



**Post-traumatic stress disorder (PTSD)
and depression and its associated factors
among former Afghan refugees
in Launceston, Tasmania**

by

Mohammad Shoaib Hamrah

Submitted in fulfilment of the requirements for the degree of

Master of Medical Sciences

**Centre for Rural Health
University of Tasmania**

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Declaration of originality

I, Mohammad Shoaib Hamrah, am the author of the thesis titled “Post-traumatic stress disorder (PTSD) and depression and its associated factors among former Afghan refugees in Launceston, Tasmania”, submitted for the degree of Master of Medical Sciences. I declare that the material is original, and to the best of my knowledge and belief, contains no material previously published or written by another person, except where due acknowledgement is made in the text of the thesis, nor does the thesis contain any material that infringes copyright. The thesis contains no material which has been accepted for a degree or diploma by the University or any other institution.

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Statement of co-authorship

The following people and institutions contributed to the publication of the work undertaken as part of this thesis:

1. The manuscript 1 reported in Chapter 4.

Manuscript 1: Hamrah M^a, Hoang H^a, Mond J^a, Pahlavanzade B^b, Charkazi A^c, Auckland S^a. The prevalence and correlates of symptoms of post-traumatic stress disorder (PTSD) among resettled Afghan refugees in a regional area of Australia. *Journal of Mental Health* (Under review).

^aCentre for Rural Health, School of Health Sciences, College of Health and Medicine, University of Tasmania, Launceston, Tasmania, Australia

^bDepartment of Biostatistics, Faculty of Paramedical Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran

^cEnvironmental Health Research Center, School of Health, Golestan University of Medical Sciences, Gorgan, Iran

The contributor of each author:

Hamrah, MS was the primary author and contributed to the data collection, data analysis, data interpretation and prepared the first draft and revisions of the article.

Hoang, H, Mond, J., Auckland, S. contributed to the idea, its formalisation, development, reviewed, edited and finalised the manuscript.

Pahlavanzade, B. and Charkazi, A. edited the translated questionnaire and provided feedback on the manuscript.

Hamrah M (30%), Hoang H (25%), Mond J (25%) Pahlavanzade, B (5%) Charkazi, A (5%), Auckland S (10%).

2. The manuscript 2 reported in Chapter 4.

Manuscript 2: Hamrah M^a, Hoang H^a, Mond J^a, Pahlavanzade B^b, Charkazi A^c, Auckland S^a. Occurrence and correlates of depressive symptoms among the resettled Afghan refugees in a regional area of Australia. *Early Intervention in Psychiatry* (Under review).

^aCentre for Rural Health, School of Health Sciences, College of Health and Medicine, University of Tasmania, Launceston, Tasmania, Australia

^bDepartment of Biostatistics, Faculty of Paramedical Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran

^cEnvironmental Health Research Center, School of Health, Golestan University of Medical Sciences, Gorgan, Iran

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Hamrah M (30%), Hoang H (25%), Mond J (25%) Pahlavanzade, B (5%), Charkazi, A (5%), Auckland S (10%).

We the undersigned agree with the above stated “proportion of work undertaken” for each of the above published (or submitted) peer-reviewed manuscripts contributing to this thesis:

Signed:

Mohammad Shoaib Hamrah

Dr. Ha Hoang

Prof Nuala Byrne

Candidate

Supervisor

Head of School

School Of Health Sciences

School Of Health Sciences

School Of Health Sciences

University of Tasmania

University of Tasmania

University of Tasmania

Date: 27-9-2019

27-9-2019

Statement of ethical conduct

The research associated with this thesis abides by the international and Australian codes on human and animal experimentation, the guidelines by the Australian Government's Office of the Gene Technology Regulator and the rulings of the Safety, Ethics and Institutional Biosafety Committees of the University.

Mohammad Shoaib Hamrah

Date: 27-9-2019

Abstract

There are over 2.5 million Afghan refugees who make up the second largest refugee population in the world. Afghans have fled their homeland due to widespread, protracted conflict across the country. Afghan refugees are at high risk of trauma-related mental health problems due to exposure to war traumas, which precipitates ongoing social stressors and daily grievances that affect many events long after resettlement.

Few studies have examined the mental health of Afghan refugees resettled in Australia, notwithstanding the fact that Australia is among the largest per capita recipient of humanitarian entrants. Furthermore, limited research has investigated the mental health of Afghan refugees who have resettled in regional areas of Australia. Studying these issues in regional areas may be particularly important, given that access to health services is known to be particularly poor in these areas. Therefore, this study examined the occurrence and correlates of symptoms of PTSD (Post-traumatic stress disorder) and depression among Afghan refugees resettled in Launceston, a regional area of Australia.

A cross-sectional survey was conducted with 66 resettled Afghan refugees living in Launceston using the Post Migration Living Difficulties Scale (PMLD), the Impact of Event Scale-Revised (IES-R) and the Hopkins Symptoms Checklist (HSCL-25). Descriptive statistics and multivariate analysis were performed. The prevalence of PTSD symptoms among participants was 48.8%. Most participants (81.2%) with PTSD symptoms recognised that they had a mental health problem. However, approximately half (48.5%) of participants with PTSD symptoms had sought help for a mental health problem. Communication difficulties, family separation and self-recognition of PTSD symptoms were associated with PTSD symptoms. The prevalence of depression symptoms was 21.2%, with females having significantly higher prevalence than males. Isolation and physical inactivity were independently associated with depression symptoms.

The results of this study suggested that there were high rates of PTSD and depression symptoms and relatively low uptake of mental health care among resettled Afghan refugees in Launceston, Australia. Factors that might usefully be targeted in

health promotion, prevention and early intervention programs include communication difficulties, family separation, barriers to help-seeking, physical inactivity, and isolation.

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1 CHAPTER 1: INTRODUCTION

Chapter one presents an overview of the study. It starts with a background outlining the research and contextual information which forms the foundation and rationale of this study. This is followed by the research aims and an overview of the methodology. Then, the thesis structure is illustrated in terms of composite chapters and content and ends with the conclusion of chapter one.

1.1 Structure of the thesis

This thesis is divided into 6 chapters. This section below presents a summary of each chapter.

- Chapter 1: Introduction- provides background and rationale of the study, research aims, an overview of methodology, and the structure of the thesis.
- Chapter 2: Literature Review- critical analysis of the published sources relevant to the subject matter of the research.
- Chapter 3: Methodology- presents the research design, details of the fieldwork and data analysis.
- Chapter 4: Results- two manuscripts are incorporated in this chapter. Both manuscripts present the results from the survey.
- Chapter 5: Discussion- highlights the major findings from chapter 4 and their implications.
- Chapter 6: Concluding comments- summarizes the findings and significance of the study.

1.2 Research background and rationale

The Refugee Council of Australia describes the term 'Refugee' as people who are forced to leave their home countries for reasons, including persecution, conflict and violence as well as people who are displaced due to natural disasters or environmental change (Refugee Council of Australia, 2016c). After a person flees or is forced to leave their home country, they reside in a temporary settlement, called a refugee camp. While in

the camp, a person is then identified and granted the status of “Refugee” and granted a Refugee visa through the process of Refugee Status Determination (RSD), which is governed by the United Nations High Commission on Refugees (UNHCR) (Karlsen, 2016; UNHCR, 2017b). The term ‘asylum seeker’ and ‘refugee’ are often used interchangeably. The asylum seekers are individuals who are appealing directly to a host country for protection as a refugee, but whose claim for refugee status has not yet been assessed. However, a refugee is someone who has been recognised under the 1951 convention relating to the status of refugees (Refugee Council of Australia, 2016c), to be a person whose resettlement has been approved and carried out by the government of their new home country. As soon as a person carrying a Refugee Visa arrives in their new home country, they cease to be a refugee. Their Refugee Visa is cancelled, and they are granted a Permanent Resident (Humanitarian) Visa. Upon arrival, they are then known as ‘Former Refugees’ (Refugee Council of Australia, 2018b). Resettlement under the auspices of the UNHCR involves the selection and transfer of refugees from a state in which they have sought protection to a third state that has agreed to admit them as refugees with permanent residence status (UNHCR, 2017c). Finally, the displacement of people refers to the forced movement of people from their locality or environment and occupational activities (Social and Human Sciences, 2017).

There were about 65.3 million people displaced in the world by the end of 2015 (UNHCR, 2017). This is the highest number of displacements of people worldwide since World War II. As a result, there were 24.5 million refugees and asylum seekers to be considered as humanitarian migrants to be resettled in a third country (Chen, Hall, Ling, & Renzaho, 2017). About two-thirds of the world’s refugees (68%) come from five countries, namely, Syria with 6.3 million, Afghanistan 2.6 million, South Sudan 2.4 million, Myanmar 1.2 million, and Somalia 986,400 (UNHCR, 2017c).

Developing countries hosted 84% of the world’s refugees which include Turkey, with 3.5 million people, Pakistan, with 1.4 million people, Uganda, with 1.4 million people, Lebanon, with 998,900 people, the Islamic Republic of Iran, with 979,400 people, Bangladesh, with 932,200 people and Sudan, with 906,600 people. Worldwide, there were 16.2 million people newly displaced in 2017. This includes 11.8 million people displaced within the borders of their own countries, as well as 4.4 million other newly displaced

refugees and new asylum-seekers. By the end of 2017, about 1.7 million people were new asylum-seekers. The following countries were the world's largest recipients of new applications: The USA was the country that received the highest number of refugees for re-settlement (331,700), followed by Germany (198,300), Italy (126,500), and Turkey (126,100) (UNHCR, 2017c). Figure 1 below shows the key flows of newly registered refugees and new asylum-seekers in 2018 (UNHCR, 2017b).

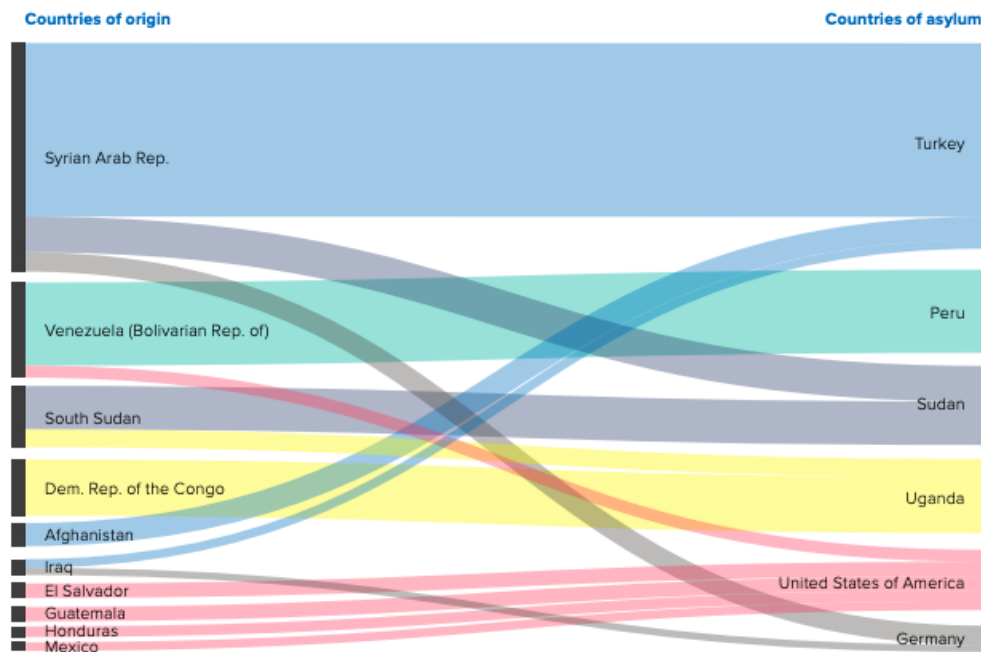


Figure 1: Key flows of newly registered refugees and new asylum-seekers in 2018

Source: Reprinted from UNHCR. (2018). *Global Trends: Forced Displacement in 2018*.

Refugees can be exposed to potentially traumatic events both before and after their displacement from country of residence (Porter & Haslam, 2005). An early study in the US (Mollica et al., 1987) found that many of their refugee patients had diagnoses of posttraumatic stress disorder associated with their history of trauma. Refugees have commonly experienced torture, war or civil unrest, the loss of family and friends through violence, and prolonged periods of deprivation in terms of inadequate food and housing. These events can have a considerable impact on one's mental and physical health, which most commonly manifests in psychiatric conditions such as Post-Traumatic Stress Disorder (PTSD), sadness, frustration, anxiety, and depression (Alemi, James, Cruz, Zepeda, & Racadio, 2014; Mollica, Wyshak, & Lavelle, 1987; Yaser et al., 2016). The two major mental

problems associated with trauma and torture are PTSD and depression (Alemei et al., 2014; Mollica et al., 1987; Yaser et al., 2016).

PTSD is characterised by exposure to actual or threatened death, serious injury, or sexual violence, followed by the development of intrusion symptoms, persistent avoidance of stimuli associated with the trauma, negative alterations of cognitions and mood, and marked alterations in arousal and reactivity (Michael, 2013). Depression is characterised by episodes of depressed mood or diminished interest or pleasure that last at least 2 weeks, and that are accompanied by characteristic associated symptoms (e.g. changes in sleep, appetite, or activity level; fatigue; difficulty concentrating; feelings of worthlessness or excessive guilt; suicidal ideation or behaviour) (Michael, 2013). The increased vulnerability to mental health problems that refugees and asylum seekers face is linked to pre-migration experiences (e.g., imprisonment, physical and emotional torture, loss of family members due to displacement and death) and post-migration conditions such as (cultural adjustment difficulties and the loss of social support) (Lee, Park, Kim, & Jung-Choi, 2014).

Between 2010 and 2015, Australia has taken the largest number of humanitarian entrants. Many of these refugees were from Afghanistan (12,228). There are an estimated 2,670,000 Afghan refugees in the world as well as 1,174,300 Afghans who have become internally displaced (Slewa-Younan, Guajardo, et al., 2017). Afghan refugees make up the second largest refugee population in the world (UNHCR, 2017b).

A crucial aspect of a migrant's settlement in Australia is personal wellbeing, which includes mental and physical health. Poor mental health is seen to affect an individual's functioning in family, social, vocational and educational roles (Australian Health Disaster Management Policy Committee, 2009). Mental illness is a leading cause of disability in Australia (Begg et al., 2007). In the only recent study, 14% and 44% of former Afghan refugees resettled in (capital) city of Adelaide in South Australia had clinically significant symptoms of depression and PTSD respectively. However, participants of a previous study were Afghan refugee adults resettled in South Australia, and participants were from different ethnic backgrounds. Also, they have used different diagnostic tools such as the Kessler Psychological Distress Scale, and the Harvard Trauma Questionnaire to assess depression and PTSD, respectively (Slewa-Younan, Guajardo, et al., 2017). Other mental health literacy variables likely to affect help-seeking for mental health problems in in a regional city

and/or among resettled refugee populations include cultural and/or religious beliefs regarding the nature and treatment of mental illness. For example, the belief that western treatments are unlikely to be helpful, limited understanding of treatment options, shame and stigma. To our knowledge, no study has examined the occurrence and correlates of depressive symptoms and PTSD among resettled refugees living in regional areas of Australia in particular. Better understanding of the occurrence and correlates of depressive symptoms in these populations may be helpful in informing the development of tailored prevention and health promotion programs.

1.3 Research aims

This study aimed to examine the prevalence and correlates of symptoms of PTSD and depression among the resettled Afghan refugees in Launceston.

To achieve the aims of the study, the following research questions (RQ) were formulated:

- RQ1: What is the prevalence of PTSD among the resettled Afghan refugees in Launceston?
- RQ2: What factors are associated with PTSD among the resettled Afghan refugees in Launceston?
- RQ3: What is the prevalence of depression among the resettled Afghan refugees in Launceston?
- RQ 4: What factors are associated with depression among the resettled Afghan refugees in Launceston?

1.4 Study setting: Launceston, Tasmania

The study was conducted in Launceston, a regional centre in the north of Tasmania, Australia (Figure 1). Tasmania is an island state lying to the south-east of the mainland, is a relative sparsely populated (the population is about 520,000), primarily rural and semi-rural region of Australia (Skromanis et al., 2018). The census usual resident population of Launceston in 2016 was 75,329, of whom 48% were male and 52% female (Australian Bureau of Statistics, 2019). Launceston was chosen as a setting of this study due to being classified as a regional area. According to the Australian Statistical Geography Standard - Remoteness Area (ASGS RA) classification, Launceston is classified as level 2, namely, “inner regional Australia”, levels of remoteness being determined by population and distance to

services (ASGS RA, 2016). Moreover, in Launceston, former refugees who have resettled in the last 5 years have most commonly arrived from Bhutan, Sudan, Afghanistan and Burma (Migrant Resource Centre, 2017). There are two Afghan resettled refugee communities in Launceston, the *HAZARA* community and *AFGHZAN HAZARA* community (Holmes, 2019). Both communities are Shia Muslims. Hazaras are from central Afghanistan, while Afghan Hazaras are from northern part of Afghanistan, and there are a few cultural differences between two communities.



Figure 2: Location of Launceston in Tasmanian Map

1.5 Overview of the methodology

This study employed a quantitative research approach using a cross-sectional survey. The survey consists of two parts. The first part included socio-demographic information and questions on levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour. The second part of the survey included three standardized

measures including the Post Migration Living Difficulties Scale (PMLD) (Aragona, Pucci, Mazzetti, & Geraci, 2012; Schweitzer, Melville, Steel, & Lacherez, 2006b), the Impact of Event Scale-Revised (IES-R) (Joseph, 2000; Kartal & Kiropoulos, 2016) and the Hopkins Symptoms Checklist (HSCL-25) (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). The survey was translated into Dari language by a team of language experts. A combination of convenience and snowball sampling was employed to recruit participants. Sixty-six former Afghan refugees resettled in Launceston completed the survey. All statistical analyses were performed using SPSS version 24.0 1 (SPSS, Armonk, NY: IBM Corp).

1.6 Summary

This chapter has presented an overview of the thesis. This chapter started with the research background and rationale. Then, the research aims and questions have been presented, followed by the study setting and overview of the methodology. Finally, this chapter has presented the structure of the thesis with an overview of each chapter. The next chapter will review the literature.

2 CHAPTER 2: LITERATURE REVIEW

This chapter reviews the literature relevant to the history of Australian migration, recent changes in Australian refugee policy, ethnicity, language and ethnic fragmentation in Afghanistan. This chapter also draws attention to prevalence and correlates of PTSD and depression among refugee populations and comorbidity for PTSD as well as the prevalence of and risk factors for PTSD and depression and mental health service utilisation among Afghan refugees.

2.1 History of Australian migration

At the time of Federation in 1901, the six states in Australia independently managed their own immigration program. Immigrants Act was passed in 1905. The Joint Commonwealth and States Scheme of 1921 formalised these arrangements and the Empire Settlement Act was subsequently passed. For periods immigration had been suspended from the 1880's through till end of the WW1 (Cooper, 2012). The Commonwealth Government took control of immigration and encouraged new settlers after World War I. Consequently, nearly 300,000 settlers arrived in the 1920s. Migrants came to Australia on assisted schemes such as the Empire Settlement Scheme. There were about 700,000 new settlers during the period from 1901 to the beginning of World War II and Australia's population grew to around seven million (Phillips, Klapdor, & Simon-Davies, 2010). By 1945, the Australian government was eager to increase the population of the country to both stimulate post-war economic development and raise the number of people in order to defend the country in the event of another war (Jupp, 2001). It was the Australian Government's policy to increase the population by 1% per year through immigration to achieve an annual growth rate of 2% overall, including natural increase. Consequently, Australia's population has grown by about one million migrants in each decade since 1950. The proportion of Australian citizens born overseas, increased from 9.8% in 1947 to about 20% in 1971 (Spinks, 2010).

Australia, New Zealand, Canada and the USA are considered to be the world's major immigration countries (Phillips & Simon-Davies, 2016). Since 1945, when the first federal

immigration was created, more than 7.5 million people who were overseas born have settled in Australia. This consisted of 25% of Australia's population in June 2015. This figure is the higher than most OECD countries (Phillips & Simon-Davies, 2016).

Currently, there are two programs for permanent migrants entering Australia, including the Migration Program for Skilled and Family Migrants and the Humanitarian Program for Refugees and those in refugee-like situations. The Australian Government allocates places, or quotas, to select people who want to migrate permanently to Australia under these two programs every year (Phillips & Simon-Davies, 2015). The UK had been the primary source country for permanent migration to Australia until 2009. However, China was considered the primary source of permanent migrants in 2010–11. Since 2011, the highest numbers of permanent migrants have come from China and India (Phillips & Simon-Davies, 2016).

Over time, fluctuations in Australia's migration program targets have been linked to priorities influenced by economic and political considerations of the day. However, the Australian Government's immigration policy changed considerably after 1945. It was the priority to attract general migrants from the UK and attract economic migrants and temporary (predominantly skilled) migrants, these changes put in place with introduction of the "White Australia policy", as these policies were instituted in 1905 (Spinks, 2010). Interestingly, there has been a significant increase in temporary migration to Australia – through short-term work visas and international students during the recent decades (Hugo, 2011). Temporary migrants mainly come to Australia through two channels - international students and temporary work visas (457). The holders of 457 visas for skilled workers and their dependants can apply for permanent residency and many students are also eligible to apply for permanent visas under the migration program at the completion of their study in Australia (Wright, Clibborn, Piper, & Cini, 2016). Recently, people on temporary visas have been the largest contribution to net overseas migration (NOM). There has been a significant increase in the annual population growth rate of Australia. This growth is mainly driven by an increase in NOM over the last few years (Australian Government Productivity Commission, 2010).

2.2 Recent changes in Australian refugee policy

Recently, there have been many changes in Australia's refugee and asylum seeker policies. These changes have mainly been political decisions in response to an increase in the number of asylum seekers who arrive by boats as illegal. During the past five years, the number of asylum seekers who arrive by boats as illegal, and the number of deaths at sea were 51,637 and 862, respectively (Refugee Council of Australia, 2016b). People who arrive without a prior visa (by sea or air) continue to be subject to indefinite detention in Australia. However, they may be released into community detention or into the community on a Bridging Visa E (BVE) (Refugee Council of Australia, 2018b). People in community detention are allowed to move freely, however, they must live at an address specified by the Minister for Immigration and need permission to spend a night elsewhere. They are subject to curfews and other supervision arrangements. BVEs holders can live in the community while their protection claims continue to be processed. A holder of the BVE can work and have access to Medicare (Refugee Council of Australia, 2018a). All refugees are subjected to security assessments by the Australian Security and Intelligence Organisation (ASIO) before a person can be granted a Protection Visa and this will not be granted if ASIO issues an adverse assessment. A refugee does not have the right to appeal the assessment or receive reasons or evidence (Australian National Audit Office, 2012).

2.2.1 Refugee Status Determination and legal advice exclusion policy

Refugees who arrived by boats on or after 13 August 2012 are not able to make an application for any visa, including a protection visa, unless the Minister for Immigration personally decides to 'lift the bar'. This policy, however, previously applied only to a particular class of people who arrived on outlying territories of Australia such as Christmas Island (McCluskey, 2013).

The 'fast track' process will allow protection claims to be assessed efficiently by introducing a new review pathway for people who arrived by boats as illegal on or after 13 August 2012 and before 1 January 2014 (Centre, 2018). The new law introduced the following key changes to the process for assessing asylum claims. They are as follows: shifting the burden of proof to people seeking asylum; removing the references to the Refugee Convention from Australia's migration legislation; and removing the

reasonableness test from consideration of relocation options for people facing persecution (Parliament of Australia, 2014).

Most asylum seekers who arrive without Australian visas are not eligible for government-funded legal advice, however, those who arrive by plane with an Australian visa and a small number of the most highly vulnerable asylum seekers who come by boat, are eligible for free legal advice at the primary stage of decision-making, but not at the merits review stage. Asylum seekers who came by boat after 19 July 2013 were transferred to regional processing centres (RPCs) in Nauru and Papua New Guinea's Manus Island. Their claims were not processed under the laws of Australia, but under the law of those countries where asylum seekers are being resettled. They will be settled in other countries than Australia if they have recognized them as refugees (Elibritt, 2016).

In September 2013, the Australian Government implemented 'Operation Sovereign Borders'. This is in response to growing numbers of people arriving by boat, led by a three-star commander reporting directly to the Minister for Immigration. Australian naval and customs officers were issued with orders to turn back boats carrying people seeking asylum (Elibritt, 2017).

Detention at sea and transfers: In December 2014, the Migration and Maritime Powers Legislation Amendment (Resolving the Asylum Legacy Caseload) Act passed. According to this amended legislation, the Immigration Minister was given the power to detain people at sea (including outside Australia's jurisdiction) and send them to other countries or vessels, even without the permission or knowledge of those countries (Parliament of Australia, 2014). In the past, there was a government-funded support program for asylum seekers who were awaiting their resettlement decisions and who were unable to meet their basic healthcare and living needs. The program, now known as Status Resolution Support Services (SRSS), provided them with a basic living allowance, casework support, access to torture and trauma counselling and subsidised medication. Current refugee and asylum regulations in Australia are now stricter than they were in the past (Refugee Council of Australia, 2018c).

The Australian government granted Temporary Protection Visas (TPVs) to refugees who arrived by boat during the period from 1999 to 2008. They were allowed to stay in Australia for three years, after which, they had to apply for protection. This type of visa did

not allow travel outside Australia, or sponsor family members for resettlement. In addition, they had only limited access to services and support (Centre, 2019; Refugee Advice & Casework Service, 2013). In 2014, the Australian government re-introduced TPVs for refugees who came to Australia without a prior valid visa. The TPVs allow a refugee to remain in Australia for a maximum of three years, after which their protection claims can be reassessed, however, refugees with a TPV are only allowed to apply for another temporary visa and are never eligible for permanent residency. They are not eligible to sponsor their family members to join them in Australia. They are also not allowed to travel overseas and return, without the Australian government's permission which will be granted only in compelling circumstances (Refugee Council of Australia, 2018b).

The TPVs have work permission and have access to Medicare, income support and English language tuition. They can receive torture and trauma counselling and employment assistance. By contrast to other humanitarian entrants, they are not eligible for the full range of settlement support services available. They can receive only a more limited form of income support known as special benefit, and no other benefits such as the new start allowance, youth allowance or a study allowance (Refugee Council of Australia, 2014).

Australian immigration staff and those working in detention centres received instructions from the Australian Government to refer asylum seekers as 'illegal maritime arrivals' in October 2013, although, it is not illegal to come to Australia to seek asylum under Australian and international law (Refugee Council of Australia, 2016b).

2.2.2 Safe Haven Enterprise Visas (SHEVs)

This is a new temporary visa and similar to the TPV, however, SHEVs will be issued for a period of five years. SHEVs holders must show an intention to work and/or study in a designated regional or rural area. All states and territories have now opted into the SHEVs arrangement, but there are different arrangements for identifying regional or rural areas. SHEVs holders can apply for another type of temporary or permanent visa (such as a Skilled or Family visa but not a permanent Protection visa) if they undertake or work without accessing income support for at least three-and-a-half years. The SHEVs may provide a pathway to permanent residency for some refugees, however, most of them are not able to satisfy the eligibility requirements for permanent visas.

Denial of family reunion: Prohibiting family reunion law has been introduced for refugees who came to Australia by boat and are not yet citizens. The lowest processing priority is given for their family reunion application if there are no special circumstances of a compassionate nature, or where processing of applications would otherwise be unreasonably delayed. Therefore, their applications have very little chances of success (Refugee Council of Australia, 2017).

TPV and SHEVs holders are not allowed to sponsor their family members under any program. Also, they are not allowed to become Australia citizens unless the Minister grants them permanent residency, or they can satisfy the eligibility criteria for a permanent Australian visa (for SHEVs holders) (Refugee Council of Australia, 2016a)

Citizenship delays and changes to citizenship criteria: There are significant delays for those from refugee backgrounds in the processing of their applications for citizenship. Many of them are not invited to attend their citizenship ceremony, even if they passed all legal requirements, including passing the citizenship test. The final stage for applicants is the ceremony in which they pledge to commit to Australia and receive their citizenship. Possible reasons for the delay include, the Department of Immigration needing more time for identity checks into which they are considered as a “complex case” group. In May 2018, the average time of processing citizenship applications has increased from 12 months to 16 months in accordance with the Department of Home Affairs. A study conducted by the with 1,000 people, found most refugees waited for up to three years for their citizenship applications to be finalized (Refugee Council of Australia, 2015) .

In 2017, the Australian Government announced changes to the way refugees and migrants become citizens of Australia (Refugee Council of Australia, 2018d). The changes include offering either a permanent visa, where no more than 3 months should have been spent overseas during the last 12 months; or a temporary visa for a period of four years, during which, no more than 12 months can be spent overseas. Applicants also no longer have an English language test that they need to pass. In addition, applicants can complete the current citizenship test as many times as they need. Finally, applicants are required to show good character (Refugee Council of Australia, 2016b, 2018d).

Australian migration policy is complex and needs to reflect the diversity and ethnic fragmentation of migrant population groups. The diverse ethnic mix and population

structure of the Afghan population is a prime example. The Migrant Resource Centre Northern Tasmania (MRC North) provides and culturally appropriate services to migrants and humanitarian entrants in Launceston. MRC facilitates the planning and coordination of services for newly arrived and established migrant communities, in consultation with Councils to work with community organisations, both in gaining access to specific cultural groups in the community and in working together to deliver to those groups, the services and support that they need. Additionally, MRC North provides facilities for meeting and cultural activities. The Afghan refugees is a new community for the Launceston city (Refugee Council of Australia, 2018a)

2.3 Ethnicity, language and ethnic fragmentation in Afghanistan

Afghanistan is a landlocked mountainous country located within South Asia and Central Asia. Afghanistan is bordered by Pakistan in the south and east, Iran in the west, Turkmenistan, Uzbekistan and Tajikistan in the north, and China in the far east. It is divided into 34 provinces (Tschudin, 2004). As of 1 January 2017, the population of Afghanistan was approximately 34,043,082 people. It covers an area of about 647,500 km square (Ethnic Council of Shepparton & District Inc, 2019). In 1937, the French diplomat René Dollot described Afghanistan as 'the Switzerland of Asia' (Maley, 2013).

The Soviet invaded Afghanistan and made it a battleground during the Cold War. After the collapse of the Soviet Union, Afghanistan entered a new field of competition among rival regional powers (William, 2010). The Soviet-Afghan war began in 1979 between the Afghan communist government and anti-communist mujahidin forces supplied and trained by the US, Saudi Arabia, Pakistan, and others. The Soviet Union was forced to withdraw 10 years later by mujahidin forces. Fighting subsequently continued among the various mujahidin factions, giving rise to a state of warlords that eventually spawned the Taliban (Dorransoro, 2007). Ultimately, 2001 witnessed the US-led invasion in response to attacks against the United States on the morning of Tuesday, September 11, 2001 (Gordon, 2013).

2.3.1 Ethnicity and language

Afghanistan is made up of multi-ethnic and multi-lingual people, with multiple and multi-layered identities (Shahrani, 2002). Afghanistan has experienced some political problems due to its multiethnic status similar to other countries (Rais, 2008). In 1937, a French anthropologist, Dollot, used a term — “groupe ethnique”, to categorize Afghan people in several ethnic units (Mazhar, Khan, & Goraya, 2012). Afghanistan has geographical and ethnic diversity. This diversity has undermined Afghanistan’s attempts at nation-building (Dubow, 2009).

Afghanistan's national anthem recognizes 14 ethnic groups. Among them, the four major ethnicities of the country are Pashtuns, Tajiks, Hazaras and Uzbeks. There are greater Pashtun populations in neighbouring Pakistan. The Tajiks, Uzbeks and Turkmens are greater in the Central Asian countries to the north (Siddique, 2012). The ethnic groups in Afghanistan are solid, cultural units which are divided by obvious boundaries and have been engaged in conflict for years (Shahrani, 1987).

Pashtuns are the largest ethnic group in the country, comprising of 42% of the total population. They live in the south and south-eastern part of Afghanistan (Haber, 2012). There is a Pashtun majority at the top level and they have been dominating the country since the mid-eighteenth century (Hanley, 2011). There are confederations between two main tribes Durrani and Ghilzai. Some other major tribes include: Mohmand, Afridi and Yusufzai (Wahab & Youngerman, 2007). The Saur Revolution in 1978 resulted in a political fragmentation among the tribes and empowerment of other ethnic groups (Newell, 1989). The Pashtuns lost their majority during the reign of Amir Abdul Rahman (1880-1901) (Bleuer, 2012). He ceded the majority Pashtun population and their territories to British India, under the Durand Line treaty agreement in 1893 (Mahmood, 2005), however, Amir Abdul Rahman made a centralised state, and resettled the Pashtuns in the northern regions and gave them rich agricultural lands and access to pastures for sheep-raising, in a territory that had been depopulated by wars among the former Uzbek Amir’s slave raiding, by the Turkmen nomads (Tapper, 1983). He also sent large numbers of Pashtun tribesmen to the war against the Hazaras who were given Hazara land and rights to sell captives in exchange for their participation. The lands formerly owned by the Hazaras were given to Pashtun groups (Ferdinand, 1962). The second largest ethnic group in Afghanistan is Tajiks which

comprise 27% of the total population in Afghanistan (Haber, 2012). They mainly live in northern, north-eastern and Western Afghanistan. After Soviet invasion and the civil war, they have remained influential in Afghanistan (Haber et al., 2012).

The Hazara people comprise 9% of the total population in Afghanistan (Haber, 2012). They are said to be descendants of Genghis Khan, the founder of the Mongol Empire in the 13th century. They live in Hazarajat and are Dari-speakers. They are the poorest and the most marginalized ethnic community of the country. The majority of Hazaras belong to the Shia sect of Islam; however, some Hazaras follow the Sunni traditions of Islam. The majority of Afghan population are Sunni Muslims. Consequently, Hazaras are viewed as outsiders. Hazaras work in the least desirable jobs due to their low ranking in the caste system. However, they are very industrious people (World Atlas, 2018).

Uzbeks are one of four major ethnic groups in Afghanistan, accounting for about 9% of the total population (Haber, 2012). They live north of the Hindu Kush, are Sunni Muslims and speak Uzbek, a Turkic language (Rais, 2008). The other ethnic groups in the country are Turkmen (3%) and Baluch (2%), which make up about 5% of the Afghan population (Bleuer, 2012).

2.3.2 Civil wars and ethnic fragmentation

It is believed that the civil wars have been the results of ethnic discrimination in the country to attain power and control the country (Siddique, 2012). Factors both internal and external to the country, have influenced the armed conflicts in Afghanistan. The wars in Afghanistan have significantly changed the balance of power and influence among the traditional social and political forces in the country. The ethnic and social forces of Afghans are more conscious of their separate identities today compared to in any other time in the history of the country. After the Soviet invasion in 1979, they were organized observably on an ethnic and local basis. Ethnic factors subsequently resulted in political polarization among the Mujahideen groups, locking them into a bitter struggle for power after the fall of the Marxist regime (Rais, 2008). The sectarian and regional dimensions have gradually changed into the ethnic conflict between the Pashtuns who were fearing loss of power and coalition of Uzbek and Tajik group from the North, who had gained more political power in Kabul. The Afghan fractions could not solve their differences peacefully, or maintain stable coalitions that would help national unity, because there were no democratic institutions. In

addition, the political rift between the parties professing traditional and revolutionary Islam onto the other, widened the conflict within the resistance after the departure of common enemy, the Soviet Union, from the country. The Taliban movement originates in Pashtun nationalism, and briefly relates its ideological underpinnings with that of the broader Afghan society. They tried to unify the country through military forces with a highly centralized government. They committed human rights abuses with other ethnic minorities in Afghanistan. After the dismissal of the Taliban regime however, the country has made significant progress toward rebuilding its political system and institutions. These accomplishments are the result of work and investments by Afghans and international partners. Since 2001, Afghanistan has adopted a new constitution, organized presidential, parliamentary, and provincial council elections, established Ministries to deliver services to the Afghan people, and developed a vibrant media and committed civil society (Rais, 2008). As one of a number of factors, ethnic differences are viewed as a significant contributor to violence in Afghanistan (Hanley, 2011).

The U.S. policy has cooperated with the ethnic minorities which assisted U.S.-led forces in routing the Taliban after 9/11, and has resulted in them being more open to welcoming and supporting the U.S forces than the Pashtun community that provided a strong political and ethnic base to the Taliban (Mazhar et al., 2012).

Afghanistan has been considered a “quintessential failed state” since the late 1970s. Since 2001, billions of dollars in aid have been spent in Afghanistan. However, their real impact is limited due to the security context, and corruption. Afghanistan still faces number of challenges, such as substandard living standards, a high unemployment rate, deep political fractures, structural governance challenges, and economic insecurity and the potential for the eruption of new conflicts. Conflict and insecurity in Afghanistan have also caused people to flee their country (Zhang, Yu, & Zhang, 2019).

Over the past four decades, Afghan refugees represent over 13 per cent of the global refugee. There were about 2.6 million registered refugees, Afghanistan remains the second largest country of origin in the world (Foundation, 2018; UNHCR, 2018b). Between 2010 and 2015, Australia has taken the largest number of humanitarian entrants and many of these refugees were from Afghanistan (12,228). In Launceston, former refugees who have

resettled in the last 5 years have most commonly arrived from Afghanistan, Bhutan, Sudan, and Burma (Migrant Resource Centre, 2017).

2.4 Prevalence of PTSD and depression in refugee populations

Refugees who have experienced repeated exposure to trauma are more likely to develop PTSD and depression than the general population (Hameed, Sadiq, & Din, 2018). Particularly, a systematic review indicated a higher prevalence of depression among former refugees (35%) than estimates of prevalence in the general population that range from 8 to 12 % (Lindert, von Ehrenstein, Priebe, Mielck, & Brähler, 2009). Furthermore, a meta-analysis of 181 studies among 81,866 refugees from 40 countries found the prevalence of PTSD was 30.6% and that of depression was 30.8% (Steel et al., 2009).

Afghan refugees are significantly affected by psychological distress including depression and PTSD along with PTSD-depression comorbidity (Alemi et al., 2014). A study in the Netherlands explored rates of anxiety, depression and PTSD in refugees and asylum seekers from Afghanistan, Bosnia and Somalia. Participants from Afghanistan were found to have higher rates of PTSD and depression than those from other countries. Thirty-five percent of Afghan participants were found to have PTSD and 57% had depression. Additionally, Slewa-Younan et al.'s study found Afghan refugee adults resettled in South Australia 44% had probable PTSD and 14.7% had depression (Slewa-Younan, Guajardo, et al., 2017).

Although research has suggested that refugees are at high risk of developing mental health problems such as PTSD and depression (Porter & Haslam, 2005), there were inconsistencies in the prevalence rates between studies (Close et al., 2016). For example, previous studies have shown a wide range in the prevalence of PTSD among refugee populations, varying from 10% to 40% (Nepon, Belik, Bolton, & Sareen, 2010; Sareen, Houlahan, Cox, & Asmundson, 2005; Wilcox, Storr, & Breslau, 2009). There are some possible reasons for considerable variations in prevalence rates for PTSD and depression among refugee populations. Firstly, these variations in the prevalence is attributed to differences in sample size, differences in demographic characteristics of the groups

studied, differences in length of time settling in the host countries and cultural differences between groups (Fazel, Wheeler, & Danesh, 2005; Tang & Fox, 2001). Additionally, self-reporting of mental problems may result in overestimates of the prevalence compared to that of diagnostic interviews and clinical diagnoses (Hall, A'hern, & Fallowfield, 1999). This may be due to the use of questionnaires screening adults for PTSD among refugee populations that had not been validated (Close et al., 2016). The inconsistencies could also be explained by the clinical and methodological variations between the studies or differences in diagnostic criteria or survey measures used to assess traumatic events and PTSD symptoms. The heterogeneity in the prevalence rates was also partly related to methodological quality of the studies and the clinical utility and cultural relevance of measuring PTSD among Afghans (Miller et al., 2009). Studies with higher methodological quality generally reported lower prevalence rates (Farooq, Fear, & Oyeboode, 1997; Flores, 2005).

2.5 Comorbidity for PTSD

There is a wide range of common comorbidities for PTSD, including substance-related disorders, depression, and anxiety (Creamer, Burgess, & McFarlane, 2001; Pietrzak, Goldstein, Southwick, & Grant, 2011). Findings from the National Comorbidity Survey (NCS) in the US have shown that 59% men and 44% women with PTSD met criteria for three or more other psychiatric diagnoses (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Similarly, another study has indicated that among those who met current criteria for PTSD, 66% met criteria for another anxiety or affective disorder (Centers for Disease Control, 1988).

The co-morbidity of PTSD and depression is common. The prevalence of PTSD and depression comorbidity was about 50% (Flory & Yehuda, 2015). The long-term complications of PTSD often result in depression. Both PTSD and depression can have profound effects on quality of life in terms of satisfaction and ability to engage in work and home life (Raab, Mackintosh, Gros, & Morland, 2015). People who develop PTSD have an internalizing personality style which is vulnerable to developing depression (Spinoven, Penninx, van Hemert, de Rooij, & Elzinga, 2014). A survey has shown that depression is nearly 3 to 5 times more likely to be accompanied in those with PTSD than those without PTSD (Kessler et al., 1995). Depression and PTSD comorbidities are actually common, but

depression can present alone with symptoms such as somatisation, suicidal thoughts, and constant low mood (Sourander, 1998). It is believed that people who have experienced trauma may look for ways to relieve the intense feelings associated with re-experiencing trauma and hyper-arousal responses.

2.6 Risk factors for PTSD and depression

Factors related to both pre- and post-displacement experiences are associated with PTSD and depression. Pre-displacement factors may include imprisonment, physical and emotional torture, loss of family members due to displacement and death threats to one's own life, being imprisoned or taken hostage, and having resided in a refugee camp (Q. Alemi & Stempel, 2018). Pre-displacement experiences can significantly affect one's mental wellbeing, this is commonly manifested as sadness and frustration and psychiatric conditions such as PTSD, anxiety and depression (Alemi et al., 2014; Mollica et al., 1987; Yaser et al., 2016). In the longer term, displacement impacts upon an individual's mental wellbeing. Husain et al. (2011) found that displaced people have the highest rates of PTSD and depression (Husain et al., 2011). A systematic review among the resettled Afghan refugees and asylum seekers in Western countries, reported that high rates of depression and PTSD were related to not only pre-migration traumas but also post-displacement stressors including economic strain, loss of status and social support, and limited host country social integration (Alemi et al., 2014). Moreover, research among refugee populations indicated that common mental health problems among refugees and asylum seekers were related to a range of post-migration factors including family separation, social isolation, acculturation, and socioeconomic factors (Kartal, Alkemade, Eisenbruch, & Kissane, 2018; Li, Liddell, & Nickerson, 2016). Specifically, the meta-analysis study (Porter & Haslam, 2005) showed that higher levels of education and socioeconomic status before displacement, were associated with worse mental health outcomes among refugees from different countries. Higher pre-displacement intellectual and economic status, may indicate subsequent loss of status rather than it having a protective effect on refugees against their predicament (Porter & Haslam, 2005). Many migrants and refugees find that their prior/country of origin educational and employment experience is not recognized in the host country. The challenges can be greater for refugees who are commonly to be

overqualified for their current employment, as over-qualification is linked to lower self-reported mental health disorders (Chen, 2010).

Post displacement factors associated with adapting to a new country's culture can socially and psychologically worsen the mental health problems of refugees. Among these factors, language barriers have a significant impact on refugees' mental health and are a determinant of depression (Bogic, Njoku, & Priebe, 2015). Refugees encounter language difficulties during the resettlement process, and this may challenge them to access public transport, understand health, social and legal systems and find appropriate, affordable and stable accommodation. Findings from a previous study suggest that there are links between housing and health outcomes for refugees in countries of resettlement such as Australia (Ziersch, Walsh, Due, & Duivesteyn, 2017). Furthermore, lack of language skills is one of the most significant obstacles to obtaining employment. Those with poor language skills are likely to have access to a much smaller range of employment and struggle with economic adaptation (Doney, 2011).

The impact of perceived discrimination on refugee health and mental health has been researched. Discrimination can be defined as a type of stressor resulting from perceived assaults, fear, and exclusion experienced by racial and ethnic outgroups. Research suggests that a sense of being accepted in one's country of settlement has had a significant effect on mood disorders among refugees (Q. Alemi et al., 2016; Bogic et al., 2012). Refugees in Canada who experienced racial discrimination had higher levels of depression (Noh, Beiser, Kaspar, Hou, & Rummens, 1999). In addition, a study among refugees in Turkey found that there was an association between higher perceived ethnic discrimination and lower mental and physical health (Çelebi, Verkuyten, & Bagci, 2017).

Other post migration factors that impact on former refugees' mental health are loneliness and isolation. Especially, separation from family members is one of the reasons that affect refugees' feelings of loneliness and isolation. A systematic review of 29 studies on long-term mental health among 16,010 refugees found separation from family members may be associated with a lack of social support, which was observed to predict depression among refugees five or more years after displacement (Bogic et al., 2015). Family separation is a common feature of forced migration, which is related to policies of refugees' reunification. As family separation is an important determinant of mental health

disorders, it can be moderated if they arrive with family members or join family members already settled in the host country (Shishehgar, Gholizadeh, DiGiacomo, Green, & Davidson, 2017).

Social support is an important contributor to maintaining mental wellbeing. Access to social support is predictive of improved mental health in new arrivals. Research among Sudanese refugees in South East Queensland found that 43% of the participants reported receiving social support from the broader community while 62% reported receiving social support from their ethnic community (Schweitzer, Greenslade, & Kagee, 2007). It was noted that support from the wider community did not seem to effect mental health functioning to the same degree that support from family and the Sudanese community did. Similarly, another Australian study which assessed the health needs of, and available services to, Syrian and Iraqi refugees (Renzaho & Wali, 2017) suggested that limited, or no family or social interaction was maladaptive to recovery from trauma. Social factors have a moderating effect on the relationship between trauma and mental health of refugees (Marshall, 2015).

The moderating effects of loneliness and social integration difficulties causing poor mental health, may negatively impact upon social interaction. A possible explanation for this is that PTSD symptoms could cause people to withdraw, which in turn lowers their chance of receiving social support and settlement services. Another possible explanation for this is that a “loneliness cycle” exacerbates existing mental health problems. However, the study of the impact of poor mental health on ability to socially interact is difficult (Chen et al., 2017). People who are depressed tend to view ambiguous social interactions as negative and act in alignment with expectations. Depressed people have also avoided social interaction (Joiner & Coyne, 1999). There was a significant association between PTSD and high levels of social inhibition - a tendency to inhibit ones expression of behaviour and emotions in social interaction to avoid a negative social evaluation (Lukaschek, Baumert, Kruse, & Ladwig, 2016). It has been hypothesized that social inhibition is a response to PTSD, a protective form of coping, rather than simply a risk-factor to the development of PTSD (Lukaschek et al., 2016). According to the Settlement Council of Australia (SCOA), social interaction is crucial for successful long-term settlement and this is considered as an essential element of building a sense of belonging for newly arrived migrants (SCOA, 2017).

Their social interaction includes the ability to interact and participate in local events, activities and networks as well as acceptance as a member of community and their empowerment to engage with civic institutions (Australian Survey Research Group, 2011). The important part of the settlement journey is to prepare newly arrived asylum seekers and refugees in Australia to establish social interaction (The Settlement Council of Australia, 2017).

2.7 Mental health service utilisation and refugees

Although refugees are more likely to develop PTSD and depression than the general population, they are less likely to use mental health services than those who were born in the host country (Boufous, Silove, Bauman, & Steel, 2005). Mental health stigma remains one of the main reasons for why refugees do not have access to mental services (Saechao et al., 2012). Shannon and colleagues found that a history of political repression, fear, the belief that talking does not help, a lack of knowledge about mental health, avoidance of symptoms, shame, and culture, were some of the reasons why it was difficult for refugees to discuss mental health (Shannon, Wieling, Simmelink-McCleary, & Becher, 2015). Similarly, another study also found that fear of treatment, shame, and embarrassment kept a large number of refugees from discussing openly their mental illness (Majumder, O'Reilly, Karim, & Vostanis, 2015). Additionally, cultural beliefs regarding the nature and treatment of mental illness, lack of insight, limited understanding of treatment options, and a lack of knowledge regarding risk factors for and causes of mental disorders were associated with impeding mental health service use of refugees (Slewa-Younan, Mond, Jorm, et al., 2014). In addition to cultural beliefs regarding health care, a qualitative study conducted in Southern California among refugee health and resettlement professionals, found language and communication, acculturation difficulties to be major barriers to accessing mental health services (Morris, Popper, Rodwell, Brodine, & Brouwer, 2009). A study by Alemi et al in 2018 investigated help-seeking behaviour for mental distress among Afghan residents in Kabul, Afghanistan found that Afghans mostly engaged in religious practices, and received support from family and friends to cope with the mental distress, while a small percentage of Afghans referred to medical professional and traditional healer (Q. Alemi et al., 2018).

2.8 Synthesis

This chapter has presented information on history of Australian migration and recent changes in Australian refugee policy. The chapter has also provided background information on Ethnicity, language and ethnic fragmentation in Afghanistan. The review of literature has indicated that refugees have higher rates of depression, PTSD and other anxiety disorders, compared to other individuals in their country of resettlement. The increased vulnerability to mental disorders that refugees face is associated with pre-migration experiences including physical and emotional torture, loss of family members due to displacement and death and post-migration conditions such as language barriers and the loss of social support. Although refugees are more likely to develop PTSD and depression than the general population, they are less likely to use mental health services than those who were born in the host country. Major barriers preventing refugees from accessing to mental services include mental health stigma, language, communication and acculturation difficulties.

2.9 Summary

Literature review plays an important role in a research study. It provides a conceptual and contextual background on which a research project is positioned. In this literature review, important issues have been identified and discussed including the prevalence of and risk factors for PTSD and depression among general refugees and Afghan refugees. The next chapter will present a different and equally important aspect of this project: research methodology.

3 CHAPTER 3: RESEARCH METHODOLOGY

This chapter starts with the rationale for the methodological approach of the study. It is followed by the research design, data collection and data analysis. Finally, ethical considerations for the study are discussed.

3.1 Rationale for the methodological approach

Research approach is a perspective based on a set of assumptions and concepts held by researchers (Chritensen & Johnson, 2004). Traditionally, there are two widely used research approaches, quantitative and qualitative methods. If the study is testing a hypothesis or examining relationships between variables, a quantitative approach is considered to be most suitable. As this study examined the prevalence and correlates of symptoms of PTSD and depression among the resettled Afghan refugees in Launceston, a quantitative approach was employed. Survey questionnaires were chosen for the study as they offer many advantages and ensure respect and confidentiality for the participants. There must be assurances that “informed consent” has been obtained as “an important safeguard” for the respondents and that there has been no element of “deception, invasion of privacy and participants’ rights”(Graziano & Raulin, 1993). Salkind (2007) comments that anonymity is useful as “people may be more willing to be truthful, because anonymity is all but guaranteed”. Anonymity is especially useful for sensitive topics on PTSD and depression among refugees that this study was investigating. In terms of cost, a survey is a less expensive method of collecting data. Although a survey was selected for the data collection process, the disadvantages of this method should be recognised, including a low response rate and incorrect responses due to respondents’ misunderstanding of some questions. Therefore, the quantitative approach with survey questionnaires was chosen as the most suitable approach to examine the prevalence and correlates of symptoms of PTSD and depression among the Afghan participants (Salkind, 2007).

3.2 Methodology

3.2.1 Design

Information sheet (Appendix 1) and a survey instrument (Appendix 2) was developed, based on the literature, by the student researcher who is fluent in both Dari and English. The first part of the survey included socio-demographic information (e.g., age, sex, education level, employment, marital status, occupation, occupation in the country of origin) and levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour. The second part of the survey included the following standardized measures: the Post Migration Living Difficulties Scale (PMLD) (Appendix 3) (Schweitzer, Melville, Steel, & Lacherez, 2006a)' the Impact of Event Scale-Revised (IES-R) (Appendix 4) (Joseph, 2000) and the Hopkins Symptoms Checklist (HSCL-25) (Derogatis et al., 1974) (Appendix 5).

The survey was translated into Dari language by a team of language experts. The language experts were instructed to focus on language equivalence, cultural sensitivity, clarity and comprehensibility, taking into account the varying levels of education and vulnerability of the target population (Lenz, Gómez Soler, Dell'Aquila, & Uribe, 2017). The language experts confirmed the equivalence of concept in the questionnaire. Moreover, cultural validation was instituted to check the appropriateness of the wording and mitigate misinterpretation due to culturally specific ways of thinking. Words were explained if there was need for more clarification about the concept of a question. There are different ways of indicating formality among languages, which are closely related to target cultural concepts of politeness and respect. Since the level of education among the target culture varies, the translation requires the use of plain language that is simple, clear, and unambiguous (Lenz et al., 2017).

3.2.2 Study sample and recruitment

Survey participants were drawn from the adult male and female population who aged between 18 and 79 years old; were born in Afghanistan; fluent in Dari and/or English; and currently living in Launceston.

A combination of convenience and snowball sampling was employed to maximise the number of participants. The snowball sampling method is based on referrals from initial

participants to find additional participants. Snowball sampling has been shown to be an effective strategy to overcome many of the recruitment challenges associated with inviting difficult-to-reach and vulnerable communities to join studies (Sadler, Lee, Lim, & Fullerton, 2010) like refugees. Snowball sampling is more likely to shorten the time and decrease the cost required to recruit participants (Atkinson & Flint, 2001a).

The survey included an information sheet, available in both Dari and English, to which potential participants were first directed. Participants were given details of what participation in the study entailed, i.e., completing a brief survey addressing their health and well-being, and were advised that their participation was voluntary, that no identifying information would be collected and that their results would therefore be anonymous, and that they had the right to withdraw from the project at any time without penalty. The information sheet also contained details of several local service providers who could be contacted should completion of the survey raise any issues for them, along with contact details for members of the research team were provided should any clarification or additional information be needed. Potential participants who confirmed that they understood this information and were willing to participate proceeded to complete the survey at the time or, if they preferred, in either own time. Participants were also informed of their right to raise any concerns regarding the study with a member of the Ethics Committee and contact details were also provided for this purpose. The student researcher contacted several local Afghan cultural and community leaders to inform them of the study and ask for their assistance with recruitment efforts. Participants were invited to take part in the study through Afghan community leaders. Afghan participants were also recruited via networking opportunities at Afghan cultural, religious and other gatherings places. Hard copies of the information sheet (Appendix 1) and questionnaire (Appendices 2, 3, 4 &5) in both English and Dari were distributed at community meetings. Participants were asked to complete the questionnaire either on site or post the completed survey using the self-addressed, pre-paid envelopes, back to the research team. If requested, the student researcher also conducted interviews with individuals due to their low level of literacy. Participants were provided with a participant information sheet that briefly described the study and aims of the study Informed consent was obtained from all participants. They were also asked to introduce their family or friends to the study. The research team

contact details were provided if they needed more clarification about the concept of a question. The data was collected by the student researcher. The data collection period was during April 2019.

3.2.3 Measures

This study used three measures: The Post Migration Living Difficulties Scale (PMLD), the Impact of Event Scale-Revised (IES-R) and the Hopkins Symptoms Checklist (HSCL-25).

The PMLD has been widely used to measure current stressors and difficulties faced by refugees in their new country (Sinnerbrink, Silove, Field, Steel, & Manicavasagar, 1997; Steel, Silove, Phan, & Bauman, 2002). The PMLD scale has been found as a predictor of mental health among displaced populations (Schweitzer et al., 2006a). The PMLD checklist (Appendix 3) was used for measuring the severity of post-migration problems commonly experienced by asylum seekers within the past 12 months (Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997). The PMLD is composed of 25 items assessing living difficulties, such as communication difficulties, separation from family, loneliness, boredom and isolation, among participants (Schweitzer et al., 2006a). The items were scored on a 5-point Likert scale (0 = not a problem to 5 = very serious problem). Items scored at least 3 (serious and very serious problem) are considered positive responses (Aragona et al., 2012). A total score is calculated as the sum of scores on these items, with higher scores indicating higher levels of post-migration stress, and five subscales. Cronbach's alpha in a previous study among Afghan migrants residing in Istanbul, Turkey was between 0.719 and 0.891 (Q. Alemi et al., 2016).

The IES-R (Appendix 4) is a self-reporting scale, which has 22 items to assess PTSD symptoms (intrusive memories, avoidance, negative changes in thinking and mood, changes in physical and emotional reactions) and subjective distress caused by traumatic events in clinical and non-clinical settings (Weiss, 2007). It is scored on a 4-point Likert scale (Kartal & Kiropoulos, 2016), which assesses how distressing each trauma symptom has been in the past seven days (past month for the present study). A total score of ≥ 33 has been suggested as the best cut-off for a probable diagnosis of PTSD among resettled refugee populations (Creamer, Bell, & Failla, 2003). The IES-R has demonstrated a high level

of internal consistency, good test-retest reliability, and good predictive validity and has been widely used among refugees to assess PTSD reactions, among war survivors in the Balkans for example (Ljubotina & Muslić, 2003). In a study of Afghan refugees in Austria (Renner, Salem, & Ottomeyer, 2008), the IES-R yielded a Cronbach's alpha = 0.89 and a convergent validity coefficient (with clinician diagnosis) of 0.81.

The HSCL-25 consists of two parts assessing symptoms of anxiety and depression respectively. The second part, comprising 15 items assessing depressive symptoms (HSCL-15) (Appendix 5), was used for the current study. Each item is scored using a Likert-type scale with options indicating how often each symptom was experienced during the past month ranging from 1 (not at all) to 4 (extremely) (Derogatis et al., 1974). This scale has been used previously with various refugee groups including Afghan refugees (Scholte et al., 2004; Ventevogel et al., 2007) and has been found to have good psychometric properties including good internal consistency and test-retest reliability and acceptable sensitivity (69 %) and specificity (67 %) when used to identify individuals likely to have a depressive symptoms. Consistent with previous research, participants with a total scale score of > 1.75 were deemed to have clinically significant depressive symptoms ("symptomatic depression") (Ventevogel et al., 2007). The Persian version of the HSCL-15 (Mosavi & N. Ghorbani, 2007) which has also been validated, was used for the current study.

3.2.4 Data analysis

Data were analysed using SPSS version 24.0. Descriptive statistics were employed for participant characteristics, namely socio-demographic characteristics, levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour, using frequencies and 95% confidence intervals (CIs). Chi-square tests were used to examine the associations between PTSD, depression symptoms and the socio-demographic, namely, sex, education level, employment, refugee status, marital status, occupation, occupation in the country of origin, and PMLD variables, namely, communication difficulties, separation from family, loneliness, boredom and isolation, levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour.

Univariate associations between PTSD symptoms and each of the above-mentioned variables, were first assessed using a series of univariate logistic regression analyses. All variables which were significantly associated with PTSD and depression symptoms in this

analysis were entered as covariates into binary logistic regression analysis using simultaneous variable entry analysis with PTSD and depression symptoms.

Variables that showed a significant association with the outcome of interest, with a p value of less than 0.05 were included in the multivariable analysis; with separate models created for each study outcome. A p -value of < 0.05 is considered as statistically significant predictors of the study outcomes.

3.3 Ethical issues

Research which involves or impacts upon people requires ethics approval from the Human Research Ethics Committee. Human research ethics concerns the ethical principles and values which should govern research involving people (Health & Council, 2007 (Updated 2018)). There are four basic principles in ethical research:

- Integrity of the researcher and the research to be undertaken;
- Respect for people, which means respect for their dignity and rights;
- Beneficence, which means the obligation to maximise possible benefits and minimise possible harm; and
- Justice, which means asking who ought to receive the benefits of research and bear its burden.

This study applied for and received the approval of the Human Research Ethics Committee (Tasmania) Network (Appendix 6). To protect the participants' confidentiality, participation was voluntary and research data gathered would remain anonymous and confidential. It was possible that participants would experience some discomfort or anxiety in responding to certain questions. Counselling services were arranged to deal with those potential issues. The researchers could help organise an appointment if needed, however, there were no participants who needed these services during the data collection.

The potential benefits of this research are to assist the local health care providers to identify potential areas of intervention that may enhance psychological health outcomes and improve the current activities of mental health services in Launceston. The study's findings will also produce invaluable consumer-generated information which could then be used to inform and reinforce improved practice strategies for service improvement. In addition, this study will provide information to the Department of Health and Human

Services about the burden of PTSD and depression and associated factors among resettled Afghan refugees in Launceston. Findings from the current research may have implications for mental health interventions—health promotion, early intervention and clinical practice.

The data will be kept in a locked cabinet and password protected computer at the Centre for Rural Health, University of Tasmania. All raw data used in the study will be destroyed 5 (five) years after the date of publication. Hard copies will be shredded, and electronic versions will be removed and deleted from the Chief Investigator's computer.

3.4 Conclusion

This chapter has described the steps undertaken to conduct this study. A quantitative methodology was chosen based on research aims and objectives. This chapter has provided information on the study design and participant recruitment, data collection procedures and other related issues that were encountered during the data collection process, and data analysis. The next chapter will present the findings of the study.

4 CHAPTER 4: RESULTS

Preface: Chapter 4 contains two manuscripts which address all the research questions. The first manuscript addresses research questions 1 and 2 which investigated the prevalence and correlates of symptoms PTSD among the resettled Afghan refugees in Launceston, Tasmania. The second manuscript addresses research questions 3 and 4 on the prevalence and correlates of symptoms of depression among the resettled Afghan refugees in Launceston, Tasmania.

All of the research contained within this chapter has been submitted as follows:

Manuscript 1: Hamrah M, Hoang H, Mond J, Pahlavanzade B, Charkazi A, Auckland S. **The prevalence and correlates of symptoms of post-traumatic stress disorder (PTSD) among resettled Afghan refugees in a regional area of Australia.** *Journal of Mental Health* (in press).

Manuscript 2: Hamrah M, Hoang H, Mond J, Pahlavanzade B, Charkazi A, Auckland S. **Occurrence and correlates of depressive symptoms among the resettled Afghan refugees in a regional area of Australia.** *Early Intervention in Psychiatry* (Decision on Manuscript-Minor Revision).

4.1 Manuscript 1: The prevalence and correlates of symptoms of post-traumatic stress disorder (PTSD) among resettled Afghan refugees in a regional area of Australia

I acknowledge that this manuscript is currently under review. I have made comments & suggestions throughout the manuscript as a component of the assessment of the thesis.

4.1.1 Introduction

There were about 65.3 million displaced people in the world by the end of 2015 – the highest number since World War II – and some 24.5 million refugees and asylum

seekers considered as humanitarian migrants resettled in a third country (Chen et al., 2017). Migration and its impact on mental health has been the subject of many studies, in various populations, over recent decades. Immigrants can be exposed to potentially traumatic events both before and after their displacement from their countries (Porter & Haslam, 2005). Refugees have commonly experienced torture, war or civil unrest, the loss of family and friends through violence, and prolonged periods of deprivation such as having inadequate food and housing. These events can have a marked impact on mental health, particularly in the form of symptoms of post-traumatic stress disorder (PTSD), anxiety and depression (Alemi et al., 2014; Mollica et al., 1987; Yaser et al., 2016).

Asylum seekers and refugees are faced with varying degrees of challenges related to adaptation to a new country and these challenges have also been found to increase the risk of mental health problems (Steel et al., 2009). These post-migratory challenges are often related to acculturation. Additional, migration-related factors that may influence the mental health of refugee populations include life-threatening conditions while traveling to resettlement countries, uncertainty about asylum application and reduced social integration (Miller & Rasmussen, 2017).

According to the epidemiological studies, the prevalence of PTSD is known to be elevated among resettled refugees relative to other individuals in their country of resettlement (De Jong, Mulhern, Ford, Van Der Kam, & Kleber, 2000; Hashemian et al., 2006; Vega et al., 1998). Gernaat et al (2002) found a prevalence rate of 35% for PTSD among Afghan refugees resettled in Netherlands (Gernaat, Malwand, Laban, & Komproe, 2002), while a previous study of Afghan refugee adults resettled in an urban area of Australia found 44% had PTSD (Slewa-Younan, Yaser, et al., 2017). This is significant when is considered that Australia has taken, per capita in 2014, the largest number of the humanitarian entrants in 2014 (Collins, 2017), and given that this included more than 12,000 individuals from Afghanistan between 2010 and 2015 (Slewa-Younan, Guajardo, et al., 2017).

There are an estimated 2,670,000 Afghan refugees in the world as well as 1,174,300 Afghans have become internally displaced (Slewa-Younan, Guajardo, et al., 2017). According to a recent study, Afghan refugees make up the second largest refugee population in the world (UNHCR, 2017a). To our knowledge, no study has considered the

occurrence and correlates of PTSD symptoms among Afghan refugees who have resettled in regional areas of Australia, and there is the significant proportion of Afghan refugees in Australia. Studying these issues in regional areas may be particularly important, given that access to health services is known to be particularly poor in these areas (Australian Bureau of Statistics, 2013-14). The goal of the current study, was, therefore, to examine the occurrence and correlates of symptoms of PTSD. These correlates included socio-demographic characteristics, potential post-migration living difficulties, self-recognition of a mental health problem and help-seeking behaviour among resettled Afghan refugees living in a regional area of Australia, namely, Launceston Tasmania.

4.1.2 Methods

4.1.2.1 Study design and recruitment of participants

The research entailed a cross-sectional, population-based survey. Participants were resettled Afghan refugees living in Launceston as of April 2019. Launceston is the second largest city in Tasmania after Hobart and the thirteenth-largest non-capital city in Australia (Skromanis et al., 2018). The census usual resident population of Launceston in 2016 was 75,329, of whom 48% were male and 52% female (Australian Bureau of Statistics, 2016). There are two Afghan communities in Launceston which include the Hazara community and Afghan Hazara community (Holmes, 2019). Hazaras are from central Afghanistan, while Afghan Hazaras are from northern part of Afghanistan. Both communities are Shi'a Muslims.

Participants were recruited by means of a combination of convenience and snowball sampling. These were deemed to be the most cost-efficient methods by which to recruit individuals from an otherwise hard-to-reach study population (Atkinson & Flint, 2001b; Sadler et al., 2010). The study was approved by the Human Research Ethics Committee of Tasmania (H0017807).

Local Afghan cultural, community, and other community leaders were contacted to inform them about the study and ask for their assistance with participant recruitment. Recruitment was facilitated by these leaders, including via networking opportunities at Afghan cultural, religious and other gatherings places. Inclusion criteria were as follows: 1)

being between 18 and 79 years old; 2) having been born in Afghanistan; 3) being fluent in Dari and/or English; and 4) Currently living in Launceston.

Hard copies of the survey instrument, available in both English and Dari, were distributed at relevant community meetings. Participants were asked to complete the survey either on site, in which, the completed survey was collected by a community leader or member of the research team, or at a later time when participants were instructed to return the completed survey in pre-paid, self-addressed envelopes provided for this purpose. Most participants chose to complete the survey on site. The Persian questionnaire was modified into the Dari language. An information sheet, available in both Dari and English, outlined the study aims and methods and provided contact details of the study team along with a list of local service providers. Participants were informed that completing the questionnaire was voluntary and anonymous. They were also asked to introduce family members and/or friends to the study. No incentive was offered for participation, other than information to the effect that the information collected would be used to inform local mental health programs.

4.1.2.2 Measures

A two-part survey instrument was developed by the first author, fluent in both Dari and English, who also oversaw translation into Dari language by a team of language experts who were instructed to focus on language equivalence, cultural sensitivity, clarity and comprehensibility, taking into account the varying levels of education and vulnerability of the target population (Lenz et al., 2017).

The first part of the survey included socio-demographic (e.g. age, sex, education level, employment, marital status, occupation, occupation in the country of origin) and levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour. The second part of questionnaire measured participants' post migration living difficulties using the Post Migration Living Difficulties Scale (PMLD) (Schweitzer et al., 2006a). The Impact of Event Scale-Revised (IES-R) was used for the assessment of current PTSD symptomatology (Joseph, 2000).

The PMLD is composed of 25 items assessing living difficulties, such as communication difficulties, separation from family, loneliness and boredom and isolation, among participants (Schweitzer et al., 2006a), which are scored on a 5-point Likert scale (0

= not a problem to 4 = very serious problem). Items scored at least 3 ("serious and very serious problem") are considered positive responses (Aragona et al., 2012). The PMLD checklist was used for measuring the severity of post-migration problems commonly experienced by asylum seekers within the past 12 months (Silove et al., 1997). A total score is calculated as the sum of scores on these items, with higher scores indicating higher levels of post-migration stress, and there were five subscales. The PMLD has been widely used to measure current stressors and difficulties faced by refugees in their new country (Sinnerbrink et al., 1997; Steel et al., 2002). The PMLD scale has been found as a predictor of mental health among displaced populations (Schweitzer et al., 2006a), which has consistently been identified as a predictor of mental health among displaced populations. Cronbach's alpha in previous study among Afghan migrants residing in Istanbul, Turkey was between 0.719 and 0.891 (Q. Alemi et al., 2016).

The IES-R is a self-report scale, which has 22 items to assess PTSD symptoms (intrusive memories, avoidance, negative changes in thinking and mood, and changes in physical and emotional reactions) and subjective distress caused by traumatic events in clinical and non-clinical settings (Weiss, 2007). It is scored on a 4-point Likert scale (from 0= to not at all or only one time, to 3 to 5 or more times per week/very much/almost always) (Kartal & Kiropoulos, 2016) which assesses how distressing each trauma symptom has been in the past seven days (past month for the present study). A total score of ≥ 33 has been suggested as the best cut-off for a probable diagnosis of PTSD among resettled refugee populations (Creamer et al., 2003). The IES-R has demonstrated a high level of internal consistency, good test-retest reliability, and good predictive validity and has been widely used among refugees to assess PTSD reactions, among war survivors in the Balkans for example (Ljubotina & Muslić, 2003).

Additional questions were included to assess participants' levels of physical activity, their self-recognition of a mental health problem and help-seeking behaviour related to a mental health problem. Participants were asked if they had sought professional (e.g., from a doctor) help for a mental health problem (e.g., PTSD) since moving to Australia and if they thought that they currently had a mental health problem (Mond et al., in press; Slewa-Younan, Mond, Bussion, et al., 2014).

4.1.2.3 Analytic procedure

All statistical analyses were performed using SPSS version 24.0 (SPSS, Armonk, NY: IBM Corp). Descriptive statistics were employed for participant characteristics, namely, socio-demographic characteristics, levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour, using frequencies, and 95% confidence intervals (CIs). Chi-square tests were used to examine the associations between PTSD symptoms and socio-demographic, namely sex, education level, employment, refugee status, marital status, occupation, occupation in the country of origin and PMLD variables, namely, communication difficulties, separation from family, loneliness and boredom and isolation, and levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour. Univariate associations between PTSD symptoms and each of the above-mentioned variable variables were first assessed using a series of univariate logistic regression analyses. All variables which were significantly associated with PTSD symptoms in this analysis were entered, as covariates, into binary logistic regression analysis using simultaneous variable entry analysis with PTSD symptoms (probable PTSD, no probable PTSD) as the (dichotomous) outcome variable. A *p*-value of < 0.05 was considered to indicate statistical significance in all analysis. A measure of depression symptoms was also included Hopkins Symptoms Checklist (HSCL-25). However, in preliminary analysis this measure was highly correlated ($R=0.486$). Therefore, excluded from the current analysis.

4.1.3 Results

A total of 66 individuals participated in the study, of whom 49 (75.2%) were male. Table 1 shows the socio-demographic characteristics, health characteristics, and scores on subscales of the PMLD, for study participants.

Table 1 Socio-demographic and health features of participants with and without PTSD symptoms

Variables	PTSD (n=32)	No PTSD (n=34)	<i>P</i> -value
Gender, no (%)			0.322
Male	22 (57.1)	27 (82.7)	
Female	10 (42.9)	7 (17.3)	
Age (in years) number, no (%)			0.172
18-29	4 (12.7)	12 (35.3)	

30-39	7 (21.9)	4 (11.8)	
40-49	8 (25.0)	7 (20.6)	
50≥	13 (40.6)	11 (32.3)	
Level of education, no (%)			0.322
Primary/private education	14 (43.7)	17 (50.0)	
Secondary	14 (43.7)	12 (35.3)	
Vocational	1 (3.1)	0 (0)	
University	3 (9.4)	2 (5.9)	
Graduate/professional	0 (0)	3 (8.8)	
Marital status, no (%)			0.345
Single	8 (42.8)	14 (30.8)	
Married	22 (50.0)	19 (65.4)	
Others	2 (7.1)	1 (3.8)	
Occupation, no (%)			0.249
Unemployed	13 (57.1)	16 (40.4)	
Working part-time	16 (35.7)	11 (42.3)	
Working full-time	3 (7.1)	7 (17.3)	
Occupation in the country of origin, no (%)			0.016
Farmer	16 (50.0)	13 (38.2)	
Housewife	11 (34.3)	5 (14.7)	
Other occupations specified by participants	5 (15.6)	16 (47.0)	
Physical inactivity, no (%)	7 (21.9)	11 (32.3)	0.339
Self-recognition of PTSD symptoms, no (%)			<0.001
Yes	26 (81.2)	6 (17.6)	
No	6 (18.7)	28 (82.3)	
Seeking professional help for PTSD symptoms, no (%)			<0.001
Yes	15 (46.9)	2 (5.9)	
No	17 (53.1)	32 (94.1)	
Serious or very serious PMLD among participants with and without PTSD symptoms			
Separation from family, no (%)	19 (59.4)	6 (17.6)	<0.001
Loneliness and boredom, no (%)	8 (25.0)	7 (20.6)	0.669
Communication difficulties, no (%)	29 (90.6)	13 (38.2)	<0.001
Isolation (loneliness, being or feeling alone), no (%)	26 (81.2)	14 (41.2)	0.001

The prevalence of PTSD symptoms was 48.8% (95% CI: 36.0–61.1%). PTSD symptom was common among participants as a former farmer in the country of origin (50.0%). The prevalence of comorbidity of PTSD and depression was 12.1% (95% CI: 6.3–22.1%). Of the 32 participants in this subgroup, 26 (81.2%) believed that they currently had a mental health problem while 15 of these participants (46.9%) had sought help in relation to a mental health problem. Participants with a probable PTSD diagnosis have higher levels of family separation (59.4%), communication difficulties (90.6%) and isolation (81.2%) than

those who did not. Self-recognition of PTSD symptoms was independently associated with help-seeking (OR, 14.4 95% CI: 3.9-95.9).

All of participants have the same country of origin (i.e. Afghanistan), Hazaragi language, and Hazara ethnic group. Their children were in Australia and came by air to Australia. About 95% (63 out of 66) of participants left the country of birth before 2000 and arrived as refugees. At the time of the study they had Australian permanent residency. Over 80% (56 out of 66) of participants were living in Iran before arrived in Australia. Ninety-seven percent of participants (64 out of 66) have been in Australia between period of 1 and less than 5 years. Forty-three percent of participants (29 out of 66) had brothers and sisters and parents living in Australia followed by 31.9% (21 out of 66) living in Middle East or American countries, then 22.7% (15 out of 66) were still in Afghanistan. There were only 1.5% (1 out of 66) in other Western Europe. The largest percentage of extended family (e.g. uncle, aunties, cousins, grandparents etc.) of the participants were in Middle East or American countries 40.9% (27 out of 66), followed by Australia 34.8% (23 out of 66), then 19.7% (13 out of 66) were still in Afghanistan and only 4.5% (3 out of 66) were in other Western Europe. There were missing data about when the participants arrived in Australia and it was excluded from data analysis.

Table 2 shows univariate and multivariate analysis of the associations between study variables and PTSD symptomatology. As illustrated, the likelihood of having PTSD symptoms was 14.6 times higher among participants with communication difficulties than those without communication difficulties (95% CI: 1.7-124.7). Family separation (OR, 9.9 95% CI: 1.8-55.5), and self-recognition of PTSD symptoms (OR 13.8, 95% CI: 2.4-80.0), were also found to be independently associated with having a probable PTSD diagnosis in multivariate analysis. None of the demographic characteristics assessed were associated with having a probable PTSD diagnosis in multivariate analysis.

Table 2 Univariate and multivariate logistic regression analysis of factors associated with PTSD among resettled Afghan refugees in Launceston

Variables	Univariate Logistic Regression			Multivariate Logistic Regression		
	OR	(95% CI)	p-value	OR	(95% CI)	p-value

Communication difficulties	15.6	(3.9-61.8)	<0.001	14.6	(1.7-124.7)	0.014
Separation from family	6.8	(2.2-21.1)	0.001	9.9	(1.8-55.5)	0.009
Isolation (loneliness, being or feeling alone)	6.2	(2.0-19.0)	0.001	0.76	(0.11-5.3)	0.781
Seeking professional help for PTSD symptoms	14.1	(2.0-69.1)	0.001	2.7	(0.34-21.5)	0.35
Self-recognition of PTSD symptoms	20.2	(5.8-70.7)	<0.001	13.8	(2.4-80.0)	0.003

4.1.4 Discussion

This study examined the occurrence and correlates of PTSD symptoms among resettled Afghan refugees in a regional area of Australia. Close to half (48.8%) of participants met an operational definition of “probable PTSD case”. The factors most strongly associated with this outcome were communication difficulties, family separation seeking professional help behaviour for PTSD symptoms, and self-recognition of PTSD symptoms. None of the demographic characteristics assessed were associated with having a probable PTSD diagnosis in multivariate analysis. Similar high levels of PTSD symptoms have been observed in international studies of Afghan refugees resettled in metropolitan areas (Gernaat et al., 2002; Husni, Rahim, & Cernovsky, 2014), and in at least one recent study in a metropolitan area of Australia (Yaser et al., 2016). The current findings suggest that PTSD symptoms may be particularly problematic among resettled refugees living in regional areas of Australia, given the combination of high symptom levels and barriers to health care services in these areas (Australian Bureau of Statistics, 2013-14).

In the current study, only half (50%) of participants with a probable PTSD diagnosis reported having received help for a mental health problem. This finding is also consistent with previous studies, conducted in metropolitan areas, in which help-seeking was the exception rather than the rule (Mond et al, in press; Slewa-Younan al. (2017). As might also be expected and supported by previous studies relating to resettled refugees and to individuals with mental health problems more generally (cf. Mond et al, in press), self-recognition of a mental health problem was strongly associated with help-seeking among participants in the current study. This finding provides further evidence for the need to improve “mental health literacy” relating to PTSD symptoms among resettled refugees and those with whom they interact (Mond et al, in press; Slewa-Younan et al, 2017). In the

current study, however, and in contrast to some previous studies (Mond et al, in press), most participants (81.2%) with a probable PTSD diagnosis did recognise that they current had a mental health problem. Hence, for the particular population investigated in the current study, interventions designed to improve other aspects of mental health literacy and/or access to local mental health services may be more important than interventions programs seeking to improve awareness and understanding of the nature of PTSD symptoms. Other mental health literacy variables likely to affect help-seeking for mental health problems in resettled refugee populations include cultural and/or religious beliefs regarding the nature and treatment of mental illness. For example, the belief that western treatments are unlikely to be helpful, limited understanding of treatment options, shame and stigma (Klimidis et al., 1999; Mond JM, 2019; Shannon et al., 2015).

This study showed no significant differences in the prevalence of PTSD by gender. It is in line with finding from meta-analyses (Shaar, 2013), which have documented in Lebanon in times of civil war showed no gender differences in PTSD. However, most studies report higher rates of PTSD among females compared to males. It is believed that the differences can be attributed to ethnocultural factors between our results and results from other studies. Therefore, culture plays a significant role in the way people perceive an event as traumatic. Most studies which reported gender differences in PTSD were conducted in Western countries or by Western psychologists/psychiatrists among refugees using western instruments for evaluating trauma and PTSD symptoms without validation (Herbert & Forman, 2010; Von Peter, 2008).

In multivariate analysis, and other than the (expected) association between PTSD symptoms self-recognition of these symptoms, family separation was the variable most strongly associated with have a probable PTSD diagnosis. Similar findings have been reported in previous studies of resettled refugees who have experienced trauma prior to resettlement (Laban, Gernaat, Komproe, van der Tweel, & De Jong, 2005; Schweitzer et al., 2006a). Many refugees are separated from family members and friends who remain in their country of origin. A perceived lack of social support among resettled refugees is common and known to be associated with mental health impairment, including symptoms of both depression and PTSD (Li et al., 2016; Lipson, 1993). A previous study found that the strong negative association between family separation and mental health disorders and it

can be decreased if they arrive with family members or join family members already settled in the host country (Shishehgar et al., 2017). Separation from a family member and friends, with lack of acquaintance with local services may indicate a significant barrier to help-seeking in refugee communities. There were close family ties among Afghan refugees which are essential in mitigating problems related to social support among them. Therefore, one's family is the single most important aspect of life in Afghanistan (Lipson, 1993). The current findings suggest that better management of issues associated with family separation in particular may be an important component of efforts to reduce the adverse impact of PTSD symptoms – and perhaps prevent the transition to more severe disorder – among refugees who have resettled in regional areas of Australia (Hocking, Kennedy, & Sundram, 2015).

The finding that PTSD symptoms were associated with communication difficulties in the current study is also consistent with findings from previous research. In particular, it was reported that Iraqi refugee who had resettled in Sweden had greater difficulties with learning the language of their new country were more likely to have PTSD symptoms than those who reported less difficulty (Söndergaard & Theorell, 2004). Difficulties learning the language of the new country likely impact a broad range of factors potentially affecting mental health (Watkins, Razee, & Richters, 2012). The inability to communicate fluently significantly affect the mental health of refugees. Language barriers also often present obstacles for refugees during the resettlement process, to gain access to the health care system, public transport, social and legal systems. Lack of language skills is one of the most significant barriers to obtaining employment; those with poor language skills are likely to have access to a much smaller range of employment and economic adaptation, which have a negative impact on the refugees' mental health (Doney, 2011; Watkins et al., 2012). Language barriers can also have a negative impact on the effectiveness of psychological treatments. This may result in under- or overestimation of the mental problems of the assessed individuals, and may lead to inappropriate treatment and care (Priebe, Giacco, & El-Nagib, 2016).

The current findings provide further evidence for the significance of language difficulties in relation to the mental health of resettled refugees and extend this evidence to Afghan refugees resettled in a regional area. They also support the need to target

language difficulties in health promotion and early intervention programs designed to improve the health and well-being of resettled refugee communities in order to have access to necessary and accurate information about available services, sources of relief, and policies or laws of their new country (UNICEF, 2006).

4.1.5 Limitations

At least three limitations of the current study should be considered when interpreting the findings. First, the sample was recruited by means of convenience sampling. While this was reasonable, given the known difficulty of recruiting resettled refugees in survey research, it nevertheless limits the generalisability of the findings. For example, participants with a probable PTSD diagnosis may have been less likely to agree to participate than those with no such diagnosis, in which case PTSD symptoms may have been underestimated. Second, the cross-sectional study design precludes any inferences about the direction of the observed associations. For example, family separation and communication difficulties might be both a cause and a consequence of PTSD symptoms and self-recognition of a mental health problem might both affect and be affected by help-seeking behaviour. Third, only Afghan refugees were considered. Other refugee populations with a significant presence in the Launceston region including individuals from Bhutan, Burma and, in smaller number, Eritrea. Replication of the current findings in these other populations would be of interest. Strengths of the current research include: this study can provide figures for the approximate total number of Afghan refugees resettled in Launceston; the recruitment of a relatively large sample of the target population; the assessment of a broad range of variables potentially associated with PTSD symptomatology; and the use of well-established measures of PTSD symptoms and post-migration difficulties.

4.1.6 Conclusion

The prevalence of PTSD symptoms among resettled Afghan refugees in Launceston, Australia was high compared to the prevalence of PTSD among the Australian population (6.4%) (Slewa-Younan, Mond, Bussion, et al., 2014). Only half of participants with a probable PTSD diagnosis reported having received help for a mental health problem. Hence the findings provide further evidence for the need to address PTSD symptoms in mental

health programs for resettled refugees. While there was little or no association between demographic characteristics and levels of physical activity and the likelihood of having a PTSD diagnosis, separation from family members and communication difficulties were strongly associated with this likelihood. Culturally sensitive health promotion, prevention and early intervention programs targeting communication difficulties, family conflict, and barriers to help-seeking may, therefore, be beneficial in reducing the occurrence and adverse impact of PTSD symptoms among resettled refugees in regional areas.

4.2 Manuscript 2: Occurrence and correlates of depressive symptoms among the resettled Afghan refugees in a regional area of Australia

4.2.1 Introduction

The prevalence of mental health problems is known to be higher among resettled refugees than the general population due to both adverse pre-migration experiences, such as exposure to conflict and trauma, and post-migration challenges such as cultural adjustment difficulties, family separation and loss of social support (Hameed et al., 2018; WHO, 2018). As a consequence, resettled refugees are at high risk of experiencing symptoms of post-traumatic stress disorder (PTSD) and depression in particular (Bogic et al., 2015).

Afghans comprise the largest refugee population in Asia and second largest population in the world. There are about 2.5 million Afghan refugees in the world. Afghans have fled their homeland due to widespread, protracted conflict across the country (UNHCR, 2018a). Research with Afghan refugees has confirmed elevated levels of depressive symptomatology associated with war trauma (Malekzai et al., 1996) as well as high rates of depression and psycho-social impairment (Cardozo et al., 2005; Gernaat et al., 2002; Miller, Omidian, Rasmussen, Yaqubi, & Daudzai, 2008). A recent systematic review confirmed that Afghan refugees are at high risk of developing mental health problems such as PTSD and depression (Alemi et al., 2014).

Few studies have examined the mental health of Afghan refugees resettled in Australia, notwithstanding the fact that Australia is among the largest per capita recipient of humanitarian entrants (Collins, 2017). In the only recent study that we are aware of, 14%

of former Afghan refugees resettled in Adelaide, the capital city of South Australia, the clinically significant symptoms of depression (Slewa-Younan, Guajardo, et al., 2017). To our knowledge, no study has examined the occurrence and correlates of depressive symptoms among resettled refugees living in regional areas of Australia in particular. Research of this kind may be particularly important, given that access to mental health care may be particularly poor in these areas (Australian Bureau of Statistics, 2013-14; National Rural Health Alliance, 2017). Key aspects of “mental health literacy”, such as individuals’ awareness and understanding of mental health problems, may also be particularly poor among individual in rural and remote areas and/or among resettled refugees (Handley, Lewin, Perkins, & Kelly, 2018; Mond et al., in press). Better understanding of the occurrence and correlates of depressive symptoms in these populations may be helpful in informing the development of tailored prevention and health promotion programs.

The goal of the current study was, therefore, to examine the occurrence and correlates of depressive symptoms among Afghan refugees resettled in a regional area of Australia. The correlates assessed included, in addition to a broad range of socio-demographic characteristics, potential post-migration living difficulties and levels of physical activity. Self-recognition of a mental health problem and help-seeking behaviour were also assessed.

4.2.2 Material and methods

4.2.2.1 Study design and recruit of participants

A cross-sectional survey was conducted with resettled Afghan refugees living in Launceston, Tasmania. Tasmania is an island state lying to the south of the mainland, is a relative sparsely populated, primarily rural and semi-rural region of Australia. It has a population of approximately 520,000, two-thirds of whom live outside the state capital city of Hobart (population of approximately 220,000) (Skromanis et al., 2018). Launceston, located in the State’s mid-north, has a population of approximately 75,000 (Australian Bureau of Statistics, 2019). According to the Australian Statistical Geography Standard - Remoteness Area (ASGS RA) classification, Launceston is classified as level 2, namely, “inner regional Australia”, levels of remoteness being determined by population and distance to

services (ASGS RA, 2016). There are two Afghan resettled refugee communities in Launceston, namely, the Hazara community and Afghan Hazara community (Holmes, 2019).

The participants were recruited from the Afghan refugees resettled in Launceston in April 2019. The selection criteria were that participants were between 18 and 79 years, born in Afghanistan, fluent in Dari and/or English, and currently residing in Launceston. A combination of convenience and snowball sampling were employed to maximise participation. These methods are recommended in gaining access to more vulnerable and hard to reach populations (Sadler et al., 2010). Several key members of both local Afghan communities were contacted in order to provide them with information about the study and to request their assistance to recruit participants. This was achieved via networking events at Afghan cultural, religious and other gatherings. A hard copy of the survey instrument was distributed at the community meetings. Participants were asked to complete the survey either on site or to post the completed survey, using self-addressed, pre-paid envelopes provided for this purpose, to the research team at their earliest convenience. Informed consent was obtained from all participants. Participants were advised that their participation was voluntary and anonymous. Contact details for members of the research team were provided should any clarification or additional information be needed. The research was approved by the Human Research Ethics Committee (Tasmania) Network (H0017807).

4.2.2.2 Study measures

A two-part questionnaire in both English/Dari was developed and data collection was conducted by a member of the research team who is fluent in both Dari and English. The first part of the survey assessed socio-demographic characteristics, including age, sex, education level, employment, refugee status, marital status and occupation in the country of origin, levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour. The second part assessed participants post-migration difficulties and depressive symptoms using, respectively, the Post Migration Living Difficulties Scale (PMLD) and the Hopkins Symptoms Checklist (HSCL-25).

The PMLD (Sinnerbrink et al., 1997) is composed of 25 items assessing the extent to which various forms of living difficulties likely to be experienced by resettled refugees (e.g., isolation, communication difficulties) are considered to be a problem (Schweitzer et

al., 2006a). Items are rated on a five-point scale (0 = not a problem to 4 = very serious problem). Items scored at least 3 ("serious and very serious problem") were considered to indicate "a problem" (Aragona et al., 2012). The PMLD scale has been widely used in studies of mental health problems among refugee populations (Nickerson, Steel, Bryant, Brooks, & Silove, 2011; Schick et al., 2016) and has good psychometric properties including good internal consistency in a recent study of *Afghan* refugees resettled in Istanbul Turkey (Q. Alemi et al., 2016).

The HSCL-25 consists of two parts assessing symptoms of anxiety and depression respectively. The second part, comprising 15 items assessing depressive symptoms (HSCL-15), was used for the current study. Each item is scored using a Likert-type scale with options indicating how often each symptom was experienced during the past month ranging from 1 (not at all) to 4 (extremely) (Derogatis et al., 1974). This scale has been used previously with various refugee groups including Afghan refugees (Scholte et al., 2004; Ventevogel et al., 2007) and has been found to have good psychometric properties including good internal consistency and test-retest reliability and acceptable sensitivity (69 %) and specificity (67 %) when used to identify individuals likely to have a depressive symptoms. Consistent with previous research, participants with a total scale score of > 1.75 were deemed to have clinically significant depressive symptoms ("symptomatic depression") (Ventevogel et al., 2007). The Persian version of the HSCL-15 (A. Mosavi & N. Ghorbani, 2007), which has also been validated, was used for the current study.

Participants' levels of physical activity were assessed as the number of days per week on which they had engaged in a minimum of 30 minutes of moderate exercise. Participants' self-recognition of a mental health problem was assessed by asking whether participants believed that they currently had a mental health problem, while help-seeking behaviour was assessed by asking whether participants had sought professional (e.g., from a doctor) help for a mental health problem (e.g., depression) since moving to Australia (Slewa-Younan, Mond, Bussion, et al., 2014).

A measure of PTSD symptoms, namely, the Impact of Event Scale-Revised (IES-R) (Joseph, 2000), was also included in the survey. In preliminary analysis, however, this measure was highly correlated with scores on the HSCL and was therefore excluded from the current analysis.

4.2.2.3 Statistical analysis

All analyses were performed using the SPSS version 24.0 software package (SPSS, Armonk, NY: IBM Corp). Descriptive statistics relating to participant characteristics are reported using frequencies and 95% confidence intervals (CI). Chi-square tests were used to examine associations between depressive symptoms and socio-demographic characteristics, levels of physical activity, self-recognition of a mental health problem and help-seeking behaviour. Association between depressive symptoms and other study variables were first assessed using a series of univariate logistic regression analyses. Variables that showed a significant association with the outcome of interest, with a *p* value of less than 0.05, in this analysis were included in multivariate logistic regression analysis, with separate models created for each study outcome, in order to identify factors independently associated with having clinically significant levels of depressive symptoms. Odds ratios with 95% CIs were generated for all logistic regression analyses.

4.2.3 Results

Completed survey were received from 66 individuals, of whom 49 (74.2%) were male. All participants were born in Afghanistan, spoke the Hazaragi language, belonged to the Hazara ethnic groups and had Australian permanent residency at the time of the study. All participants had children, all of whom came to Australia by air. Most participants (95%) had left their country of birth before the year 2000, 85% were living in Iran before arriving in Australia to 97% had been in Australia for between 1 and 5 years. Close to half (43.9%) of participants had brothers and sisters living in Australia, one third (31.8%) had brothers and sisters living in the Middle East or Americas, 22.7% had brothers and sisters still living in Afghanistan, and 1.5% had brothers and sisters living elsewhere in Western Europe.

Table 3 Characteristics of study participants with and without clinically significant symptoms of depression

Variables	Depression (n=14)	No depression (n=52)	p-Value
Gender, no (%)			0.019
Male	7 (50.0)	42 (80.8)	
Female	7 (50.0)	10 (19.2)	
Age (in years) number, no (%)			0.724
18-29	4 (28.6)	12 (23.1)	
30-39	1 (7.1)	10 (19.2)	
40-49	3 (21.4)	12 (23.1)	
≥50	6 (42.8)	18 (34.6)	
Level of education, no (%)			0.308
Primary/private education	10 (71.4)	21 (40.4)	
Secondary	3 (21.4)	23 (44.2)	
Vocational	0 (0)	1 (1.9)	
University	1 (7.1)	4 (7.7)	
Graduate/professional	0 (0)	3 (5.8)	
Marital status, no (%)			0.833
Single	5 (35.7)	17 (32.7)	
Married	8 (57.1)	33 (63.5)	
Others	1 (7.1)	2 (3.8)	
Occupation, no (%)			0.214
Unemployed	9 (64.3)	20 (38.5)	
Working part-time	4 (28.6)	23 (44.2)	
Working full-time	1 (7.1)	9 (17.3)	
Occupation in the country of origin, no (%)			0.05
Farmer	4 (28.6)	25 (48.1)	
Housewife	7 (50.0)	9 (17.3)	
Other	3 (21.4)	18 (34.6)	
Physical inactivity, no (%)	8 (57.1)	10 (19.2)	0.005
Self-recognition of depression symptoms, no (%)			
Yes	10 (71.4)	22 (42.3)	0.053
No	4 (28.6)	30 (57.7)	
Seeking professional help for a mental illness, no (%)			0.337
Yes	5 (35.4)	12 (23.1)	
No	9 (64.3)	40 (76.9)	
Serious or very serious PMLD among participants with and without PTSD symptoms			
Separation from family, no (%)	8 (57.1)	17 (32.7)	0.094
Loneliness and boredom, no (%)	6 (42.8)	9 (17.3)	0.043
Communication difficulties, no (%)	12 (85.7)	30 (57.7)	0.053
Isolation (loneliness, being or feeling alone), no (%)	13 (92.8)	27 (51.9)	0.005

Approximately one fifth (21.2%; 95% CI: 12.1%–33.0%) of participants had clinically significant levels of depressive symptoms and these symptoms were more common among females (41.2%, 95% CI: 18.4-67.1%) than males (14.3%, 95% CI: 5.9-27.2%) ($p=0.002$) (Table 3). Depression symptom was common among housewife participants as a former occupation in the country of origin (50.0%). As can also be seen in Table 3, participants with depressive symptoms had higher levels of physical inactivity (57.1% vs 19.2%, $p=0.005$), ~~and were more likely to believe that they currently had a mental health problem (71.4% vs 42.3%, $p=0.053$), than those without symptoms,~~ whereas symptom status was not associated with age, educational attainment, marital status, current occupation or former occupation (all $p>0.05$). Concerning factors assessed by the PMLD measure, self-recognition of mental health problem and as can also be seen in Table 3, participants with depressive symptoms had higher levels of loneliness/boredom (42.8% vs 17.3%, $p=0.04$), ~~communication difficulties (85.7% vs 57.7%, $p=0.053$),~~ and isolation (92.8% vs 51.9%, $p=0.005$), than those who did not. There were missing data about when the participants arrived in Australia and it was excluded from data analysis.

Table 4 Univariate and multivariate logistic regression analysis of factors correlated to depression among resettled Afghan refugees in Launceston

Variables	Univariate Logistic Regression			Multivariate Logistic Regression		
	OR	(95% CI)	p-value	OR	(95% CI)	p-value
Gender	4.2	(1.2-14.7)	0.025	0.57	(1.3-2.5)	0.461
Occupation in the country of origin	0.21	(0.48-0.87)	0.032	0.83	(0.07-9.3)	0.882
Self-recognition of mental health problem	3.4	(0.94-12.3)	0.061			
Communication difficulties	4.4	(0.89-21.7)	0.069			
Isolation (loneliness, being or feeling alone)	12	(1.5-98.8)	0.021	19.5	(1.9-203.5)	0.013
Physical inactivity	5.6	(1.6-19.8)	0.008	9.2	(1.8-45.8)	0.007
Loneliness and boredom	3.6	(0.997-12.8)	0.051			

Table 4 shows univariate and multivariate analyses of the associations between study variables and depressive symptoms. Univariate analysis showed an association of depressive symptoms with gender, occupation in the country of origin, isolation and physical inactivity. However, isolation and physical inactivity were independently

associated with depressive symptoms in the multivariate logistic regression analysis. Participants with isolation (loneliness, being or feeling alone) were 19.5 times more likely to have depressive symptom (95% CI: 1.9-203.5) when controlling for other variables. The likelihood of having depressive symptoms was 9.2 times higher among participants with physical inactivity than those with physical activity (95% CI: 1.8-45.8). (Table 4).

4.2.4 Discussion

This study is the first study to report on the occurrence and correlates of depressive symptoms among Afghan refugees resettled in Launceston, a regional area of Australia. The findings suggest that depressive symptoms are common in this population, with more than one in five (21.2%) participants reporting clinically significant levels of these symptoms. This study suggests that depressive symptoms were more common among women than men ~~and were also associated with former occupation and self-reported levels of loneliness and boredom. Physical inactivity and self reported isolation were the variables that were most strongly associated with depressive symptoms in bivariate analysis, however, and.~~ In multivariate analysis after controlling for exposure variables, physical inactivity and loneliness were independently associated with depression symptoms these were the only variables independently associated with depressive symptoms in multivariate analysis.

The occurrence of depressive symptoms among participants in the current study was considerably higher than current estimates of the prevalence of these symptoms in the general Australian population (21.2% versus 9.3 %) (Australian Bureau of Statistics, 2015). Levels of depressive symptoms among participants in the current study were also higher than the figure of 15.6% reported in a meta-analysis of studies including some 16,000 immigrants from 20 countries (Close et al., 2016). Levels of depression among resettled refugees considerably higher than those observed in the current study have also been reported in some other studies, including an early study of Afghan refugees resettled in a rural area of the Netherlands (Gernaat et al., 2002). The relatively high prevalence of depressive symptoms among participant in the current study may not be surprising, given the adverse pre-migration experiences and post-resettlement challenges to which most if not all of these individuals will have been exposed (WHO, 2005, 2018). Highlighting that such findings extend to a regional setting is important given the additional challenges,

including lower access to and/or uptake of mental health services, faced by individuals with mental health problems in these settings (Handley et al., 2018; National Rural Health Alliance, 2017).

The present study found that prevalence of depressive symptoms was higher among women than men. This finding is also consistent with previous studies of mental health problems among resettled refugees (Georgiadou, Zbidat, Schmitt, & Erim, 2018; Poole, Hedt-Gauthier, Liao, Raymond, & Bärnighausen, 2018) although levels of depressive symptoms did not differ by sex in Slewa-Younan et al. (2017) study of Afghan refugees resettled in a metropolitan area of Australia (Slewa-Younan, Yaser, et al., 2017). It is possible that the higher prevalence of depressive symptoms among females in the current study and in most other studies of resettled refugee populations simply reflects the well-established finding that the prevalence of depression in the adult females is higher than adult males in general population (Albert, 2015). It also is possible that female refugees may be having a greater vulnerability to stress to develop depression and related anxiety disorders (Sandanger, Nygård, Sørensen, & Moum, 2004). Regardless of which of these interpretations is favored, the magnitude of the difference between women and men observed in the current study (41.2% vs 14.3%), which is far greater than that observed in the general Australian population, is notable and suggests that, in the current study population, women may warrant particular attention in health promotion and early intervention efforts.

The strong association between physically inactivity and depressive symptoms observed in the current study, in both univariate and multivariate analysis, is consistent with findings from previous research, in a broad range of study populations, indicating that regular physical activity is associated with improved mental health, including reduced risk of depression (Beaulac, Carlson, & Boyd, 2011; De Mello et al., 2013). This includes, for example, studies of Turkish immigrants in the Netherlands (Reijneveld, Westhoff, & Hopman-Rock, 2003) and Iraqi immigrants in Sweden (Ströhle, 2009). The biological and social pathways underpinning these associations are well-established (Cowen & Browning, 2015; Ströhle, 2009). It is believed that individuals who are physically active on regular basis may result in an improvement in their mood and self-confidence (North, Mccullahg, & Tran, 1990). Mental illness increased the risk of chronic diseases such as heart disease,

diabetes, cancer, and decreased access to adequate health care (Firth et al., 2019). In addition, inactivity may be an indicator of risk of mental health problems (Nyström et al., 2019). It is possible that people in marginalised groups face socio-economic challenges which make having access to leisure time physical activity more difficult, which puts them at risk for both mental health problems and chronic physical health problems (such a heart disease and diabetes). if GPs screen for levels of inactivity, there is an opportunity for prevention. In addition, inactivity may be an indicator of risk of mental health problems which could warrant further assessment.

The only other factor independently associated with depressive symptoms among participants in the current study was self-reported isolation. Associations between isolation and depressive symptoms in various study populations are also well-established (Cacioppo & Cacioppo, 2014; Chou, Liang, & Sareen, 2011). According to the Royal Australian and New Zealand College of Psychiatrists (RANZCP), it is also well-established that resettled refugees are at increased risk of isolation and lack of social support more generally (Phoenix Australia, 2013; RANZCP, 2017). Taken together, the abovementioned findings suggest that health promotion programs seeking to increase levels of physical activity and/or social interaction among Afghan refugees resettled in regional areas of Australian may be an important component of overall efforts to improve mental health outcomes in these populations. Our findings also suggest that women in particular may benefit from programs of this kind.

Also of note, most participants (71.4%) in the current study with depressive symptoms recognised that they currently had a mental health problem. This finding could be seen to be encouraging in that self-recognition of mental health problems has been found to be poor in previous studies, including in a recent study of Iraqi refugees resettled in an urban region of Australia, and poor self-recognition is, in turn, a factor in low or inappropriate help-seeking (Mond et al, in press). On the other hand, only one third (35.4%) of participants with depressive symptoms reported that they had in fact sought treatment in relation to a mental health problem since arriving in Australia. Hence, for participants in the current study, other aspects of “mental health literacy”, such as knowledge about how and where to seek help and perceived stigma associated with help-

seeking and structural factors, such as availability of culturally sensitive service providers, may be more significant barriers to treatment (Mond et al., in press).

4.2.5 Limitations

The current study had several limitations. First, the sample size was relatively small, and participants were recruited by means of convenience sampling. While this was reasonable, given the known difficulty of recruiting refugees in survey research, it nevertheless limits the generalizability of the findings. For example, participants with depressive symptoms may have been less likely to agree to participate than those with no symptoms, in which the prevalence of these symptoms will have been underestimated. Second, other refugee populations with a presence in the Launceston region, including individuals from Bhutan, Burma and, in smaller number, Syria and Eritrea, were not considered. Replication of the current findings in these other populations would be of interest. Third, the cross-sectional study design precludes any inferences about the direction of the observed. For example, depressive symptoms are likely to be both a cause and a consequence of physical inactivity and/or isolation. Strengths of the current research include the provision of novel information concerning the occurrence and correlates of depressive symptoms among resettled refugees living in a regional area of Australia, the assessment of a broad range of variables potentially associated with these symptoms, and the use of well-established measures of depressive symptoms and post-migration difficulties.

4.2.6 Conclusions

To conclude, findings from this study suggest that depressive symptoms are common among Afghan refugees resettled in a regional area of Australia and strongly associated with female gender, physical inactivity and isolation. Hence, health promotion and early intervention programs seeking to increase levels of physical activity and/or social interaction among Afghan refugees resettled in regional areas of Australian – women in particular – may be an important component of overall efforts to improve mental health outcomes in these populations.

Postscript: In this chapter, results of the study have been presented. The next chapter will sum up the findings from this thesis and how they relate to the existing body of knowledge on the occurrence and correlates of symptoms of PTSD and depression among Afghan refugees.

5 CHAPTER 5: DISCUSSION

The last chapter has presented the results of the study. These results have been addressed to the research questions of this research which are:

- RQ1: What is the prevalence of PTSD among the resettled Afghan refugees in Launceston?
- RQ2: What factors are associated with PTSD among the resettled Afghan refugees in Launceston?
- RQ3: What is the prevalence of depression among the resettled Afghan refugees in Launceston?
- RQ 4: What factors are associated with depression among the resettled Afghan refugees in Launceston?

This chapter considers how the findings relate to the existing body of knowledge in the literature.

5.1 Prevalence and correlates of PTSD

Among the 66 former Afghan refugees resettled in Launceston, PTSD symptoms were found in 48.8% of these participants. According to the Australian National Survey of Mental Health and Well-Being, the prevalence of PTSD among the Australian population was 6.4% (Slewa-Younan, Mond, Bussion, et al., 2014). This suggests that the prevalence of PTSD symptoms among the current study's participants was around seven times higher than the general Australian public. Although this finding is lower than previous research conducted among Afghan refugees resettled in the UK; it is higher than that found in Afghan refugee adults in the Netherlands (Gernaat et al., 2002; Husni et al., 2014), in Afghan refugee adults resettled in South Australia (44%) (Slewa-Younan, Yaser, et al., 2017), and among refugee adults resettled in Western Australia (17%) (Laugharne, 2012). A number of reasons may account for these variations in the rates of PTSD. First, the difference in sampling methods (i.e. as non-random sampling, small sample sizes and self-

report scales) accounted for a larger proportion of inter-survey variation (Steel et al., 2009). A second reason is the differences in the characteristics of participants, cultures, sample size, demographic characteristics of the groups studied, length of time settling in the host countries, diagnostic criteria or survey measures used to assess traumatic events and PTSD symptoms. Furthermore, some differences are associated with post-migration risk factors such as employment, residential status, and other pre-migration factors that refugees experience (Fazel et al., 2005; Tang & Fox, 2001).

This study showed no significant differences in the prevalence of PTSD by gender. This is in line with previous study suggesting that there was not gender differences in PTSD in Lebanese in times of civil war (Shaar, 2013). However, most studies (Herbert & Forman, 2010; Von Peter, 2008) reported higher rates of PTSD among females compared to males. Also, previous studies have reported a high prevalence of mental illness among women than man Afghan refugees and Afghans in Afghanistan (Due, Burford-Rice, Augoustinos, & Denson, 2018; Miller et al., 2008; Panter-Brick C, Eggerman M, Gonzalez V, & S., 2008). It is believed that the differences can be attributed to ethnocultural factors between the current study results and results from other studies. Culture plays a significant role in the way people perceive an event as traumatic. Studies that reported gender differences in PTSD were conducted in Western countries or by Western psychologists/psychiatrists among refugees using Western instruments for evaluating trauma and PTSD symptoms without validation.

This study suggested that family separation is an independent risk factor for PTSD symptoms. These findings are comparable to the results of studies among traumatized refugees (Laban et al., 2005; Schweitzer et al., 2006a) and supported by research suggesting that family separation was associated with an increased risk for mental disorders among refugees (Hynie, 2018). Particularly, an Australian study suggested that refugees and migrants experienced several barriers to resettlement such as language barrier, lack of employment, and especially the impact of family separation and breakdown (Forrest, Hermes, Johnston, & Poulsen, 2012). This issue is a common feature of forced migration, which is related to policies of refugees' reunification. Therefore, family separation is an important determinant of mental health disorders and it can be moderated if they arrive with family members or join family members already settled in

the host country (Shishehgar et al., 2017). Many refugees are separated from their families and friends who remain in the country of origin. Lack of social support during relocation has been associated with negative psychological outcomes, which has been observed to predict depression and PTSD among refugees (Li et al., 2016). Separation from family and friends, together with a lack of familiarity with local services may represent a significant barrier to help-seeking in refugee communities. There were close family ties among Afghan refugees which are essential in mitigating problems related to social support among them. Therefore, family is perhaps the most significant institution in Afghan culture (Lipson, 1993).

The results of our study indicated that PTSD was linked to communication difficulties. This is supported by research suggesting that refugees that experienced greater difficulties with learning the language spoken at the resettlement location, tended to be suffering with PTSD (Söndergaard & Theorell, 2004). Language barriers also significantly affect the mental health of refugees. This association could be explained in that refugees experience language difficulties during the resettlement process, and this may prevent them accessing public transport and understanding health, social and legal systems. Lack of language skills is one of the most significant obstacles to obtaining employment; those with poor language skills are likely to have access to a much smaller range of employment and economic adaptation, which have a negative impact on the refugees' mental health (Doney, 2011; Watkins et al., 2012). The lack of qualified, professional interpreters arises as a frequent problem in health settings, where it can have serious consequences for access to health care and treatment (Kirmayer et al., 2011). A prior study conducted in the US among refugees, indicated language and communication, acculturation difficulties, and cultural beliefs concerning health care to be the main barriers to accessing mental health services (Morris et al., 2009). These findings are reported in a survey examining the prevalence of PTSD, depression, and other psychiatric disorders among Afghan refugees. The higher degrees of distress were reported among refugees who arrived in the US at an older age and among those who had mothers with lower English proficiency (Mghir, Freed, Raskin, & Katon, 1995).

According to the results of this study, the help-seeking rate among participants with PTSD symptoms was 50%. This finding is similar to results from a previous study

conducted among resettled Afghan refugees in Adelaide, South Australia with probable PTSD where half of participants reported having sought help (Slewa-Younan, Yaser, et al., 2017). This could be explained by the fact that individuals from minor ethnic groups are less likely to use mental health services than those who were born in the host country (Boufous et al., 2005). Another study showed that participants from a refugee background were 30% less likely to have mental or behavioural admissions than those born in Australia (Correa-Velez, Sundararajan, Brown, & Gifford, 2007). There were some factors associated with a hindrance to mental health service use such as cultural beliefs regarding the nature and treatment of mental illness, lack of insight, limited understanding of treatment options, and a lack of knowledge regarding risk factors for and causes of mental disorders (Klimidis et al., 1999). A previous study conducted in the Netherlands in migrants, found that they were more likely to approach informal help sources, such as friends and religious institutions, than formal help sources (Teunissen et al., 2014). Therefore, these findings suggest the need for programs to promote appropriate help-seeking among Afghan refugees who have resettled in Australia. Furthermore, fear, the belief that talking is not helpful, a lack of knowledge about mental health, avoidance of symptoms, shame, and culture were reasons why refugees do not seek help (Shannon et al., 2015).

This current study has shown that the self-recognition of PTSD rate was 81.2%. This rate is higher than a previous research conducted with resettled Afghan refugees in South Australia (58.7%) (Slewa-Younan, Yaser, et al., 2017). There may be several reasons why participants who self-recognised PTSD, had lower help-seeking rates. Firstly, the presence of associated life events may decrease distress symptoms. As a result, people with probable mental illness might be seen as a normal response to a given condition, which might prevent them from recognising the potential need for professional help. Secondly, there was a decrease in the odds of reporting a mental health problem, due to attributing distress symptoms to a physical cause. Moreover, mental health illnesses are often under-diagnosed among individuals with physical illnesses. This is due to fact that distress might be considered as a 'normal' response to a physical illness. Finally, some symptoms (e.g. feeling tired, changes in weight) overlap both physical and mental health conditions, which may disguise mental health illness among individuals with physical illness (National Institute for Clinical Excellence, 2009). This study found a positive association between self-

recognition of PTSD symptoms and help-seeking. The results indicated that self-recognition of a probable mental health problem were independently associated with help-seeking, confirming prior research conducted with Afghan refugees resettled in South Australia (Slewa-Younan, Yaser, et al., 2017). In addition, a study from community-based research found that early, appropriate help-seeking is associated with improved mental health outcomes (Jorm, 2012). People who have better health literacy are more likely to obtain more knowledge of mental illness and apply their knowledge to resolving their health problems (Suka et al., 2015). Self-recognition of mental health illness symptoms is the crucial point in the help-seeking process, which emphasizes the importance of adequate knowledge and understanding of mental illness symptoms among participants (Rickwood, Deane, Wilson, & Ciarrochi, 2005). Therefore, correct recognition was associated with less likelihood in recommending informal help-seeking such as family and friends for mental health problems, with higher rates of help seeking from mental health professionals and services such as psychiatrists, psychologists (Picco et al., 2018).

5.2 Prevalence and correlates of depression

The prevalence of depression symptoms among the 66 resettled Afghan refugees in Launceston was 21.2%, higher than the 6.3% reported in the general Australian population (Australian Bureau of Statistics, 2008). The prevalence observed in the current study was also higher than the 15.6% found in a meta-analysis of studies among 16,121 immigrants from 20 countries (Close et al., 2016). However, it was lower than that reported by a systematic review of literature (Alemi et al., 2014) with the high prevalence of depression (57%) among resettled Afghan refugees in Western countries. There are several reasons why depression prevalence was high. Firstly, Afghans have experienced prolonged exposure to war. Afghan refugees have been exposed to pre and post-resettlement stressors. Secondly, many Afghans have not received any psychological support due to the country's poor mental health services (WHO, 2005), and traumatic experiences and escapes from Afghanistan. Some were forced to live in refugee camps in Pakistan or Iran (Lipson & Omidian, 1997). In addition, prior research showed that memories of pre-migration and post-migration traumas experiences are associated with the rumination that is inextricably related to isolation and loneliness, affecting many even after long-term resettlement

(Sulaiman-Hill & Thompson, 2012). Furthermore, the study carried out among Afghan refugees indicated that mental health problems may be increased due to erosion of cultural values, which includes disrespectful behaviour of children toward their elders, their indifference to the culture, and their new sense of identity and independence (Lipson, 1993). This finding is plausible, because Afghanistan has been plagued by war for more than 30 years. The war has left millions dead and thousands with disabilities. The long civil war had a devastating impact on every aspect of the country and the society, as the majority of the population has been traumatized by constant conflict, natural disasters, and prior to that, the difficult Taliban years. Afghanistan has been impacted in many ways by conflict. One can hardly find an Afghan family which has not lost one or more members in this period, and the Afghan population continues to face the main stressors of ongoing conflicts in different parts of the country (Jackson, 2009).

There are many possible reasons why Hazara ethnic group have a high prevalence of depression. First, one of main factors in Hazaras' continued discrimination is their Shi'a religion. Another reason why the Hazaras have been discriminated is their appearance that look like Chinese people. Moreover, the Hazaras are also seen as the weakest and poorest race in Afghanistan, so that they are easily subjected to be killed, insulted, and tortured. Therefore, the fact that being of Hazara ethnicity and their historic trauma may have related to their higher reporting of depression in this study.

The present study found that prevalence of depressive symptoms was higher among women than men. This finding is also consistent with a previous study of mental health problems among Syrian Refugees in Germany (Georgiadou et al., 2018). However, the opposite pattern is seen for refugees in Ethiopia (Feyera, Mihretie, Bedaso, Gedle, & Kumera, 2015). There were no gender differences in depressive symptoms among North Korean Defectors (Kim et al., 2011), and are consistent with prior research conducted with Syrian refugees in Jordan that reported an absence of a gender difference in depression as an artefact of equal exposure to trauma between males and females (Gammouh, Al-Smadi, Tawalbeh, & Khoury, 2015). A first possible explanation for the preponderance of depression among females can be explained by the physiological and psychosocial mechanisms (Weissman & Klerman, 1977). Another explanation is that females may experience a greater vulnerability to stress which develops depression and related anxiety

disorders (Sandanger et al., 2004). The high prevalence of depression among females supports the hypothesis that females encountered a higher burden of depression compared to males (Poole et al., 2018). In the present study, depression was associated with physical inactivity. This association has been demonstrated in a previous study (De Mello et al., 2013). A prior study found that physical activity had a mental health-promoting effect among the general population. In addition, the effects of physical activity as a treatment for depression, are comparable to those of anti-depressant drugs and psychotherapy (Beaulac et al., 2011). Reijneveld et al. (2003) found that physical activity resulted in improved mental health among elderly Turkish immigrants in the Netherlands (Reijneveld et al., 2003). These results are in agreement with prior research that Iraqi immigrants who performed less than 150 minutes per week of physical activity were more likely to be anxious and/or depressed compared to the general population in Sweden (Ströhle, 2009). It is believed that individuals who are physically active on regular basis may result in an improvement in their mood and self-confidence (North, Mccullahg, & Tran, 1990). This association may be explained by the fact that reduced activity of serotonin pathways plays a causal role in the pathophysiology of depression (Cowen & Browning, 2015). Physical activity could increase norepinephrine neurotransmission in the central nervous system, serotonin synthesis and secretion of atrial natriuretic peptide. They are possible biological explanations for its association with anxiety and depression (Ströhle, 2009).

The results of this study indicate that depression was associated with isolation (loneliness, being or feeling alone), which aligns with a prior study showing a similar association (Chou et al., 2011). Studies have found that a higher level of isolation (loneliness, being or feeling alone) is consistently associated with elevated depressive symptoms among different age groups (Nolen-Hoeksema & Ahrens, 2002; Victor & Yang, 2012). This finding highlights the role of friendship in preventing or improving depressive symptoms. Prior research indicates that living alone attributed to poorer depression among elderly persons (Chan, Malhotra, Malhotra, & Østbye, 2011). ~~However, a survey has shown there was not an association between living alone and depressive symptoms among an adult population.~~

One study suggests that other aspects of social isolation (i.e. social support and social integration) may have a higher effect on depressive symptoms among an adult population (Ge, Yap, Ong, & Heng, 2017). Social isolation and loneliness are indicators of that there were weak social relationships (Cacioppo & Cacioppo, 2014). Mghir et al. (1995) found that there was an association between higher levels of psychological distress and arrival to the US after the year 2000, fears about discrimination (for both men and women), loss of identity and cultural preservation particularly among men, and social isolation, which is a greater problem among women (Mghir et al., 1995).

Hence, health promotion and early intervention programs seeking to increase levels of physical activity and/or social interaction among Afghan refugees resettled in regional areas of Australia – women in particular – may be an important component of overall efforts to improve mental health outcomes in these populations.

5.3 Comorbidity

This study found the prevalence of depression–PTSD comorbidity was 12.1% which was lower than the 21% reported in a previous research conducted among Bosnian refugees living Croatia (McInnes, Sarajlić, Lavelle, & Sarajlić, 1999). The risk for suicidal behaviours was associated with comorbidity of PTSD and depression (Acierno, Resnick, Kilpatrick, Saunders, & Best, 1999), and participants with a history of trauma during the war, were four times more likely to have depression–PTSD comorbidity (O'Donnell, Creamer, & Pattison, 2004). A survey has shown that depression is nearly 3 to 5 times more likely in those with PTSD than those without PTSD (Kessler et al., 1995). Marshall et al. (2005) has indicated a high level of comorbidity between the two diagnoses associated with exposure to traumatic events, was found among Cambodian refugees performed two decades after resettlement in the US (Marshall, Schell, Elliott, Berthold, & Chun, 2005). In addition, people who develop PTSD have an internalizing personality style which is vulnerable to developing depression (Spinhoven et al., 2014). Both PTSD and depression can have profound effects on quality of life in terms of satisfaction and ability to engage in work and home life (Raab et al., 2015).

5.4 Summary

This chapter has discussed the occurrence and correlates of PTSD symptoms and depression among the resettled Afghan refugees in a regional area of Australia in relation to the existing body of knowledge in the literature. The next chapter will conclude the study.

6 CHAPTER 6: CONCLUDING COMMENTS

The concluding chapter is a place to critically reflect on the process and achievements, particularly the implications and recommendations arising from the research findings. This chapter revisits some of the issues and findings, examines implications and make recommendations.

6.1 Achievements and significance of the study

The study has achieved its aim and contributed to the body of knowledge on the prevalence and correlates of PTSD and depression among resettled refugees in a regional Tasmanian setting. A survey conducted with 66 former Afghan refugees resettled in Launceston suggest that close to half (48.8%) of participants had PTSD symptoms. Despite this, only half of the participants with a probable PTSD diagnosis reported having received help for a mental health problem. In addition, only one third (35.4%) of participants with depressive symptoms reported that they had in fact sought treatment in relation to a mental health problem since arriving in Australia. Hence, for participants in the current study, other aspects of “mental health literacy”, such as knowledge about how and where to seek help and perceived stigma associated with help-seeking and structural factors, such as availability of culturally sensitive service providers, may be more significant barriers to treatment. Interventions designed to improve other aspects of mental health literacy and/or access to local mental health services may be more important than interventions programs seeking to improve awareness and understanding of the nature of PTSD symptoms.

The factors most strongly associated with this PTSD symptoms were communication difficulties and family separation. The current findings suggest that better management of issues associated with family separation may be an important component of efforts to reduce the adverse impact of PTSD symptoms – and perhaps prevent the transition to more severe disorder – among refugees who have resettled in regional areas of Australia. They also support the need to target language difficulties in health promotion and early intervention programs designed to improve the health and well-being of resettled refugee

communities in order to have access to necessary and accurate information about available services, sources of relief, and policies or laws of their new country.

The findings suggest that depressive symptoms are common in this population, with more than one in five (21.2%) participants reporting clinically significant levels of these symptoms. The findings of this study also suggested that female participants had significantly higher prevalence of depression symptoms than male counterparts. Depression symptoms were associated with physical inactivity, and isolation (loneliness, being or feeling alone). This suggests that health promotion programs seeking to increase levels of physical activity and/or social interaction among Afghan refugees resettled in regional areas of Australia may be an important component of overall efforts to improve mental health outcomes in these populations. Our findings also suggest that women in particular may benefit from programs of this kind.

Culturally sensitive health promotion calling for interventions that address challenges such as communication difficulties may be a necessary first-step in addressing their mental health needs, prevention and early intervention programs targeting family conflict, and barriers to help-seeking may, therefore, be beneficial in reducing the occurrence and adverse impact of PTSD and depression symptoms among resettled refugees in regional area.

6.2 Strengths and weaknesses of the study

This study has several limitations. First, the sample size was relatively small and recruited by means of convenience sampling. While this was reasonable, given the known difficulty of recruiting resettled refugees in survey research, it nevertheless limits the generalisability of the findings. For example, participants with a probable PTSD diagnosis and depressive symptoms may have been less likely to agree to participate than those with no such diagnosis, in which case PTSD and depression symptoms may have been underestimated. Second, the cross-sectional study design precludes any inferences about the direction of the observed associations. For example, family separation and communication difficulties might be both a cause and a consequence of PTSD symptoms and self-recognition of a mental health problem might both affect and be affected by help-seeking behaviour. Third, only Afghan refugees were considered. Other refugee

populations with a significant presence in the Launceston region including individuals from Bhutan, Burma and, in smaller number, Eritrea. Finally, it should be noted that while a broad range of potential covariates was considered, inevitably some variables likely to be associated with symptoms of PTSD and/or depression were not assessed due to the need to employ a relatively brief survey instrument.

The current research has several strengths. First, this study can provide novel information concerning the occurrence and correlates of depressive symptoms among resettled refugees living in a regional area of Australia. Other strengths include the recruitment of a relatively large sample of the target population and the assessment of a broad range of variables potentially associated with PTSD symptomatology. Finally, the use of well-established measures of PTSD symptoms and post-migration difficulties is another strength of this study. The research also points to current gaps in mental health support programs for the migrant populations in regional settings.

Firstly, plausible explanations for their lack of help-seeking are provided, which is not the main focus of this study. Further research could be conducted on help-seeking patterns among resettled Afghan refugees. Secondly, there is a need to conduct a long-term prospective cohort study to investigate the observed associations of variables among study participants. In addition, further research is needed to examine the barriers and facilitators for mental health care utilization among this population. The heterogeneity in the prevalence of PTSD within Afghan context was also partly related to the clinical utility and cultural relevance of measuring PTSD among Afghans. Furthermore, future studies could look more closely at protective factors, and lastly a closer look at the idea of 'culture shock' as related to their movement from a semi-arid agrarian society where they are able to move about freely to resettling on an island and what they see and hope for their future, how this contributes to their overall well-being, may be helpful in better addressing their needs. Finally, replication of the current findings in other refugee populations in Launceston would be of interest.

6.3 Conclusion

The study revealed a high prevalence of depression and PTSD symptoms among the resettled Afghan refugees in Launceston. The study has found that physical inactivity, and

isolation were most determinates of depression symptoms. PTSD symptoms were significantly associated with communication difficulties, family separation, professional help seeking behaviour for PTSD symptoms, and self-recognition of PTSD symptoms. None of the demographic characteristics assessed were associated with having probable depression and a PTSD diagnosis in multivariate analysis.

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Appendix 1 Information Sheet

The prevalence and correlates of symptoms of post-traumatic stress disorder (PTSD) and depression among the Afghan population in Launceston

You are invited to participate in a study which examines the prevalence and correlates of symptoms of PTSD and depression among the Afghan population in Launceston.

1. What is the purpose of this study?

This project aims to examine the prevalence and correlates of symptoms of PTSD and depression among the Afghan population in Launceston.

2. What does this study involve?

Participation involves filling in a 5-part questionnaire which will take no more than 30 minutes to complete. The participants will be asked to send the completed questionnaire back in the postage paid envelope provided.

3. Possible benefits from participation in this study?

There are not personal benefits for participants. However, this study will assist the local health care providers to identify potential areas of intervention that may enhance psychological health outcomes to improve the current activities of mental health service in Launceston.

4. Possible risks from participation in this study?

It is possible that participants will experience some discomfort or anxiety in responding to certain questions. As noted above, however, you can choose not to answer any questions, and should you need advice or assistance contact details for local service providers are given below. The researchers can help organise an appointment if needed. Please note that your participation in this study will not affect your access to the Migrant Resource Centre (MRC) or other services.

5. What if I have concerns about a mental health problem?

Please contact your own GP, medical professional or mental health professional in the first instance. In addition, below are some local service providers that you could contact should you wish:

Lifeline (Phone 6326 0400): Lifeline provides all Australians experiencing a personal crisis with access to online, phone and face-to-face crisis support and suicide prevention services.

Phoenix Centre (<https://mrctas.org.au/phoenix-centre/>, Phone: 03 67242820): the Phoenix Centre is a support service for adults and children from any country who have fled persecution, torture and war-related trauma to find safety in Australia. Services are available in the south and north of the state.

The Mental Health Services Helpline (Phone: **1800 332 388**) is also the point of contact for General Practitioners (GPs) and other agencies to make a referral to Mental Health Services.

Migrant Resource Centre Northern Tasmania; <https://www.mrcntn.org.au/>, Phone: 03 67242820

If you need help to make an appointment, please contact with the research team member.

6. Anonymous and Confidentiality?

Participation is voluntary and research data gathered will remain anonymous and confidential.

7. How will the results of the study be published?

We hope that, in due course, results from this study will be published in peer-reviewed academic journals and presented at academic and/or public forums. Any publications or research reports that arise from this study will be available from MRC upon completion and upon your request. Results will only ever be published in summary form.

8. What if the participants are worried about their English-language proficiency?

The questionnaire will be translated into Persian by two researchers from the Department of Community Medicine, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran and Environmental Health Research Centre, Golestan University of Medical Sciences, Gorgan, Iran. Then, the questionnaire will be modified into the Dari language by experts in Afghanistan.

9. What if I have questions about this study?

This study has been approved by the Tasmanian Social Sciences Human Research Ethics Committee (HREC). If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226

7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number [H0017807].

Your completion and return of the questionnaire indicate your consent to participate in this study.

Thank you for taking the time to consider this study. This information sheet is for you to keep.

Yours sincerely,

Appendix 2 Questionnaire

1. Part A: About you (Please answer by ticking (✓) the most appropriate box or write in the space provided).

1. Are you male or female?

☐ Female

☐ Male

2. What is your age group?

☐ 18 – 29

☐ 30 – 39

☐ 40 – 49

☐ ≥50

3. What is your country of origin?

☐ Afghanistan

☐ Iran

☐ Other: please specify:

4. What language do you speak at home?

☐ Dari

☐ Pashtu

☐ Hazaragi

☐ Other: please specify:

5. When did you leave your country of birth?

☐ Before 2000

☐ After 2000

☐ Other: please specify:

6. When did you arrive in Australia? Please write the year below.

.....

7. In which country did you spend most time on route to Australia?

☐ Pakistan

☐ Iran

☐ Other: please specify: ...

8. How did you travel to Australia?

☐ By boat

☐ By air

☐ Other: please specify: ...

9. What is your current migration or refugee status in Australia?

☐ Permanent Resident

☐ Australian Citizen

☐ A 3-Year Temporary Protection Visa

☐ A 5-Year Temporary Protection Visa

10. How did you arrive in Australia?

☐ Refugee

☐ Asylum Seeker

☐ Migrant

11. What is the highest level of school you attended?

☐ primary/private

☐ secondary

☐ vocational (e.g. secretarial, electrical)

☐ university

☐ graduate/professional

12. How long have you been living in Australia?

☐ Less than 1 year

☐ 1-less than 5 years

☐ 5-less than 10 years

☐ More than 10 years

13. What is your current employment status?

☐ Not employed

☐ Working part time

☐ Working full time

14. What was your occupation in your country of origin?

_____ (please give your occupation)

15. To which ethnic group do you belong?

☐ Tajik

☐ Pashtun

☐ Hazara

☐ Other; please specify.....

16. Do you engage in physical activity for a minimum of 30 minutes per day for 5 days per week?

☐ Yes

☐ No

17. What is your marital status?

☐ Single

☐ Married

☐ Others

18. Since moving to Australia, have you ever sought help from a health professional for example a general practitioner, psychologist, psychiatrist or social worker) in relation to a mental health problem?

☐ Yes

☐ No

19. Since moving to Australia, has there ever been a time when you thought that you needed help from a health professional for a mental health problem?

☐ Yes

☐ No

20. Do you think that you might currently have a mental health problem?

☐ Yes

☐ No

21. Where do members of your family live? (Tick all boxes that apply)

Family Members	Australia	Other Western Europe	Afghanistan	Other Middle Eastern American countries
Spouse/partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children over 18 years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Children under 18 years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brothers or sisters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extended family (e.g. uncles, aunties, cousins, grandparents etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix 3 Post-Migration Living Difficulties (PMLD) Measurements

We would like to ask you about some difficulties you may have experienced since immigrating to Australia. Please answer by ticking (✓) the most appropriate box for each of the following items.

	No problem	A little problem	Some what of a problem	A fairly big problem	Serious problem
1. Worries about not getting treatment for health problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Poor access to emergency medical care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Poor access to long term medical care (family doctor, Primary Care Physician)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Poor access to dental care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Poor access to counselling services (if you wanted counselling, would it be problem for you?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Little government help with welfare (unemployment benefits, financial help)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Little help with welfare from charities (social services, e.g., Red Cross, Salvation Army)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Delays in processing refugee/ immigrant applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Communication difficulties/Language difficulties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Discrimination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Being unable to find work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Bad working conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Poverty (not having enough money for basic needs--- food, clothing, shelter)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. No permission to work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Separation from family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Worries about family back home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Unable to return home to family in an emergency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Loneliness and boredom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Isolation (loneliness, being or feeling alone)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Poor access to traditional foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Interviews by immigration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Conflict with immigration officials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Fears of being sent home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Being unable to practice your religion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Difficulty adjusting to the weather/climate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix 4 Impact of Event Scale-Revised

Impact of Event Scale-Revised

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you during the past 7 days with respect to----- (event) that occurred on ----- (date). How much were you distressed or bothered by these difficulties?

		Not at all	A little bit	Moderate ly	Quite a bit	Extremel y
1	Any reminder brought back feelings about it.	0	1	2	3	4
2	I had trouble staying asleep.	0	1	2	3	4
3	Other things kept making me think about it.	0	1	2	3	4
4	I felt irritable and angry.	0	1	2	3	4
5	I avoided letting myself get upset when I thought about it or was reminded of it.	0	1	2	3	4
6	I thought about it when I didn't mean to.	0	1	2	3	4
7	I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8	I stayed away from reminders about it.	0	1	2	3	4
9	Pictures about it popped into my mind.	0	1	2	3	4
10	I was jumpy and easily startled.	0	1	2	3	4
11	I tried not to think about it.	0	1	2	3	4
12	I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	2	3	4
13	My feelings about it were kind of numb.	0	1	2	3	4
14	I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15	I had trouble falling asleep.	0	1	2	3	4
16	I had waves of strong feelings about it.	0	1	2	3	4
17	I tried to remove it from my memory.	0	1	2	3	4
18	I had trouble concentrating.	0	1	2	3	4

19	Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20	I had dreams about it.	0	1	2	3	4
21	I felt watchful and on guard.	0	1	2	3	4
22	I tried not to talk about it.	0	1	2	3	4

Appendix 5 Hopkins Symptom Checklist.

Please answer by ticking (✓) the most appropriate box for each of the following items

Description symptoms	Not at all	A little	Quite a bit	Extremely
Feeling low in energy, showed down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blaming yourself for things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crying easily	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of sexual interest or pleasure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor appetite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty failing asleep, staying asleep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling hopeless about future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling blue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling lonely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thought of ending your life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling of being trapped or caught	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worry too much about things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling too interest in things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Feeling everything is an effort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feeling of worthlessness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix 6 Ethics approval forms



10 April 2019

Dr Ha Hoang
C/- Centre of Rural Health

Sent via email

Dear Dr Hoang

REF NO: H0017807
TITLE: Post-traumatic stress disorder (PTSD) and depression and its associated factors among the Afghan population in Launceston

We are pleased to advise that the Tasmania Social Sciences Human Research Ethics Committee approved the above project on 10 April 2019.

Please ensure that all investigators involved with this project have cited the approved versions of the documents listed within this letter and use only these versions in conducting this research project.

This approval constitutes ethical clearance by the Tasmania Social Sciences HREC. The decision and authority to commence the associated research may be dependent on factors beyond the remit of the ethics review process. For example, your research may need ethics clearance from other organisations or review by your research governance coordinator or Head of Department. It is your responsibility to find out if the approvals of other bodies or authorities are required. It is recommended that the proposed research should not commence until you have satisfied these requirements.

In accordance with the National Statement on Ethical Conduct in Human Research, it is the responsibility of institutions and researchers to be aware of both general and specific legal requirements, wherever relevant. If researchers are uncertain they should seek legal advice to confirm that their proposed research is in compliant with the relevant laws. University of Tasmania researchers may seek legal advice from Legal Services at the University.

All committees operating under the Human Research Ethics Committee (Tasmania) Network are registered and required to comply with the *National Statement on the Ethical Conduct in Human Research* (NHMRC 2007 updated 2018).

Therefore, the Chief Investigator's responsibility is to ensure that:

- (1) All investigators are aware of the terms of approval, and that the research is conducted in compliance with the HREC approved protocol or project description.
- (2) Modifications to the protocol do not proceed until **approval** is obtained in writing from the HREC. This includes, but is not limited to, amendments that:
 - (i) are proposed or undertaken in order to eliminate immediate risks to participants;

**Human Research Ethics
Committee (Tasmania) Network**
Research Ethics and Integrity Unit
Office of Research Services

Private Bag 1
Hobart Tasmania
7001
Australia

T +61 3 6226 6254
E ss.ethics@utas.edu.au
ABN 30 764 374 782 /CRICOS 00586B

utas.edu.au



- (ii) may increase the risks to participants;
- (iii) significantly affect the conduct of the research; or
- (iv) involve changes to investigator involvement with the project.

Please note that all requests for changes to approved documents must include a version number and date when submitted for review by the HREC.

(3) Reports are provided to the HREC on the progress of the research and any safety reports or monitoring requirements as indicated in NHMRC guidance. Researchers should notify the HREC immediately of any serious or unexpected adverse effects on participants.

(4) The HREC is informed as soon as possible of any new safety information, from other published or unpublished research, that may have an impact on the continued ethical acceptability of the research or that may indicate the need for modification of the project.

(5) All research participants must be provided with the current Participant Information Sheet and Consent Form, unless otherwise approved by the Committee.

(6) This study has approval for four years contingent upon annual review. A *Progress Report* is to be provided on the anniversary date of your approval. Your first report is due 10 April 2020, and you will be sent a courtesy reminder closer to this due date. Ethical approval for this project will lapse if a *Progress Report* is not submitted in the time frame provided

(7) A *Final Report* and a copy of the published material, either in full or abstract, must be provided at the end of the project.

(8) The HREC is advised of any complaints received or ethical issues that arise during the course of the project.

(9) The HREC is advised promptly of the emergence of circumstances where a court, law enforcement agency or regulator seeks to compel the release of findings or results. Researchers must develop a strategy for addressing this and seek advice from the HREC.

Should you have any queries please do not hesitate to contact me on (03) 6226 6254 or via email ss.ethics@utas.edu.au.

Yours sincerely

Jude Vienna-Hallam
Executive Officer I Social Sciences

Human Research Ethics Committee (Tasmania) Network Research Ethics and Integrity Unit Office of Research Services	Private Bag 1 Hobart Tasmania 7001 Australia	T +61 3 6226 6254 E ss.ethics@utas.edu.au ABN 30 764 374 782 /CRICOS 00586B utas.edu.au
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