. As a result, they reported often arriving home late and exhausted. They described having just enough time to eat and catch up with needed rest. Eating late at night was another practice the women associated with their weight gain. The women felt that the cycle was inevitable and necessary for them to survive in Australia.

... I work every day and I go to Uni and go to work; I come home I'm tired, I sit down and eat and then I sleep so I'm trying to find the solution of cutting down some of the food and like eating a bit too late in the night which causes me to gain more weight and also- it is not healthy... (Jasmine).

With their priorities focused upon employment and providing for their family both here in Australia and back home in Africa, many of these women were time poor. Suzie was very concerned that her weight had increased from 60kg to 104kg since her arrival in Australia, 8 years before. Despite her concern however, the pressure of working, schooling and caring for three young children affected her capacity for self-care. As Suzie said:

I don't have any physical activity. The only physical activity I have is to come to the shop work, go to school for my studies and then back home. The only time I have physical activity is when I'm back in the house and doing those house work... My children go for swimming. Even that, my friends drop them for me and pick them up I have no time at all (Suzie).

Participants identified a greatly reduced physical activity level compared to what they were used to prior to their migration. The women recognised the reduced physical activity involved in their day-to-day activities was a dilemma. The access to cars in Australia meant the women no longer engaged in

the unavoidable routine walking they did when in Africa in order to complete their daily tasks. Reminiscing about her African lifestyle Sophie said, *'we were always moving, walking a long distance to get to where we want to go; we move a lot and walk a lot'*.

The change in diet they experienced after moving to Australia was a great concern for participants, and especially for their children. Food has great cultural and social meaning, and the complete change in diet was a source of worry. Amy, as the mother of 3 children commented, *'the kids eat Aussie junk foods because coming into a new country; they like it and drink the fizzy drinks also'*. Claire, like Amy, was also concerned about the acceptance and availability of soft drink and its effect on her young daughter's health:

I'm worried for her [daughter] because of too much of sugar inside fizzy drinks. So now I'm trying to cut it down for her. I encourage her to exercise, to walk (Claire).

The availability of inexpensive packaged and processed foods, access to technology like laptops, and sedentary pastimes meant the women believed their children's health was compromised by the Western lifestyle. Prue expressed concern about her daughter's eating habits and her refusal to be active.

See as a Muslim when we want to pray we stand, we bend we kneel down and head touching the floor and I as the mother was able to do all that during prayer yesterday, she (Prue's 20 year old daughter) could not, and she was just sitting down in one place. I joined her to xxx (weight loss program); she is not doing it... I also tried (another weight loss program) but she won't do it. I beg her. Even my sister paid \$15 every week into an exercise program for her... and we drop her there and come back to pick her. But we didn't know that during winter time when we drop her she only goes into the heated room to sit down (Prue).

Coupled with the lack of time was the financial commitment required to join a gymnasium or fitness outlet. As these women struggled to meet the financial needs of their immediate and extended

family back in Africa, it became evident that the priorities and competing interests of the West African migrant women in this study had reduced the opportunity to focus on maintaining a healthy weight. But this was a concern for them and even though these women were busy, the recognition of the health risks of excess weight spurred them into making efforts towards weight loss. Sophie reported evening walks with her sisters had helped her to reduce her weight from 100kg to 75kg. Suzie's concern with developing diabetes and high blood pressure from her weight had propelled her into dieting, and for Jasmine:

So I am battling to get the weight down to my normal range... I'm trying to sort out how to eat properly.... so that I can lose the weight. I've gone and joined the Gym and also bought the exercise machine... (Jasmine).

Through their stories, some of the women's narratives highlighted cultural differences between Western and African societies beliefs regarding obesity.

It's in Australia here that they are talking of weight gain ... weight loss. In Nigeria we see that weight as a good thing... We see it (weight gain) as beneficial... What I mean is if a man or a woman is not gaining weight; it means that the person is not feeding well (Leanne).

Like Leanne several other women indicated that they embraced their weight gain. These women explained that their positive attitude towards weight gain stemmed from the notion that an African woman is expected to increase in weight after marriage because it is seen as a source of pride to the woman and indicates the capacity of her husband to provide for her. Favour discussed the African belief of affluence and a heavier body weight being correlated with good health. According to Favour, in Nigeria a man with a large abdomen symbolised someone that not only ate well but was also the epitome of health and a blessed life. Favour explained further that an African woman that is obese or overweight represented a woman who had been provided with a good life and marriage.

Discussion

Participants in the current study discussed changes to their weight and provided rationales for their weight gain following the move to Australia from Africa. The diet and lifestyle in Africa was considered more conducive to maintaining a healthy weight. Food was not as accessible and in the context of African economics, was more expensive. Most of the women understood that poor diet and excessive weight gain significantly contributed to poor health. They had concerns about the effects of their diet and lifestyle on their own health and their families' health.

Weight gain as a concern for our participants was reflected in other studies focussing on female African migrants to Western countries (Saleh et al, 2002; Janzon & Bolmsjo, 2013). Saleh et al. (2002) found that migrants from Ghana living in Sydney, had almost entirely replaced tropical root crops consumed in Africa with potato starch; consequently, the self-reported mean body mass index (BMI) increased. In addition to the variety of fresh food available, the convenience of take-away and pre-packaged meals and availability of soft drink was also correlated with weight gain. Maneze et al (2017) found similar results with Filipino migrants who also changed their diet upon migration to Australia. The abundance of inexpensive unhealthy food choices and increased portion sizes led to a 'trap of overindulgence' to which they were unaccustomed. For immigrants to Australia, having a child at home is related to a higher likelihood of eating take-away food (Peterman et al, 2011). In Renzaho et al.'s Swedish study (2012), being able to afford take-away food was associated with achieving higher social status. In the current study, participants recognised that take-away food contributed to weight gain which was undesirable, yet Renzaho and colleagues' participants were more likely to encourage their children to eat take-away food as many were invested in seeing their children gain weight. Several studies comparing immigrant children to children born in the host country have found that immigrants differ in prevalence rates of obesity and being overweight (Griffith et al, 2014; Zhang et al, 2017).

Refugees have distinct experiences and personal characteristics that may affect how they react to the Australian food environment. Many refugees come from war and trauma, have experienced food

deprivation, sometimes for extended periods, have little education and poor literacy (Carroll et al. 2007; Peterman et al, 2011), all of which may influence their contact with new culture and their choices and practices around food (Peterman et al, 2010; Renzaho et al, 2007).

There is a distinct contrast in the ideal body size between women in Western countries and women in African countries (Cox et al, 2010; Grabe & Hyde, 2006; Perez & Joiner, 2003). In Westernised countries, the social construction of beauty is associated with slim figures and being thin. In other parts of the world, including Africa, larger bodies are more desirable (Ricciardelli et al, 2007; Swami et al, 2009). In Somali, Kenya and central Africa there are certain terms that translate to 'thin or skinny lady' that are used in a negative and derogatory tone (Scott et al, 2012). There are also terms used in these areas that are positive and complimentary to women with a larger figure, who in Western society may be considered obese (Renzaho, 2004). African women may therefore be invested in maintaining a larger figure and this preference will not necessarily change to accommodate standards of beauty beliefs in Western countries. The desire to be bigger along with dietary acculturation could put African immigrant women at a higher risk of obesity related conditions such as stroke and diabetes (Janzon & Bolmsjo, 2013).

Reports of sedentary lifestyles and inactivity pervaded the women's stories. In Africa, exercise is frequent and incidental. Similar, to research with African migrants living in Melbourne (Renzaho et al, 2012) and Sweden (Janzon & Bolmsjo, 2013), in the present study, participants reported becoming increasingly sedentary which they also associated with weight gain. This was attributed to a faster paced Western lifestyle that had to accommodate work and study and reduced or no access to domestic help. Additionally, exercise was now seen as being an intentional (rather than incidental) activity, and associated with both a financial and time penalty to attend the gym.

The health of the children of refugee women in Victoria was explored by Renzaho and colleagues (2008). These researchers found that a less traditional African lifestyle equated to food and sedentary habit formation that could result in obesity, consistent with the present study's findings. In

their review of 57 publications into barriers and enablers of physical activity in culturally and linguistically diverse (CALD) groups who have recently migrated to Western society, Caperchione et al. (2009) found that physical inactivity is common in migrant CALD groups. It has also been documented as a key contributing risk factor to chronic disease for these individuals.

Contrary to the current study, Renzaho and colleagues (2012) found that the African participants not only sought to increase their own weight, but that they actively attempted to make their children gain weight. Also children in this study embraced the Western diet and gained weight whereas children in Renzaho and colleagues (2012) study actively resisted their parents attempts to increase their body mass subscribing to Western standards of beauty that value thinness. The children were educating the parents on the dangers of becoming overweight or obese.

Conclusions

Many participants in this study reported gaining weight or becoming obese since migrating to Australia. Gaining weight was attributed to lack of time, convenience of take-away and pre-packaged meals and access to soft drinks. Although weight gain is seen as desirable in their home countries, the majority of our participants were concerned for their own health and that of their children. Participants were cognisant of the health risks associated with being overweight or obese and many were consciously taking steps to attempt to lose weight or reduce their children's weight.

The experiences of the participants in this study may be shared by other migrants entering Australia. Migrants may have additional needs and require health education to support them and their families around physical health needs in the context of settling in a new country.

Although some of our findings resonated with the literature on African migrants in Australia, there were distinct differences which could perhaps be attributed to research being undertaken with people migrating from different countries and regions of the African continent. The diversity of

African migrants in Australia must be acknowledged, and this diversity recognised in both the design of research and health care.

Relevance to clinical practice

Given the strong established links between obesity in early life and obesity related conditions in later life, the high prevalence of obesity among West African immigrants is a major health concern. Gaining insight into the underlying reasons that West African immigrants in Australia often become obese could contribute to assisting health professionals design culturally appropriate interventions and health education programs.

Activities such as community gardens and/or community kitchens could create opportunities for women to come gather and share skills and knowledge about food production and healthy eating since most of these women are concerned with weight issues for themselves or their family members. Education about the Western food culture and exercise could be included to help this community avoid weight gain and the accompanying health risk.

Recommendations for future research

With the exception of extensive work being undertaken by small pockets of researchers, data on obesity among African migrants in Australia is lacking. Given the diversity between African migrants from different African countries and the contrast between our results and Renzaho et al.'s (2012) regarding attitudes to obesity and in particular overweight and obesity in children, further research needs to occur in groups of African migrants from specific countries and regions of Africa.

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