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Social context matters: Predictors of quality of life among recently arrived refugee women-at-risk living in Australia

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Background

By the end of 2018, an estimated 70.8 million people were forcibly displaced globally due to war, conflict, and persecution, representing the highest number of displaced people in recorded history (United Nations High Commissioner for Refugees [UNHCR], 2019). To address the gender-specific vulnerabilities that refugee women and girls experience, the UNHCR has a separate category, ‘Woman-at-Risk’, for women and girls who are at heightened risk of experiencing gender-based violence and assault due to a lack of protection often afforded by male family members (UNHCR, 2013). Women-at-risk may be “single heads of households, unaccompanied, or accompanied by other family members” (UNHCR, 2013, p. 2). Some of these risk factors include (UNHCR, 2008):

- “Security problems threatening or exposing them to sexual and gender based violence (SGBV) or other forms of violence;
- Problems accessing and enjoying assistance and services;
- Position of women and girls in society leading to inequalities;
- Legal systems which do not adequately respect, protect and fulfil their rights;
- Protection mechanisms which do not adequately respect, protect and fulfil their rights;
- Absence of solutions” (p. 66)

Resettlement in a third country is an important protection tool for women and girls who find themselves in vulnerable circumstances. Annually, about 12% of all UNHCR submissions for resettlement involve refugee women-at-risk (UNHCR, 2016). The UNHCR has identified women as a high-risk group in terms of psychiatric morbidity, possibly due to
heightened risk for particular traumas including experiences of rape and sexual violence (Pittaway & Bartolomei, 2018, Vromans et al., in press). Despite these unique factors and experiences, limited gender-specific research exists.

**Refugee Wellbeing and Quality of Life**

People from refugee backgrounds regularly experience traumatic events during the pre-flight, flight, and resettlement period, and subsequently are more likely to suffer from poorer mental health outcomes than non-refugee populations (Carswell, Blackburn, & Baker, 2011; Schweitzer, Melville, Steel, & Lacherez, 2006). Meta-analyses indicate that refugees fare significantly worse than the general population for mental health concerns (Fazel, Wheeler, & Danesh, 2005; Porter & Haslam, 2005; Turrini et al., 2017).

While there has been a dominant focus on psychopathology in refugee research, there is a growing body of research examining wellbeing outcomes and quality of life (QOL) during the resettlement process (Correa-Velez, Gifford, & Barnett, 2010; Löfvander, Rosenblad, Wiklund, Bennström, & Leppert, 2014). QOL is defined as “an individual’s perception of their position in life, in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns” (WHO Quality of Life Assessment Group, 1995, p. 1403). As such, QOL is multidimensional and relates to all areas of life (Skevington, Lofty, & O’Connell, 2004). Subjective wellbeing has been defined as an assessment of a person’s life consisting of positive aspects, negative affect, and cognitive evaluations of life satisfaction (Diener & Diener, 1995). Although wellbeing and quality of life are not the same construct, recent research has found high positive correlation between subjective wellbeing and the psychological dimension of QOL (Medvedev & Landhuis, 2018).
The literature has reported lower levels of QOL among resettled refugee populations (Huijts, Kleijn, van Emmerik, Noordhof, & Smith, 2012; Leiler, Bjarta, Ekdahl, & Wasteson, 2019; Teodorescu et al., 2012) when compared to the general population (Skevington et al., 2004). Among resettled refugees, lower QOL has been found to be associated with experiences of torture (Carlsson, Mortensen, & Kastrup, 2006); chronic pain (Carlsson, Mortensen, et al., 2006); depression (Ghazinour, Richter, & Eisemann, 2004; Leiler et al., 2019; Teodorescu et al., 2012), anxiety (Leiler et al., 2019), PTSD symptoms (Huijts et al., 2012; Leiler et al., 2019; Teodorescu et al., 2012); lower social support (Carlsson, Mortensen, et al., 2006; Ghazinour et al., 2004), and unemployment (Carlsson, Olsen, Mortensen, & Kastrup, 2006).

There is, however, a dearth of research on the QOL of resettled refugee women in particular. The few studies available report poorer QOL when compared to the general population (Jesuthasan et al., 2018; Sundquist, Behmen-Vincevic, & Johansson, 1998) but higher compared to refugee men (Ghazinour et al., 2004). A recent study of 663 refugee women from six countries (Afghanistan, Syria, Iran, Iraq, Somalia and Eritrea) living in Germany found that their QOL was negatively correlated with “age, subjective near-death experiences, absence of health care in the case of illness, and having experienced violence by a family member” (Jesuthasan et al., 2018, p. 8).

The current paper posits the importance of examining the QOL of newly arrived women-at-risk from refugee backgrounds, in addition to researching and understanding factors promoting and detracting from QOL, such as pre-migration and post-migration experiences in Australia.

**Gender and Pre-migration Factors**

Demographic factors have been assessed for their impact on resettlement outcomes including gender. The majority of studies indicate a higher prevalence of post-traumatic
stress disorder (PTSD) and depression among refugee women compared to men (Lindert, Ehrenstein, Priebe, Mielck, & Brähler, 2009; Pittaway & Bartolomei, 2001), across a number of countries (Porter & Haslam, 2005; Schubert & Punamaki, 2011). While the underlying mechanisms driving gender differences are unknown, researchers suggest that the higher prevalence of PTSD and depression among refugee women may relate to a higher likelihood of pre-migration sexual violence (Freedman, 2016; Rumbaut, 1991).

Pre-migration factors have been shown to be linked with post-migration outcomes. For instance, both higher and lower levels of education have been linked to poorer mental health and wellbeing (Fenta, Hyman, & Noh, 2004; Porter & Haslam, 2005). People with higher educational achievement may experience a more marked drop in social status, and a greater loss of identity after migration compared to individuals with lower educational attainment. Those with lower educational levels may struggle to access services and navigate social and cultural systems in a new environment. But for women, additional barriers like the lack of access to sanitary materials limit their access to educational opportunities (Pittaway & Bartolomei, 2018).

Research suggests that the more types of pre-migration traumatic events experienced, the greater likelihood of psychological distress and psychopathology (Steel et al., 2009). Overall, pre-migration factors have been consistently linked with post-migration outcomes, thus suggesting unique transition needs depending on prior experiences and individual characteristics.

**Post-migration Factors**

People from refugee backgrounds face an accumulation of multiple traumatic events (Bracken, Giller, & Summerfield, 1995; Schock, Bottche, Rosner, Wenk-Ansohn, & Knaevelsrud, 2016), including stressors related to resettling in a new country (Schweitzer,
Brough, Vromans, & Asic-Kobe, 2011). For example, research with Tamil asylum-seekers, refugees and immigrants in Australia found pre-migration trauma accounted for 20% of the variance of PTSD symptoms, with post-migration living difficulties accounting for 14% (Steel, Silove, Bird, McGorry, & Mohan, 1999), suggesting this is an area worthy of further attention.

Several post-migration factors have been linked with poor mental health outcomes. These include difficulty finding employment (Brody, 1994), long-term institutionalised imprisonment or confinement (Steel et al., 2006; Von Buchwald, 1998), absence of trust in community members (Vromans et al., in press), limited access to cultural resources (Porter & Haslam, 2005), experiences of racism or prejudice, loss of meaningful social roles and culture (McMichael & Manderson, 2004; Porter & Haslam, 2005), poor living conditions (Laban, Gernaat, Komproe, van der Tweel, & De Jong, 2005; Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997), and limited social support (Schweitzer, Melville, Steel, & Lacherez, 2006). Communication problems have also been found to negatively impact post-migration mental health and wellbeing as difficulties speaking a host nation’s language can negatively impact adjustment to the community (Silove, 1999; Takeuchi et al., 2007).

Specific post-migration factors have been identified as protective of refugee mental health and wellbeing. For example, studies indicate that greater social capital and support predicts lower levels of depression (Beiser, 2009). Social support both from ethnic in-group members and others have protective effects for mental health (Beiser, 2006; Birman & Tran, 2008; Gellis, 2003; McMichael & Manderson, 2004). Social support has been linked to an increased sense of community, belonging, and access to practical assistance (Menjívar, 2000). Ethnic in-group support has been shown to be important when people from refugee backgrounds experience discrimination by providing a buffer against possible alienation and loneliness (McCoy & Major, 2003). Studies focussing on women specifically highlight a
range of sociocultural factors that support their adaptation as they juggle with day-to-day challenges and opportunities (Lenette, Brough, & Cox, 2013; Lenette et al., 2019; Vromans et al., in press).

**The Current Study**

There is limited research on factors predicting the QOL of women-at-risk despite the fact that they represent 12% of Australia’s annual refugee intake and are deemed to be at specific risk compared with mainstream refugee populations. Informed by a social determinants of health framework in post-migration contexts (Hynie, 2017), the purpose of the current study is to assess the differential impacts of pre-migration and post-migration factors on the QOL of 104 newly arrived refugee women-at-risk living in South-east Queensland, Australia in 2016–2017. We hypothesize that social capital and social networks positively predict QOL, above and beyond traditional predictors of trauma and post-migration living difficulties among this group of women-at-risk from refugee backgrounds.

With a population of 5,011,216 people in 2018, Queensland is the third most populated state in Australia (Queensland Government Statistician’s Office, 2019). The South East region (SEQ) hosts 70% of the Queensland population, with 25.8% of the population born overseas, and 14.4% speaking a language other than English at home. The top five overseas countries of birth were New Zealand (5.2%), England (4.4%), China (1.4%), India (1.3%) and South Africa (1%) (Queensland Government Statistician’s Office, 2019).

Between 2008 and 2017, Australia resettled 170,637 refugees (Refugee Council of Australia, 2018). Of the 26,135 resettled between July 2016 and June 2017, 2,490 (9.5%) were resettled in Queensland, 80% of these in SEQ (Australian Government Department of Social Services, 2017). The majority of refugee arrivals to SEQ were from Syria, Iraq, Democratic Republic of Congo (DRC), Myanmar, and Afghanistan (Refugee Health Network...
Queensland, 2018). Recent research in SEQ found no gender differences in life satisfaction among 222 adult refugees from Burma (Myanmar), Ethiopia and DRC, with low English language proficiency, unemployment and financial difficulties being associated with lower levels of life satisfaction (Hebbani, Khawaja, Colic-Peisker, Obijiofor, Gallois & MacKinnon, 2016).

**Methods**

The cross-sectional analysis is part of a mixed-method research project investigating health and settlement experiences of refugee women-at-risk.

**Sample and Procedure**

Participants were recruited through a collaborating agency involved in refugee resettlement. Researchers worked in partnership with two key agencies in South-East Queensland. Staff from the agency provided initial information to clients meeting the inclusion criteria, and invited them to participate. Inclusion criteria were: (i) aged 18 years or older; (ii) entered Australia in previous 6 months via the Australian offshore humanitarian program; (iii) living in South-East Queensland; (iv) referred by government-funded resettlement agencies as women-at-risk; and (v) provided voluntary informed consent. Clients who met the inclusion criteria and expressed interest in participating were referred to a researcher who, with the help of an interpreter, elaborated further on the purpose of the study and went through the consent process. Consent materials were verbally translated to participants by the interpreter.

A structured questionnaire was administered to consenting participants with the assistance of an interpreter/bicultural worker who spoke the participant’s preferred language. Most bicultural workers were also members of the participant’s ethnocultural community. The welfare of participants and the quality of communication processes were prioritised
throughout the research. In-house training and supervision were provided to the bicultural workers, with the aim of ensuring a good understanding of working ethically and effectively with interviewers in the assessment of people from refugee backgrounds. Interviews were conducted between April 2014 and December 2015 at an agency office or at the participant’s home, lasting approximately 2 hours.

**Ethical considerations**

The research team worked closely with the resettlement agency and bicultural workers to ensure participants’ welfare, cultural appropriateness of the research, privacy and confidentiality, and optimal communication with participants. All interpreters and bicultural workers were women. All participants provided written informed consent. Ethics approval was granted by the Queensland University of Technology (QUT) Human Research Ethics Committee.

**Materials**

Demographic questions enquired into age, country of birth, religious affiliation, marital status, number of children, education level, English language skills, and employment status.

**Independent variables**

*Pre-migration Trauma*. Number of trauma types were measured using the Harvard Trauma Questionnaire (HTQ; Mollica et al., 1992). The HTQ has been widely used in diverse refugee populations (Mollica et al., 2001; Shoeb, Weinstein, & Mollica, 2007). Section 1 of the HTQ indexes participants’ experiences of 17 traumatic events: for example, ‘lack of food or water’; ‘rape or sexual abuse’; ‘torture’, and; ‘murder of family or friend’. Total number of trauma types were calculated. The measure specifies that participants are to report on traumatic experiences that occurred prior to their arrival in Australia, thus specifically capturing pre-migration trauma.
**Post-migration living difficulties.** Number of post-migration difficulties were measured using the Post-migration Living Difficulties (PMLD) Checklist (Silove, Steel, McGorry, & Mohan, 1998). The original PMLD included 23 common difficulties but only 10 were assessed in the present study to reduce participants’ burden, covering areas such as communication difficulties, discrimination, worry about family members, employment, immigration process, access to health/welfare services, adjustment to life in Australia, transport, loneliness/boredom, and isolation. Shorter versions of PMLD have been previously used (Schweitzer et al., 2011; Schweitzer et al., 2006). A slight modification was made to the response scale, where responses for each item ranged from ‘was not a problem or did not happen’ (1) to ‘still a serious problem today’ (5). Only difficulties reported as ‘a serious problem’ (4) or ‘still a serious problem today’ (5), were considered in this analysis.

**Social Capital.** Four items from the short version of the Adapted Social Capital Assessment Tool (SASCAT; De Silva et al., 2006; Harpham, Grant, & Thomas, 2002) were used to assess cognitive social capital in the post-migration context. These items included trust (‘In general, can the majority of people in this community be trusted?’), social harmony (‘Do the majority of people in this community generally get along with each other?’), sense of belonging (‘Do you feel as though you are really part of this community?’), and sense of fairness (‘Do you think that the majority of people in this community would try to take advantage of you if they got the chance?’). Each item had a No (0) or Yes (1) response option. SASCAT has been used and validated in a variety of cultural settings (De Silva et al., 2006).

**Social Networks.** Similar to a genogram, a sociogram is a visual representation of one’s social world, incorporating both qualitative and contextual data (Tubaro, Casilli, & Mounier, 2014). Participants were asked to identify key individuals (both family and friends) in their social lives to construct their sociograms. They were then asked whether social
figures were family or friends, and whether they were located within their households, community, or beyond, to construct the structure of their social networks. Participants were asked to indicate the types of functional support that were provided by each key social figure: emotional, practical, social, and/or spiritual support, or no support. Social support was described as companionship or engaging in social activities with a person; emotional support was defined as having someone to talk to about problems or difficulties; practical support was defined as having someone to help with tasks such as taking care of children, housework, or transportation; spiritual support was described as having someone to talk to about spirituality or matters of faith; educational support was defined as help with educational matters (such as learning English or support with schooling); financial help was described as someone who had loaned money or provided monetary relief. These descriptors of support were used as prompts rather than criteria for supportive relationships, thus giving authority to the women’s lived experiences of support and acknowledging the diverse meanings associated with support and friendship (Smith, 2013). Participants were able to indicate whether key social figures provided more than one type of functional support, or provided no functional support.

*Dependent (outcome) variable – Quality of life.* The World Health Organization Quality of Life-Bref (WHOQOL-BREF) questionnaire (WHO, 1996) was used to assess QOL. WHOQOL-BREF is a 26-item measure which has been widely used in a variety of cultural settings (Skevington et al., 2004), and with displaced populations (Araya, Chotai, Komproe, & de Jong, 2011; Correa-Velez, Barnett, Gifford, & Sackey, 2011; Correa-Velez et al., 2010). WHOQOL-BREF consists of four domains (24 items): (i) Physical domain (7 items); (ii) Psychological domain (6 items); (iii) Social relationships domain (3 items); and (iv) Environment domain (8 items). For the four subscales, each item was scored on a 5-point scale; higher scores indicating a greater QOL in each individual domain. In accordance to the recommendations of the WHOQOL-BREF developers (Skevington et al., 2004), the social
relationships domain has been excluded from the analysis because one of the three items, “How satisfied are you with your sex life?” reported high levels of missing responses (54% of participants declined to respond to it) Cronbach’s alpha coefficients of the remaining three domains were: physical domain (0.70), psychological domain (0.71), and environment domain (0.62). Due to its unacceptable reliability coefficient, the environment domain has also been excluded from this analysis. The implications of these exclusions are examined in the Discussion section.

The WHOQOL-BREF includes two additional items which were used to assess overall quality of life (“How would you rate your quality of life?”; responses ranged from ‘very poor’ (1) to ‘very good’ (5)), and satisfaction with health status (“How satisfied are you with your health?”; responses ranged from ‘very dissatisfied’ (1) to ‘very satisfied’ (5)). For the purpose of conducting logistic regression analyses, these two variables were recoded into binary variables: quality of life was recoded into poor (very poor, poor, neither poor nor good) and good (good, very good), while health status was recoded into dissatisfied (very dissatisfied, dissatisfied, neither satisfied nor dissatisfied) and satisfied (satisfied, very satisfied).

**Statistical Analyses**

Analyses were conducted using IBM SPSS 22 (IBM Corp., 2013). Percentage (when appropriate), mean, standard deviation, and range were used to describe demographic characteristics, psychosocial variables, and QOL outcomes. Missing data was low; only one participant did not provide responses on the four cognitive social capital items.

Hierarchical multiple linear regression analyses assessed factors predicting WHOQOL-BREF physical and psychological domains. Hierarchical logistic regression analyses were conducted for WHOQOL-BREF overall quality of life and health status items. Regression analyses involved three steps. At step 1, five demographic variables were
included in the model to assess their contribution to the outcome variables: age in years, region of birth (from an African nation vs. all other countries), number of children (none vs. one or more), education completed (none/primary vs. secondary or tertiary), and English language skills (none/great difficulty vs. some difficulty/fluent). In step 2, number of trauma types were added to the model to assess the impact of pre-migration trauma. At step 3, number of post-migration living difficulties, cognitive social capital (4 items) and social support (5 items) described above were added to the model to assess the impact of post-migration factors. A stepwise backward elimination procedure was applied to those variables added in step 3 (only those variables with a p value < 0.100 were kept in the models). Changes in the adjusted R² statistic were used to assess how much predictive power was added to the model by the addition of other variables. All analyses were undertaken using a criterion for significance of α = .05 in two-tailed tests.

Results

Descriptive Statistics

Table 1 shows descriptive statistics for independent and dependent variables. The majority of participants were originally from Africa (78.9%; mostly from Democratic Republic of Congo, 22.1%; Eritrea, 20.2% and Ethiopia, 14.4%), were Christian (60.6%), had children (60.6%), and reported limited English language skills (61.5%). All but one of the women were not in the workforce. Of the 104 participants, 88 (84.6%) entered Australia on a Woman-at-Risk visa, 12 (11.5%) on a Global Special Humanitarian visa, and 4 (3.8%) on a Refugee visa category. All were assessed by the resettlement agency as women-at-risk. Participants had been in Australia for an average of 103.7 days (SD=57.7; Median=94.5; range 6 to 219). Ninety percent had been in Australia longer than 32 days.
The majority of women felt part of their ethnic communities (86.4%), and 57.3% believed that most people in their communities could be trusted. However, 61.2% thought that the majority of people in the community would take advantage of them if they got the chance. Participants reported a greater number of key people who provided emotional support (5.4 people on average) compared to the average number of key people who provided social (3.2 people), practical (3.1 people) and spiritual (2.2 people) support. Overall, women reported high scores in physical and psychological wellbeing domains, and the majority reported good quality of life (80.8%) and were satisfied with their health status (73.1%).

Table 1 about here

**Bivariate Correlations**

Bivariate correlations show the physical domain was positively correlated with the psychological domain and satisfaction with health status. Satisfaction with health status was positively correlated with the psychological domain and overall QOL. Age (older) was negatively correlated with physical and psychological domains and health status, but was not correlated with overall QOL. Region of birth (Africa) was positively correlated with both physical and psychological domains, while having children was negatively correlated with the physical domain. Having completed either secondary or tertiary education (versus no education or primary schooling) was correlated with greater levels of the physical domain and health status. Number of trauma types was positively correlated with a greater number of post-migration living difficulties.

**Multivariate Analyses**

Results of the hierarchical multiple linear regression analyses for physical and psychological domains are shown in Table 2, while the hierarchical multiple logistic regression analyses for overall QOL and satisfaction with health status are shown in Table 3.
Physical domain. Step 1 (see Table 2) shows that the demographic characteristics accounted for 22% of the variance in physical domain scores (Adj $R^2 = .22$, $p<.001$). Being African born ($\beta = .35$, $p<.001$) and having completed either secondary or tertiary education ($\beta = .32$, $p=.002$) were associated with greater scores in the physical domain. When number of pre-migration trauma types was added into the model (Step 2), the variance did not change and region of birth and education remained significant. PMLD, cognitive social capital, and social support items were added into the model in step 3, but only ‘most people in the community can be trusted’ remained after stepwise elimination. The variance in step 3 increased to 25% ($p<.001$). Being African born ($\beta = .32$, $p=.001$), having completed secondary or tertiary education ($\beta = .32$, $p=.002$), and believing that most people in the community can be trusted ($\beta = .20$, $p=.027$) were significantly associated with greater scores in the physical domain.

Table 2 about here

Psychological domain. The demographic characteristics (Step 1, Table 2 Cont.) accounted for 5% of the variance in psychological domain scores (Adj $R^2 = .05$, $p<.075$). Being African born ($\beta = .24$, $p=.018$) was significantly associated with greater scores in the psychological domain. The variance did not change when number of pre-migration trauma types were entered into the model (Step 2), and region of birth remained significant ($\beta = .25$, $p=.015$). In Step 3, the variance increased to 13% and only two of the post-migration items, ‘most people in the community can be trusted’ and ‘number of key persons who provide no support’, remained in the model after the stepwise procedure. The addition of these two variables yielded a reduction of the effects of region of birth, which was no longer significant. Believing that most people in the community can be trusted ($\beta = .20$, $p=.039$) was associated with greater scores in the psychological domain. The greater the number of key
people who provide no support, the lower the scores in the psychological domain ($\beta = -.24$, $p=.018$).

*Overall QOL.* The hierarchical logistic regression predicting overall QOL (Table 3) found no significant associations in any of the three steps.

*Satisfaction with Health Status.* Step 1 (see Table 3) shows that demographic characteristics accounted for 19% of the variance in whether or not participants were satisfied with their health ($\chi^2 = 14.13$, $df = 5$, $p = .015$). Women who had completed secondary or tertiary education were 4.67 times more likely to be satisfied with their health compared to those with no education or who completed primary education only (95%CI [1.40, 15.63], $p=.012$). Women with better English language skills were less likely to be satisfied with their health (OR = .22, 95%CI [.07, .71], $p=.011$). Adding number of trauma types (Step 2) and post-migration variables (Step 3) did not change the variance, and both education and English language skills remained statistically significant. No post-migration variables remained in step 3 after the backward elimination procedure.

Table 3 about here

**Discussion**

The current research, which includes 104 women from 15 different countries, has identified several characteristics that predicted the quality of life of women in the first 6 months following resettlement. This research is among the limited body of research examining the unique experience of women in the resettlement process. The findings have important implications for programs and policies for women and their families, in particular during the early stages of resettlement.
Quality of life and wellbeing. The majority of newly arrived refugee women reported having a good quality of life (80.8%) and were satisfied with their health (73.1%), with relatively higher scores in the psychological and physical wellbeing domains when compared to population averages (Skevington et al., 2004). This is important, as wellbeing can be understood as both a resource for and an outcome of successful settlement among people from refugee backgrounds (Ager & Strang, 2008; Correa-Velez et al., 2010).

Social capital and social networks. Overall, the findings of this study confirm our hypothesis that social capital and social networks positively predict women-at-risk’s QOL in resettlement, above and beyond traditional predictors of trauma and post-migration living difficulties. While prior research has largely emphasized the role of pre-migration trauma or specific post-migration living difficulties (e.g., PMLD scale), neither of these was a significant predictor in any of the models tested. This research indicates that social contexts, including both the close ethnic community and the broader host community, may be important factors in predicting QOL for newly resettled refugee women-at-risk. The cognitive social capital items assessed women’s experiences within the community, without specifying whether social capital referred to participants’ own ethnic community or the larger Australian or geographic community. Participants responded from their own frames of reference, thus the relationships within both ethnic and host communities warrants further consideration (Ager & Strang, 2008).

The uprooting of social networks is at the core of refugee experiences (Fiddian-Qasmiyeh, Loescher, Long, & Sigona, 2014). Questions remain regarding the ways in which refugees are able to rebuild their social networks following forced displacement. A Canadian study found that refugees are able to keep some familial networks upon resettlement and
bring with them capabilities to build more extensive non-familial networks (Lamba & Krahn, 2003). In the current study, women reported an average of just over seven key persons in their social networks. Most key people were from within their household (M = 2.9 people) or overseas (M = 2.9), with fewer local supports reported (M = 1.4). While more detailed information about the quality and characteristics of these networks is needed, these findings suggest that newly resettled women continue to rely largely on social supports established prior to resettlement. A recent review of the impact of socio-cultural experiences among resettled refugee women on their health also found that the support provided by family and ethnic communities is a critical predictor of their mental health and wellbeing (Shishehgar, Gholizadeh, DiGiacomo, Green, & Davidson, 2017).

Community. People resettle within particular contexts where the local community and context undoubtedly plays a role in their settlement experience. In this sample of women, having less trust in the community predicted worse QOL in the physical and psychological domains (as in Lenette, 2015). It could be argued that mistrust in communities is not only the result of community characteristics but also a sign of an individual’s distress resulting from significant hardship. Further research is needed to assess the mechanisms responsible for the association between community mistrust and QOL among refugee women-at-risk. The breakdown of social networks and the loss of trust are often a legacy of war and conflict. McMichael and Manderson (2004) noted, “war erodes social reciprocity, trust and social cohesion, and social capital is not readily reformed upon resettlement. The social conflict and hostilities that provoke displacement and eventual migration continue to inform social relations after resettlement” (p. 89). The closeness within ethnic communities in resettlement can act as a source of support and also conflict. Community connections and kinship may facilitate access to services and resources such as employment and housing, but can also be
experienced as a source of gossip, community surveillance, and harmful judgments (McMichael & Manderson, 2004). Refugee women who are raising children alone and experience mistrust with their community and the broader society “could face significant hardships, thus increasing their vulnerabilities and keeping them at the margins of their communities” (Lenette, 2015, p.129).

When considering the broader community context, few participants reported experiences of discrimination. Beyond experiences of discrimination, relationships with the larger host society contribute to the acquisition of social capital and integration more broadly (Strang & Ager, 2010). Future research should assess experiences and social capital within participants’ own ethnic community and within the broader community context independently and, in turn, their potentially unique roles in promoting QOL.

There is a fair amount of evidence in support of the positive association between the size of one’s social networks and better physical and mental health (Jetten, Haslam, Haslam, Dingle, & Jones, 2014). While the number of social networks did not predict QOL among this group of refugee women, those women who identified higher numbers of individuals within their social networks but who did not provide support reported lower scores in the psychological domain. Given the cross-sectional nature of this study, it could be argued that psychological wellbeing predisposes individuals to acknowledge those networks that provide support more readily than those which do not. Nevertheless, these findings may have implications for the resettlement of refugee women-at-risk, given they are often single mothers with dependents who are unable to provide social support. Similarly, Somali women from refugee backgrounds settled in Melbourne were often overwhelmed by their parental responsibilities because of social isolation and lack of familiarity with Australian culture and systems (McMichael & Manderson, 2004). Thus, settlement and community services would
benefit from programs that support the building of social resources for single mothers to better meet their parenting needs and promote better health and settlement outcomes.

**Level of education.** There was little support for the role of demographic characteristics predicting QOL for women in this study. Having a higher level of education predicted higher physical domain scores and greater health status. This is unsurprising, given that higher levels of education (a component of socioeconomic status) is consistently associated with better health outcomes (Zajacova & Lawrence, 2018). Unexpectedly, women who were more fluent in English were also more likely to report less satisfaction with their health. This may be that women with greater English language ability have more confidence or agency to articulate their dissatisfaction. Arguably, these women received fewer supports in transitioning to the local health care system if they were considered to be more self-sufficient or perhaps that they are more acutely aware of the oppressive discourses which may surround them. Further research is warranted to examine how women are supported across levels of English ability in their transition to accessing health care services and in addressing their health needs in new environments.

**Limitations**

Quality of life is culturally constructed. While there might be a universal understanding of some elements of quality of life such as a sense of satisfaction with personal achievements and relationships, “the degree to which each of these factors is emphasised and predicts wellbeing can vary substantially from culture to culture” (Uchida, Ogihara, & Fukushima, 2015, p. 834). Because sampling occurred in collaboration with settlement agencies across a period of approximately 20 months, the current study included a highly culturally heterogeneous sample that is typical of a resettlement cohort in any given year. To this end, there is high external validity, but limited ability to examine group differences by
country of origin or other characteristics. We categorized country of origin to compare women from African countries versus ‘other’ geographical regions, which may obscure other intra and inter-group differences. With a small sample size of 104, there are further limitations to examining cultural subgroups separately. Future research should examine these factors in larger samples.

The cultural heterogeneity of the sample may have also influenced how participants interpreted the survey questions. The same procedures were used for all participants, and we have no evidence from the data obtained that women from one ethnic/cultural group perceived the questions differently than another. Research further exploring cultural equivalence and the application of standard measures and methods across diverse populations is needed throughout the refugee and global mental health literature more broadly.

The WHOQOL-BREF includes two subscales not included in the current study (social and environment domains) due to high missing responses in one item (social domain) and low internal reliability of the environmental domain. This is an important limitation as these two domains are crucial when examining the QOL of refugees in a resettlement context, especially when considering the impact of social capital and social networks. The remaining subscales and items utilised had adequate reliability and distribution; however, questions remain over the best way to assess QOL within such heterogeneous samples of people at very early stages of their settlement journey, particularly in a way that addresses gender-specific issues.

For the purpose of this analysis, total number of (pre-migration) trauma types and total number of post-migration living difficulties were used as predictor variables. Therefore, the association of individual items in these checklists (e.g. pre-migration experiences of torture, post-migration access to health and welfare services) with quality of life were not assessed.
As the current data are cross-sectional, we cannot examine causality. This may be a particularly important factor when measuring the effects of community trust. It may be that individuals with worse QOL may be more suspicious, with questions of trust tapping psychopathology or past lived experiences more so than the community environment. However, correlations with those variables were significant but small (r's < .4), thus suggesting there is some independence between the variables. In addition, the variance accounted for in some of the outcome variables is quite small. Caution should be exercised when developing interventions based on these findings to address QOL and social needs or refugee women-at-risk.

Finally, the independent and outcome variables assessed in this study represent a snapshot of a group of women at early stages of their settlement. Longitudinal research to document how quality of life, and its determinants, change during the settlement journey is very much needed.

Conclusions

This study contributes to the limited literature on the QOL of women from refugee backgrounds, in particular those at heightened risk of gender-based violence prior to resettlement in a third country. Importantly, the study considers the differential impact of a number of pre-migration and post-migration factors on the QOL of such women. The post-migration environment warrants further research, in particular to better understand how refugee women-at-risk experience different types of social capital (i.e. bonding, bridging, linking), and how these promote their QOL. Additionally, the support available to women with different levels of English language ability in their transition to accessing health care services needs further investigation.
The current findings suggest that post-migration factors, including level of trust in the community, predicted the physical and psychological domains of QOL for women entering Australia on woman-at-risk visas. A more systematic assessment of community context is important for gaining a more nuanced understanding of QOL of refugee populations in the current social and political climate. Social networks bring support but also obligations. Prospective research may clarify causal mechanisms in this relationship. Women-at-risk may have unique experiences and risk factors, including a high number of dependents, which warrant additional consideration to ensure a successful transition to resettlement in a new country. Community context serves as a potentially modifiable factor, compared to demographic characteristics or pre-migration trauma. The current findings point to the significance of community contextual factors in informing policy and practice to support social and community integration of newly arriving refugee women-at-risk. Therefore, resettlement programs and policies must look to not only supporting newly arriving individuals but to work to create communities where women are able to thrive, connect, and achieve their fullest potential.

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| Independent Variables                                      | Independent Variables                                      |
|------------------------------------------------------------|------------------------------------------------------------|
| Age in years [mean ± SD (range)]                           | Number of trauma types [mean ± SD (range)]                 |
| 32.5 ± 11.6 (18–70)                                        | 8.9 ± 4.6 (0–17)                                           |
| Region of birth n (%)                                      | Number of post-migration living difficulties [mean ± SD (range)] |
| Africa 82 (78.9%)                                           | 2.4 ± 1.5 (0–7)                                           |
| South Asia 12 (11.5%)                                      | Majority of people in this community can be trusted – YES n (%) |
| Middle East 4 (3.8%)                                       | 59 (57.3%)                                                |
| West Asia 3 (2.9%)                                         | Majority of people in this community get along with each other – YES n (%) |
| South East Asia 3 (2.9%)                                   | 74 (71.8%)                                                |
| Religion n (%)                                              | You feel you are really part of this community – YES n (%) |
| Christian 63 (60.6%)                                       | 89 (86.4%)                                                |
| Muslim 41 (39.4%)                                          | Majority of people in this community would try to take advantage of you if they get the chance – YES n (%) |
| 21 (9.6%)                                                  | 63 (61.2%)                                                |
| Marital status n (%)                                       | Number of key persons who provide emotional support [mean ± SD (range)] |
| Married/defacto 22 (21.2%)                                 | 5.4 ± 3.8 (0–20)                                          |
| Single 51 (49.0%)                                          | Number of key persons who provide practical support [mean ± SD (range)] |
| Widowed 21 (20.2%)                                         | 3.1 ± 2.5 (0–12)                                          |
| Divorce/separated 10 (9.6%)                                | Number of key persons who provide social support [mean ± SD (range)] |
| 37 (35.4%)                                                 | 3.2 ± 4.0 (0–20)                                          |
| Number of children n (%)                                   | Number of key persons who provide spiritual support [mean ± SD (range)] |
| None 41 (39.4%)                                            | 2.2 ± 3.6 (0–20)                                          |
| One or more 63 (60.6%)                                     | Number of key persons who provide no support [mean ± SD (range)] |
| 20 (19.2%)                                                 | 0.7 ± 1.2 (0–7)                                           |
| Education n (%)                                            | QOL physical domain [mean ± SD (range)]                    |
| None/Primary 54 (51.9%)                                    | 76.0 ± 16.3 (28.6–100)                                    |
| Secondary 44 (42.3%)                                       | QOL psychological domain [mean ± SD (range)]               |
| University/Trade 6 (5.8%)                                  | 76.3 ± 16.4 (16.7 – 100)                                  |
| English language skills n (%)                               | Overall QOL n (%)                                          |
| Great difficulty/no skills 64 (61.5%)                      | Good 84 (80.8%)                                            |
| Fluent/some difficulty 40 (38.5%)                          | Poor 20 (19.2%)                                            |
| Satisfaction with health status n (%)                       | Satisfied 76 (73.1%)                                      |
|                                                              | Dissatisfied 28 (26.9%)                                   |
Table 2 Hierarchical multiple linear regression analysis for physical domain and psychological domain

**Physical domain**

| Predictors                       | Step 1       |          |          |          | B (SE B)  | 95% CI       | β     | P value |          |          | B (SE B)  | 95% CI       | β     | P value |          |          | B (SE B)  | 95% CI       | β     | P value |
|----------------------------------|--------------|----------|----------|----------|-----------|------------|-------|---------|----------|----------|-----------|------------|-------|---------|----------|----------|-----------|------------|-------|---------|
| Age                              | −.21(.15)    | −.51, .08| −.15     | .156     | −.21(.15) | −.51, .09  | −.15  | .171    | −.22(.15) | −.51, .08| −.15      | .148       |       |         |          |          |          |
| Region of birth (Africa)         | 13.71(3.58)  | 6.60, 20.8| .35      | <.001    | 13.99(3.65)| 6.75, 21.23| .35   | <.001   | 12.63(3.62)| 5.44, 19.83| .32       | .001       |       |         |          |          |          |
| Children (1 or more)             | −1.30(3.80)  | −8.85, 6.25| −.04     | .733     | −1.09(3.84)| −8.72, 6.54| −.03  | .777    | −1.22(3.77)| −8.70, 6.25| −.04      | .746       |       |         |          |          |          |
| Education (2ry/3ry)              | 10.46(3.35)  | 3.82, 17.11| .32      | .002     | 10.62(3.38)| 3.92, 17.32| .33   | .002    | 10.37(3.31)| 3.80, 16.94| .32       | .002       |       |         |          |          |          |
| English skills (fluent/some difficulty) | −1.57(3.24)  | −8.00, 4.85| −.05     | .628     | −1.53(3.25)| −7.98, 4.92| −.05  | .639    | −1.68(3.19)| −8.00, 4.64| −.05      | .599       |       |         |          |          |          |
| Trauma types                     | −.15(.32)    | −.79, .49 | −.04     | .638     | .05(.33)  | −.61, .70  | .01   | .889    |          |          |          |          |       |         |          |          |          |
| Community can be trusted         |              |          |          |          | 6.64(2.95)| .79, 12.49 | .20   | .027    |          |          |          |          |       |         |          |          |          |
| $R^2$                            | .26          |          |          |          | .26       | .30        |       |         |          |          |          |          |       |         |          |          |          |
| Adj $R^2$                        | .22          |          |          |          | .22       | .25        |       |         |          |          |          |          |       |         |          |          |          |
| $F (df), p$                      | 6.84 (5, 97), <.001 | 5.69 (6, 96), <.001 | 5.81 (7, 95), <.001
Table 2 (Cont)

| Predictors                        | Step 1                  | Step 2                  | Step 3 (Stepwise)          |
|-----------------------------------|-------------------------|-------------------------|----------------------------|
|                                   | B(SE B)                 | 95% CI                  | β  | P value  | B(SE B) | 95% CI | β  | P value | B(SE B) | 95% CI | β  | P value |
| Age                               | -.11(.17)               | -.44, .22               | -.08 | .515     | -.10(.17) | -.43, .23 | -.07 | .559     | -.17(.16) | -.49, .15 | -.12 | .294     |
| Region of birth (Africa)          | 9.54(3.97)              | 1.66, 17.43             | .24  | .018     | 10.05(4.04) | 2.03, 18.06 | .25  | .015     | 5.90(4.08) | -.22, 14.00 | .15  | .151     |
| Children (1 or more)              | -5.08 (4.22)            | -13.45, 3.29            | -.15 | .231     | -4.70(4.26) | -13.15, 3.74 | -.14 | .272     | -2.51(4.19) | -10.83, 5.81 | -.08 | .551     |
| Education (2ry/3ry)               | -3.50(3.71)             | -10.87, 3.86            | -.11 | .348     | -3.22(3.74) | -10.64, 4.20 | -.10 | .391     | -2.58(3.60) | -9.73, 4.57  | -.08 | .475     |
| English skills (fluent/some difficulty) | .39(3.59)             | -6.73, 7.52             | .01  | .913     | .47(3.60)   | -6.68, 7.61 | .01  | .897     | -.78(3.48) | -7.68, 6.12  | -.02 | .823     |
| Trauma types                      |                         |                         | -.27 | .36      | -.98, .44   | -.08         | .451 | -.02(36) | -.73, .69   | -.01         | .958 |
| Community can be trusted          |                         |                         |      |          |          |              | 6.67(3.19) | .33, 13.02 | .20       | .039     |
| Number of people no support       |                         |                         | -.31 | .32      | -.80, .49   | -.24         | .018 |
| R²                                | .10                     | .10                     | .19  |
| Adj R²                            | .05                     | .05                     | .13  |
| F (df), p                         | 2.07 (5, 97), .075      | 1.81 (6, 96), .104      | 2.81 (8, 94), .008         |
Table 3 Hierarchical logistic regression analysis for overall QOL and satisfaction with health status

| Predictors                        | Step 1            | Step 2            | Step 3 (stepwise backward) |
|-----------------------------------|-------------------|-------------------|---------------------------|
|                                   | OR    | 95% CI  | P value | OR    | 95% CI  | P value | OR    | 95% CI  | P value |
| Overall QOL                       |       |        |         |       |        |         |       |        |         |
| Age                               | .99   | .94, 1.04 | .620    | .98   | .93, 1.04 | .493    | .99   | .94, 1.05 | .772    |
| Region of birth (Africa)          | 2.86  | .90, 9.05 | .074    | 2.41  | .74, 7.87 | .146    | 3.18  | .83, 12.22 | .092    |
| Children (1 or more)              | 1.29  | .34, 4.98 | .709    | 1.08  | .27, 4.30 | .910    | .86   | .20, 3.69 | .840    |
| Education (2ry/3ry)               | 1.04  | .32, 3.38 | .951    | .95   | .28, 3.23 | .935    | .76   | .21, 2.75 | .673    |
| English skills (fluent/some difficulty) | .46   | .15, 1.42 | .175    | .41   | .13, 1.36 | .145    | .44   | .13, 1.51 | .190    |
| Trauma types                      | 1.13  | 1.00, 1.27 | .057    | 1.14  | 1.00, 1.32 | .058    |       |        |         |
| Community take advantage          |       |        |         | 2.67  | .84, 8.49 | .096    |       |        |         |
| Number of people no support       |       |        |         | 2.47  | .93, 6.60 | .071    |       |        |         |
| Nagelkerke R²                      | .08   |        | .13     |       |        | .25     |       |        |         |
| \( \chi^2, df, p \)                | 4.96, 5, .421 |     | 8.89, 6, .180 |       |        | 17.32, 8, .027 | |

Satisfaction with health status

| Predictors                        | Step 1            | Step 2            | Step 3 (stepwise backward) |
|-----------------------------------|-------------------|-------------------|---------------------------|
|                                   | OR    | 95% CI  | P value | OR    | 95% CI  | P value | OR    | 95% CI  | P value |
| Age                               | .99   | .95, 1.04 | .761    | .99   | .95, 1.04 | .806    | .99   | .95, 1.04 | .806    |
| Region of birth (Africa)          | 2.13  | .66, 6.84 | .204    | 2.24  | .68, 7.40 | .186    | 2.24  | .68, 7.40 | .186    |
| Children (1 or more)              | .56   | .15, 2.08 | .389    | .58   | .16, 2.15 | .413    | .58   | .16, 2.15 | .413    |
| Education (2ry/3ry)               | 4.67  | 1.40, 15.63 | .012    | 4.75  | 1.42, 15.95 | .012    | 4.75  | 1.42, 15.95 | .012    |
| English skills (fluent/some difficulty) | .22   | .07, .71 | .011    | .23   | .07, .72 | .012    | .23   | .07, .72 | .012    |
| Trauma types                      |       |        |         | .98   | .87, 1.10 | .705    | .98   | .87, 1.10 | .705    |
| Nagelkerke R²                      | .19   |        | .19     |       |        | .19     |       |        |         |
| \( \chi^2, df, p \)                | 14.13, 5, .015 |     | 14.27, 6, .027 |       |        | 14.27, 6, .027 | |
